GUIDE TO THE AO7 CENTRAL THAI FILE

[The AO7 Central Thai file contains a variety of information on one village, Bang Chan, located in Thailand's Central Plain, twenty miles northeast of Bangkok. Bang Chan is the village that was chosen for intensive study by the Cornell Thailand Project which began in the early 1950's. Hence there is a relatively large literature on many aspects of its lifestyle. The Central Thai, while not sharply distinct from the rest of the Thai population, are those Thai that inhabit the flat Chao Phraya basin around and north of Bangkok. The area (approximately 62,000 square miles) comprises 30% of Thailand's land area and contains 40% of the population. A 1975 estimate based on the 1960 census (26,392,000) and a 3.1% growth rate yields an approximate population for all Thailand of 43 million and for Central Thailand of 17,200,000 (though this is probably slightly high). The Chao Phraya Valley is the most densely populated part of the country. The Central Thai speak the Central or Bangkok dialect of Thai, which is the nation's official language and has approximately ten million speakers (1960). Dialect differences within Thai are only slight and mutually intelligible among all Thai speakers. Thai is generally considered to be part of the Sino-Thai branch of the Sino-Tibetan stock. However there are some who feel it is closer to the Indonesian languages. It is spoken by 85% of the Thai population. While exposed to the more urban and Western influences and commodities found in Bangkok, the Central Thai are still overwhelmingly rural rice agriculturalists who generally work and own their own land. Two types of settlement pattern are commonly found. Some settlements are strung along roads and water courses with the fields behind the houses, while others are circular clusters of houses or compounds surrounded by their fields and connected to the main road by a path. Village size ranges from 300-3000. Rice is the dietary staple, but fish are also an important source

of food since canals and rivers abound. Rice is also the country's chief export. Yams, cassava, chilies, eggplant, and beans are also grown for food. Commerical crops include sugar cane, tobacco, rubber, coconuts, condiments, and cotton. Besides agricultural labor, the Thai staff the government and upper professional positions, but the Chinese (the second largest ethnic group in the country) occupy most of the commercial and artisan jobs. The nuclear family is the basic social unit, but extended families are frequent. Descent is ambilineal and the personal kindred is a person's most important group. Kin terms are also used to indicate respect and friendship. Polygyny is present though not common. Postmarital residence is generally neolocal, but poorer couples often remain with the bride's family for a few years. In any case, village endogamy is preferred. Social stratification is based on age, occupation, wealth, and residence. But Central Thai society is more of a ranked than a class society, with passage up and down the scale easy and common. 93.6% of the population identify themselves as Theravada Buddhists (1960). The religious practices however, have a strong mixture of pre-Buddhist animism as well as Brahmanic beliefs.

As of 1956, Bang Chan was a village of 296 households and 1,771 people (1956 census, 4: Phillips, p. 15). It is spread over an area of five square miles allowing people to be near their fields. It contains a Buddhist monastery and an elementary school which give this dispersed village its identity as a unit. It is composed of seven hamlets of both the settlement types mentioned above, but the linear pattern predominates. Because of a decentralized administration divided between the hamlets and two communes into which they are divided, community-wide projects and a sense of village solidarity do not exist except for religious festivals. The nuclear family and loosely defined kindred are the principal groups with which people identify. The school, the monastery and the nation-state are the only other

institutions which serve as foci of loyalty (4: Phillips, p. 22). The district or amphur has been marked for category 634. Only one hour by road and three by canal from Bangkok, the people of Bang Chan are much more cosmopolitan than their more rural countrymen. Bangkok provides jobs, schools, markets, entertainment and mass communication not available to most rural Thai. Despite their proximity to a city of over two million, they are principally rice cultivating peasants, whose lives are centered on the land. It was chosen by Cornell as a site to study cultural change.

There are seven sources in this file, all in English. All of them are directly or indirectly connected with the Cornell Thailand Project. The fieldwork on which they are based was part of an organized program and was carried out for varying lengths of time between 1948 and 1957. Unfortunately there is no single wide-perspective community study of Bang Chan in the file. The sources discuss a number of specific areas with only brief mention of the overall situation. The introductory chapter to 4: Phillips (category 116, pp. 14-38) provides the best summary of life in the village. 1: Hanks concerns maternity, its associated rituals and attitudes toward modern medicine in Bang Chan. 2: Hauck et al. discusses food habits and nutrition. 3: Hauck et al. discusses the nutritional health of mothers and children. 4: Phillips is a study of Thai peasant personality based on interpersonal relations and psychological tests (sentence completion) in Bang Chan. 5: Hauck et al. contains medical, biological and demographic data on health, sanitation, nutrition, and anthropometry. 6: Goldsen and Ralis concerns factors significant in the acceptance of innovations in such areas as medicine and agriculture. Contact with the urban life style either through residence or mass communication was found to be the main factor. 7: Janlekha is a dissertation on the economic development of Bang Chan and the effects of its confrontation with the Western economic system. The file contains data that is not

widely accessible and is the product of a coordinated project. It does however lack the diversity it might have. The file was processed between 1969 and 1973.]

BANG CHAN

Introduction

121 This investigation was undertaken in connection with the Cornell Thailand Project, one of several studies under the auspices of the Department of Sociology and Anthropology which are focused on the process of cultural change. Bang Chan, the community chosen for intensive investigation, has been described previously (Sharp et al., 1953). The studies to be reported [101] herein were designed to contribute to a baseline description of the community culture and were carried out during the first and second years of a 5-year project, i.e. from September 1952-May 1954.

114 For the clinical examination of the school children and families, the research group consisted of Dr. Anusith Rajatasilpin, Miss Sapha Indrasud, Bua Srisuay, a local villager who assisted in many practical ways, and the author, who assumed major responsibility for planning and directing the work. Dr. Chumlong Kittiveja, of the Dental School, University of Medical Sciences, Bangkok, examined the teeth of the school children. Some data on sanitary practices were collected by Miss Saovanee Sudsaneh, in connection with the dietary survey.

121 The main investigations undertaken fall into two categories: 1) studies of nutritional status and 2) dietary studies, both qualitative and quantitative. In connection with both types of studies, information was collected concerning certain aspects of health and of sanitation in the village. Additional data concerning health practices, illness and death in Bang Chan were recorded by members of the Cornell research group in their field notes. This present report is concerned primarily with presenting findings from all of these sources regarding aspects of the health, sanitation and nutritional status in this rural Thai community.

Methods

Clinical Examination

125 Schedule. - In general, the clinical examination was directed toward discovery of signs and symptoms which might either be indicative of nutritional deficiency or of some disturbance which might be associated with or lead to nutritional deficiency. Certain items, such as cristal height, bicristal diameter, and age at menarche were included because information concerning them would contribute to our knowledge of norms for Thai people, and the clinical examination presented a good opportunity for obtaining such information.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

MAP I

131
103
102
634
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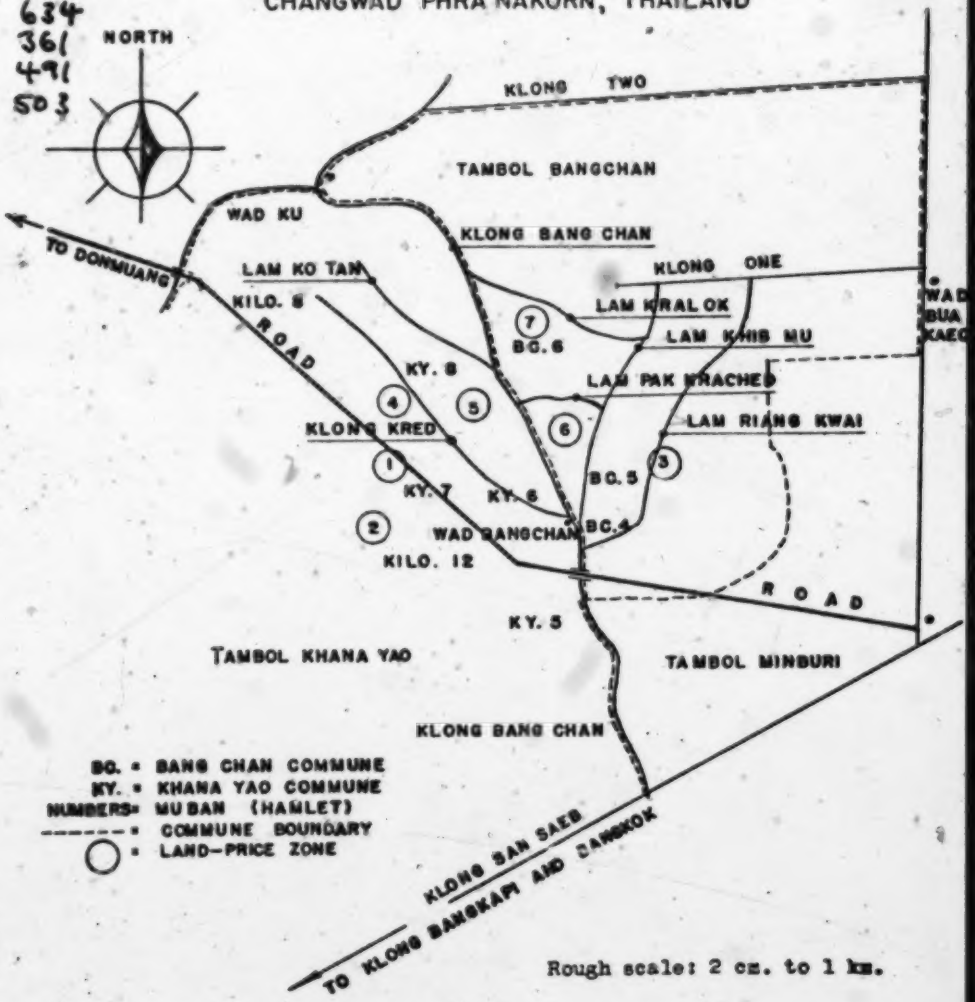
491
503

SKETCH MAP OF TAMBOL KHANA YAO, AMPHOE BANGKAPI AND TAMBOL BANGCHAN, AMPHOE MINBURI CHANGWAD PHRA NAKORN, THAILAND

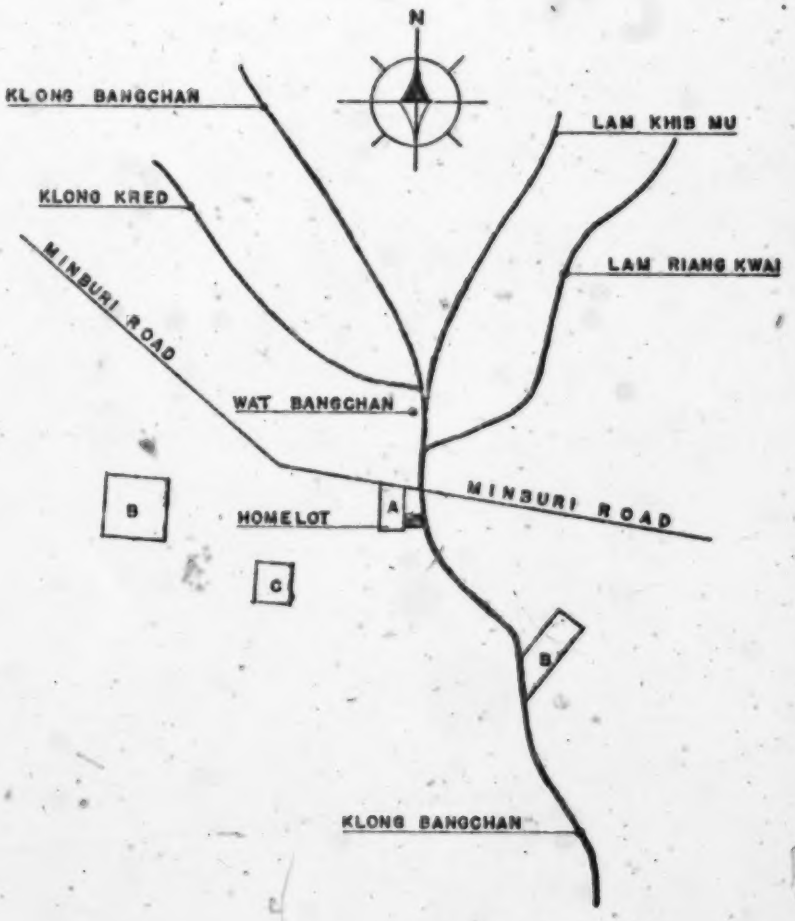


Rough scale: 2 cm. to 1 km.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

MAP II

SKETCH MAP OF CHOM FARM AND HOME LOT BANGCHAN, THAILAND 1953



Rough scale: 4 cm. to 1 km

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

MAP I

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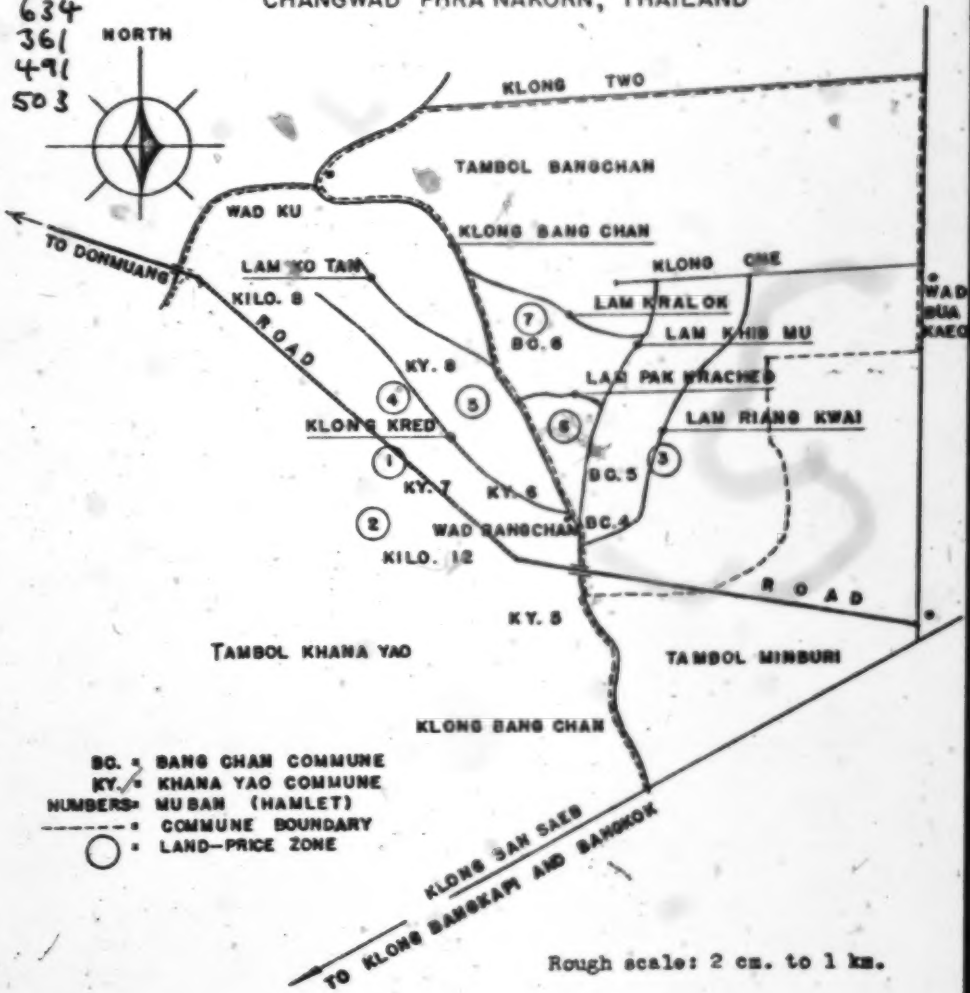
SKETCH MAP OF TAMBOL KHANA YAO, AMPHOE BANGKAPI
AND TAMBOL BANGCHAN, AMPHOE MINBURI
CHANGWAD PHRA NAKORN, THAILAND



Rough scale: 2 cm. to 1 km.

interest of improved maternal and child health, a few suggestions are made.

Purpose and Method

The purpose of this study is to set down the ethnographic data concerning childbirth in Bang Chan, following out the economic, social, religious, and cosmological aspects as needed to clarify the behavior and the psychological attitudes noted. The hope is that not only anthropologists but persons working in programs of maternal and child health will find the data useful.

The data were gathered from Buddhists and Muslims in Bang Chan by interviews and direct observation. Because Dr. Hazel Hauck, in the course of nutritional studies also made inquiries "from the standpoint of anthropological study rather than because of an assumed relation to nutrition or health" (1959:3) she first opened up the broad outlines of the subject. The author, with Dr. Saovanee as an interpreter of unusual competence, and Dr. Saovanee herself then pursued the subject further, including interviews at the Minburi Health Center and at Cha Choeng Sao.

A few comparative references such as to McFarland's dictionary and Phya Anuman's researches are given, but the focus is always kept on Bang Chan. Though many of the findings will have a certain pertinence in Bangkok, the fact that Kaufman found striking differences in Bang Khuat only 8 kilometers away shows how cautious generalizations must be.

The transliterations of Thai words are only approximations, based on the system promulgated by the Royal Institute of Thailand; the tones have been omitted. With the translation always adjacent and a glossary provided at the end of the volume, the author feels there should be little confusion. Proper names which are generally known in a different transcription are left in their familiar form. In referring to works by Thai authors western custom is followed but in referring directly to the authors themselves Thai custom is followed, as it should be in direct address.

GLOSSARY OF THAI TERMS USED

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อาจารย์	ăchān	Professor
อำเภอ	amphōe	District office
อรหัต	arahat	Priest who has achieved the highest status in Buddhism
อรูป	arūp	Non-body
บาท	baht (bāt)	Base monetary unit
ไบศรี	bāisī	Tiered offerings
บางชัน	Bang Chan	Name of place
บางกะปิ	Bāng Kapi	Name of place
บางขวาก	Bāng Khŭat	Name of place
บัตรพลีกระทง	bat phlī krathong	To give offerings or a small container for offerings
บอก	bŏ̄k	To inform
บน	bon	Vow food or liquor in return for the help of supernatural beings
บวชใหม่	bŭat mai	Newly ordained
บุญ	bun	Merit
ฉะเชิงเทรา	Cha Choeng Sao	Name of a province
ชาย	Chāi	Name of Duan's son
ใจ	čhai	Heart

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ใจอ่อน	čhai ɔ̄n	Soft, or tender, heart
เจ้ากรุงผาลี	Čhao Krung Phā Lī	Name of a spirit
เจ้าแม่	Čhao Mâe	Mother-princesses (deities)
เจ้านาค	Čhao Nāk	Prince-snake
เจ้าพ่อ	Čhao thān	A spirit of the place
เจ้าที่	čhao thī	A spirit of the land
เจ็บใจ	čhep čhai	Angry
เจตภูติ	čhēttaphūt	Soul
ช่วย	chūai	To help
ช่วยงาน	chūai ngān	Help to do the work
ดินอ๊อฟแป้ง	dinɔ̄ɔ̄phɛ̄ng	Face powder
ดิบ	dip	raw, uncooked; not (yet) ordained
ดวน	duan	A woman's name
ไฟชุด	fai chut	Chamber, fire-box
ฝากทอง	fāk thɔ̄ng	To deposit gold
หนุมาน	Hanumān	King of the monkeys in the Ramayana
แกงเลียง	kaēng līang	A nursing curry made of banana flower and vegetables

กรรม	kam	Karma
การเรียกขวัญ	kānrɛpkhwan	Seizing and welcoming the soul
แข็ง	khaeng	Hard
ขนม	khanom	Puddings
ไข้เหนือ	khai nɯ̌a	North fever
เคย	khoēi	Habit, to be accustomed to
คนทรง	khon song	Medium
ของฉัน(ชม)	khǭ̆ng chan (phom)	Mine (female [male] speaking)
คู่	khū	Pair
คุณ	khun	Supernatural disease missile
ครู	khrū	Teacher
ขวัญ	khwan	Soul(s)
ขวัญข้าว	khwan khāo	Ritual rice offerings, rice-soul
ขวัญอ่อน	khwan ɔ̀n	Soft, tender, immature soul
กีโอาแปต	Kilō Pɛ̄t	Name of a place
กลับไปเป็นเด็ก	klap pai pendek	Back to being a child; senility; second childhood
กดทับ	klɔ̀t	To press down

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กล้วย	klūai	Banana
กล้วยหักมุก	klūai hakmuk	A variety of banana
กล้วยหอม	klūai hŏm	A variety of banana-fragrant banana
กล้วยน้ำ	klūai nam	A variety of banana
กล้วยน้ำว้า	klūai namwá	A variety of banana
กล้วยตานี	klūai tānī	A variety of banana
กลุ้ม	klum	To feel unhappy
กระด้ง	kradong	Winnowing tray
ลำผึกระเฉด	Lam Phakachēt	Name of a place
ลำบาก	lambāk	Trouble
หลาน	lān	Grandchild
เล็ก	Lek	A woman's name
เลี้ยง	līang	Feeding, nourishing
เลี้ยงดี	līang dī	Good nourisher(s)
เลี้ยงง่าย	līang ngaī	Easy to raise
ลอยกระทง	Lōi Krathong	A festival
ลพบุรี	Lōburī	Name of a place
ลม	lom	Wind
ลมแข็ง	lom bĕng	The pushing wind
ลมกระชาก	lom chawat	The pulling wind

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ลูก	lūk	Child; children
ลูกประคบ	lūk prakhop	A medical compress
แม่	mǣ	Mother, female
แม่โพสพ	Mǣ Phōsop	Rice goddess
แม่พระพาย	Mǣ Phra Phāi	Goddess of Wind
แม่พระเพลิง	Mǣ Phra Phloēng	Goddess of Fire
แม่ซื้อ	Mǣ Sū̄	The mother-goddess, guardian of infants
แม่ธรณี	Mǣ Thoranī	Mother Earth
แม่น้ำเจ้าพระยา	Menam Chao Phraya	Menam River
มหาหิงคุ์	mahāhing	Asafoetida
มะขามเทศ	makhāmthēt	Manila tamarind
มี	Mī	A woman's name
มีนบุรี	Minburi	Name of a community
มึง	ming	Soul
หมอ	mǒ	Doctor, specialist, person authorized to handle any saiyasāt (magic)
หมอดู	mǒ dū	Astrologist, foretellers
หมอขวัญ	mǒ khwan	Soul-ceremonialist, soul-specialist
หมอนวด	mǒ nūat	Masseurs
หมอผี	mǒ phī	Exorciser of spirits, disease, missiles or objects

• 104 หมอปลึง	Mǭ Plụng	The personal name of a particular specialist in saiyasāt
หมอรักษา	mǭ rakṣā	Curers
หมอเสน่ห์	mǭ sanè	Love-and-hate-magic specialist
หมอสุก	Mǭ Suk	The personal name of a particular specialist in saiyasāt
หมอตำแย	mǭ tamyāe	Midwife, expert-in-pressing
มนตร์	mon	Prayers
มงคล	mongkhon	Holy cord
หมู่บ้าน	mūbān	Hamlet
นโม พุทธาย	Na mō phut thā ya	Traditional incantation of the five names of the Buddha to prevent spiritual dangers
นัก	nak	Expert
นักเที่ยว	nak thīeo	An expert in roaming around; a tourist
นักโทษ	nak thōt	A convict
น้ำ	nam	Water
น้ำคาวปลา	nam khāo plā	Fish-water (the viscous fluit expelled after parturition)
น้ำคร่ำ	nam khram	The abdominal body water, refuse-water

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น้ำสุก	nam suk	Boiled (ripe or cooked) water
น้ำหูนหัว	nam thūn hua	The amniotic fluid (water that supports the head of the child)
น้ำมนต์ธรณีสาร	Nammon Thoranīsān	Earth holy water
นิพพาน	nipphān	Nirvana
นิสัย	nisai	Character
ออก	ɔ̄k	To come out, leave
ออกพรรษา	ɔ̄k Phansā	End of Buddhist Lent
โอมมิ่งโอมฟันโอมไฟสุวาหา	ōm ming ōm fūn ōm fai sawā hā	Incantation used by Muslims
อ่อน	ɔ̀n	Tender, delicate, soft, weak
ไปป่า	pai pā	Go away to the jungle or forest
ไปเที่ยว	pai thīeo	Wander, waywardness
แพ้ท้อง	phāethɔ̂ng	Defeated by pregnancy
พรรษา	Phansā	The 3-month season, of retreat usually called Buddhist Lent
ผี	phī	Ghost, spirit
ผีกระสือ	phī krasɯ̄	One kind of ghost; filth-ghost
ผีหลวง	phī lūang	Great ghost
ผีตายทั้งกลม	phī tāi thang klom	Spirit of one who had died violently

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แผล	phlǣ	A wound
ไพล	phlai	Zingiber casumunar, a traditional healing root
พระ	Phra	An honorific title for male deities and monks; a conferred title of nobility.
พระอินทร์	Phra In	Indra
พระคุลีมาน	Phra Khulīmān	An ancient hermit's name
พระโมคคลาน	Phra Mok Khanlān Mō	Phra Mogdallana, one of the Buddha's disciples
พรหมจินดา	Phrom Čnindā	Name of an old Thai textbook, cited in Phya Anuman Rajadhon's "Life and Ritual in old Siam," W.J. Gedney, Ed.
พุทรา	phutsā	Spiny Indian jujube or Chinese date
โปรดสัตว์	prōt sat	Show mercy towards creatures
เรียกขวัญ	rīak khwan	Calling the soul
โรคพุพอง	rōk phuphǭng	Pustules that enlarge to sores
ร่อน	rǭn	To winnow
รูป	rūp	Body
สไบเฉียง	sabaichīang	Shoulder scarf

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สะดวก	sadūak	Convenient
แสนแสบ	Sānsāēp	Name of a canal
แสลง	salāēng	Deleterious
สาย	Sāi	A woman's name
สายสิญจน์	sāi sin	Holy cotton thread
ไสยศาสตร์	saiyasāt	Occultism
สะแก	sakāē	Combretum quadrangulare, one kind of firewood
สั่น	san	Shaking
ศาลพระภูมิ	sān phra phūm	House of a guardian spirit
สั่นชัก	san chak	Convulsion
ซาง	sāng	A disease of the eyes
เสาร์ห้า	sao hā	Saturday, the 5th day of the waxing moon
สวัสดิ์	Sawat	A personal name
สง	Song	A man's name
สุก	suk	Mature, ripe
สุเหร่า	suraō	Mosque
ต่ำ	tam	To lower
ตามธรรมชาติ	tām thammachāt	Natural
ทำอาชีพ	tham āchīp	Profession
ทำขวัญ	tham khwan	A soul-strengthening rite, ordination

• 104 ทำมาหากิน	Tham mā hā kin	Have enough to use and eat (to earn a living)
ธาตุ	thāt	Element
เทวดา	thēwadā	Protecting deities
ไหว้ครู	wai khrū	Homage-to-the-teacher ritual
วันศุกร์	Wan Suk	Friday, popularly viewed as "Happy Day"
ว่านน้ำ	wānnam	Acorus calamus, medicinal root
วิญญาน	winyān	Soul
วิญญานอสัมปโน	winyān a sam pa nō	A magic incantation
วิเศษ	wisēt	Powerful
ยา	yā	Medicine, tonic
ยาชุบ	yā chup	Rub-on medicine
ยาดำ	yā dam	Black medicines, a bitter and hot tasting medicine
ยาดอง	yā dǭng	Pickled medicine
ยาหอม	Yā hǭm	Fragrant medicine
แยม	Yāēm	A bean thought to cause madness
ยักษ์	yak	Giant
ยันต์	yan	Jantra, a small protective banner

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ญาน	yān	Supernatural power, auspicious, augury
อยู่ไฟ	yū fai	Rest period by the fire

[p. 124 is blank]

792 262 431 village offers of regular service, the holiday offerings, home invitations and sporadic gifts so that all priests had places to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut[1] or hardship.

792 794 262 About mid-July, Buddhist Lent changed the food habits somewhat. This three-month period corresponded with the height of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering, and thereafter the priests went regularly on their appointed rounds.

796 261 On Buddhist holidays, the people did not usually eat any of the food brought to the temple, but on (3)thauaud (2)ka-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bountsously.

792 857 262 Residing at Wat Bang Chan in 1954 were 22 boys, aged 10 to 16, sent to serve the priests, get their living and attend school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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792 262 737 235 1. Amounts of food given usually exceeded the actual needs of the priests and temple boys. One instance was noted in which food was sent by the priests to a needy old person nearby. Leftover rice was dried and sold for chicken feed.

114 104 2. The transcription used throughout this report is that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

264 855 [262] Most of the children who ate lunch regularly brought rice and some of the "with-rice" dishes prepared for a family meal in a lunch pail. Menus for breakfast and noon meals were often identical. Children who lived at a distance may have found it harder to carry lunch, especially when they had to walk to school, but the month by month record of the percentage of children who missed lunch (Table 3) does not indicate any clear seasonal trend. Even children who lived nearby might neither bring lunch nor return home during the noon recess. We were at the home of a school teacher, a short distance on foot from the school, when his two children returned in the afternoon. The mother said that they usually waited until after school to eat, but were having no snack on that day because for the first time, they had carried lunch to school.

126 262 Thorangkul (1957) scanned all of the dietary records to note the frequency with which the following food groups occurred: protein-rich food, carbohydrate-rich food other than plain boiled rice, vegetables and fruits. She considered the records of each child as a unit; thus if a boy for whom 5 daily records were available, had recorded protein-rich food such as fish, eggs, or beans 16 times, he was regarded as having more than 3 "servings"[1] of such food per day. The frequency with which various food items occurred in the daily diets of these children is shown in Table 4.

Considering the day's record as a whole, some protein-rich food, usually fish, was included in the records of 97% of the children. Such protein-rich food appeared two or more times per day in the records of over 80% of the boys and about 90% of the girls. In contrast, no fruit was mentioned in the records of about 10% of the children, although fruit was one of the commonest snacks. Vegetables were not mentioned in the records of 10% of the boys and 3% of the girls. Only about one-fourth of the vegetables recorded were green or yellow.

For 75 children for whom we had 4 or more records, Thorangkul (1957), to obtain a rough estimate of the adequacy of the children's diets, grouped the records into three categories, based on the number of times protein-rich foods, vegetables and fruits appeared. On the average, children whose diets were placed in Class I had at least 3 "servings" of protein-rich food, 3 "servings" of vegetables and 2 of fruits. Diets in Class II included some from each of the food groups each day, but the items were recorded less frequently than in diets in Class I. Diets in Class III did not include foods from each of the food groups emphasized, each day. On this

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[104] 1. The term serving is used here to designate each time an item appeared in the daily food record. Thai do not have "servings" as the term is used in Western countries.

262 Other vegetables (continued)

Taro
Turmeric, white
Water chestnut, Chinese or black truffle (Eleocharis dulcis)
West Indian pea tree, (1)Khaeae flowers, (Sesbania grandiflora)

V. Fruits

Coconut and its products
Coconut meat
Coconut sport
Coconut milk
Coconut cream

Fruits other than coconut

Banana, (3)kluaj (4)nam-(4)waa
Guava (Psidium guajava)
Hog plum (a species of spondias)
Jack fruit (Artocarpus heterophyllus)
Jujube (Zizyphus jujuba)
(2)Ka-(4)tauaun (Sandoricum indicum)
Limes
Lotus seeds (Nelumbo nucifera)
(4)Ma-(1)dan fruit (Garcinia schomburgkiana)
Mango
Manila tamarind (Pithecellobium dulce)
Muskmelon
Olive
Orange, sour
Orange, sweet
Papaya
Pineapple
Rambai, (4)ma-(1)faj (Baccaurea sapida)
Rambutan (Nephelium lappaceum)
Star gooseberry (Cicca acida)
(2)Ta-(1)koo (a species of Diospyros)
Tamarind (Tamarindus indicus)
Thai nutmeg (a species of Diospyros)
Watermelon

VI. Fats and oils

Coconut oil
Pig's skin
Pork fat

VII. Sugar

Palm sugar
Sugarcane

VIII. Miscellaneous and spices

Agar
Bergamot, rind
Cardamom
Cinnamon
Coriander seeds
Fennel
Galangal (Alpinia officinarum)
Ginger (Zingibor officinale)
Holy basil (Ocimum sanctum)
(2)Ka-(1)chaaj (Boesenbergia pandurata)[2]
Nutmeg
Pepper, black
Salt
Vinegar

1. English names, where known, are given first. Thai terms are given where no common English name was known. Both Thai terms and scientific names are given for plants which may be unfamiliar to many Western readers.
2. Foods for which no nutritive values were found nor imputed.

APPENDIX

GLOSSARY OF THAI TERMS USED

• 104 The transcription used throughout this report is that described by Sharp et al. (1953), pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

(1)baur-(1)a-(4)phed. (Tinospora rumphii) The bitter juice of the stems may be applied to the nipples in weaning a child.

(1)jaa (1)dauaung. "Pickled medicine"; a medicine commonly taken after childbirth.

(2)juu (1)faj. Literally to be by the fire. During the postpartum period, Thai mothers in Bang Chan usually rested by a fire for an odd number of days.

(1)kaeaeng (1)liang. Literally a supporting curry; a soup made with dried fish and certain vegetables reputed to stimulate milk production.

(3)klusj (5)hauaum. The "fragrant" banana; the banana commonly used in the U.S.A.

(3)kluaj (4)nam-(4)waa. A small, rather flavorless banana used as baby food, for ill persons, and for ritual purposes.

(2)kha-(5)nom. A general term referring to "sweets", biscuits, or crackers.

(3)khaaw (1)caan (4)naam. (3)khaaw (5)suaj to which hot water has been added.

(3)khaaw (2)piag. Rice cooked in extra water and mashed; considered to be baby food.

(3)khaaw (5)suaj. Literally beautiful rice; cooked in the usual manner. The rice was washed twice, boiled in a large volume of unsalted water until almost done, then drained, and the covered pot returned to a slow fire to finish cooking by steam.

(3)khaaw (3)tom. Rice cooked with more than the usual amount of water and left undrained.

(3)kuj (1)chaaj. A vegetable introduced by the Chinese; both leaves and flowers are used.

(3)luug (1)yaunu. Flattery fruit.

(4)nam (1)plaa. Fishsoy: a condiment made from fish and salt. 104

(1)plaa. Fish.

(1)plaa (1)thuu. A fish commonly purchased by residents of Bang Chan.

(2)phag (2)ka-(2)cheed. An aquatic plant (Neptunia prostrata).

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

[p.xiii]

Note on the Transliteration of Thai

Thai terms (excepting titles and proper names) have been transcribed according to the Haas phonetic system (Haas, *Thai Vocabulary*, 1955, and *The Thai System of Writing*, 1956. Washington D. C., American Council of Learned Societies). However, the five tonal markers have been omitted. 104

Briefly the system is as follows: voiced unaspirated stops are written *b*, *d*, and (only in final position) *g*; voiceless unaspirated stops are *p*, *t*, *c*, *k*, and *ʔ*; voiceless aspirated stops are *ph*, *th*, *ch*, and *kh*; voiceless unaspirated spirants are *f*, *s*, and *h*; voiced semivowel sonorants are *w* and *j*; voiced nasal sonorants are *m*, *n*, and *ŋ*; the voiced lateral sonorant is *l*; and the voiced trill sonorant is *r*. The vowels are written thus: front unrounded, *i*, *ii*, *ia*, *e*, *ee*, *ɛ*, *ɛɛ*; central unrounded, *y*, *yy*, *ya*, *ə*, *əə*, *a*, *aa*; and back rounded, *u*, *uu*, *ua*, *o*, *oo*, *ɔ*, *ɔɔ*.

[p.xiv is blank]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

APPENDIX A

TERMS USED IN THIS STUDY

Measurement

104 [243]

1. Rough rice or paddy: Grains of rice after they have been threshed but before they have been milled.

2. Milled rice or clean rice: Grains of rice after they have been milled.

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3. One rai equals two-fifths of an acre.

4. One tang equals twenty litres. It is the standard measurement for both paddy and rice. The weight of one tang of paddy varies from one locality to another. On the average, Bangchan paddy weighs about eleven kilograms per tang. The weight of one tang of milled rice does not vary significantly from place to place, the average being sixteen kilograms.

5. One baht (weight for gold and silver) equals fifteen grams.

436

Currency

The basic monetary unit is the baht. During the period of the study, Thailand maintained a so-called open market exchange rate which served largely as the going and legal rate for all commercial transactions other than exported rice and a few specified items of export and import. At the time of the study, this open market rate was about 20.25 baht to one U. S. dollar.

The official rate of exchange during the early post-war period was 10 baht to one U.S. dollar. Following the

SUMMARY

A general description is given of conditions in a Siamese rice village, 1952-54, as they relate to food supply and food habits. Activities at various seasons of the year are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

Food was mostly home produced and an important factor in the standard of living was the number of productive hands available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods were used. Nearly all of the families in Bang Chan raised chickens, and some raised ducks, but about 3/5 of all eggs produced were sold. Every family had some sort of kitchen garden, including banana trees and other plants, but spices and chili were much more commonly grown than vegetables and fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, cocomut, palm sugar and small amounts of vegetables.

Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

Preparation of some typical dishes, meal service and techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

105 262 Sweets and fruit were the items most commonly eaten. Fruits were seldom eaten except as snacks.

271 105 The customary beverage with meals was untreated water. Rain water was preferred for drinking, but for 3 or 4 months of the year, water from the canal or fish pond was used.

105 262 Attitudes toward food, and foods considered appropriate for the very young, the old, for the pregnant or nursing woman and for use during illness, are briefly discussed.

105 126 146 Quantitative food intake for 11 families was recorded on a total of 44 survey days distributed throughout the year. Two groups of families, in which individuals were matched so far as possible as to age and sex, were selected on the basis of apparent difference in nutriture. The sample was not stratified with respect to economic conditions, but those in Group B, chosen for apparently better nutriture proved to be, in general, more prosperous than those in Group A, chosen because of signs of poor nutrition.

105 146 Food values were calculated on the basis of published analyses. Conservative nutrient allowances were estimated for residents of Bang Chan. On the average, calories, protein, iron, niacin and ascorbic acid in the diets of persons in Group B approximated or exceeded these allowances. For Group A, this was true for niacin and ascorbic acid only. Average intakes of riboflavin were estimated to be about 1/3 or less of the allowances, and estimates of calcium intake were about 20% of the allowance for Group A and 30% of that for Group B. Vitamin A values of diets for both groups appeared to be low, and thiamine intakes marginal or low. The signs observed among persons in these families were generally those associated with low intakes of thiamine, riboflavin and vitamin A.

Rice contributed about 4/5 of the calories and over half the protein in diets of both groups. Animal foods, chiefly fish, furnished about 2/5 of the protein. Intake of fats and sugar was small. Snacks of fruit contributed about 1/6 of the total ascorbic acid for Group A, and about 1/9 for Group B.

Seasonal variations in food preparation, meal patterns, food costs and caloric and nutrient values of foods eaten are discussed. Higher caloric intake during heavy work seasons was largely accounted for by larger amounts of rice eaten. The highest intake of protein for both groups occurred in the post-harvest season, when fish ponds were drained.

Questions for further study are proposed, and possible approaches to improving food habits and nutritional status in Bang Chan are suggested.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

4:Phillips E-4,5 (1956-1957) 1966
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Bang Chan
Thailand AO1

whole, depends in large part on one's frame of reference.[2] In the most general terms, the people of Bang Chan are like almost all ethnic Thai peasants (excepting on some counts Thai Moslems and some of the economically disenfranchised people of the Northeast) in that they have a keen sense of membership in the nation-state with a deep loyalty to the Crown, speak the Thai language, are Therevada Buddhists, are outwardly highly deferential to the authority of the Central government, and have a conception of the good life that stresses fun, physical comfort and security, intellectual simplicity and practicality, and a moral (as contrasted with a natural) ordering of the universe. Too, like the vast majority of their rural compatriots,[3] they are engaged in the production of rice, an activity which to them is not only an economic operation (Ingram 1955, Janlekha 1955) but almost a way of life, being bound up with their social structure, dietary habits, religious practices, and even their philosophical (J. R. Hanks 1961) and aesthetic conceptions.

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[2] For readers unfamiliar with Thailand, the nation-state, it should be noted that the country is predominantly rural; 84 percent of the total national labor force is in agriculture and there are only ten towns with populations of 20,000 people or more, in which 6 percent of the national population (1947 census) live. Although Bangkok has a population of approximately 1,200,000, the second largest city, Chiengmai, has only 60,000 (1957 estimate).

The nation also has a high degree of ethnic homogeneity, 82 percent of the population considering themselves native Thai (1957 estimate). The largest ethnic minority group is the overseas Chinese, comprising 11.3 percent of the population (1953 estimate, from Skinner 1957), the balance being Malays, Cambodians, and Indians; the so-called tribal groups number in toto only about 150,000 people.

The religious composition of the country is 94.1 percent Buddhist, 3.9 percent Moslem, 0.5 percent Christian, and 1.5 percent "others," many of whom are tribal animists. Thai Buddhism is of the Southern (Therevada, Hinayana, or "Lesser Vehicle") variety and as practiced by most Thai, has syncretized within it many Brahmanic and traditional Southeast Asian animistic elements (see the chapter on "Religion" in Sharp *et al.* 1956, and Textor 1960). The largest minority religion, Islam, is practiced by ethnic Malay living in the four southernmost provinces of Thailand, as well as by some ethnic Thai—many of them descendants of former Malay slaves or war prisoners—scattered through the areas north and east of Bangkok, including Bang Chan, where they comprise 9.8 percent of the local population. Relationships between Buddhists and Moslems, at least in Bang Chan, are quite amicable and except for ideal prohibitions against intermarriage and occasional offhand remarks such as "Moslem women are loose" or "Moslems kill animals," there is little overt hostility between the two groups. Certainly few Bang Chaners ever distinguish between their Buddhist and Moslem neighbors when arranging a work group, selecting a drinking partner, or even compiling a guest list for a son's ordination.

[3] Janlekha (in Sharp *et al.* 1953: 110) indicates that 55 percent of the total national labor force is involved *solely* in the cultivation of rice—which occupies approximately 90 percent of the total cultivated land area—and as many as 92 percent of all agricultural households are rice households. The 55 percent figure excludes all those people who are involved in the transportation, milling, storing, and distribution of rice. Eighty-five percent of the population of Bang Chan (1953) are rice farmers.

1: Hanks, Jane Richardson. Maternity and its Rituals in Bang Chan. Cornell University, Department of Asian Studies, Southeast Asia Program, Data Paper Number 51. Ithaca, N.Y., 1963.

HRAF copy. DLC: GN482.1.H3. DLC card no.: 64-1974. Pp. ii, viii, 128.

/This is an account of the customs and beliefs surrounding pregnancy and birth among the inhabitants of a small rural community, about 20 miles from Bankok. Special consideration is given to attitudes to and acceptance of modern medical methods. Also, differences between Buddhists and Moslems as well as their relationship to each other in particular in matters of pregnancy and birth are discussed./

Field date: 1953-1954
Analyst: Sigrid Khera

Evaluation: Ethnologist-5
Processed in 1969

2: Hauck, Hazel M., Saovanee Sudsaneh and Jane R. Hanks, with the assistance of Anusith Rajatasilpin, Sapha Ingrasud, Mary B. Campbell and Dana Thorangkul. Food Habits and Nutrient Intakes in a Siamese Rice Village: Studies in Bang Chan, 1952-1954. Cornell University, Southeast Asia Program, Data Paper 29 (Cornell Thailand Project, Interim Reports Series 4). Ithaca, 1958.

Pp. xii, 139; 2 charts; 15 tables; 3 appendices; bibliography.

HRAF copy.

Pp. 130-139 omitted from file since the material contained does not pertain to Bang Chan and the AO7 Central Thai file.

/This source is a report on a detailed survey of the nutrition of the village of Bang Chan, about 20 miles northeast of Bangkok. According to this report, malnutrition is a relatively minor problem in this area. In a few cases symptoms of beriberi could be found. Suggestions for improvements in the food situation are given on pp. 81-88. Methods of field research and analysis of data are discussed in detail./

Field date: 1952-1954
Analysts: Sigrid Khera
Dubravka Schmalzbauer

Evaluation: Dietitian, Ethnologist-5
Processed in 1969-1970

3: Hauck, Hazel M. With the assistance of Anusith Rajatasilpin, Sapha Indrasud, Saovanee Sudsaneh, Silvia de la Paz and Barbara J. Smith. Maternal and child health in a Siamese rice village: nutritional aspects; studies in Bang Chan, 1952-1954. Cornell University, Southeast Asia Program, Data Paper, 39. Cornell Thailand Project, Interim Reports Series, 5. Ithaca, Cornell University, 1959.

10, 70 p.; 2 figs.; 18 tables.

HRAF copy.

[This study on the nutritional conditions for mothers and children in Bang Chan were undertaken by the author with the aid of several trained assistants. Data on the quality and quantity of food intake during different developmental stages and at different seasons were collected and correlated with ontogenetic data. Infants and children in Bang Chan increased steadily in height, but the rate of increase tended to be less than that of infants observed in a baby clinic in Bangkok and much less than is usual for Western infants. This, as well as the relatively small size of adults in this area, may be evidence of unsatisfactory nutrition. An appendix presents the information schedule used during the field study.]

Field date: 1952-1954
Analysts: Sigrid Khera, marker
Helen Bornstein, checker

Evaluation: Nutritionists-5
Processed in 1970-1972

4: Phillips, Herbert P. Thai peasant personality: the patterning of interpersonal behavior in the village of Bang Chan. Berkeley and Los Angeles, University of California Press, 1966.

14, 231 p.; tables.

HRAF copy. DLC: HN750.5.P5 1967. DLC card no.: 65-13647.

[This excellent study on Thai personality and social interrelationships is based upon "naturalistic" observation and interpretation in combination with the use of Sentence Completion Tests. The author comes to the conclusion that Thai personality and social interrelationships are characterized by a pronounced independence of the individual. The conception of the individual person as an independent, self-responsible entity of its own finds its specific ideological expression in Buddhism. However, the author makes it understood that Buddhism cannot be considered as the only factor responsible for the formation of the specific Thai personality type. The question of historical developments is not dealt with in this book.]

Field date: 1956-1957
Analysts: Sigrid Khera, marker
John Beierle, checker

Evaluation: Ethnographer-5
Processed in 1969-1972

5: Hauck, Hazel M. Aspects of health, sanitation and nutritional status in a Siamese rice village; studies in Bang Chan, 1952-1954. By Hazel M. Hauck with the assistance of Anusith Rejatasilpin, Sapha Indrasud, Chumlong Kittiveja, and Saovanee Sudsaneh. Cornell University, Department of Far Eastern Studies, Southeast Asia Program, Data Paper 22. Cornell Thailand Project, Interim Report Series 2. Ithaca, Cornell University, 1956.

9, 73 p.; 3 figures; 24 tables.

Yale: DS501 + C6 22.

[This report contains medical, biological and demographic data on Bang Chan, a community located about 20 miles northeast of Bangkok. It presents information on health, sanitation and anthropometry gathered while checking for symptoms of malnutrition in the seven hamlets of Bang Chan. The original text of this report was mimeographed, which accounts for its near illegibility on some pages. HRAF collated a number of copies of the report in order to produce the best possible copy under the circumstances.]

Field date: 1952-1954
Analysts: Dubravka Schmalzbauer, marker
Helen Gunsher Bornstein, checker

Evaluation: Nutritionists - 5
Processed in 1970-1972

6: Goldsen, Rose K. and Max Ralis. Factors related to acceptance of innovations in Bang Chan; Thailand: analysis of a survey conducted by the Cornell Cross-Cultural Methodology Project, May 1955. Cornell University. Department of Far Eastern Studies, Southeast Asia Program, Data Paper, 25. Cornell Thailand Project, Interim Report Series, 3. Ithaca, N. Y., 1957.

8, 72 p. tables.

Yale: DS501+ C6 25 c.2.

[This study was conducted by a research staff consisting of Americans and Siamese, some of them trained anthropologists, by strictly following a predesigned survey schedule. Various factors were studied statistically in order better to determine the conditions of acceptance of selected agricultural innovations and conditions for using the facilities of modern medicine in clinics and hospitals. Four agricultural innovations were selected, viz. gasoline motor, raising of fish (tilapia), use of fertilizer, and mushroom culture. Contact with urban life style, either through temporary stay in the city or through radio and written material, was the main factor for accepting certain innovations.]

Field date: May 1955
Analysts: Sigrid Khera, marker
Dubravka Schmalzbauer, checker

Evaluation: Sociologists-4, 5
Processed in 1970-1973

7: Janlekha, Kamol Odd. A study of the economy of a rice growing village in Central Thailand. Dissertation (Economics)--Cornell University, 1955. University Microfilms Publication 15,941; Microfilm 56-740. Ann Arbor, University Microfilms, 1956.

13,421 p.; 65 tables.

HRAF copy.

[This is a case study of the economic development of a rice-growing village (Bangchan) near Bangkok. Due to various socio-economic problems (complication of the post-war rice marketing, population pressure, insufficient job opportunities, improper control of water resources, and scarcity of cash and credit in the village), a vicious circle has been created in which expenses exceed the incomes, which in turn affect the rice production. This condition is particularly detrimental for the small farmers. The study covers primarily the period between 1948-1953, for which the bulk of data is presented. The time before 1948 is discussed in general terms, since exact data on a documentary basis are hardly in existence. The study also gives an excellent introduction in the history of Southeast Asia in its confrontation with the Western economic system through direct and indirect colonization.

The author, himself a Thai, had been in the Thai government service from 1940 to 1948 (1941-1945 in the head Section of Rice Extension), and from 1950 to 1955 studied economics and anthropology at Cornell University.]

Field date: 1948, 1952-1953
Analysts: Sigrid Khera, marker
Dubravka Schmalzbauer, checker

Evaluation: Economist-4,5
Processed in 1970-1973

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

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• 113 Goldsen, Rose K. and Max Ralis, 1957. Factors Related to Acceptance of Innovation in Bang Chan, Thailand. Ithaca, New York: Cornell University, Southeast Asia Program, Data Paper Number 25.

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594 What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the
434 families, living in tiny separate cottages.[1] Usually with in-
444 adequate or no land, they earned an irregular income by hiring
423 themselves out for farm or other work. At the other extreme
in a hamlet-like cluster of dwellings, lived a closely affili-
596 ated group of kin. A senior couple more or less headed the
592 married sisters, brothers, or children, maybe with a hired man,
476 or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

855 Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or
[252] go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying
596 ing home from school to do so. Where the adult cooperative
476 group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons
[810] could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

241 Plowing could be done by a man and wife, but for both
462 transplanting and harvesting which had to be done within a few
476 days, large groups were necessary. Two patterns of auxiliary
464 group labor prevailed: reciprocal cooperative work, and hiring of labor.

113
114 1. Janlekha, 1955, categorized families as 5% "one-
142 person," 59% nuclear, 8% limited extended (including one or
594 more parents of a spouse), 27% extended (including dependent
596 married couples or other collateral relatives), and the temple
423 residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

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BANG CHAN

FOREWORD

The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, Minburi. A century-old canal and to the north of it a post-war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

In 1954, when data for the present study were still being gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the households were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupation of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple food of the people. During the wet season and into the cooler dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

The Thai countryside is divided into hamlets, each with a headman in charge of the thirty to sixty households of the hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

BANG CHAN 1

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in Tables 1 and 2.[1]

Heights of children in the Bang Chan elementary school were, on the average, less than mean heights for Thai children given by Yong Chutima (Chutima, 1939). They are much below the mean heights at various ages, from charts (Class II) in use at the Dept. of School Hygiene, Bangkok.[2] Curves for mean weights of children in Bang Chan cross Dr. Yong's average curves, but are well below the average curves for girls and boys in Class II, School Hygiene charts (Figures 1 and 2). When compared with mean weights for children of the same height and age, from tables in use at the Dept. of School Hygiene, however, the two curves are seen to be similar (Figure 3). Mean heights and weights for rural children as reported by Zimmerman (1931) are not very different from those in Bang Chan.

In general, Thai children are shorter and weigh less than western children of the same age. For example, at all ages, mean heights and median weights[3] for both boys and girls in Bang Chan fell below the 10th percentile of the Iowa school children whose measurements are reported by Stuart and Meredith (1946) (Table 3). Weight of clothing was probably about the same for the two groups. In general, the median weight for a given age, in Bang Chan, corresponds to the weight of the 50th percentile for Iowa children 2½ to 4½ years younger. Thus the median weights for 8 year old boys and girls in Bang Chan, were similar to the weights of the 50th percentile of Iowa boys and girls 5 to 5½ years old, and the median weights of 13 year old boys and girls in Bang Chan were similar to weights of the 50th percentile of Iowa boys and girls at 10 and 5½ years of age, respectively. The tallest and heaviest boys and girls of these ages in Bang Chan were shorter and lighter than the corresponding median values for Iowa school children. On the average, however,

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1. Median weights are generally considered to be more representative of a group, but mean values are included as well, for comparison with results of certain other studies.

2. Unpublished data, based on measurements of over 15,000 children, both urban and rural, made over a period of years, and compiled by Dr. Laeng. Furnished through the courtesy of Dr. Ladda of the Dept. of School Hygiene, Bangkok. Subjects were grouped as Classes I and II, of which roughly 1/3 were considered Class I.

3. Most of these observations were made in November or early December, 1952. On the basis of subsequent observations, many children were found to weigh less in May than during the previous February, but weight gains were again observed the following August and November.

TEXT CONTINUED ON PAGE 15

[see pp.9-13-An.] [see p. 14-An.]

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The Innovations

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A. Agricultural Innovations: During the past few years, certain innovations have come to Bang Chan which have increased agricultural productivity and improved the level of living. Some of these innovations are listed below.

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[24H]

1. The small motor. One innovation is the small engine, gasoline motor, which is used mainly as a water-lifting device for irrigation purposes. In 1950 only five small motors were found in Bang Chan.* Twenty-one per cent of the respondents in the 1953 survey, however, report owning these motors; the majority of the respondents (68 per cent) claim to have used this labor-saving device which is sometimes jointly owned by more than one household and is frequently loaned out.**

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2. Straw mushroom growing. Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1953, the practice of growing mushrooms had reached into many homes (44 per cent of the respondents report that they have engaged in this activity***). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

One advantage in the culture of straw mushrooms is that it permits quickly realized returns. The cycle, from sowing spores in moistened straw to harvesting the mushrooms, takes about two to three weeks. Another advantage is that there is relatively little heavy work or investment required besides the acquisition of straw and spores. A third advantage is a ready market, for the plant is sought by Chinese dealers in Bangkok who supply hotels and restaurants. Bang Chan rice farmers who engage in mushroom growing as a sideline activity sell it either to local middlemen or directly to the Chinese in Bangkok.

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[113] * Sharp, L., H. M. Hauck, K. Janlekha, and R. B. Textor, Siamese Rice Village. A Preliminary Study of Bang Chan. Thailand, Cornell Research Center, June, 1953.

[125] ** The questions: "Do you own a small engine motor or not? (If 'NO'): Have you ever made use of one in your work?"

[125] *** The question: "Have you ever grown mushrooms, or not?"

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TABLE 22. AMONG ILLITERATE FARMERS USE OF MOTOR IS LINKED TO WIDER SOCIAL CONTACTS

	Exposure to Influence of Others	
	Have more friends or about the same	Have fewer friends
	(Proportion who tried small motor)	
Literacy		
Illiterate	64% (56)	26% (27)
Literate	87 (86)	86 (78)
	(Proportion who tried tilapia)	
Illiterate	34% (56)	15% (28)
Literate	43% (86)	26 (27)

[369] This finding corroborates and expands the previous discussion of the culture contact and acceptance of innovations. Exposure to influence of others from outside the community (through contact with the city, with the airport, with the agricultural fair, for example), as well as exposure to the influence of others from within (through friends and associates) clearly relates to the decision to use an innovation such as the motor. Its effectiveness is not felt equally by the whole population, mainly instead, by those who are illiterate.

The significance of these internal and external contacts to illiterates may be that through such contacts they are likely to gain needed information and motivation which, if one can read and write, is available through other sources. If one cannot read and write, however, it is the outside world which provides this kind of needed information.

Capital Investment and Debt

426 Bang Chan s economy is largely a money economy and many farmers avail themselves of credit facilities through professional money lenders. Most loans are sought for the purpose of replacing capital equipment and purchasing land and buffalo.*

The present survey secures a rough measure of the extent of such borrowing in Bang Chan. The majority of farmers (59 per cent)

[113] * See Janlekha, Kamol O. A Preliminary Study of the Economic Conditions of Siamese Rice Farmers in Bang Chan, Thailand. M.S. Thesis Cornell University, 1951, p. 73.

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FOREWORD

Dr. Jane Richardson Hanks has been associated with the Cornell Thailand Project as Research Associate in Cultural Anthropology since 1952. Dr. Hanks' field work, with emphasis on family life, was concurrent with a dietary study of families in Bang Chan, and observation on dietary practices of mothers and feeding and growth of infants. She is co-author of Food Habits and Nutrient Intakes in a Siamese Rice Village, in which she contributed her insights as an anthropologist to the observations of her nutritionist co-workers. The facts recorded in a report on the nutritional aspects of maternal and child health, and many observations in the field notes of her co-workers from other disciplines, take on new meaning in the light of Dr. Hanks' study of maternity and its rituals in Bang Chan. References to these and other related reports are included in the bibliography.

In a society where health and well-being are thought to be determined primarily by merit, where illness and early death are accepted as deserved sufferings for sins of an earlier existence, the health worker might be perplexed as to how to implement his teachings. Yet the parallel importance of habit, the concept that the first occurrence sets the pattern for all subsequent occurrences of like nature, opens the way for the introduction of many desirable practices. The need to reconcile new ways with old is emphasized in this study. In her chapter on "Guides for the Introduction of Changes," the author gives practical illustrations which assure realization of her hope that this report will be of interest not only to anthropologists but to all who are concerned with maternal and child health.

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Cornell University
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October 1963

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The author wishes to express her gratitude to Dr. Lauriston Sharp, Director of the Thailand Project, and to the other members of the Cornell research group. Her debt is especially great to Dr. Hazel M. Hauck, who set the frame for the study of childbirth, and to Dr. Saovanee Sudsaneh. Their assistance has been unstinting and their notes, turned over in full, have been a rich mine of information. Additional materials came from Dr. Sharp, Dr. L.M. Hanks, Dr. Kamol Janlekha, Dr. Robert Textor, Mr. Loebongs Sarabaya, Mr. Judun Kongsa, Mr. Aram Emarun, and Mr. Singto Metah. Assistance at various points was given by Dr. Charles Archaimbault, Dr. J. Ingersoll, and Dr. Herbert Phillips. Many insights also came from the members of the Wartenstein Conference of the Wenner Gren Foundation in 1959, in particular Dr. Robert Heine-Geldern, Dr. Kenneth Wells, and Dr. Siribongs Boonlong. The lifelong research of Phya Anuman Rajadhon permits this regional study to take its place in a larger scene. To all of these institutions and persons thanks are extended.

For the sustained friendliness and courtesy of the people of Bang Chan who made every visit happy and fruitful, the author is particularly grateful.

I am deeply grateful to Dr. Henry F. Dobyns for his kindness in seeing this paper through the final phases of production, to Dr. R.B. Jones for certain linguistic corrections, to Mr. Warin Wonghanchao for preparation of the glossary, and to Mrs. Marilyn Cartier for preparing the manuscript for printing. The paper was prepared for reproduction by the staff of the Comparative Studies of Cultural Change of the Department of Anthropology under Contract AID/csd-296 with the U.S. Agency for International Development.

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interest of improved maternal and child health, a few suggestions are made.

Purpose and Method

The purpose of this study is to set down the ethnographic data concerning childbirth in Bang Chan, following out the economic, social, religious, and cosmological aspects as needed to clarify the behavior and the psychological attitudes noted. The hope is that not only anthropologists but persons working in programs of maternal and child health will find the data useful.

The data were gathered from Buddhists and Muslims in Bang Chan by interviews and direct observation. Because Dr. Hazel Hauck, in the course of nutritional studies also made inquiries "from the standpoint of anthropological study rather than because of an assumed relation to nutrition or health" (1959:3) she first opened up the broad outlines of the subject. The author, with Dr. Saovanee as an interpreter of unusual competence, and Dr. Saovanee herself then pursued the subject further, including interviews at the Minburi Health Center and at Cha Choeng Sao.

A few comparative references such as to McFarland's dictionary and Phya Anuman's researches are given, but the focus is always kept on Bang Chan. Though many of the findings will have a certain pertinence in Bangkok, the fact that Kaufman found striking differences in Bang Khuat only 8 kilometers away shows how cautious generalizations must be.

The transliterations of Thai words are only approximations, based on the system promulgated by the Royal Institute of Thailand; the tones have been omitted. With the translation always adjacent and a glossary provided at the end of the volume, the author feels there should be little confusion. Proper names which are generally known in a different transcription are left in their familiar form. In referring to works by Thai authors western custom is followed but in referring directly to the authors themselves Thai custom is followed, as it should be in direct address.

843 farmers brought to the fields an offering of two kinds of
782 bananas (kluai hŏm and kluai namwā), sugar cane, taro,
776 young coconut and cakes; and fresh earth burned and offered with oranges and other kinds of fruit."[27] She was also given the things "dear to women": new clothing, perfume, face-powder, hair lotion and a mirror. In the
843 annual harvest ritual, when some woman (never a man)
776 escorted the Goddess from the field to the rice bin, participation was forbidden to a pregnant woman because
784 "the Goddess-Mother might be jealous of the woman's heightened beauty" and so be malevolent. Also, "being now emotionally weak and easily upset, a woman might be frightened by seeing the Goddess, who, after all, is close to being a spirit (phī).

843 The prominence of food cravings in this traditional
262 description leads to a consideration of diet in pregnancy.

Diet in Pregnancy[28]

As long as everything went well, pregnant women "ate as usual." The underlying premise was that each woman early in childhood had established a regular diet suitable to her individual make-up of elements, and eliminated foods that because they did not agree with her or were disliked, were judged "not compatible." A woman could eat as usual because the ordinary daily foods, rice, coconut, etc., were "safe." The modifications introduced to beautify and protect the mother and baby were made on the basis of the properties and

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27. The goddess was following traditional "defeated by one's pregnancy" (phaethong [Mc.F: 599]) symptoms of desiring "sour, salty, or strange things such as burnt earth." Like any woman, her craving for sweets indicated that a heavenly creature was to be born; for fruits, that she would bring forth an animal; for burnt earth, that the god Brahma would be born (Anuman Rajadhon 1961:115-116).

[114] 28. This section does not purport to present a dietary study in modern nutritional terms. Hauck's study (1958) of maternal and child health gives information on foods eaten, craved, disliked, or viewed as "good for" or "not good for" women during child-bearing, and also on illnesses found among pregnant women, including beri-beri, nausea, cramps, and fainting. The data here add to her information on behavior and stress traditional views as to the purpose of the dietary injunctions.

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775 Moreover, her life would some day begin again. Whether birth
844 was rapid or slow, the experience of the suffering deepened her sense of compassion and, as will be shown, brought her closer to fulfillment of her life role.[41]

Habit

153 If mutual help organized relationships, habit (khoei)
82 stabilized them. Khoei means "to be used to, accustomed to,
853 habituated." A first occurrence was an example and set the pattern for all subsequent occurrences. With one performance
[761] one was accustomed to an action. For instance, shortly after the temple was built 7 people died, deaths in Bang Chan "always occurred in pairs;" it was the temple's "habit." Moverover, "the head priest could never expel a priest because he had never done so." Again, a few women saw to it that during this period their babies were given a few grains of rice (even though they were far too young to be offered new rice regularly), so that "later on, if they got sick, they could always at least eat rice," for "they would be used
[171] to it." "Glutinous rice was not good for babies in Bang Chan, but in North Thailand [where it was a staple] it could be eaten because people were used to it." Someone had set the example which started the custom.

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844 41. Bang Chan's Buddhist phrasing of the meaning of pain and
154 death in childbirth seems to indicate that childbirth occurred
171 under psycho-cultural conditions that induced relaxation and reduced fear and pain. An "easy" delivery lasted 7 hours.
114 According to a modern medical theory, (Dick-Read: Childbirth Without Fear, passim) lack of fear of childbirth leads to mental and physical relaxation which in turn reduces pain and labor. Dr. Dan Bradley observed that labor was shorter among Siamese women than among non-Siamese. "Facts seem to prove that parturition is both shorter and easier to Siamese mothers than is usual to Europeans and Americans" (Bradley, 1865:79). We accept his first-hand observation because he had 40 or more years of experience in delivering babies, both Thai and non-Thai (missionary wives, etc.), and suggest that it may be taken as proof of mental and physical relaxation derived from lack of fear. Although the missionary women may have been frightened because they were in a far country, Dick-Read argues that fear of childbirth has long been present among American women and this fear has the effect of longer, harder labor.

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A major clustering of first experiences, and so of habit formation, was in intra-uterine existence. Every experience of the mother was shared by the fetus. After birth, a baby daily formed habits of eating, sleeping, and crying, and later, as a child, habits of respect, obedience, truth-telling, etc. To create good habits efforts were bent to control and ameliorate any first experience: to make it as correct as possible; to seek out favorable astrological moments; to ask auspicious, skilled, or learned persons to be part of the initial action. An example was the establishment of nursing. When the baby was put to the breast the first time, the objective was not nourishment but to establish a good habit, viz. copious and strong sucking from an ample milk supply. Only after this first nursing did breast-milk as nourishment become important. If on this occasion he did not nurse well, he would have the habit of eating poorly all his life. Moreover, whatever the mother's experience with her first-born, it would not only be repeated every time he nursed, but set the nursing pattern for all subsequent children she bore. For her first-born, though, a mother would have had no previous experience of making milk. She had to be taught, or shown, how to make good milk, just as the baby had to be taught to suck, and later taught to eat rice. Consequently, the first-born baby was almost always first nursed by another person (not necessarily a kinswoman) with copious milk. Then 2 or 3 days later, because the example had been set, good milk came in and the mother started nursing. What was to be avoided at all costs was a first suck of colostrum, which appeared to be "unfit, early milk" from an insufficiently lactating breast. This would be a poor precedent. Until a mother decided her milk was right for nursing, a baby subsisted usually on honey and water, and maybe a little crushed banana. If a woman were not satisfied with her nursing capacities for her first-born child, when the second child was born she might ask another lactating woman to give the baby a first nursing so as to improve her own habit.[47] One woman flatly said her own milk was always unfit as proved by her babies' health, so she used a bottle of (canned) cow's milk from the start. She felt she had the habit

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47. Bradley (79-80) felt that the dehydration attendant on lying by the hot fire significantly reduced the quantity and quality of the milk.

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FOREWORD

• 114 The research sector of the Cornell Thailand Project concerned with health, sanitation, nutritional status, and diet has been directed since 1950 by the senior author of this paper, Dr. Hazel M. Hauck, Professor of Food and Nutrition in the New York State College of Home Economics, Cornell [12] University. In this report, she and two of her colleagues present some of the results of a field research project designed by her and carried out by the authors among the rice farmers of the village of Bang Chan in the central plain of Thailand during 1952, 1953, and 1954. Professor Hauck's account of other aspects of this field investigation was issued in 1956 as Data Paper Number 22 of the Cornell University Southeast Asia Program under the title, Aspects of Health, Sanitation and Nutritional Status in a Siamese Rice Village. Since 1948, Thai and Americans have been working in the Bang Chan farming community to define some of the problems involved in changing peasant cultural behavior, including health and food habits.

While in the field in 1952-53, Professor Hauck began the arduous task of systematically collecting detailed data on the diets of a carefully selected sample of Bang Chan villagers. This work was continued during 1953-54 by Miss Saovanee Sudsaneh, the junior author of this report. Her assignment was a demanding one, for once begun there could be little deviation from an established schedule designed to cover diurnal and annual cycles in the preparation and consumption of food. Miss Saovanee together with a suitable companion had to sleep in the village, rise before dawn, and proceed during the dry season by foot, and by boat during the longer wet season to the homes selected for study. Some of these households were situated two or three miles from the Project's village headquarters. Only one could be visited in a day. All homes had to be reached well before pre-daylight breakfast preparations were begun so that equipment could be readied and preliminary observations made. After a year of this dawn to dusk visiting, Miss Saovanee retired to a more normal daily round of post-graduate study in nutrition at Cornell, where she received her M.S. degree in 1956, and at Harvard, where she is a candidate for the doctorate. She plans to return to Thailand to teach and do research in nutrition at Kasetsart University.

The necessary companionship for Miss Saovanee during her field work in Bang Chan, a companionship involving, of course, the same rigorous and taxing schedule, was cheerfully provided by Dr. Jane Richardson Hanks of Bennington College, the third collaborator in the preparation of this report. Dr. Hanks has worked with the Cornell Thailand Project since early

1953 as Research Associate in Cultural Anthropology. Her research in the field during 1953-54 and subsequently in the United States, which has been primarily concerned with various aspects of Thai family behavior, has enabled her to contribute valuable data and insights to the present report.

Lauriston Sharp, Director
Cornell Thailand Project

Cornell Research Center
Bangkok, Thailand
November, 1957

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122 For the period of her field study, 1952-53, one of us (H.M.H.) received an award for advanced research from the United States Educational (Fulbright) Foundation in Thailand. Another (S.S.), who was field worker with the Cornell Thailand Project during 1953-54, was enabled to come to the United States for graduate study through a travel grant from the same Foundation. She held an assistantship in the Southeast Asia Program at Cornell University 1954-55, and the Anna Cora Smith Scholarship for Research in Home Economics, 1955-56.

114 To their co-workers in the field, Dr. Anusith Rajatasilpin and Miss Sapha Indrasud whose services in connection [122] with the medical inspection were provided by the Food and Drug Administration, Bangkok, through the courtesy of its director, Dr. Yong H. Chutima, the authors express their appreciation.

Most helpful information concerning techniques which might be used in carrying out dietary studies was provided by Miss M. W. Grant of the Applied Nutrition Unit, London School of Tropical Medicine. Dr. Amara Chandrapanond suggested adaptations suitable to the local situation.

The transcription of Thai terms was checked by Mr. Marvin Brown. Dr. W. J. Dress assisted by checking the scientific names of food plants for which the authors had previously obtained identification. Many minor points were cleared up by discussion with Thai students in this country. The help of all these persons is gratefully acknowledged.

Most of all, the authors are indebted to the people of Bang Chan: to all who patiently answered their questions, to Khruu Sawad Sangtong and Khruu Yod Nakon who obtained diet records from children in the third and fourth grades, and especially to the members of the eleven households that participated in the quantitative dietary study. These people not only cooperated generously, but accepted us as friends. For their kindly assistance the authors are deeply grateful.

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INTRODUCTION

121 This study of food habits and nutrient intakes in a Siamese rice village was undertaken in connection with the Cornell Thailand Project. The project is one of several under the auspices of the Department of Sociology and Anthropology, which are focused on the process of cultural change
• 114 in non-industrialized societies. Dietary studies designed to contribute to a base-line description of the community were carried out from September, 1952 through May, 1954. Local headquarters, where members of the research group kept equipment, and could stay overnight, were maintained in the village.

128 The observations to be reported fall into two general categories: 1) descriptive information concerning many aspects of the food situation in Bang Chan and 2) quantitative information on food intake, and its estimated nutrient
126 value, for 11 selected families. Qualitative information on food in Bang Chan was obtained from several sources: 1) field notes made by various members of the Cornell research group, 2) structured interviews with mothers about their own food, and that of small children in the family, 3) records of food eaten during 24-hour periods, submitted by children in the third and fourth grades of the elementary school as homework for the health class, and 4) weighed dietary studies carried
114 out in 11 selected households. Quantitative information on food intakes was obtained from the latter source only. Most of the data to be presented were obtained between September 1952 and June 1954, but supplementary information was obtained from a diary for 1955, kept by a school teacher at the request of the research group, a study of innovations made by Ralis in May 1955 (Goldsen and Ralis, 1957) and information provided at our request by members of the Cornell research group who were in Thailand in the summer of 1957.

A general account of the economic, political and social organization of Bang Chan in 1948-49, together with some material on health and diet was given in the first interim report issued on the Thailand Project (Sharp et al., 1953). The second interim report concerned aspects of health, sanitation and nutritional status in Bang Chan in 1952-54 (Hauck, 1956), and the third was a report on factors related to acceptance of innovations (Goldsen and Ralis, 1957).

THE COMMUNITY

Location, Climate, Transportation

131 Bang Chan is situated in the rice-producing area of central Thailand, about twenty miles by road northeast of Bangkok.

What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the families, living in tiny separate cottages.[1] Usually with inadequate or no land, they earned an irregular income by hiring themselves out for farm or other work. At the other extreme, in a hamlet-like cluster of dwellings, lived a closely affiliated group of kin. A senior couple more or less headed the married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying home from school to do so. Where the adult cooperative group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

Plowing could be done by a man and wife, but for both transplanting and harvesting which had to be done within a few days, large groups were necessary. Two patterns of auxiliary group labor prevailed: reciprocal cooperative work, and hiring of labor.

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1. Janlekha, 1955, categorized families as 5% "one-person," 59% nuclear, 8% limited extended (including one or more parents of a spouse), 27% extended (including dependent married couples or other collateral relatives), and the temple residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

792 262 441 village offers of regular service, the holiday offerings, home invitations and sporadic gifts so that all priests had places to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut[1] or hardship.

792 794 262 About mid-July, Buddhist Lent changed the food habits somewhat. This three-month period corresponded with the height of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering, and thereafter the priests went regularly on their appointed rounds.

796 261 On Buddhist holidays, the people did not usually eat any of the food brought to the temple, but on (3)thaanaad (2)kaa-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bountifously.

792 857 262 Residing at Wat Bang Chan in 1954 were 22 boys, aged 10 to 16, sent to serve the priests, get their living and attend school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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792 262 737 235 1. Amounts of food given usually exceeded the actual needs of the priests and temple boys. One instance was noted in which food was sent by the priests to a needy old person nearby. Leftover rice was dried and sold for chicken feed.

114 104 2. The transcription used throughout this report is that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

252 a woman's" (Sharp et al., 1953, p. 88). For instance, the
462 husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was
252 sick or resting after childbirth. The ability of boys as well
867 as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had
252 (Hauck, 1953). Responsibility for food preparation increased
[383] with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a
[397] daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 Certain men of eminence, e.g. headmen and elders, would
554 not be asked to cook at all, but as they aged, they might re-
887 turn to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for
252 2 months because his wife had back trouble. Some dishes were
562 cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 A premium was put on good cooking, and certain women
261 who were noted for their cooking were in great demand for large
[868] scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 Food was commonly prepared twice a day, in the morning
264 and late afternoon. The meal pattern was the same for breakfast

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• 114 1. Suvarnakich (1950) described the Thai diet in a
262 general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

storekeeper: about 800-900 liter bottles per month during the 3 months dry season as compared to about 350 bottles per month during the 9 months of the rice season.

Moslems never served liquor at their weddings, cremations, and other auspicious events. Moslem residents occasionally attended Buddhist (l)ngaan in spite of dietary proscriptions that Buddhists did not observe.[1] A medium (spiritualist) commented however that because pig's head was essential for her homage-to-the-teacher rites, some Moslem sick persons preferred to go to the Buddhist temple for treatment. There the priest-practitioner could afford to set up a separate kitchen for his Moslem patients, and so spare them the distress of confronting pork. To one big ordination Moslem guests brought their own food. Buddhists came somewhat more often to Moslem ceremonies.

We do not have enough information to appraise the nutritional significance of food eaten at ceremonies. Some individuals got a great deal of it, others very little. One must remember that the (l)ngaan was not a public but a private event at home, to which guests came on invitation. Although cremations and the teacher-rites of priest-practitioners were held at the temple, and so had a semi-public character, no one who was not invited presented himself for food. Of the participants, the working group undoubtedly received the most food; they were there the longest time, had regular meals, tastings and snacks throughout the (l)ngaan meal itself. This group comprised the host, co-sponsors and their immediate kin; other relatives and friends who were asked or who volunteered to help. The feeling was, if one were "very fond" of the host, one volunteered to cook. If less close, one was invited as a guest, but made the usual cash donation. Sociable persons combining skill and energy were invited often and volunteered often, hence spent many days at ceremonies. Young unmarried men and women were asked and liked to be asked to work, for such occasions offered a great chance for fun and flirting.

Different degrees of participation may be estimated from Janlekha's (1955) figures for reported contributions ranging from 30 to 1000 baht in a year. Since a contribution of 5 to 10 baht per (l)ngaan was customary, the villager with the lowest reported contribution probably attended from 3 to 6 ceremonial occasions. Attendance at 100 or more (l)ngaan is unlikely, hence the villager who gave as much as 1000 baht probably made larger contributions per (l)ngaan.

What sort of persons or groups in the village were invited as guests? Every host's list included his older

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1. Moslems were said to resist army service because they were afraid they would have to eat pork.

184 On the basis of experience during the pretest, the ob-
125 server began the 24-hour period of observation with an unannounced visit in the afternoon, in time to see the preparation for the evening meal. This proved to have several advantages. A householder whose home had been visited at the evening meal, and who anticipated the observer's return before breakfast, could restrain the dog, if necessary; or the homemaker might postpone washing the rice until the observer arrived to weigh it. Without such cooperation on the part of the homemaker, our records would have been much less complete
[405] than they were. Since few village families had clocks, the time when the homemaker said she would start breakfast was always approximate.

125 Foods were weighed in both the raw and cooked states,
262 and foods given to priests, fed to animals, left over, etc. were weighed so that the actual amount eaten by the family could be calculated. Previously cooked foods included in the survey meals were weighed and raw weights estimated from information obtained in other observations. If possible, snacks were weighed. School children and others who ate snacks away from home were asked to report them to the obser-
128 ver, and weights were estimated. The guides prepared for
262 the observer are included in Appendix C, pp. 110-111. Data were recorded on the schedule, shown in Appendix C, pp. 116-120. and essential information such as the weights of food, after allowing for weight of containers, was later transferred to the shorter form shown in Appendix C, p. 121. As examples some of the data obtained on 3 of the 44 survey days are shown. Examples of notes on procedures in food preparation are included with these records. For examples of notes on the food intake of individuals see Appendix A, p. 97.

Calculation of Nutritive Value of the Diets

Figures from the original records were transferred to the Form for Calculating Raw Weights of Foods Eaten (Appendix C, p. 121), and the edible portion of each raw ingredient consumed was calculated by adjusting the gross amounts according to the use made of the cooked food and the number of family members present. Procedures followed are outlined in Appendix C, pp. 113-115.[1]

Few analyses of Thai foods had been made in Thai laboratories, and most of these were for proximate composition only. Therefore, data from other available sources were used. Since Handbook No. 34 of the United States Department of Agriculture "Composition of Foods Used in Far Eastern Countries" (Leung

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[114] 1. Many of the calculations were checked by Mrs. Mary Barkley Campbell, who made independent use of the data.

APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children. . . . . The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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1. In reproducing these notes, slight changes have been made such as substitution of descriptive terms for personal names which appeared in the original.

Notes on Tilapia Culture in Bang Chan

226 654 In 1952, the Thai government, at the suggestion of FAO, began to encourage tilapia culture. Fingerlings and some information on tilapia culture could be obtained from the Minburi district office, where a demonstration pond was maintained. Early in 1953, we learned from the records of the district officer that three persons in Bang Chan, two of them hamlet headmen, had obtained tilapia from this source. In 1953 the commune chief called a meeting in the village and explained the importance of tilapia raising. In May 1955 when Ralis conducted a survey in Bang Chan (Goldsen and Ralis, 1957), tilapia raising had been tried in nearly a third (31%) of the households, but was considered by 2/3 of the respondents to pay little.

The authors comment:

> From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply [434] rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months.

From the comments just quoted, tilapia culture appears to have been undertaken for the anticipated cash return. No [114] information was obtained by Ralis concerning the extent to which the villagers used tilapia to increase their supply of fish for home use. In the summer of 1957 members of the research group who visited Bang Chan found that no one was raising tilapia; they were neither a source of food nor of cash. Some indication was obtained that their flavor and texture were not agreeable. Clearly the attempt to introduce a rapidly growing but unfamiliar variety of fish failed in Bang Chan. An understanding of the reasons for this failure might help to prevent other costly failures in future.

Notes on Mushroom Culture in Bang Chan

177 244 Goldsen and Ralis (1957) commented as follows:

> Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per

APPENDIX C

Guides Prepared for the Observer Who Carried Out the Dietary Study

114 125 124 Preliminary Visit to Participating Households

Households selected for dietary study are to be visited in advance, acquainted with the procedure which we wish to follow, and asked for their cooperation.

The following points should be emphasized:

1) Meals should be prepared as usual both in amount and kind. Workers wish to know how much food and what kind, the family eats.

2) Each item of food which enters into the meal preparation will be weighed before cooking.

3) Each prepared food (as cooked rice, fried fish, curry, etc.) will be weighed when the preparation is finished.

4) Amounts of prepared food given to priests, fed to animals or left over, must be weighed, so that the amount of food actually eaten by the family can be calculated.

5) As often as possible survey members would like to be present during the meal, but will not accept food from the household.

6) Each member of the family will be asked to report to the survey worker what is eaten between meals. If the snack is eaten at home, it should be brought to the survey worker first, to be weighed. If the snack is eaten away from home, individuals are asked to tell the survey worker as clearly as possible what was eaten, and how much.

Preliminary information to be obtained at this interview:

1) Usual number of meals taken by the family at this season.

2) Usual time of meals.

3) Time when food preparation is started in the morning, and when evening meal is over.

The family should be told that the survey workers will come sometime during the next two weeks. They should not be told which day, as that might lead them to make some changes in their usual diets, either consciously or unconsciously.

114 The schedule of visits should be such that each day of
124 the Buddhist "week" will be appropriately represented, i.e.
125 the day before the holy day, the Buddhist holy day, and the 5 or 6 days which follow. Days of special festivals should not be included in the dietary survey, although the investigators should attend many of these, and record observations on the foods served.

Dietary Survey Proper: General Procedures, with Alternative Suggestions

Twenty-four hour period. - Each visit should cover a 24-hour period. After preliminary experience, a good plan seems to be to go in the early afternoon, in time to see the preparation for the evening meal, and to return early the next day, remaining until the 24-hour period is up. This plan has several advantages over making one's first appearance before breakfast:

1) The homemaker may be introduced to the procedure at a time when she is less hurried than she is apt to be in the morning, when she must have food ready for the priests at a fairly definite time.

2) Scales and other equipment may be left overnight, so that these need not be carried before dawn, along with food and water for the survey worker.

3) The risk that food preparation will be started before the worker comes is less if the homemaker expects the survey worker before breakfast.

4) If the worker's visit is anticipated, someone at the house will restrain the dog if necessary.

5) For the more remote households, arrangements can probably be made to stay overnight at the home, or nearby, without previous notification as to the exact date of one's visit.

Because the observer may leave in the afternoon before children return from school, she should ask about snacks eaten away from home on the first afternoon, so that record will be obtained of such snacks eaten on one day, though not necessarily during the same 24-hour period as the other meals recorded.

Number of Visits. - Aim to visit each of the 11 families once each 3 months, i.e. 4 times in the year. This means once during the cool season, once during the dry season, and twice during the rainy season, i.e. early and late. From May 25, 1953 to the end of April 1954 there are 49 weeks. In a schedule calling for one survey day each week, this would allow 5 weeks for unforeseen circumstances which might interfere,

114 or for planning time off because of holidays, celebrations, 124 etc. 125

Scheduling of Visits. - Plan to see the families in rotation, going to those in groups A and B on alternate weeks, so that seasonal variation in food supply will not be a major difference between the two groups. The survey worker must have in mind another nearby home, however, which might be visited if the original plan cannot be carried out on a given day.

The survey worker should not give advance notice of the exact day when she plans to come, unless the householder has specifically requested this. Even when notice is requested, it need not be long in advance, i.e. one could stop by in the morning and ask if it would be all right to come back in the afternoon to watch supper preparation.

Directions for Use of Schedule 8 on Which Data Obtained During the Dietary Survey are to be Recorded.

Most of the items in this schedule may be filled in from census information or by direct observation by the survey worker. The worker will need to enquire re item E. the makeup of the food consumption unit, and J 4, the cost of raw foods purchased. The survey worker should try to observe other items during the day, and fill in by inquiry, if necessary, at the end of the day. Note whether information was obtained by observation (ob) or inquiry (q).

A. Hamlet and house number should be written in from the census information, and should correspond to that on schedule 3 for the same household.

B. Each Household to be visited for dietary survey will be given a key number in advance. This number should be inserted here.

C. Head of household (from census information).

D. Religion. - Some dietary practices are associated with religion, therefore indicate whether the household is Buddhist or Islam by checking the appropriate space.

E. Composition of food consumption unit: List here all persons whose food is prepared in the kitchen which the observer is visiting. Note that all persons living in one household (i.e. at the same house number) may not belong to one food consumption unit.

F. Source and treatment of water. - Find out, by observation if possible, from what source or sources water is obtained for drinking and food preparation, at this season. Note

114 whether or not water is boiled or treated otherwise before
124 use.
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G. Garbage disposal. - While making the dietary survey, the observer should note what is done with garbage. Is edible waste given animals? Is garbage disposal carried out in such a way that it will not attract flies, etc.?

H. Protection of food against contamination. - The observer should note what means are used by the householder to protect both staple and perishable foods from contamination by insects and animals. If the householder's practices are not consistent, the observer should note this, either on the schedule, or in her note book. In the latter case, the schedule should be plainly marked "see notes."

I. Family member observed at meal time. - We have been unable to think of any plan for weighing foods consumed by individual members of the family without disturbing the customary eating procedures. The observer may be able, however, to get some idea as to how food is distributed in the family, by observing one person at a time, and recording her estimate of the individual food intake.

The person chosen for observation should be one of the family members who would be most vulnerable to an inadequate food supply, for example a pregnant or lactating woman, a young baby, a growing child or an old person. The observer should fix her attention on the person to be observed, throughout the meal, and should record as well as possible the amounts eaten of each type of food. Record amounts taken onto the plate, amounts left on the plate at the end of the meal, number of bites or spoonfuls of each item eaten a) directly from the serving dishes and b) after the food is put on the plate. Check your estimates of amount eaten by the person observed with reference to the total prepared for and consumed by the family.

From observations of this sort we hope to get information on questions such as the following:

1. When a child is said to eat all adult food, does this mean that the kinds of "with-rice" and the proportions of rice to "with-rice" are the same for him as for adults?

2. If a pregnant or lactating woman says she eats as usual except for the hot tastes, does this mean a) that she omits or decreases intake of peppery foods and eats no more than usual of other foods or b) that she omits or decreases intake of peppery foods and eats more rice and/or less highly seasoned "with-rice" items? In the case of a child, note carefully any remarks made by adults urging him to eat more of, or suggesting that he eat less of a given item.

114 J. Food preparation and consumption
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In the schedule, each column has a descriptive heading and a number. On the sheet used for calculating "adjusted consumption," the numbers alone are used.

1. Menu. Record title of meal as "breakfast" or "dinner" and time served. List all foods served at each meal, including leftover foods from the previous day. If foods left over from an earlier meal on the same day are used, note this fact, since weight of raw food, noted when the food was prepared can be used in calculation.

Raw ingredients

2. Kind. Note here the name of each ingredient, and any description needed, i.e. fat or lean pork, hen or duck egg, etc. Since rice is served at each meal the terms "home milled" and polished are listed here. Cross out the inappropriate one.

3. A.P. (as purchased) weight. Record here the weight of the food as it is purchased, or as it comes from the storehouse, garden or canal. If several food items are used in preparation of one dish, bracket these together.

4. Cost. For foods which have been purchased, record cost of the amount used. For example, if 3 fish were purchased for 1 baht, but one only was prepared at this time, record 33 stg. as the cost. If the food was produced at home, grew wild, or was received as a gift, note this.

5. Inedible refuse. Note weight of inedible refuse which is discarded during preparation. If the inedible portion is included in the cooked dish, weigh it later and record the weight in this column.

6. E. P. (edible portion). Add together all weights of inedible refuse for a given item to get the total for item 5. Subtract 5 from 3 to get this figure.

Note on weighing raw food: So far as possible, weigh raw food and inedible refuse on waxed paper (weight negligible) or in standard utensils (enamel plate, plastic bowl, etc.) the weights of which are known. Record: weight of A.P. food on utensil minus weight of utensil equals weight of food. For example, if rice is weighed in a plastic bowl weighing 90 g., and the total weight is 870 g., 870-90 = 780 (g. rice). The observer is less apt to make mistakes if she uses the same containers repeatedly, than if containers used are provided by the household, and vary widely in weight. The balances provided for weighing food are 3 kg./10 g. and 1 kg./4 g. Small amounts of food should always be weighed on the 1 kg. scale, since it is more sensitive than

114 the 3 kg. scale. If a number of items are used in small
125 amounts, weights may be approximated more closely if the items are placed one after another, on a piece of waxed paper, noting each time the added weight causes the indicator to move. Thus the red or green pepper alone might not weigh enough to affect the indicator, but these together with other green or leafy materials used (as lemon grass, coriander leaves and sweet basil) might weigh 8 grams. In a marginal diet, the contributions of such items to the nutritive value of the diet should not be overlooked.

Cooked foods. - For cooked foods, which must often be weighed in a container provided by the family, columns are provided for weight of dish (7), of dish plus food (8) and of food (9). For example, if rice is to be cooked in an aluminum kettle, weigh the empty kettle and record this weight in column 7. When the rice is done, and ready to serve, weigh kettle plus cooked rice, and record this in column 8. Subtract 7 from 8 and get the weight of food, to be recorded in column 9.

Use of cooked food

10. If food is given away, weigh dish and food before and after the food is offered, to get weight of food given away. Record the weights before and after and the difference, in column 10. Specify whether the recipient is priest, neighbor, relative etc. If inedible portion is included, note this and weigh it if possible.

11. Fed to stock. If inedible portion is given, note this and weigh it if possible. Specify if fluid only is given, or if part of the complete dish.

12. Edible waste. Specify if this is fluid only or a representative part of the complete dish.

13. Left over. Specify if this is fluid only or a representative part of the complete dish. Note if inedible portion is included and weigh it if possible. If you must leave in the evening before all family members have eaten, explain that you wish to weigh all left over food, and arrange to have it kept in separate dishes so that you can weigh it in the morning.

14. Food eaten. Weigh the pot or serving dish before and after the meal. At the end of the meal, weigh inedible portions left on plates or in the pot, and correct for those to get the weight of cooked food actually eaten.

15. Persons eating. Record here the number of persons in the consumption unit (item E) minus the number absent from this meal (x), plus the number of guests (y). Thus if there are 6 members of the family, one of whom is away, write 6 - 1 x + 5. Similarly if there are 6 members of the family,

plus a guest, write 6 + 1 y = 7. If one member of this family is away but a guest is present, write 6 - 1 x + 1 y = 6. In calculating, if the number of persons eating a given meal differs from the usual number in the household, the amount of a given food eaten is multiplied by a factor representing the number of persons in the household/number of persons present. Thus if a guest shares the meal in a household consisting of 6 persons, all of whom are present, the weight of each food eaten should be multiplied by 6/7 to get the "adjusted consumption," for which nutritive value is to be calculated. Similarly, if 5 only of the 6 members of the household eat a given meal at home, the weight of each food eaten should be multiplied by 6/5 to get the "adjusted consumption."

16. Methods of preparation. Describe the method of preparation clearly enough so that one who was not present could visualize it. Specify if soaking or cooking water is discarded. Note cooking time and appearance of cooked product when these give a clue as to probable nutritive value. Thus greens which are added at the last, cooked only a short time so that they retain their color, may be expected to retain a maximum amount of their vitamin C. Note type of equipment used.

K. Snacks. Record snacks eaten between meals on the separate sheet provided. Ask persons who eat snacks at home to bring them to you first, to be weighed. Question each member of the family about foods eaten away from home during the day, and record the kind of snack, description, and weight. (Estimated weights should be put in parenthesis, to distinguish them from observed weights.) If the snack was purchased, record the cost. Under "person eating" note the name of the family member who ate each snack.

From these data we hope to get an idea as to the nature and probable nutritive value of snacks, and whether these are eaten by all or most members of the family, or by certain ones only, as by the school children at recess.

NOTES ON THE PREPARATION AND NUTRITIVE VALUE OF COCONUT MILK AND COCONUT CREAM

252 The term coconut cream ((5)hua (2)ka-(4)thi), as it 262 was used in Thailand, referred to the product which was made by squeezing grated coconut with little or no addition of water. Coconut milk ((4)naam (2)ka-(4)thi) was made by squeezing grated coconut repeatedly with water. Coconut cream might be made first, and the residue extracted one or more additional times to obtain coconut milk. The terms coconut milk and coconut cream apparently are not used consistently. Losee (1952) commented on this when he described the preparation of coconut cream in Samoa, and said that it was sometimes called coconut milk. Miller et al. (1936), in describing the preparation of coconut milk said "If a thick cocoanut milk to serve over puddings, taro leaves, etc. is desired, 1/2 to 3/4 cup of coconut water or boiling water should be poured over 3 cups of grated coconut. . . . If the milk is to be used in curry sauce for chicken, eggs, shrimps, or in cornstarch pudding, a larger quantity of water (1 to 2 cups of water to 3 cups of grated coconut) may be used."

126 In carrying out the dietary study, the observer weighed the grated coconut meat, the residue and the final products, coconut milk or cream, or both. She did not weigh the water as it was added in successive portions, but the amount of added water could be calculated.

196 The ratio of coconut milk to meat varied considerably, 262 but on the average, households in Group A obtained coconut milk which weighed more than eight times as much as the coconut meat from which it was made. Households in Group B obtained less than 2½ times as much milk by weight as coconut meat. The number of extractions made varied from 2 to 6, 196 with a mode of 3. Obviously, the products made by Groups A 171 and B, although both called coconut milk, had markably differ- 262 ent percentage composition, and neither was similar to "coconut milk" for which values could be found. These values were as follows:

Authors	Location	Coconut milk grams per 100 gm. E. P. Pro.	Fat	Carbo.
Bocobo et al.	Philippine Islands	3.6	33.2	38.4
Food and Drug Division	Thailand	3.52	34.75	1.52
Miller et al.	Hawaii	4.0	27.0	18.91

1. Personal communication

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
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FOREWORD

In this Data Paper, Professor Hauck and her associates continue their analysis and reporting of the field research into conditions of health, sanitation, nutritional status, and diet carried out in Thailand during 1953, 1953, and 1954. Research operations were concentrated among the 300 households of the village of Bang Chan, whose population of about 1,700 was made up primarily of rice farming families. This community lies in the central plain of Thailand some twenty roadmiles northeast of the capital, Bangkok, whose proximity provides major and continuing stimuli to cultural change. Investigation of the processes involved in changing cultural behavior in rural Thailand is the primary objective of this and other field research conducted under the auspices of the Cornell Thailand Project.

Reference to earlier reports by Professor Hauck and her associates and to other materials providing general background information for this study will be found in the bibliography included in this interim report. Dr. Hauck, who is Professor of Food and Nutrition in the New York State College of Home Economics, Cornell University, designed and supervised the research on basic problems of health in Bang Chan reported on in this and in the other studies cited. Of the other contributors to this present report, Dr. Asmith, who has been working in the Medical School of Tulane University, is associated with the School of Public Health in Bangkok, and Dr. Saovanee, having completed her doctoral work in nutrition at Harvard University, has returned to Thailand to join the faculty in home economics at Kasetsart University. The Cornell Thailand Project is much indebted to these scholars and to other Thai and American collaborators who have contributed so much to the studies of Bang Chan.

Lauriston Sharp, Director
Cornell Thailand Project

Ithaca, New York
November, 1959

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
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ACKNOWLEDGMENTS

• 114 For the period of her field study, 1953-53, the author
122 received an award for advanced research from the United States Educational (Fulbright) Foundation in Thailand.

The author wishes to express her gratitude for the assistance of her Thai co-workers: Dr. Anusith Rajatasilpin and Miss Sapha Indrasud, whose services were provided by the Food and Drug Administration, Bangkok, Thailand, through the courtesy of its director, Dr. Yong H. Chutima; and Miss Saovanee Sudsaneh, who served as field worker with the Cornell Thailand Project during 1953-54.

114 In connection with their graduate study at Cornell, Sylvia de la Paz summarized the observations on feeding practices of children from birth to two years, and Barbara J. Smith summarized data obtained on growth in height and weight of infants and small children in Bang Chan.

123 The author is particularly grateful for the interest and friendliness of the parents, especially the mothers of Bang Chan. They patiently answered our questions at each visit and reassured the small children who seldom saw strangers and who were unused to being weighed and measured. Without their generous cooperation this study would not have been possible.

[p. vi is blank]

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
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GROWTH IN HEIGHT AND WEIGHT OF INFANTS AND YOUNG CHILDREN

Evidence on growth in height and weight of Thai is scant. So far as we have been able to learn, all available studies have been cross-sectional. We, therefore, undertook, in the limited time available, to make longitudinal studies of growth of infants and small children and elementary school children in Bang Chan. Observations on the latter were summarized by Thorangkul (1957) and those of infants and small children, by Smith (1958).

In general Thai children of elementary school age are shorter and weigh less than Western children of the same age. Heights of children in the Bang Chan elementary school were, on the average, less than mean heights for Thai children given by Dr. Yong Chutima (1939), and they were much below mean heights at various ages from charts (class II) in use at the Department of School Hygiene, Bangkok. Mean heights of adult men and women in Bang Chan were slightly below those recorded by other observers who have measured groups of Thai men and women (Hauck, 1956). Without further study one cannot say whether the short stature of Thai as compared to Western peoples is due to inheritance, environment, or both. Nor do we know why school age children and adults in the rice producing village of Bang Chan were, on the average, somewhat shorter than their counterparts in Bangkok only 20 miles away.

Thorangkul (1957) found that although children 7 to 14 years of age increased in height in successive 3-month intervals, a large proportion of them failed to gain weight or even lost at times and that such failure to gain occurred in more children during the dry season than during the wet season. The reason for this was not apparent from our observations. Two possible explanations are: 1) use of untreated canal water may lead to heavier infestation with intestinal parasites in the dry season and 2) leafy vegetables are almost lacking, and other vegetables are in short supply at this time. One would expect the temporary shortage of vegetables to be reflected in growth failure only when the diet is borderline in respect to some nutrients as it appears to be in Bang Chan (Hauck et al., 1958; Hauck and Sudsaneh, 1959). Either of the possible causes suggested might affect the nutritional state of other family members as well as elementary school children. All those drinking canal water and eating "adult foods" could be affected directly, whereas infants who are still largely breast fed might be affected indirectly through the quantity and quality of mother's milk available to them.

In this section observations on the growth in height and weight of infants and small children in Bang Chan are presented.

4:Phillips E-4,5 (1956-1957) 1966
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Introduction

The purpose of this study is twofold: (1) to provide a basic description of 121
the dominant personality traits of the adult members of a Central Plain Thai community; and (2) to demonstrate a procedure for dealing with many of the methodological problems, theoretical and technical, that are encountered in cross-cultural personality research. The primary data are observational materials and the responses of 111 Bang Chan villagers to a Sentence Completion Test, a so-called "projective technique."

Several considerations have prompted this work, its planning, emphases, and aims.

In 1955, when I participated in the preparation of a sociological hand- 122
book on Thailand (Sharp *et al.* 1956), I had the task of writing a descrip- 114
tion of the "social values and personality patterns of the Thai," using as sources all available materials in the English language. These sources consisted largely of the writings of travelers, businessmen, and government servants who had worked in Thailand, the comments of introspective Thai, and some preliminary ethnographic studies (R. F. Benedict 1946, Embree 1950, Sharp *et al.* 1953, deYoung 1955, Kaufman 1955, and unpublished field notes of the Cornell Thailand project). It quickly became apparent that these documents—written originally for purposes quite removed from those of psychological analysis—could provide little more than cursory impressions or intriguing clues to the psychological functioning of the Thai, and that a focused, systematic study of Thai personality was a problem for future research. The account that finally emerged from my review of the literature was hardly more than a vocabulary for describing some of the stereotyped forms of Thai social interaction: politeness, the maintenance of a stoical mien in stressful situations, the love of fun, and the like. Although worthy of note, such a lexicon obviously did not represent a thorough or intensive portrayal of Siamese personality. It was 121
with the aim of redressing this situation, therefore, that in the winter of 1956 I undertook a twenty-two-month field research project, a major portion of which is presented in this monograph. Since the research concerns

4:Phillips E-4,5 (1956-1957) 1966
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continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959b: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express relatively enduring psychological commitments. These are the nuclear family;

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home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

4:Phillips E-4,5 (1956-1957) 1966
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bringing them into the world; of helping siblings because of the kind things they have done; of loving children so that they will care for them when they are old [11]—but they do condition how and when such sentiments will be expressed. It is difficult to recall any instance of a Bang Chaner being caught in a situation of which *he was aware of* a conflict between satisfying his own desires and fulfilling his obligations to kin, so it is difficult to say which sentiment would ordinarily take precedence in his own mind; but to an observer, it would seem that the former would most likely have priority. (See Hanks and Phillips 1961 for evidence in support of this point.) [12] Actually, most villagers seem eminently successful in keeping the sentiments apart, which helps to account in part for the "centripetal" forms of kinship arrangement referred to earlier. Self-interest is of course not the same as selfishness, and when circumstances and inclinations permit, Bang Chaners can become among the most generous and hospitable of people (and in no sense paradoxically). Rarely have I seen, for example, people derive so much genuine pleasure from doing favors for others. In fact, these are among the first things that one notices about them: free agents helping others—but also ignoring them—when they see fit.

[11] This phrasing here in terms of *reciprocal benefits* is in the villagers' idiom, not mine.

[12] It is not insignificant that nowhere in Thai folklore does one find a recognition of possible conflict between the motives of self-interest and family obligation or of any moral lesson to be drawn from it; that is, there are no stories of a parent sacrificing himself for his children, or of children for their parents or, for that matter, of any moral value at all in self-sacrifice. On the other hand, one does find stories of individuals in conflict over which of two self-satisfying alternatives to select. In *Khun Chang and Khun Phaen*, for example, Wan Thong, the inconstant lover, could not make up her mind between love and wealth, and eventually was slain because of her indecision, the moral being that the person who cannot make up his mind deserves nothing.

On a more realistic level, one rarely finds anyone in Bang Chan being condemned for self-interest—the mother who abandons her children or the gallivanting husband—although one very frequently does encounter sympathy for those who suffer, the sympathy being elicited by the person or the fact of suffering, not the cause. The majority of Bang Chaners generally consider the motives of the self-interested party as the person's own business. This concern with sympathy (*soysaan*) for those in difficulty, and simultaneous indifference to the source of their problem has deep roots in Buddhist doctrine and should not be glossed over.

To have compassion (*mettaa* and *karunaa*) is among the noblest of Buddhist virtues. It is at one time a kindly expression of concern with others and a recognition of—or coming to terms with—what is considered intrinsic to the human situation. "Life is suffering" is the first of Buddhism's Four Noble Truths. However, since such suffering is intrinsic, there is little to be gained by assigning blame for it. Equally important, villagers assume that a person who suffers may well have brought it upon himself. The other person, acting in his own natural self-interest, may have simply been an agent or catalyst. His motives are his own business because they will eventually contribute, for better or worse, to his own denouement. The dynamics of these attitudes are discussed in detail in the next chapter.

4:Phillips E-4,5 (1956-1957) 1966
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to choose, even if in this case it was seemingly to his own detriment—he knows what is best for himself. Even the incompetent, helpless infant is an independent soul with his own will and right of determination, and his dignity must be respected.

It must be recognized of course that in the cosmology of Bang Chan the infant is anything but a conative *tabula rasa*. When he enters the world of human beings he brings with him not only a stock of individually accumulated merit (*bun*) and demerit (*baap*) from countless previous lives which will affect his being in this one, but also a host of other forces which predetermine his character: his *khwaan* (soul-stuff), *winjaan* (psycho-biological motive power), *caj* (heart), and *nidsaj* or *ʔupanidsaj* (ingrained character), among others. (J. R. Hanks 1959 has a brilliant exposition of the role of these elements.) In a very real sense the infant enters the world of humans as a developed, or partially developed, psychological being. Human influences, particularly virtue and "good habits," can be inculcated into him, but they are ultimately limited by these pre-natally determined characteristics. Much of Bang Chan child rearing is actually a series of perpetual compromises between (a) parents surrendering to what they think are the child's predetermined traits (and while this represents an extraordinary respect for his infantile individuality, it also leads in a developmental sense to much of the solipsism to which we have been referring throughout); (b) parents trying to come to terms with, or overcome, his preordained characteristics by inculcating good habits through example, coaxing, and whipping (the three modes of socialization, in order of priority, although villagers are more prone to talk about whippings than actually give them; most are too tenderhearted, and the rare whipping is almost always the result of sudden rage); and (c) leaving the child to his own devices. The third differs from the first in that it focuses on the parent's concerns rather than the child's and indicates indifference rather than respect. Thus, in contrast to the illustration above, one constantly sees children, generally under eight years of age, "annoying" conversing adults (primarily by making noises, although not necessarily to get the latter's attention) to which the parent responds with continuous but intermittent "tsk, tsks." The adult never raises the volume of his admonition, never gets increasingly disturbed, and eventually gives up while the children continue on their merry, noise-making way. The parent's lack of genuine concern and compulsion is not lost upon the child. Although events of this type are not overly noticeable in Bang Chan—precisely because they occur in such an easygoing and unremarkable way—they do take place repeatedly, and represent one of the principal interactional themes of the parent-child relationship. Children learn quickly that although parents will go through little ritualistic forms of controlling them,

4:Phillips E-4,5 (1956-1957) 1966
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tions are more penetrating, but in these instances he works himself into the more serious problem of interpreting overt behavior without examining the meaning that it has for those who are experiencing it. Thus, in discussing pedicab drivers' relationships with the police, he asserts that the drivers need closer police supervision because they lack strong inner controls. He argues that when they get out of control, they "go all the way," and try to get away with as much as they possibly can, particularly with regard to traffic and license regulations. Textor's *description* of the overt behavior of pedicab drivers and police is accurate, but what is not shown in his *interpretation* is that for a Thai there are, in the relations between authority figures and subordinates, several *other* considerations that take precedence over the need to observe regulations: that authority figures should be benevolent and helpful, rather than demanding; that one tries to avoid placing others, especially subordinates, in embarrassing situations; that in most interpersonal situations, Thai have an extraordinarily high tolerance for deviation from the rules, regardless of the confusion that may ensue (as the most superficial observation of Bangkok traffic would demonstrate). Textor's recommendation in fact flies in the face of these more deeply-rooted norms and expectations. Despite these various shortcomings, Textor's study is an interesting and readable commentary on some of the social psychological dimensions of culture change in Thailand.

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Together with Benedict's study, the papers by Hanks and Phillips (1961) and Phillips (1959) represent the few excursions made into the analysis, as contrasted simply with the description, of Thai personality. The article by Hanks and Phillips is a discussion of a portion of the life-history and projective test responses of a young Bang Chan man, focusing on the events leading up to his marriage, his motives for getting married, and the psychological complications that this event entailed. Emerging from the informant's account was evidence pointing to two related areas of psychic tension: (1) a conflict between the informant's desire for independence, based on the expectation of becoming master of his own household and establishment, and the necessity for him to make himself dependent on others, his social superiors, as the very means by which to achieve this end; and (2) a conflict between the desire for the security provided by these individuals and the fear of expressing his hostility toward them when they, involved with their own concerns and never completely independent themselves, are unable to fulfill his untoward demands. The informant resolved these predicaments simply by continuing his demands on others but ignoring any psychological obligations he had toward them. The behavioral implications of this resolution are summarized in the article's final paragraph (655–656):

> From this vantage point, the Thai personality stands more encapsulated, alone, and isolated than the Chinese. Thai resist strong affiliation

4:Phillips E-4,5 (1956-1957) 1966
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114 157 156 as do rejected lovers who fear suffering again. Without strong bonds, they develop no sense of guilt for those they injure and stand ultimately responsible only to themselves, individuals among individuals who differ mainly in the amount of influence they wield. Thus Dang [the informant] can make demands of others but feels little obligation toward them. As he left his father and uncle with scarcely a second thought, so others can leave him. Of course, as was indicated by Dang's projective test data, this form of individualism is not entirely without its psychic toll. But on the level of action and conscious decision, the moral for a Thai runs: invest not thy love in a shadow.

114 156 155 866 The piece by this writer (Phillips, 1959) is essentially an amplification of some of the findings of the above paper and a confirmation, in the life histories of two other informants, of their typicality. The paper was confined to an examination of the development and expression of the needs for dependence and independence in the lives of these villagers. Three major points emerged from the analysis. First, the most common expression of dependence was in the area of subsistence and economics, in the individual's desire to attach himself to others who would give him sustenance in return for services rendered. Over and over again, the informants viewed their relationships with other people, particularly kin, in terms of the others' economic value to themselves. However, this mode of dependence was not so much an overriding compulsion as it was a basic postulate about human relationships: the measure of another person's love was explicitly [581] the degree to which in material terms he served the self. The second point, in contrast to the above, was that marriage was seen as the means by which a person could free himself from the obligations of economic dependence. This freedom has two aspects: freedom from the frustrations caused by others; and freedom to set oneself up as master of one's own household, thus reaping the psychological satisfactions—status, power, and prestige—of having others dependent on oneself. The third and perhaps most striking point concerned the fact that all these informants spent their childhoods being shuttled from one family to another. Although this experience may not have been culturally modal, it occurred with sufficient frequency to be a possibility for every Bang Chan child. It was further suggested that in [571] part such experiences taught villagers at a very early age that they had to fend for themselves, and that the experiences served as psychological prototypes for the sense of fragility of social relationships that is so characteristic of village life.

114 124 In contrast to most of the literature cited above, the last two articles are based on data which are products of interviews heavily weighted toward the psychologically expressive. Two of the informants admitted that they told us things that they had never shared with anyone, and the agitation (a

4:Phillips E-4,6 (1956-1957) 1966
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non-histrionic agitation) [5] with which they reported some of their experiences suggested that this was indeed the case. I mention these considerations because the kind of material to come out of the interviews was perhaps not what one would expect from typically affable, easygoing Thai peasants. However, it must be recognized that the material focused only on the private sector of their lives, and indeed a very narrow area of this sector. Thus, although the articles may have been more analytic than previous efforts, they were also considerably more limited in scope.

I have attempted above to describe and evaluate almost all the available literature on Thai personality. There are a few additional sources which might be cited (Ratanakorn 1955, Boesch 1956, Mosel 1957), but their major concerns seem so tangential to our present purposes that it would add little to discuss them. By way of summary, the following points should be noted. The Thai language psychological literature is for the most part an unself-conscious, non-analytic folk literature, and as such is a rich source of data rather than a source of ideas on Thai personality. Illustrations of the value of the literature as data were provided in the text. However, since these data are primarily the product of an urban literati it is difficult to determine precisely to what extent they are also descriptive of peasants, although many of the traits reported seem apposite. There are no psychologically oriented Thai language essays dealing exclusively with villagers. The English language literature tends to be more analytic and broad-ranging in its concerns. Excluding Tirabutana's autobiography, these efforts seem to fall into one of three categories: (1) itemizations of manifest traits with little attention given to the psychodynamics involved (Thai psychologist, Phillips in Cornell Thailand Handbook, Textor); (2) sensitive psychological reflections on incomplete or specialized ethnographic data (R. F. Benedict, leMay); and (3) analyses of a limited set of private psychological issues from a few informants. (Hanks and Phillips, Phillips).

Psychological Dimensions of Village Interaction

Most personality portrayals proceed either by discussing how people behave in terms of a specific set of analytic issues, such as aggression,

[5] This is important simply because when opportunity permits—and the life-history situation is clearly such an opportunity—villagers love to tell a good story: full of histrionics, feigned exaggerations, and emotional flourishes. However, our informants were not given to theatrics during the interviews; on the contrary, they tended to tell their stories with an almost poignant seriousness. The fact that we were the first people ever to take such a direct, personal interest in them as individuals played a crucial role here. Being asked to reveal for the first time how they felt about their early lives, their families, and themselves was cause not only for pride but trust, and they often used the interviews as a way of unburdening themselves.

4:Phillips E-4,5 (1956-1957) 1966
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571 as a release mechanism from boredom or tension (Riesman and Bloomberg
154 1957, Roy 1959–1960), as a "healthy" escape from reality (Flugel 1954,
52 Bateson 1954), or as a normal and desirable regression to childhood pleasures (Freud 1905 and 1928). Running through all these observations is the obvious Western bias that play somehow is divorced from, or a reaction to, the harsh facts of social reality.[9] On reflection, however, it is clear there is no theoretical necessity, either maturational or social psychological, for play to be limited to cathartic functions, or for regarding it as a less realistic or less mature psychological state than that which causes boredom, tension, escape, or regression. In fact, one might logically argue that the conditions which create the latter states are less realistic and immature because they represent retreats to forms of infantile masochism. Such questions of course belong to the realm of interpretive debate. The essential point is that in the process of learning to adapt to the social psychological realities of one's culture there is no inherent, ontogenetic requirement (other than that imposed by the peculiarities of one's culture) for human beings to renounce their motivations for play. Simply stated, having fun need not be so much a retreat from or defense against adult reality and responsibility as it is something to be sought after for its own sake.

121 The fundamental analytic issue here may well be whether play is a
154 psychobiological "given" of the human animal, on the same order as
52 hunger, sex, and other precultural needs, or a learned, secondary cultural

[9] Of these various interpretations, the most broadly conceived and carefully argued is Freud's, where play activities are linked theoretically to the interrelationships of the id, ego, and superego and the aims of the "pleasure principle." However, even here Freud was caught up in the Western cultural bias that only children, those who have not yet had to come fully to terms with social reality, could easily "afford" the luxury of play. This same cultural bias often appears at a totally different interpretive level in the rather crass pronouncements of journalists and travelers who, in writing about the Thai, refer to the "child-like" behavior of these people who spend so much time, energy, and money in having fun.

[114]

Radcliffe-Brown's famous essay on the "joking relationship" (1952) is of course a special sociological case of the "tension release" function of play. In a brief paper, Keesing (1960) lists some seven overlapping functions of play, but here too play is seen largely as divorced from "everyday 'reality' activities." Callois (1958) brings together valuable cross-cultural data in what is otherwise a classification of organized games.

Probably the most comprehensive study of play ever written is *Homo Ludens: A Study of the Play Element in Culture* (1938; English translation 1950) by the late cultural historian, Johan Huizinga. Although Huizinga is concerned mainly with structured play activities (games of skill, chance, guessing games) and with the relationships between play and ceremonials, one of his observations is worth noting: "Nature, so our reasoning mind tells us, could just as easily given her children all those useful functions of discharging superabundant energy, of relaxing after exertion, of training for the demands of life, of compensating for unfulfilled longings, etc., in the form of purely mechanical exercises and reactions. But no, she gave us play, with its tension, its mirth, and its fun. Now this last element, the *fun* of playing, resists all analysis, all logical interpretation. As a concept, it cannot be reduced to any other mental category. . . ."

4:Phillips E-4,5 (1956-1957) 1966
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521 The sociological context of a story-telling is probably what is most
522 important here. Bang Chan is a community where other than cultivating
538 the single rice crop and attending to daily household chores and religious activities, the villagers realistically have little else to do but talk to each other. This is clearly not an inevitable attribute of the peasant condition, but it is true of Bang Chan where little attention is given to such creative leisure activities as craftsmanship, music, and art, and where there is little occupational specialization. In fact, probably more time is given to gossiping than to any other single waking activity except daydreaming. Bang Chaners talk of many things, serious as well as lighthearted: the price of rice, religion, gambling, the doings of "big people," family disputes, and the like. However, by far one of the largest segments of their total conversational repertoire is given over to "funny" stories. Of course, no story is ever *exclusively* humorous in nature; all communication is inherently multidimensional, and even the funniest story has a substantive, non-humorous message. However, if stories may be judged by their behavioral effects (laughter) irrespective of their intellectual content, then the function of a major part of Bang Chan gossip is amusement.[10]

538 The motivations for the selection of banana peel type stories are more
154 complex. In part, the choice seems prompted by a "there but for the grace of God go I . . . " mentality. As suggested earlier, Bang Chaners have a keenly developed sense of the possible: to them, this is a world where anything, not only the probable or the predictable, can happen. The banana peel story, with its emphasis on the painfully ludicrous and extreme, is a perfect representation of such an uncertain world. Its beauty is

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[123] [10] During the early stage of field work, I attempted to do systematic naturalistic observations of these gossip groups. The purpose was simply to identify the kinds of
[114] topics uppermost in the villagers' minds and the modes of interaction that most frequently developed during the sessions; it was hoped that the latter information might
[126] be related to the psychological test materials of the discussants. As a precisely designed and executed project, the effort, however, was dropped after a short time. For one thing, it was too difficult for two observers to record the *simultaneous* verbal and kinesthetic interaction of *several* people without the aid of a self-powered tape recorder and with the added burden of having to strain the material through the translation process. The task was further complicated by the fact that the membership of these groups continually changed as people would leave and enter the conversations. Also the groups would often break down into smaller sub-groups. Most important was the sheer multidimensionality of the conversation: any one utterance could simultaneously be funny, aggressive, boastful, carry practical information, etc. However, enough information was culled from these early attempts and later less ambitious ones to prompt the statements presented here. It is this writer's observation that one of the reasons behind the success of so much of the "small group" research conducted in the United States is that the groups studied have been *problem solving* or *task-oriented*, rather than simple gossip groups. The highly functional nature of the former has provided built-in constraints on the freedom of action permitted the discussants, and has made observational problems comparatively easier to deal with.

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given were equally oblique. Although I never really overcame my feeling of helplessness in dealing with such situations, I did manage over a period of time to communicate to those in my employ the appropriateness (at least regarding our own particular relationship) of giving me fair warning, *e.g.*, "Europeans are different in this way."

Again, there is nothing extraordinary or unique about personal desires and inclinations intruding on the stability of an interpersonal relationship. However, what is unique to Bang Chan and Thai culture in general is the frequency of such intrusions, the extent to which they take precedence over the responsibilities of the established relationship, and perhaps most important, their general expectability. No Bang Chaner is ever taken aback when another does not fulfill his assumptions about how that other will behave. Note that these intrusions may have little effect on the face-to-face contacts existing between people. My assistant's declaration that he was going to the movies was presented in a most affable way and in the other examples cited, where people were left in the lurch, there need not have been any contact whatsoever between the parties involved.

Reference was made to these modes of relationship in the section on Bang Chan social organization and kinship. However, they received their first formal, and perhaps most elegant, formulation in a now famous article entitled "Thailand—A Loosely Structured Social System," by the late John F. Embree (1950). Embree's application of the notion of "loose structure" was mainly descriptive rather than analytic; it was used to summarize a wide variety of empirical materials. Thus (182): "The first characteristic of Thai culture to strike an observer from the West, or from Japan or Vietnam is the individualistic behavior of the people. The longer one resides in Thailand the more one is struck by the almost determined lack of regularity, discipline, and regimentation in Thai life. In contrast to Japan, Thailand lacks neatness and discipline; in contrast to Americans, the Thai lack respect for administrative regularity and have no industrial time sense." After providing an extensive series of examples—on the lack of binding filial piety, on the tendency to permit a thief to steal from a neighbor's house without raising an alarm or attempting to stop him, on the capacity to delay and double-talk those with whom one has business dealings, Embree concludes (184): "The point here once more is that . . . while obligations are recognized, they are not allowed to burden one unduly. Such as are sanctioned are observed freely by the individual—he acts of his own will, not as a result of social pressure."

While Embree's formulation is by definition phrased in social structural terms, it inevitably directs our attention to an underlying motivational issue: the nature of the villagers' dispositions to conformity. Conformity to the expectations of others—whether such expectations are shared, comple-

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mentary, or emergent—is of course a basic requisite of all effective[19] social action. It is perfectly clear, as was demonstrated in the earlier discussion, that Bang Chaners are highly motivated to conform while in the direct presence of others. Often there is over-conformity when in such situations villagers become overly solicitous to what they think are the needs of others. However, the hallmark of Thai social relations is that there never is any certainty that such face-to-face contacts will take place, or if they do take place, that the conformity which exists during the direct encounter will be sustained once the contact has ended. The overriding inclination of the Bang Chaner is to separate the encounter itself from that which precedes or follows it; psychologically, they are independent and unrelated experiences. The typical Bang Chaner excels at the art of indicating agreement with people—responsiveness, coöperativeness, and compliance with their verbal requests and orders—and then once the situation has been concluded, doing precisely what he wants, often the exact opposite of that to which he had agreed.[20]

Ordinarily, this is not intended as a form of duplicity. Villagers are quite sincere (and probably correct) when they say: "People are much happier when you agree with them and tell them what they want to hear." Too, the behavior is explained in part by the fact that most villagers feel they can change their plans and intentions with impunity at the slightest provocation. Unfortunately, the other persons involved may not be informed of the change until it actually occurs. A Bang Chan employee who

[19] The term "effective" is inserted here to acknowledge that social action is just as likely to be characterized by ambiguity, confusion, and misunderstanding—the absence of clear expectations—and that in some cases (for example, greeting rituals) it is oriented mainly to *discovering* patterns of expectations. Further, insofar as such action occurs through time, it is never completely free of a minimum of both ambiguity and certainty: the ambiguity of not being able to anticipate what might next occur; the certainty of knowing that what does emerge has *some* relationship to what has gone before.

[20] Bang Chan and Thai culture in general evidently are not the only places in Southeast Asia where one finds these modes of response. Addressing himself to a rather different issue, Geertz (1956: 155), writing about the social attitudes of Javanese peasants, notes: "Now, as in the past, the central government and the *prijaji* [aristocratic, learned, upper class] outlook which justifies it sits unessily in the general social context of Javanese peasant society, with much less actual control over the behavior of the villager than it would seem at first glance to have. Without the intricate ties between the rural and urban gentry one finds, for example, in China, or without the deeply rooted clearly defined, land-rights-linked social code of reciprocal obligations of feudal Europe, the *prijaji* has always found outward submission, exaggerated respect, and placating excuses easier to obtain from the *abangan* [traditionally oriented peasants] than actual obedience." This passage, of course, was concerned with the nature of the Javanese authority system rather then with more generalized patterns of interpersonal response. Whether Javanese respond in the same way to fellow villagers and to other social equals is unclear. However, the stylistic similarities between Thai and Javanese peasants are striking.

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Chan. However, there remains the crucial question of how villagers manage to develop the long-term relationships that they do have, for despite the inevitable unpredictability of all human contacts, most Bang Chaners do live together in family units for more or less sustained periods of time, fathers do save for years in order to give their sons respectable ordinations into the monkhood, relatives and friends who have not seen each other since childhood do assemble for the cremation of a late kinsman or mutual friend, and mature adults do continue to feel a profound sense of respect and obligation to individuals who were their teachers when they were youngsters. What are the bases and rewards for these enduring interpersonal commitments?

The immediate rewards for these commitments are, on the one hand, quite apparent. They involve such things as the simple, unrationalized kind of love found among any group of kin or close friends. In the case of the ordination and cremation, there is the reward of making merit, not only for the son and the departed soul, but for all those who sponsor and participate in the ceremonials. The satisfactions gained from increasing one's social prestige by putting on an ostentatious ceremonial are not to be overlooked either. At a more subtle level in the case of the respectful student, the reward is gained from knowing that one is behaving in a proper and courteous way toward one's *aacaan* (in its social psychological connotations, similar to the Indian term *guru*) and is thus upholding established normative patterns. The rewards of maintaining the rituals of the moral order are not to be glossed over for Bang Chaners, like most Siamese, are a deeply ethical people. This is not meant as an evaluation of their behavior or as a statement of their capacity to conform to their ethical prescriptions, but simply as a statement of their preoccupation with ethical concerns. The rewards of *feeling* (genuinely or self-deceptively) that one has behaved in an ethically and ritualistically prescribed way are among the most satisfying of sentiments, although as indicated in the discussion of "social cosmetics," villagers often use the rituals of ethical behavior as substitutes for more demanding interpersonal involvements. Indeed, the great emphasis given to the performance of ethical rituals (speaking in soft and gentle words, honoring one's mentors) helps perpetuate the loosely structured relationships found in the community in that conformity to these rituals is perceived by many as comprising the fulfillment of their interpersonal obligations. Beyond this they are free to pursue their own interests. To a large extent the ritualistic forms serve as a comforting psychological justification for the pursuit of individualistic concerns, *i.e.*, "But I otherwise treat others so nicely." [20] This is not the result of conscious

[20] In one of his more recent and typically penetrating works, Goffman (1963) coins the terms "Involvement Shields," "Main Involvements," and "Subordinate

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*156 psychological manipulation. The frequency with which villagers evaluate themselves and others in terms of the performance of these rituals and the high frequency of rituals in actual behavior attests to the seriousness which Bang Chaners attach to them. Their compensatory nature in no way [181] detracts from their importance to the individual. In fact, the precise opposite seems to be the case. Bang Chaners are a highly ethical people irrespective of the social psychological functions such ethics may serve.

Less apparent than the above immediate rewards for fulfilling interpersonal commitments but perhaps the very factor that is common to most of them is the sense of reciprocity that is at the basis of all enduring relationships in Bang Chan. Reference was made to the *quid pro quo* nature of Thai social relationships at several points in the text. However, the importance of this consideration cannot be fully appreciated without realizing that the functioning of the entire Thai social system is ultimately dependent on it. Individuals become involved with others and do things for them because they consciously expect others to respond in kind. This applies to the relationships existing between family members who live together *because* such an arrangement is most advantageous to each; to the father who gives his son an ordination *in order that* the latter will make merit for him and feel obligated to care for him when he becomes old; to the friends and relatives who make merit for the departed soul *because* of the good things he had done for them during his lifetime; to the adults who feel obligated to their childhood teacher *because* of the knowledge, and thus power, he [114] imparted to them. It might well be, as Mauss (1954 [originally

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[114] [121] Involvements" to describe in theoretical terms what has been analyzed here empirically. The major point of Goffman's concepts, and of his entire book, is that human behavior is typically polyphasic (people act one way and simultaneously think or feel another); that there are types and degrees of involvement with people, situation and self; that situational behavior typically entails patterns of "deception" as ways of implementing disinvolvement (or, as he says, as ways "to conceal improper involvement and to affect appropriate involvement"); and most important that such patterns of "deception" are culturally—and not as heretofore assumed, idiosyncratically—phrased. His definition of "Involvement Shields" (p. 41) is particularly apposite to the discussion above: ". . . we think of involvement shields as one means by which the individual can maintain the impression of proper involvement while he is actually delinquent in his situational obligations."

Dealing mostly with American culture, Goffman does not of course analyze ethical rituals as a particular kind of "Involvement Shield." Americans favor other, more culturally distinctive patterns of deception. Also, he uses the term "involvement" in the same way that I have been using the term "commitment." Unfortunately, neither Goffman nor I say very much about the conditions, cultural or psychological, which determine whether a person is fully ("properly and appropriately") involved or committed in any particular situation or is simply shielding himself. However, I would argue on theoretical grounds that the *decision* is almost always idiosyncratic, the *actual behavior* almost always cultural.

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1923–1924], translated by Cunnison) and Homans (1961) have argued, that human relationships everywhere are based on just such a consideration, usually concealed by ethically palatable amenities (such as in American culture, from which most of Homans' empirical materials come). However, what is so intriguing about the Thai case is that *quid pro quo* factors are forever in mind as justifications and explanations of why people relate to one another. Although villagers, because they are such polite people, rarely say to others, "I am helping you because I know the day will come when I need your help," or "Do this for me because you owe me a favor," they do use such arguments *to explain* the basis of their ties: "Of all my friends I love Lek the most because she has done me the most favors (*bunkhuns*)"; "The purpose of marriage is to have a companion who will take care of you when you get sick"; "Of all my daughters, the one who gives me the greatest pleasure is the one who sells things. . . . When she gets money she gives it to me"; "Friends are very useful because it means that you have people who will do you favors. And when they need help, you will take care of them. This is love." [21]

One of the finest discussions of the nature of reciprocal obligations appears in a recent paper by George M. Foster (1961) that deals not with a Thai community, but with the Mexican village of Tzintzuntzan. Foster outlines in his paper the notion of the "dyadic contract" which he presents as a model for the social structure of Tzintzuntzan. Or, more precisely: "Specifically, I suggest a model . . . to reconcile the institutionalized roles which can be recognized and described in the community with the underlying principle which gives the social system coherence." Foster's focus thus differs somewhat from our psychological emphasis. However, his abstract statement of the "dyadic contract" provides such an excellent summation of the major factor making for enduring social relationships in Bang Chan that it merits quoting in detail here. There are of course inevitable differences in cultural content between the two communities and the fact that

[21] Such explanations are not unique to Bang Chan. In his description of the Thai-Lue village of Ban Phaed in Northern Thailand, Moerman (1962) observes: "The society of Ban Phaed operates in terms of something got for every something given. This is not merely an analytic device which permits a predictive, if crass, view of any human society. It is the way in which villagers explain and evaluate their own behavior. Favor for favor, visit for visit, meal for meal, one should return what he receives. 'We help our kinsmen because they help us. If a kinsman however close didn't help me, I wouldn't help him.' 'We care for our children when they are young; they will care for us when we are old.' Actions which we would justify in terms of compassion, generosity, public-spirit, patriotism, pride in a job well done, the Lue villager speaks of in terms of reciprocal, short-term self-interest. Their actions are no more selfish than ours. Far from it. But the moral rhetoric of a Lue villager is different from our own. In politics, economics, family life, and religion it focuses on something got for something given."

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status differences and the looseness of social ties loom considerably in Bang Chan probably makes for some other structural variations.[22] However, as stated below, Foster's formulation applies almost perfectly to Bang Chan (1173-1176):

> The model appears to account for the nature of interaction between people of the same socio-economic status, between people of different statuses, between fellow villagers, between villagers and outsiders, and perhaps between man and supernatural beings as well. Although my analysis deals only with Tzintzuntzan, I think the model will prove useful for other societies with similar structural features . . .
>
> Briefly it is hypothesized that every adult organizes his social contacts . . . by means of a special form of contractual relationship. These contracts are informal, or implicit, since they lack ritual or legal basis. [This is not completely true for Bang Chan. There is, for example, a special "Teachers' Day," sanctioned by the national government, set aside for honoring teachers, and thus providing ritualistic reinforcement to the contract.] They are not based on any idea of law, and they are unenforceable through authority; *they exist only at the pleasure of the contractants.* The contracts are dyadic in that they occur only between two people; three or more individuals are not brought together. The contracts are noncorporate, since social units such as villages, *barrios*, or extended families cannot truly be said to enter contractual relations with other families, although spouses often honor the obligations inherent in each other's contracts.
>
> The implicit dyadic contract is made between members of a family as close as siblings [and in Bang Chan, as close as husband and wife, and parents and children] . . . ; and it unites neighbors and friends. Contracts are found between social and economic equals within Tzintzuntzan or with similar people in other communities. And they are found between people (or beings) of different status and category, as on those few occasions when outside political leaders or economic patrons have ties with villagers and when a villager invokes the aid of the Virgin Mary or a saint. [In Bang Chan, a functional equivalent of the latter would be when villagers propitiate the *caw*, or Spirit Lord, who resides in the *Sam Phra Phoum*, or house of the Guardian Spirit of the home. This is a replica of a house, about the size of a bird cage, located in every house lot in Bang Chan. The offering of rice and flowers to the *caw* is explicitly a form of payment to him for the use

[22] A second paper on Tzintzuntzan (Foster 1963) indicates that there are some crucial motivational differences as well, viz., Bang Chaners enter into dyadic contracts with a much greater sense of freedom than do Tzintzuntzeños. Their attitude is both more cavalier and cold-blooded than the Mexican peasant who feels that if he is to exist, he has no choice but to enter into these contracts. The Bang Chaner is animated by a sense of personal advantage; the Tzintzuntzeño by a sense of passive participation in a system he cannot change.

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of the land upon which the human home is built. In effect, humans have temporarily "rented" the land from him.]

. . . [The] contract implies and is validated by reciprocal obligations . . . [In] its totality the system of complementary reciprocity validates, maintains, and gives substance to the implicit contractual networks. The symbolic meaning of exchanges (as contrasted to economic and other functions) is accepted without question by all villagers: as long as a person continues to give to and receive from a partner, he is assured that the particular relationship is in good order. *When an exchange pattern between two people terminates, it is overt evidence to both that the contract is dead*, regardless of the formal institutional ties or the religious validation which may, in theory, continue to bind the participants. [Italics added.]

In anthropological analysis it is customary first to seek and attempt to identify the factors which link human beings together rather than those which keep them apart. This is so much a part of our professional tradition—in effect, one of our "primitive predicates"—that we tend to gloss over the question of the extent to which people must have enduring interpersonal commitments. This question has not been pursued in precise detail in our discussion. However, the realities of Bang Chan social behavior are so weighted in the direction of atomistic and essentially non-relational considerations that any coherent discussion of them should be organized in approximately equivalent terms. It is for this reason that the bulk of our presentation has focused on the individualistic nature of the villagers and that the factors accounting for interpersonal linkage were left to the end. It is hoped that such an organization has accurately reflected the tone and quality of Bang Chan social life as it is encountered and felt by an outside observer trying to understand its meaning to those who experience it.

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123 a "serious-minded teacher" generally worked to the advantage or disadvan-
124 tage of the research, I would definitely answer, "the former."

• 114 Perhaps even more important than the villagers' attitudes toward the author were their attitudes toward the Thai field assistants who worked with me at various times. It was through the field assistant that many villagers had their actual contact with the research and through him (or her) that I obtained a large part of my data.[1] Because the role of field assistant requires such distinctive qualities—"competence" in a foreign language, willingness to work with peasants and an appreciation of them, a desire to learn the way "other people" live—it was not easy to obtain or retain individuals to work with in Bang Chan. In a country such as Thailand where the term "social science" was virtually unknown until a few years ago, the position of "research assistant" simply offers no occupational future. Consequently, I had six different assistants working for me at different times during almost two years in the field. Two of these individuals were with me for less than three weeks. (One left the rice fields of Bang Chan for a position at the Thai Embassy in Rome; the other just did not like peasants.) Two were extremely able female graduate students in Education who worked only on Sundays and holidays, primarily with the younger village women. Out of both loyalty to me and a genuine interest in, almost love for, the villagers, they stayed on until the research was completed. The fifth, my major assistant, took three months to find, but he remained with me for fourteen months. When he left to work in Burma ("because I have never been to Burma") his place was taken by a very competent and sophisticated assistant district officer whom I "borrowed" from the Ministry of Interior. This last chap saw me through the life histories. Although he was excellent in the highly personalized setting of the life history interviews, his polished urban manner would have been too overbearing for the majority of informants during the earlier, more sensitive stages of the research. While this coming and going of field assistants,

12 [1] During the early stages of field work I was completely dependent on my assistant-
114 translators, despite six months language training prior to leaving for the field. Later, I gained enough control over Thai to participate actively in the interviews. In order to minimize translation errors, however, it was decided to conduct and record all formal interviews (those involving the Sentence Completion Method, TAT, and life histories) completely in Thai, and translate later. The reasons for this are more fully discussed below. In effect, this meant training the assistant to carry the burden of the Sentence Completion interviews, the first large block of the research. By the time we reached the life histories, the interviews were taking the form of the informant replying directly to both myself and the assistant. All formal interviews were based on carefully prepared schedules, including even such matters as instructing on seating arrangements. Only a portion of the total data of course came from these formal interviews. All the preceding materials, for example, were based directly on my own observations, or on the small but crucial verbal events that occurred outside the interviews and which actually comprised the interactive substance of day-to-day life.

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particularly that of the one who went to Burma, had considerable effect on me and on the continuity of the research, it appeared to affect the villagers not at all. In their less predictable world, such movement was quite customary.

Because three of the assistants were with me for substantial periods of time, a few words should be said about them as individuals and their role in the community.

My principal assistant was an individual whose own life history, although not unusual for Thailand, describes one of the most important and least known psychological types emerging in the newly developing countries of the world today. Born and reared in a Northeastern village, he came to Bangkok in his bare feet at the age of sixteen to fulfill a childhood dream of becoming a newspaperman. (He once said to me that "if the first *farang* who came to Thailand in the sixteenth century had wanted to study a village, they would have had to pick a village just like the one in which I was born.") After working on a road construction gang during the day and going to school at night, he accumulated enough money to support himself and to enter Thammasart University. While working as a newspaperman, he became ill, had to leave Bangkok, and took a job as a forest ranger in the North, which gave him considerable free time for writing. It was while he was in the North that I heard about him, and asked him to come down and work with me. While working in Bang Chan, he was able to reëstablish some of his old Bangkok ties so that after my departure, he and a wealthier associate established a publishing company, one purpose of which was to have an outlet for their own writings. He has since published a volume of short stories, and has undertaken with his colleague and others a field survey of Thai peasant oral literature. His ultimate aspiration at the time was to start the first newspaper in the Northeast, one addressed especially to the interests of Northeastern peasants. When we first met he had just turned twenty-five.

Despite his worldly experience, his primary reference remains that of a peasant, albeit a well-educated one. I have seen him discussing the beauty of a field of fresh growing rice with a group of Bang Chaners exactly as if he were one of them. Similarly, his spontaneous use of peasant idioms, fictive kin terms, and body gestures were indistinguishable from those of almost any Bang Chaner. He "knew" precisely when to take a villager by the hand or to place his own hand upon the villager's leg as a sign of affection. Even his wisecracks to the girls were perfectly delivered: cute enough to raise a titter but never broad enough to be considered offensive. Although some of these actions were prompted by his desire to get on good terms with the villagers, most of them were quite spontaneous.

None of this of course was lost on a people as socially perceptive as the

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villagers of Bang Chan. Although in their eyes he probably never ceased being identified in some ways with the *farang*, he was defined primarily as "one of us." He helped reinforce this definition by referring to himself and the villagers as "we Thai" or "we Thai farmers," as contrasted with the *farang*. Often, not out of any enmity but simply because he had a ready foil, he would make fun of my *farang* ways for the benefit of the villagers. It was conduct like this, repeatedly expressed, that permitted him later to ask the villagers their opinions of the *farang* without raising any eyebrows. On the other hand, when the need arose, he readily assumed the role of the gentle, guiding, probing representative of the research who, in his efforts to get the villagers to participate, would appeal to everything from pride in country ("Don't you want the *farang* to know the true way we Thai people think") to the principle of reciprocity ("We do a favor for *Aacaan* Herb by helping him pass his examination, and he helps us by bringing us fame").

The two female graduate students who worked part-time were not as distinctive as their male counterpart, but in their own way, were equally as effective in the research. One was the daughter of a high-ranking Army Officer School teacher; the other was the daughter of a low-level bureaucrat. In their early twenties, they had been closest friends during college and graduate studies. To a certain extent, they were prototypes of the upper-middle-class, college educated Thai female.[1] Confident about their professional abilities and aware of how much they are needed, they are caught in the conflict of whether to participate in "worldly affairs" and thus become independent and admired social leaders, or to become wives and mothers, and thus live in the shadows of their husbands. Their problem, unlike the case in the United States, is that both alternatives are equally valued and equally available and that because the social need is so great, they can actually become leaders with not too much effort. The conflict is further aggravated by the fact that they come from the social class that emphasizes a double sexual standard. At the same time as they are expected to be assertive and competent in their jobs, they are also expected to be sweet, docile, and compliant females. They resolve this conflict to a large

[1] The daughter of the lower-level bureaucrat had this status by virtue of her own accomplishment, not her father's. In fact, one of the most touching scenes I ever observed in Thailand was when the girl's entire family assembled at Don Muang Airport to see her off to the United States where she had won a graduate fellowship. She had become the hope and pride of her family. Her mother, in the traditional cropped hair style of the Thai female and her mouth stained with betel juice, was trying to stand on the pair of oversized high heels that she had bought especially for the occasion. Tears were flowing down her eyes, both in pride over her daughter and because she could hardly walk on her first pair of "modern" shoes. My male assistant, in his inimitable way, turned to me and whispered: "Khun Maeae [the honored mother] wants to be just like her successful daughter."

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extent by becoming succoring females—taking care of the less fortunate, seeking opportunities where they can help others, and the like.

The relevance of these remarks to the work of the assistants in Bang Chan is that they represent the attitudes the girls brought into play in their relationships with the villagers. In the eyes of Bang Chaners, they were well-educated, high status city girls who combined the finest qualities of the Thai woman. They were not only clever because they carried clipboards and spoke two languages but they were "good" girls who used "sweet words" and proper terms of address and "brought us medicine when we were ill. They knew how to help farmers." In contrast to my own practice—which was to give villagers aspirin only if they explicitly asked for help, or if the problem was more serious to plead incompetence—their actions were entirely spontaneous. In the same way, villagers would often wonder why after working all week at the university, these girls would spend their Sundays and holidays in Bang Chan. The answer was not hard for them to find: "These girls have much progress. They want to help the nation and themselves. So they come here and work for *Aacaan* Herb. This will help them go to America. And then they will have more progress." Although this motive may have entered into the assistants' decisions, a more important reason was the simple pleasure they derived from listening to villagers bare their problems and preoccupations. By giving of their time and interest they were fulfilling their own best image of themselves.

A final word should be said about the various relationships existing among the assistants and myself. The relationships that developed among the assistants themselves was perhaps the ideal Thai adjustment to the unique situation in which these three young, unmarried people found themselves: they began to treat each other like brothers and sisters. Theirs was not a perfect sibling relationship—not even in the fictive sense, for they were keenly aware of their differences in background and of the desirability of keeping romantic considerations out of the relationship. However, their very differences in background helped form a bond of mutual respect.

Their attitudes toward the author were more complicated. Although in many ways they treated me too as a sibling, their attitudes were forever colored by the fact that I was a *farang*. On the positive side, this meant that they respected me for my technical training and knowledge, and for my obvious concern about learning as much as I could about the villagers. By the same token, however, they would frequently become annoyed by my inability to see things which in Thai terms were obvious, or by my insistence on probing matters that in their terms were either unanswerable or better left unexamined. Their attitudes toward me were not too different

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114 123 from those of the villagers, except that because our relationship was considerably more sustained and intellectually stimulating (they wanted to know about the village almost as much as I did), it was more intimate and unguarded. My closest friend in Thailand was not a villager but my male field assistant.

114 *Investigator's Attitudes Toward the Villagers*

121 Anthropological field work has been referred to variously as "a period of stepped-up socialization," "the ultimate test of the value and limitations of empathy," and more simply "the most rewarding part of the anthropological endeavor." It is all these things. However, perhaps its most distinctive characteristic is that it is a period of intensified self-control. It involves the willingness to suspend one's normal and familiar patterns of behavior in deference to patterns which are appropriate to the culture being studied, or at least not too incongruent, and which are aimed at one's overriding purpose in being there: to obtain data.[8] The rewards of field work are of course immediately apparent: to encounter directly a different arrangement of the human experience. But field work also involves the psychological price of being temporarily willing not "to be oneself." There are of course numerous instances within one's own culture when one does not behave like "oneself," but simply assumes the pose associated with one's role. What is distinctive of field work is the highly *sustained* quality of one's "acting"; the researcher must be *continuously* concerned with tailoring his actions to suit others' preferences. The problem is complicated further by the fact that in field work the preferences of others are usually only slightly known; in fact, the discovery of such preferences is part and parcel of the very process of field work. Thus, the researcher tends to be even more hesitant and concerned with keeping himself under rein. It should be noted that "not being oneself" is not identical with "not being true to oneself." Indeed, the ideal adaptation to the psychic requirements of the field situation may be to feel any way one wants to *feel* toward one's informants, but to be sure to *act* properly toward them.

123 My overt behavior toward the villagers involved assuming something of a social pose, but a relatively straightforward and simple one. I attempted to present myself as an interested, uncritical, and mildly bewildered young

[8] I am not speaking here simply of functioning comfortably in an alien culture. Cultures differ radically in the degree of conformity to or deviance from prevailing patterns that is permitted individuals; and in this respect, Thai culture is extraordinarily tolerant of personal deviance. However, this is not the same as living in a foreign culture when one's *raison d'être* is to induce members of that culture to cooperate, provide information, and otherwise function. Here it is incumbent upon the outsider to make some adjustments in his normal behavioral responses.

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man who wanted their help for the sake of "knowledge." I came to Thailand because a very wealthy American who manufactured automobiles (The Ford Foundation) had decided to make merit by giving money to universities as well as to monasteries and hospitals; I had applied for a fellowship, and he had given me the money.[4]

In my actual contacts with villagers, I tended to be much more docile and unassertive than is my wont, often to the extent of appearing diffident. Although in the relationships with my assistants I did not hesitate to express my opinions and evaluations of things—often in an excitable and seemingly aggressive way, which is one of my "natural" and extremely non-Thai modes of expression—I tried to keep my comments to villagers free of any evaluation. The only time I really let myself go was in laughter, which villagers liked but which they sometimes thought was undignified. To the countless little frustrations that occur in the field—spending an hour with an informant "making rapport" only to be told that he was too tired to take the TAT; seeing an informant get up at the high point of an interview, say "I must go," and simply leave—I responded either with giggling or stoicism, never anger. This latter posture was particularly difficult to maintain. When the owner of the "Cornell Office" asked me for three times the agreed upon cost of rent and board, I answered first by giggling and then by changing the subject, although neither was in any way representative of my genuine feelings. I later paid the original amount through a go-between, and nothing further was said.

Not all my behavior was oriented toward controlling such feelings, and not all of it was by any means intended as a disguise. In fact, the role of being an "interested, uncritical, and mildly bewildered young man" was not only the best way to present myself to the villagers from the point of view of effective research, but was often the way I felt. (The bewilderment was effective to the extent that it often elicited clarifications and specifications from informants who wanted to be sure I understood.) Similarly, my expressions of laughter were quite consistent with village patterns, and they could not easily be feigned. Perhaps one of the most enjoyable aspects of the pose was when I provided villagers with accurate and truthful answers to questions they might ask, but in an idiom that I thought would be most meaningful to them, *e.g.*, Henry Ford's merit-making activities.

[4] The source of my funds was of never-ending interest to the villagers. One Bang Chaner said he understood what the source of my funds was, but did not quite understand how I actually obtained them. "How does the money get into your wallet?" I explained that prior to my departure from the United States, I made arrangements with my benefactor's secretary to have the money deposited in a bank in Bangkok. And whenever I needed money, I would write a check and obtain the baht equivalent of the amount I had written. At this explanation, the villager broke out into a broad smile and said: "That's wonderful. It sounds just like Communism!"

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least in a half-sentence, "*He feels frustrated when. . . .*" This item, along with three others, was eventually rejected. 125

Before the items were finalized, they were all reviewed by an American linguist thoroughly conversant in Thai. Despite all our previous efforts, he suggested lexical changes in approximately thirty items and pointed out a basic but easily remedied grammatical flaw (with semantic implications) which ran through almost the entire test.

For the more time-consuming task of translating the villagers' protocols back into English, I managed to obtain the services of two urban Thai translators, both graduates of British universities. The only contact these translators had with informants was through the SCT responses. The theory and method of the test was explained to them as was a list of twenty instructions which were to be used as translation guides. (These are described in Phillips 1959–1960.) After each test was translated (the translator working independently of his colleague and the author), it was checked by me for ambiguities, multiple meanings, and statements that simply did not make sense. These questionable items, which averaged approximately one-third of each test, were then analyzed and discussed by the author and a third person and when necessary, changed or qualified. Thus, responses that were originally translated as "*Most high government officials are . . .* kind people. They speak nicely, but some of them don't" or "*People have to help each other because . . .* of humanity's sake" became, after analysis, "kind people. They speak nicely (use nice-sounding words), but some of them don't" and "of humanity's sake (because it is in the nature of human beings, because they are human, to help each other)," respectively. Each test took an average of seven hours: three hours for the translation, one hour to check, and three hours to clarify questionable points. After about eighty of the tests had been completed, the translations started to become very sloppy and their clarifications more difficult, so that toward the end it took a minimum of ten hours per test. (114)

One of the more important and perplexing decisions that had to be made during the translation process was how to label the hypothetical individuals referred to in the various SCT items. The decision was important because of the controversy surrounding the question of whether the SCT is truly a "projective technique"; that is, a technique which not only induces individuals to reveal their needs and wishes, but which induces them to do this unknowingly. It is argued that materials obtained projectively are less guarded and less censored than those derived from more direct techniques. The identity of the hypothetical individual described in the sentence fragment enters into the controversy in that the informant's identification of him directly affects the "projectability" of the item. Thus, it is asserted that if the individual described in the item is referred to in the

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("we" or "generalized I")[9] and *khon raw* ("we people"). However, I used two other terms, *khon* ("people") and *khaw* ("he," "she," or "they") in those items most descriptive of the expression of ego-alien sentiments: that is, those sentiments which, on the basis of my knowledge of the villagers, I expected to be most readily denied as being self-referring. Thus, an aggression item read: "*Khon most often get angry when . . .*," instead of "*Raw most often get angry when. . . .*" To simplify matters for the reader, later SCT materials which list both the original English language item and the English translation of the Thai translation will also include the Thai pronouns that were used in the various items.

The third stage of the SCT construction involved the pre-testing of the SCT schedule with ten villagers. A major aim of these trial interviews was to examine the quality of all the items. I was particularly concerned with how well informants understood the items and with identifying those items which interested them, those which required revision, those which brought forth revealing material, and those which elicited useless information.

The second purpose of the pre-test was to train my assistant in how to conduct the SCT interviews. Of principal concern was to try to minimize the effects of the interpersonal situation on the informant. Such effects can never be fully cancelled out, but they can be controlled to the extent of insuring that the data obtained represent the informant's product, not the product of ideas the interviewer might introduce into the situation. The major task of the training period, therefore, was instructing of the assistant in elementary interviewing techniques.[10]

The instructions also included such considerations as seating arrangements: try to locate the informant so that the canal—where people paddle by and can be waved to—is in our line of sight, not his. Ideally, he should be able to observe only the interviewers. If interviews are to be conducted in boats (later, eight of them were) the boat should be pulled off into one of the canal tributaries to minimize the disturbance from canal traffic. In general, privacy can be obtained by telling informants that since we wanted

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[9] *Raw* as a "generalized I" is not as ear-catching in Thai as it is in English. Thus, although *raw* can always mean "we," it is a perfect synonym, not a substitute, for "I" when the speaker wishes to indicate less self-reference. Another way of putting it is that when it is used to mean "I," the ordinary "we"-"I" contrast is psychologically inoperative; *raw* simply becomes an attenuated form of "I."

[10] The techniques which I had the most difficulty impressing on my assistants concerned such seemingly simple matters as the following: never afford the informant any hint of a response; if his first few responses are wild, repeat the instructions, and pick up the interview where it was left off, adding the items with the strange responses at the end; do not hesitate to encourage the informant with comments such as "that is fine"; if the informant gives funny responses, smile but do not laugh; if he is hesitating too long on an item, simply repeat the item as a prod; if he does not respond after three repeats, go on to the next item, and the like.

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nique," frequently makes one forget that variations in the context and form of sentence fragments actually make different versions of the SCT into entirely different "tests," leading to major differences in results and interpretations. Failure to recognize this obvious fact has led to some specious arguments (Lorge and Thorndike 1941 vs. Sacks and Levy 1952, for example) about the relative effectiveness of "the" instrument.

My point of view, of course, is that one can design an SCT to investigate *anything*, from cabbages to kings. The very nature of language—or more precisely, one of its defining characteristics, its "productivity" or "open-endedness"—permits this. (By "productivity" I mean, following Hockett 1959, that a speaker may say something that never before has been said or heard.) In this light, what is distinctive about the present work is not the fact that an SCT is being used but rather that the language of this particular SCT describes a number of universal social and psychological problems.

Second, the technique also helps to bring into focus an issue that is particularly crucial to cross-cultural personality studies. My primary task was of course to describe and analyze the villagers' predispositions in a number of areas of psychological concern: aggression, anxiety, dependency, and the like. There were originally thirteen such areas which, on the basis of prevailing ethno-psychological theory and practice, were presumed to be of major importance in the psychic lives of the informants. It should be recognized, therefore, that in selecting these areas I committed myself to the premise that there are in fact a number of analytic issues crosscutting all societies which are crucial to the psychosocial functioning of the members of these societies. This should not be taken lightly, because it is only on the basis of such a premise that a comparative science of personality may develop.

Such a science does not as yet exist, at least as a coherent, systematic corpus of theory and fact. Kroeber is absolutely right when he says (1955*a*: 303): "Culture and personality studies are being pursued with intensity and devotion, but one feels that they are popping off in diverse and unaccountable directions much like a string of fire-crackers. One inquirer is interested in tensions, another in Rorschachs, another wants to experiment on frustration; but in effect each starts off on his own—except when a string of them go in for a fad like toilet training. . . ."

Yet, there has been a steady flame setting off all these firecrackers: the search, at times undeniably ill-planned and unreflective, for a set of abstract, analytic categories by which the personalities of all peoples can be described and compared. Papers by Kluckhohn (1953, 1954*a*, 1954*b*), Hallowell (1950, 1953), Spiro (1954), Inkeles and Levinson (1954), and Kroeber himself (1955*a*, 1955*b*) on the psychological universals in human

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behavior suggest that there are now sufficiently solid theoretical and empirical grounds upon which to build such an undertaking. Inkeles and Levinson deal with the problem directly (1954: 989-990):

> One promising approach is to concentrate, for purposes of comparative analysis, on a limited number of psychological issues . . . that meet at least the following criteria. First, they should be found in adults universally, as a function of both maturational potentials common to man and of sociocultural characteristics common to human societies. Second, the manner in which they are handled should have functional significance for the individual personality as well as for the social system, in that their patterning in the individual will affect his readiness to establish, accept, maintain, or change a given sociocultural pattern. A further task, one that will take longer to carry out, is to develop a set of descriptive categories for the empirical analysis of each issue.[8]

Toward this end, Inkeles and Levinson present a provisional list of analytic issues, some of which are replicated in the Thai study: relation to authority, conception of self, bases for maintaining inner equilibrium, major forms of anxiety and ways of dealing with them, modes of cognitive functioning, styles of expressive behavior, and the handling of major dispositions such as aggression, dependency, and curiosity.

In formulating the various issues to be included in the SCT, I borrowed from Inkeles and Levinson and the other writers noted above. However, like them, I wish to note that this list of categories is neither exhaustive nor definitive. In fact, because of limitations of time and instrument design, some of the areas proposed above—cognitive functioning, for example—had to be ignored. Others were also ignored during the write-up because the materials elicited were not in my opinion sufficiently meaningful or revealing. The value of our list lies not in its formal completeness but rather in the fact that the issues which are included seem, on the basis of knowledge presently available, to be of universal psychological importance. This is a beginning.

A third attribute of the SCT, related to the above, deserves comment. This concerns the abstract nature of the SCT items.

A fundamental problem in all cross-cultural personality research is not

[8] In a later paper (1956), Inkeles qualified one of these criteria by noting that there are probably many personality complexes which are functionally significant to individuals, but which have little discernible relevance to the functioning of social systems. Much depends here on how one defines "social system" and "personality"—particularly "levels" of personality. Inkeles, for example, draws a clear theoretical distinction between "basic personality" and "social personality," the latter being comprised only of those traits which are necessary for the effective maintenance or change of the social system.

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only the specification of a series of pan-human psychological issues as described above, but the selection of a research tool capable of obtaining empirical data that *accurately* reflect these issues in the various cultures studied. Aggression, anxiety, dependency, and the like may be universal human dispositions, but the causes and circumstances pertaining to them vary considerably from culture to culture. This is of course a basic anthropological truism (see particularly Whiting 1954 and Lewis 1955). Perhaps the best theoretical formulation of the problem from a research point of view can be found in an unpublished paper by Suchman (1955; see also Sears 1961) where the matter is framed in terms of what is called "concept equivalence" vs. "data or item equivalence." Or translated into our research operations: given the fact that the concept "anxiety" as applied to Thai culture is equivalent to the concept "anxiety" as applied to American culture, what kinds of items will bring forth *equivalent* empirical data from both cultures relevant to this concept?

My decision in dealing with this question was to design items which were sufficiently abstract so that they could be used in any culture with assurance that the empirical problems which they described were accurate and equivalent representations of the concepts.[6] In essence, statements such as *"He was most afraid of . . . ," "When something worried him, he usually . . ."* were derived directly from the concept of anxiety, bypassing culturally specific definitions of anxiety; the experiences portrayed by the items are in themselves descriptively universal rather than culture-bound. Cultural specificity—which is of course the central aim of this research—enters when informants react to these experiences in their completions. From an operational point of view, therefore, the requirements of concept and item equivalence were effectively merged.

A final aspect of the SCT, of an entirely different order from the above, merits attention. This concerns those general methodological advantages which the SCT enjoys as an organized, semi-structured research technique.

First, the SCT permits the field worker to present his research interests to his informants rather than wait for manifestations of these interests to emerge spontaneously from the behavior or remarks of the informants. Data collected by this method is by no means any better than that obtained, for example, by observational techniques, but it is more complete. If an investigator wants to know how an adult villager would react to being struck by another person or what the villager thinks about when he is

[6] Florence Kluckhohn (1960: 6–7) in her effort to develop a technique for the cross-cultural study of value orientations comes to a similar conclusion. She says that the "more highly generalized" an item was, the more readily it could be translated for use in another culture.

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1950; and Wheelis 1958.) At best, it would suggest that the Thai informant was faced with a difficult problem external to himself—perhaps finding a job or a spouse, or thinking of his future—and was appraising his ability to deal with that problem. Also, such an appraisal would have a strong constraining element: the necessity to control one's hopes and desires (perhaps for the hypothetical job or spouse) in order to avoid potential pain or disappointment; in essence, "beware of your limitations; do not forget your station." This is in turn supported by certain Buddhist concepts, such as *?ubeegkhaa*, or stoical indifference to the vicissitudes of life, among others.

Whether there is *any* way to express handily in Thai the Western notion of "the need for self-acceptance" is doubtful. Most villagers are too thoroughly narcissistic to require such a concept in their cognitive maps. Alternatively, there are other more direct ways of saying what "knowing myself" might mean in Thai, for example, "controlling my desires," "knowing whether I have the ability to do the job," or by referring directly to Buddhist doctrine. As such, these statements would be an expression of piety or the bolstering of one's self-confidence (or steeling oneself against failure) rather than psychic introspection.

A similar interpretive problem exists with the completion "his family." Because Thai kinship relations are so strongly influenced by concepts of benevolent superiority and dependent inferiority, most expressions of the need for affiliation with the family immediately imply the related need of succorance: security, support, protection, and sympathy, either as source or beneficiary.

The point of these comments is that the responses must always be first interpreted in the villagers' terms, not ours. Once made, precisely by explanatory notes such as these, these interpretations become part of the "data" and serve as a basis for our analysis. It should be recognized, however, that anthropological mythology (and these particular examples) to the contrary, not *all* the responses are interpretively dissimilar. When a villager says, *"When he hit me, I . . . must hit him back,"* he means precisely the same thing we do. The point, therefore, is to be extremely sensitive to the possibility of differential meanings, underscore and explain it when it occurs, and use the native interpretation as a prerequisite and corrective to our own. For a brief but brilliant theoretical discussion of this problem see Bohannan 1959.

The Psychological Meaning of the Responses

The fourth premise concerns the psychological "meaning" of the responses. There are several aspects of this problem which require specification.

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*125 15 should conform. (For example: *"The best way to treat a subordinate is . . . to speak to him with kind and agreeable words"; "When he thinks of his father, he thinks of . . .* the goodness and kindness his father has done for him.") This is not a universal pattern since definitions of the ideal are ambiguous, lacking, or inappropriate for many of the items; also, such definitions seem not to be applied to items which imply immediate action. However, they do appear with sufficient frequency to be noticeable.

156 None of this should be surprising, inasmuch as viewing behavior in terms of "the good" and "the proper" is a central characteristic of the villagers' thought and idiom. They tend, *considerably* more than Americans, to evaluate (in an ethical sense) people and events rather than describe them, and even to describe by evaluating. Ask most villagers: "What kind of a person is so-and-so?" and their replies will consistently be in terms of whether he is "bad" or "good," rather than in terms of non-evaluative description, *e.g.*, he is "funny," "passive," "interesting." The words, *khon maj dii* and *khon dii* ("a bad person" and "a good person") are two of the most frequently occurring items in the Thai lexicon. One might epigrammatically characterize much of the villagers' thought as "super-ego-dominated." That this mode of thought should be applied to many of the SCT situations is hardly unexpectable.[9]

121 15 Having recognized this tendency, however, there is the problem of assessing its psychocultural meaning. Do such appeals to the ideal, especially as applied to the self, in any way weaken our definition of the responses as "predispositions to action?" Are many of the responses mere verbalisms that have little to do with real behavior?

121 114 15 A number of theorists, notably Murdock (1940 and 1954) and Kluckhohn (1943*b* and 1951) have taken the position that cultural behavior should be distinguished into two fundamentally different forms: ideal patterns and real patterns. The former are "those norms which are verbalized as the ideals to which behavior should conform" (Murdock 1954: 22); and the latter, patterns of actual, overt behavior. Opler has taken issue with the necessity for this distinction, and has argued (1948: 116):

> My own feeling is that the concern over precepts or ideal patterns which contrast with or stand apart from behavior is a pleasant distraction which will not get us very far. In my opinion the disparity between rule and behavior in society has been greatly exaggerated. Actually, behavior remains remarkably close to rules or precepts which are

[9] This same characteristic has been described in other contexts (Wilson and Phillips 1958, Phillips 1958, L. M. Hanks 1959*a* and 1959*b*) as the essentially moral nature of the villagers' universe: the tendency, largely implicit, for Bang Chaners to perceive events of the most diverse kinds within an ethical frame of reference. It might well be, as Redfield had argued for many years (1941, 1953, and 1956) that such a cognitive orientation is characteristic of all peasant peoples.

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considered of moment by the group. I think that it can be demonstrated that when precept and activity draw too far apart, a modification of one or the other is likely to take place to close up the gap.

In assessing my psychological test materials, I take the following position with regard to this issue. The distinction between the ideal and the real is an analytic requirement because obviously there are some instances where the two patterns are not congruent. However, once such distinction has been made there is no inherent necessity to assume that there *must* be a gap between the two patterns or if there is a gap, to assume that it must be especially wide. One will inevitably encounter in Bang Chan cases where subordinates are not spoken to "with kind and agreeable words." But on the whole, the extent to which real behavior does accord with this precept is impressive. For the most part, it is not a mere verbalism but rather a viable guide to action: a subordinate who is not treated with kind and agreeable words will not (depending of course on other situational factors as well) long maintain his ties to his superior. This same reasoning applies to the majority of the cases in which informants couch their responses in terms of cultural ideals.

A third aspect of the responses concerns the psychological "level" at which they will be interpreted. Because of the highly realistic nature of the completions, the necessity to interpret them in Thai terms (which precludes "blind analyses"—see DuBois 1944) and the necessity to work with the pooled responses of many individuals, our interpretations will not go psychodynamically very "deep." On the other hand, neither will we remain at the level of the manifest meanings of the responses. Although an informant's completion may represent a precise description of the way he would behave in real life, and in many cases does, it is more sensible from an analytic standpoint to view the response as a symptom of an underlying, more generalized, psychological orientation. The reasons for this are twofold: first, many of the responses which are superficially different seem to express simply alternate facets of a single, underlying predisposition; second, and more important, we must remember that on theoretical grounds personality characteristics are not, as Inkeles and Levinson point out (1954: 981) "phenotypic, behavior-descriptive terms, but rather are higher level abstractions that refer to stable, generalized dispositions or modes of functioning and may take a great variety of concrete behavioral forms."

In these terms, a statement such as *"When he saw that others avoided him, he* . . . also avoids them" indicates not only a person's desire not to associate with those who avoid him but, more important, an underlying, more general disposition *to accept and maintain a breakdown in social relations*. Moreover, the latter interpretation also encompasses such varying responses as: ". . . must not speak to them because they are bad. They

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125 15 like to look down upon people" and ". . . probably was not generous with them, so they avoided him." The significance of this underlying interpretation becomes even more apparent when the three responses are contrasted with other possible but unoffered completions which belong to totally different interpretive categories, for example, ". . . tried to make up with them" or ". . . asked them why?" signifying *attempts to reintegrate or understand the interpersonal rupture* and ". . . felt terribly hurt," indicating *emotional pain or disturbance.*

A Working Conception of Modal Personality

121 157 Our fifth and final premise is concerned with developing a workable conception of modal personality despite the inevitable paradoxes which attend such an endeavor.

The fundamental problem here is that in abstracting out the psychological similarities which the villagers share with one another, we become unavoidably involved in the difficulties of working with "conjugate variables"; that is, the more we concern ourselves with the commonality of a personality trait, the less we simultaneously learn about the role of that trait in the functioning of the individual members of the sample. The significance of this is not so much that we sacrifice an understanding of individuals for an understanding of the group, but that in so doing we must also sacrifice some of the depth and perceptiveness of our analysis. A successful personality study is in large measure achieved by descriptive contrast: we learn more about human beings the less they appear like other people. When subtle individual differences must be submerged for purposes of group characterization, the resulting descriptions must necessarily be less sensitive and precise.

The root of the problem lies in the fact that our basic units of analyses are individuals who, despite all the similarities they share as members of Thai culture, are obviously different from one another in specifics. Moreover, as Wallace points out in a recent article (1961a: 147–148), from the point of view of culture-personality theory, they *must* have certain psychological differences:

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> The problem of psychic unity is sometimes obscured by our tendency to regard human societies as populations and not as groups when we make psychological statements. A population of individuals may be described without references to their interrelationships; but a group cannot be considered apart from its organizational structure. Thus physical, demographic, or personality characteristics of the members of a population can be stated, explicitly or implicitly, as a statistical distribution on one or more dimensions, and to the extent that the data

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> permit, some measure or estimate of central tendency can be calculated which will allow the attribution of some value or range on one or more dimensions to all, or a specified sub-population, of the population itself. . . .
>
> But such predicates, universally applicable to all members of a population, are inadequate for the psychological analysis of that population as a group, as an elementary consideration reveals: most culturally organized groups not merely permit but require that their members perform different roles in interaction. . . .

Although Wallace does not state it in so many words, it is apparent that he is referring to differences in age, sex, and occupational roles, or to any other roles that may be deemed important, and is assuming that the individuals who perform the roles have in some respects different personality types. (Whether the latter assumption is completely valid is still another problem. For a provocative discussion of the analytic complexity of the personality-role relationship, of the non-congruence which may occur, and of consequent psychological adjustments see Levinson 1959; Nadel 1957 also touches on the issue.) In any case, it is clear that whatever psychic unity informants have as members of the same culture, they are differentiated from each other on at least two counts: (1) their individual life experiences and genetic-constitutional backgrounds which ultimately give them each a unique personality; and (2) their performance of different social roles.

These differentiae are of course virtually self-evident. But what is not self-evident—nor easy to decide—is how much emphasis should be given to them in formulating or qualifying our conception of Thai peasant modal personality. Any decision that we make is from some point of view unsatisfactory. Should we treat our informants solely as individuals, and pursue our analysis with rigor, we would get an increasingly refined picture of the uniqueness of these individuals but, at the same time, a decreasingly clear picture of their cultural or shared characteristics. The analysis would undoubtedly be more precise but, in effect, we would be studying "idioverses"—idiosyncratic versions of culture (Mead 1958)—with little basis for determining what is culturally typical or deviant. In fact, questions of the normative or variant would become logically irrelevant. On the other hand, should we group the informants into age or sex groups and contrast the responses of these groups, it might well seem that the personality differences between men and women, for example, are greater than the similarities, or even that Thai women are more like Navaho or American women than they are like Thai men. Although I suspect that culture makes for greater psychological similarity than does sex and, as Sharp has pointed out (Sharp *et al.* 1953) Bang Chan culture is, from a cross-cultural point of view, impressive for its slight differentiation of the adult

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121 157 roles of the sexes, such findings are not empirically impossible. Finally, should we de-emphasize the distinctions between individuals and role-defined sub-groups, and consider all the responses as a whole, we would as suggested earlier be in the best possible position for determining the villagers' modal personality but would proportionately lack analytic precision. There would always be some intra-sample differences—as far down as the individual level—which the critic could point to as requiring discrimination, although such discrimination would obviously have to be achieved at the cost of group identification.

Given these various alternatives, each of which has its merits and shortcomings, what should the analyst do? I have decided to conform to the principal aim of this research and focus primarily on total group responses, that is, on those abstracted psychological similarities which all or, more realistically, large numbers of our individual informants share with one another. Operationally, this entails investigating the responses of all informants on each SCT item rather than those of each informant on all items, and explicating the major underlying psychological theme or themes of these responses. [125]

The inclusion of both the singular "theme" and plural "themes" in the preceding sentence is not only intentional but crucial to our formulation of modal personality. Its significance will perhaps best be seen by contrasting our approach with the two prevailing points of view governing most modal personality formulations. On the one hand, the majority of the culture-personality and particularly "national character" studies of recent years have been characterized by an assumption of psychological *unimodality*; that is, an assumption that the culture being investigated has such a high degree of psychological homogeneity that it can be portrayed as having a *single* personality pattern, with perhaps a few deviant sub-types. The assumption is based partially on precedents established within the history of ethnographic method (Herskovits 1954); partially on unconscious aesthetic considerations involved in the presentation of data (Opler 1948 on Benedict); and partially on the apparent validity of the concept in some areas of psychocultural functioning in which, once established, it is tacitly extended to include all areas. Even Wallace's sophisticated study of the modal personality of the Tuscarora (1952) is based on the premise of unimodality, although his aim is to find out precisely how *unimodal* the Tuscarora actually are.

Whatever attractiveness the premise of unimodality may have, it is clearly an oversimplification of psycho-ethnographic facts. Human beings in any culture are simply too complex to be of the same psychological stamp in all respects. In his recent paper (1961*a*), Wallace points out that a research design for the study of modal personality which involves only [114]

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twenty binary dimensions (which is considerably less than is actually employed in most Rorschach analyses) will yield up to 1,048,576 structural types, to which Wallace adds, "the uniformity of the population on each dimension must be impressive, or the types must be very crudely defined, before any one type is likely to acquire prevalence over any substantial proportion of the group. . . ."

Having recognized the oversimplification of the unimodal approach, however, there is no inherent necessity to go the the opposite extreme and posit a complete *multimodality*. Yet this seems to be the position taken by Inkeles and Levinson (1954) and Kaplan (1954, 1957, and Kaplan, Rickers-Ovsiankina, and Joseph 1956) who, genuinely disturbed by the stereotypy and lack of sophistication of the unimodal viewpoint, argue that cultural groups are characterized by a plurality of personality patterns. Kaplan's arguments are particularly compelling in that he bolsters them with empirical cross-cultural evidence, although he himself admits (1954) that his results may be a consequence of his particular sorting and categorizing techniques. He concludes his comparative study of Navaho and Zuni TAT's with the statement that (1957): "The influence of culture on personality does not appear to create a common personality configuration in its members, but instead tends to foster a variety of personality tendencies in small groups or clusters of individuals while leaving many aspects of personality free to vary without respect to group membership."

My position, in comparison, is that the cases for complete unimodality and complete multimodality are both overstated. What both viewpoints seem to overlook is the likelihood of there being *specific areas* of psychocultural functioning in which a high degree of homogeneity exists and *other specific areas* in which a high degree of heterogeneity comes into play. This more flexible formulation not only provides a more realistic picture of modal personality than can be had from ascriptions of wholesale uniformity and diversity but directs our attention to identifying the areas of differential frequencies and attempting to account for them. For example, I suspect that those areas characterized by a high degree of homogeneity are ones likely to be surrounded by strong cultural sanctions, or are areas of psychological "focus" (psychological parallels to Herskovits' "cultural focus," [10] as it were) or, perhaps, are areas of greatest cultural conditioning; conversely, I would think that areas of high heterogeneity most likely do

[10] Although Herskovits seems to have changed his definition of "cultural focus" over time (1945 and 1948), his first definition is most relevant to our present meaning: "that area of activity or belief where the greatest awareness of form exists, the most discussion of values is heard, the widest difference in structure is to be discerned." However, unlike his formulation, which in practice assumes only one focus in one culture, our use of the term presupposes that a culture can have a number of psychological foci.

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*125 152 ceptions, took on additional significance when related to the sense of psychological worth and self-love that the people of Bang Chan *also* exhibit. Again, the essential issue here is not the presence or absence of anxiety about interpersonal relationships. There is little doubt that villagers do suffer such anxiety. Rather, the question is one of *relative* frequency, and, by implication, the *relative* importance of such suffering to the *total* need and deprivation system of the villagers. It is precisely with regard to this larger kind of question that an instrument such as the SCT can provide context and perspective.

Turning to the theoretical issues that have been raised or suggested by the data, perhaps the most important is the problem of "conformity" as it relates to the villagers' loosely structured social system. This problem is of course at the center of all social psychological research. It is concerned with how, why, and the extent to which individuals relate to their social environments. In fact, in a recent paper aimed at synthesizing the theoretical premises underlying most current culture personality research, Bert Kaplan (1961*b*) presents a cogently argued case for the necessity of anthropologists and psychologists to shift their attention from the study of why individuals behave in particular ways to the study of this more generalized disposition. He says (665–666):

• 114 121 *756

> Up to now our emerging theory appears to suggest a jungle-like situation in which wholly free and autonomous individuals, in a relatively opportunistic way, make use of the available channels of social partici-

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*125 121 152 regressions, and other psychodynamic processes of informants. Even so, it is highly unlikely that the anxiety responses of adults are *simply* the result of a series of unconscious processes—substitutive, projective, or otherwise. It must be remembered that an anxiety response is just as often a function of the ego, oriented to and in the service of the organism's reality needs, as it is a function of unconscious needs derived from the difficulties of the developmental process. When we consider that the villagers live in one of the most unpredictable universes imaginable and that they are a people entering the throes of a revolution of rising expectations, it is not at all surprising that they should feel anxious about threats to their physical well-being, expressed as a fear of going hungry or being poor. In fact, I would suggest that at bottom these are expressions of an existential anxiety about the essential instability, uncertainty, and impermanence of all life (including their own), an anxiety which has its cognitive basis in the "Wheel of Law" and other Buddhist doctrine. It might be argued that since, objectively viewed, the villagers are well fed and enjoy one of the highest standards of living in Asia, such anxieties are without foundation. I would answer by saying that the villagers are not aware of the per capita income figures for Asia, and that "reality" for any people is how they subjectively perceive and define it, not what it objectively is. To say that there is no realistic basis for the villagers' anxiety about going hungry and being poor is like saying that there is no realistic basis for their belief in interminable existences or in the timeless continuity of the self. In both instances they believe these things to be the case, and ultimately that is what is important.

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pation and the rewards that are attached to them. . . . However, there is much evidence that conformity is ordinarily a generalized and diffuse disposition, not something that occurs only when some desired reward is in sight. One might say that it is the basic way of life of all but a few persons in any society. The essential meaning of most social action is not that the actor wishes to do this or that act, but that he wishes to stand in a conformative relationship to the social demands that exist in the situation. In the great majority of social situations most of us are not concerned with the problem of what to do, but much more with the problem of finding out what it is that would be appropriate. When we know what this is, compliance follows almost automatically. The basic fact is that we are mostly good citizens, persons who want to do what is right, correct, decent, and fitting. The culture and personality issue that we have been working to define so far, is not why persons wish to do this or that act, but why they are good citizens. Or, in other terms, what is the motivational basis for the generalized disposition to conformity. . . .

The approach outlined in this highly persuasive argument would clearly contribute to increased understanding of the functioning of social systems, particularly complex, smoothly operating ones. However, on the basis of our Thai materials, I wonder if it is not in fact based on the highly debatable assumptions that (a) all social systems function *equally* smoothly; (b) that all social systems are *equally* demanding in their functional requirements for people to conform; and (c) that persons in *different* societies are *equally* motivated, through socialization or otherwise, to conform. Kaplan in fact says: "One might say that it [conformity] is the basic way of life of all but a few persons in *any* society." (Italics added.) It seems to me that Thai culture provides a powerful argument for the capacity of a social system to function and of its members to have reasonably satisfying relationships with one another (they get done in a pleasant way the things that have to be done) while the standards for and dispositions to conformity are very low indeed. Again, it is perfectly true that Bang Chaners are highly motivated to conform, and even to over-conform, in face-to-face relationships. However, the most striking characteristic of these relationships is not the conformity exhibited in them. It is rather that there is never any assurance that the relationships will actually occur, or if they do occur, that the commitments undertaken in one face-to-face encounter will be carried over to the next. The conformity typically is immediate, short-lived, and uncertain. Bang Chaners may wish "to stand in a conformative relationship to the social demands that exist in the situation." But they first must make a judgment on whether or not to stand in that relationship, a decision that is very much based on their being "free and autonomous individuals, [who] in a relatively opportunistic way, make use of the

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156 available channels of social participation and the rewards that are attached to them. . . ."

12) 114 15 Without claiming in any way to know the thinking that prompted Kaplan's provocative comments on the importance of the motivation of conformity in shaping action, I wonder if it is not based on the supposition that situations in all cultures are similar to those that we typically encounter in our own highly complex, functionally specific culture—a culture which, *if it is to operate in the highly complex and relatively efficient way we know it*, requires that individuals conform to the demands of their tasks. In other terms, to what extent is the argument for conformity based on the supposition that the majority of relationships in most societies are similar to those which obtain, for example, between workers on an assembly line or between a secretary and her employer, where, if conformity were not maintained most of the time, the consequences would be functionally disastrous, disastrous to the very *purpose* of the relationship? While I take issue here with Kaplan, there is one crucial aspect in which I am in complete agreement with what he seems to be aiming at. That is, if his argument is in fact based upon, and directed at understanding, a strictly American model, I can thoroughly understand the import of his question: "What is the motivational basis for the generalized disposition to conformity . . . [?]" After living in Thailand for several months and observing, and often identifying with, the ease with which individuals pursued their own purposes, oblivious to the requirements of conformity, I began to wonder not about the Thai capacity to maintain loosely structured relationships but about the considerably more mystifying American capacity to conform to the expectations of others. From a *psychological* point of view, the latter is by far the more difficult and demanding, requiring as it does inhibition of and control over one's own desires and a deeply developed predisposition to orient oneself to others. How this orientation is developed and sustained on such a pervasive scale as is found in American culture—particularly with regard to the rewards involved ("Are *instrumental* rewards such as money really sufficient to link person A to person B?")—is clearly, as Kaplan suggests by his posing of the issue, an analytic problem the motivational details of which we presently have only the dimmest understanding. To a certain extent this orientation is explicable in terms of the simple malleability of human beings; in terms of the consummatory rewards that instrumental satisfactions eventually lead to; or perhaps in terms of what Wallace (1957) calls, "cultural identification," or the love of one's culture patterns for their own sake (in this case, love of the modes of social interaction to be found in one's culture). This last would involve interactional patterns assuming a *motivational* "functional autonomy" (Allport 1937) of their own, that is, ego deriving an *intrinsic*

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satisfaction from fulfilling another's expectations. However, it is clear that the actual motivational process individuals go through in order to learn to be concerned with the expectations of others—and considering the pervasiveness of this concern, it must involve either intensive or sustained learning—has yet to be examined in a ramified way.[8]

To my knowledge, the only scholars to address themselves directly to the question of the motivations and rewards for conformity are Kaplan in an earlier paper (1957) and Parsons (1952, 1961, and Parsons *et al.* 1953). Kaplan argued that there are two motivational tendencies making for conformity: the desire to behave morally and the desire to please others. The former tendency is quite explicable in terms of the development and functioning of the super-ego (a universal human attribute), and by emphasizing this, particularly with his later use of the pointed phrase, "good citizen," Kaplan's contribution is considerable. However, the latter consideration begs the question of why individuals should be so motivated to please others, and raises the additional problem, as I have done here, of whether all people are equally motivated in such directions. Parsons' early discussions of conformity simply propound the "evaluative, cognitive, and cathectic" satisfactions that the fulfillment of prescribed patterns award to the individual. In his later, more carefully elaborated essay, he sees the roots of conformity in the inherent helplessness of the human infant. In what is essentially a masterful sociological translation of Freud, he argues that conformity develops into a "generalized goal" or "mode of organization of the ego" as the individual successively identifies with, cathects, and internalizes the attitudes of the powerful figures (his parents) who respond to his helplessness. In this sense, Parsons seems to be arguing that the individual's major initial reward for conformity is the maintenance of his own life. The individual's conformity is gradually generalized as he goes through successive developmental stages, reaching its crystallization—the "point of no return," as it were—in the painful options of the Oedipal

[8] The theories that have been most concerned with the nature of conformity and "self-other" orientations—role theory and "symbolic interactionist" theory—have for the most part viewed the motivations and rewards for conformity as self-evident. That is, the immense literature of these "schools" has tended to focus not on why individuals should wish to conform in the first place, but on the skills, consequences, and non-motivational processes of conformative behavior. Writers such as G. H. Mead (1934), Cameron and Magaret (1951), Sarbin (1954), Shibutani (1961), and Rose (1962) all recognize the necessity of individuals to be socialized into conformity, but they go no further than describing the manifest processes of socialization—"intentional instruction" and "incidental learning," "imitation" and "spontaneous play activities." Having once mentioned these processes, they simply go on to assume that the conformative motivation is thoroughly internalized and self-sustaining. The only exception I have found is Shibutani who addresses himself to the matter of reward in a single sentence (1961: 509): "For most children, the voluntary inhibition of impulses begins with attempts to please those whom they admire."

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12 situation. It might be added that since the Oedipal situation is very much of
114 a moral crisis, Parsons' arguments go far in supporting Kaplan's earlier
15 contentions. Parsons, however, says little about the *different* ways in which parents respond to the child's helplessness and little about *variations* in the intensity and types of identifications, cathexes, and internalizations that the individual may implement—factors which would obviously lead to different kinds of conformative tendencies. Our earlier materials on Bang Chan socialization are particularly instructive on this point. In fact, if Parsons' formulation were linked to those data, it would go a long way to explain precisely why Bang Chaners have such a weakly developed sense of conformity. In the same way, the contrast helps to underscore the profound sense of interpersonal involvement, dependence, and concern inculcated in members of our own culture during the developmental process. To Parsons, the quintessence of these interpersonal investments is, of course, the Oedipal situation: the prototypic encounter with the power of external authority and all that such power implies for the individual's need to conform and to deny and control his own impulses. If this interpretation is correct, it would further suggest that the Oedipal situation must be based, *in the first instance*, on the developmental experience of close interpersonal involvement—an experience which, as our Thai data demonstrate, is subject to broad cross-cultural variation.

*128 The problem of "conformity" raises an additional question, one that has
*156 been implicit to many of our earlier remarks, but which merits explicit consideration in these final pages. At several points in the text, it was suggested that the villagers, with their profound sense of self-concern and freedom of choice, often choose to ignore or to isolate themselves from the effects and influences of others. This kind of behavior is a major dimension of their loosely structured relationships; it appears as well in their handling of dependency, anxiety, and aggression. From a psychological point of view, the behavior can be interpreted in one of two ways. On the one hand, it can be interpreted to mean that the villagers have difficulty in relating themselves to others, and use isolation as a means of defense. Implicit here is the notion of emotional deprivation, for who but a deprived person should wish to withdraw from contact with others? On the other hand, the behavior can be read to mean that the villagers are emotionally tough, and simply do not need other people very much. Here isolation is seen as self-reliance and mature emotional security. Throughout this study, I have chosen to stress the latter interpretation.

*128 This kind of interpretation is not an easy one to justify in contemporary
114 Western social science. Implicit to almost all of our thinking is the Judaeo-
*156 Christian assumption (more recently codified by Durkheim and Freud)
181 that the greatest psychological pleasures an individual experiences are

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derived from his interpersonal contacts, commitments, and interdependencies. In fact, I would suggest that perhaps the major reason that Freud (although correct) placed so much emphasis on sex is because the sexual experience is the most absolute expression of interdependency. My materials from this little community in Thailand, where psychological isolation is the norm and where this norm is so impressed upon the Western observer, have stimulated me into wondering if perhaps our past assumption has represented only *half* the story. What we have failed to see (or if we have seen, ignored) is that there is immense psychological satisfaction to be gained through psychological isolation, or from experiences that require or presuppose isolation. Such satisfactions are found in the pleasures of lonely creativity. (Has a committee, family, tribe, or neighborhood ever written a symphony or a poem, or even a fable?) Additional examples are sleep ("sweet sleep"); directing oneself toward the extremities of human experience in matters of faith and religious belief (by definition, a lonely, isolated experience); inducing mind-body alterations, as in hallucinatory states. These are all pleasurable experiences that can be talked *about*, but never shared. My point is of course that for historical and other reasons we have come to assume that loneliness is maladaptive, something which at best is to be avoided, at worst dreaded. And this is clearly not the case: no more than is the experience of dealing with a spouse, a brother, a child, a friend, or a teacher maladaptive.

What is perhaps most surprising is that the evidence for the need for isolation and privacy has been so readily available, and yet until recently so easily ignored. All of us who have observed children—in whom the elemental psychological needs of our species are most clearly and unashamedly expressed—have been impressed by the child's need for contact, love, response, and stimulation. But equally apparent is the child's need for privacy and lack of stimulation. Thus, we are just now beginning to become aware that the child's use of his thumb (in Bang Chan, his forefinger), his trips into quiet fantasy, his recurrent assertion, "Leave me alone!" are not simply amusing infantile epiphenomena, nor even defenses against an oppressive external world, but are expressions of a fundamental human need to be with oneself.

The villagers of Bang Chan, of course, are not children. They are people who for their own distinctive psychocultural reasons—their Buddhist ethos, their child-rearing practices, their loose and simple social system—have heightened this essential human need to be left alone, and express it in a mature, adult way. Unless one assumes that the only universe is the social universe, theirs is not a case of emotional deprivation. It is rather an honest and unabashed expression of another kind of psychological need, one which we in the Western world, for our own peculiar

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FOREWORD

114 The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

113 The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on health and diet (Sharp et al., 1953). Since the circulation 128 of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

361 Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, 487 Minburi. A century-old canal and to the north of it a post- 491 war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

621 In 1954, when data for the present study were still being 162 gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the house- 592 holds were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupa- 243 tion of 80 per cent of all families. The population in 1954 241 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home 463 sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet 311 rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple 132 food of the people. During the wet season and into the cooler 221 dry season, from May or June to February, the growing of the 519 single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

621 The Thai countryside is divided into hamlets, each with 622 a headman in charge of the thirty to sixty households of the 128 hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

and KY followed by a number.) The center of social life in Bang Chan is the Buddhist monastery or wat and the adjacent government primary school. The community simply consists of the clientele which regularly patronizes Wat Bang Chan and this school rather than other comparable institutions elsewhere in the region. Within the area of the community lives a minority of Thai Moslems constituting about ten per cent of the population. They have their own mosque which happens to be just outside Bang Chan, but they attend many secular and some Buddhist functions at Wat Bang Chan. A number of small stores, which also serve as coffee houses and men's clubs, are used as neighborhood centers in different parts of the village. Near the central wat and school, there is also a store, and the house provided by one of the headmen for use as the Project headquarters.

This present interim report of the Cornell Thailand Project includes some of the data necessary for the design of a program to improve health and diet in Bang Chan. Another report, now in preparation, will give the results of a detailed dietary survey made in the community following the health survey reported on here. These two studies together will indicate existing deficiencies in health and diet, and will permit the formulation of recommendations for needed changes in behavior as these can be realized in the context of the village and national culture.

The author of this study, Dr. Hazel M. Hauck, is Professor of Food and Nutrition in Cornell University. She has been associated with the work of the Cornell Thailand Project since 1950. She not only designed and supervised the research on health, nutritional status, and diet in Bang Chan, but during almost a year of field work in Thailand she obtained valuable data on many other topics for the Project's files. Some of her daily work in Bang Chan made little sense to the villagers, but they nevertheless became devoted to her. Her energy, tact and fine spirit in facing the discomforts and difficulties of rough field work in a tropical foreign land inspired both her Thai and American associates. Working with Professor Hauck were Dr. Anusith Rajatasilpin, now a teacher in the School of Public Health in Bangkok; Miss Sapha Indrasud, now in the Ministry of Public Health; Dr. Chumlong Kittiveja, of the Dental School of the University of Medical Sciences, Bangkok; and Miss Saovanee Sudsaneh, who has been doing post-graduate work in nutrition at Cornell and Harvard. To all of these faithful workers, the Cornell Thailand Project is greatly indebted.

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September, 1956

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[126] Stool examinations were made at the Department of Pathology, Chulalongkorn Hospital, Bangkok.

[128] Some preliminary tabulations and analyses of data were made at the Division of Statistical Services, National Economic Council, Bangkok, through the courtesy of its director, Dr. Tooi Xoomsai.

ooo For the interest and friendliness of the people of Bang Chan, without whose cooperation the study would not have been possible, the author is particularly grateful.

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Introduction

121 This investigation was undertaken in connection with the Cornell Thailand Project, one of several studies under the auspices of the Department of Sociology and Anthropology which are focused on the process of cultural change. Bang Chan, the community chosen for intensive investigation, has been described previously (Sharp et al., 1953). The studies to be reported [101] herein were designed to contribute to a baseline description of the community culture and were carried out during the first and second years of a 5-year project, i.e. from September 1952-May 1954.

• 114 For the clinical examination of the school children and families, the research group consisted of Dr. Anusith Rajatasilpin, Miss Sapha Indrasud, Dua Srisuay, a local villager who assisted in many practical ways, and the author, who assumed major responsibility for planning and directing the work. Dr. Chumlong Kittiveja, of the Dental School, University of Medical Sciences, Bangkok, examined the teeth of the school children. Some data on sanitary practices were collected by Miss Saovanee Sudsaneh, in connection with the dietary survey.

121 The main investigations undertaken fall into two categories: 1) studies of nutritional status and 2) dietary studies, both qualitative and quantitative. In connection with both types of studies, information was collected concerning certain aspects of health and of sanitation in the village. Additional data concerning health practices, illness and death in Bang Chan were recorded by members of the Cornell research group in their field notes. This present report is concerned primarily with presenting findings from all of those sources regarding aspects of the health, sanitation and nutritional status in this rural Thai community.

Methods

Clinical Examination

125 Schedule. - In general, the clinical examination was directed toward discovery of signs and symptoms which might either be indicative of nutritional deficiency or of some disturbance which might be associated with or lead to nutritional deficiency. Certain items, such as cristal height, bicristal diameter, and age at menarche were included because information concerning them would contribute to our knowledge of norms for Thai people, and the clinical examination presented a good opportunity for obtaining such information.

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145 not recall the age at menarche.

The median and modal reported age at menarche was 15 years, with a range from 13-19 years (Table 11).

Table 11

Reported Age at Menarche of 94 Females in Bang Chan.

	Age in Years						
	13	14	15	16	17	18	19
Number at each age	6	18	34	21	8	4	3
Percentage at each age	6	19	36	22	9	4	3

This estimate, made from ages given by recall, is necessarily approximate; however, none of the girls between 12 and 14 who were examined clinically, had passed the menarche. Moreover, median and modal ages at menarche were 15 years for sub-groups aged 15 to 24, and 25 to 39 at the time of inquiry, hence the inclusion in this series of women for whom the event was not recent did not alter the estimated median age at menarche. Wilson and Sutherland (1953) conclude that in tropical countries the onset of menstruation as compared with that for English children, 145 may be either early or late. Tannor (1955) notes that if 114 climate has an effect on age at menarche, it must be a minor one, 121 and that at present the effect of race cannot be disentangled from nutritional and socio-economic circumstances. Basing his [146] judgment on the effects on man of famine associated with war, and on results of direct experiments on animals, Tanner expresses the conviction that nutrition plays a major role in determining the age at which menarche and the adolescent spurt in growth occur. If this view is correct, the relatively late median age of menarche in Bang Chan may be associated with inferior nutritional status.

145 One of 17 women in the age group 35-44 had passed the menopause, whereas 12 of 16 women over 45 years of age had done so. One of 7 women over 55 years of age, 2 of 7 women age 50-54, and one of 2 women age 45-49 had not yet reached the menopause. The reported ages at menopause were: 30-34 years, 2 women; 40-44 years, 3 women; 45-49 years, 3 women and 50-54, 5 women.

147 Approximately 100 respondents gave information concerning

Procedures Used in Obtaining Information Recorded on Schedule for Clinical Examination, and Descriptions of Possible Manifestations of Nutritive Failure

114 For the clinical portion of the nutrition survey, the team consisted of a Thai physician, who carried out the clinical examination, the nutritionist, who made the physical measurements, a second-class chemist, who did the hemoglobin determinations and served as interpreter, and a local boy who not only propelled the boat but helped in other ways such as giving directions to the children concerning preparations for being weighed and measured. The nutritionist was the only non-Thai on the team. The physician's internship had been served in a hospital in which he had opportunity to see many patients with nutritional disorders.

123 The material which follows is primarily descriptive of the procedures agreed upon in advance of the clinical examination. When different descriptions of a given sign were obtained from the various sources, the criteria which the physician agreed to use, after discussion with the nutritionist, are stated here. Some of the signs described were not observed in any of the persons examined in Bang Chan.

Before beginning the survey, the examining physician and the nutritionist agreed that only signs which could be considered undoubtedly positive should be so recorded.

128 125 In preparing the schedule, care was taken to avoid diagnosis, i.e. the physician was to record what he saw. If the examining physician believed diagnosis or probable diagnosis would be helpful, he recorded this under Comments. Thus Comments included such items as the following:

1. Diagnosis of deficiency disease, together with nature of onset, association with other conditions such as pregnancy, malaria or dysentery.

2. Obvious present disease as trachoma, ring worm etc. or evidence of past disease, as smallpox scars.

3. Complaints such as bloody stools, or other conditions which might affect adversely the general health and nutrition.

The schedule was designed to be used with all ages and both sexes. Items relating to menstrual and child bearing history were placed at the end, to be used for adolescent girls and women.

Comments on the items on the schedule follow:

1. Hamlet and house number. Information given by the school child or householder was checked later with the census data.

6: Goldsen and Ralis Z-4,5 (1955) 1957
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APPENDIX A

March 1956

HOW THE BANG CHAN SURVEY WAS CONDUCTED

How the Study Came to be Made

121 The survey conducted in May 1955 was part of a program* for testing diverse techniques of data-gathering in cultures substantially different from U.S. and Western European cultures, where the survey method of gathering data had been developed and tested.

• 114 The survey questionnaire was developed and the field work carried out with the help of area specialists of the Cornell Research Center in Bangkok. Mr. Robert B. Textor and Mr. Loebonga Satabhaya of the Cornell Thai staff assisted the field director and recruited the English-speaking Thai university students who interviewed for the survey.

The Questionnaire

12 After a period of training interviewers about the questionnaire and techniques of interviewing, the questionnaire was pretested in a rural community near Bang Chan. Then the staff, consisting of the field director, his deputy, and five Thai interviewers, among them one woman, moved to Bang Chan to carry out the survey.

124 Thai and English-language versions of the schedule were
125 drawn up, but of the 335 interviews conducted in the survey, the overwhelming majority was conducted in the Thai language rather than through an interpreter.

The Interviewers

124 The interviewers were a mixed group: one Thai-speaking American anthropologist; one trained Thai anthropological field worker; two Thai Christians (one a theology, the other a medical student); one Thai Buddhist medical student, one Thai Buddhist female social worker; and an American sociologist who used the Thai interviewers as interpreters.

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[122] * The Cornell Cross-Cultural Methodology Project for the Development and Testing of Improved Methods to Study Underdeveloped Areas is supported by a grant from the Rockefeller Foundation and is a project in the Department of Sociology and Anthropology.

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125
621 The age breakdown of the sample is as follows:

41 cases of 20 to 29 years of age
73 cases of 30 to 39 years of age
85 cases of 40 to 49 years of age
68 cases of 50 to 59 years of age
41 cases of 60 to 69 years of age
16 cases of 70 years or more

The occupational status breakdown is as follows:

269 farm operators
24 farm laborers
18 in trade or commerce
10 in service occupations
12 other (2 retired, 2 artisans, 1 traditional doctor,
1 janitor, 1 air force man, 1 policeman,
1 children's caretaker 1 gardener,
1 laborer in irrigation department, and
1 occupation unspecified)

123 Respondent Reaction to the Survey

The respondents were in general cooperative and congenial as is substantiated by the following interviewers' ratings:

(1) 93 per cent of the respondents were reported as cordial at first contact;

(2) 96 per cent of the respondents were reported friendly, cooperative, and responsive for all or most of the interview;

(3) 90 per cent of the respondents were reported as speaking freely for all or most of the interview,

(4) 91 per cent were reported as answering to the point of most or all questions, as giving reasonable, applicable answers;

(5) Only 3 per cent of the respondents were reported as giving many guarded, insincere or evasive replies, whereas 15 per cent were reported as giving some guarded, insincere or evasive replies; and 80 per cent of the respondents were reported as giving no guarded, insincere or evasive replies.

114 The interviewing period fell in a relatively quiet season between harvesting and planting of paddy. At that time farmers were readying implements and beginning to prepare for harrowing and sowing the seed-beds. The period coincided with a period of university vacation so as to recruit English-speaking interviewers. The morale of the staff was high at all times.

* * * *

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7

BIOGRAPHICAL SKETCH

• 114 Kamol Odd Janlekha was born on July 22, 1918, in Nakorn Rajsima, Thailand. After graduation from Vajiravudh High School in 1935, he was sent by the Thai Government to study Agricultural Economics in the University of the Philippines, where he was graduated with the degree of Bachelor of Science in Agriculture in 1940.

In 1940, he entered Thai government service and served as Head Section of Rice Extension from 1941 to 1946. Throughout World War II, he also served as Food Drive Officer for Bangkok, Thonburi, Nonburi, Ayuthia, Chainat and Supanburi. Concurrently, he was also a member in the Occupation Subcommittee of the Board of Evacuation.

He was employed as an instructor in Kasetsat University, Bangkok, in 1948. In this same year, he assisted Professor Lauriston Sharp of Cornell University in the preliminary community study of Bangchan, Thailand. In 1949, he served as field director of an agricultural economic survey of Sarapee District, Chiengmai, co-sponsored by the Thai Government and Food and Agricultural Organization of the United Nations.

He entered Cornell University in 1950, and received a Master of Science degree in 1951. During 1952-53, he was

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7

114 sent by the Southeast Asian Program of Cornell University to continue his research in Bangchan, Thailand. He completed the requirements for the degree of Doctor of Philosophy in September, 1955 with a major in Economics of Agriculture, and minors in Cultural Anthropology and Far Eastern Studies.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7

CHAPTER I

METHODOLOGY

Since 1947 Cornell University has been sponsoring a number of studies in community development in various parts of the world. "All of these studies are multiple approaches to a central problem: What are the basic factors involved in the process of cultural change? In the Cornell studies of changing human behavior it is postulated that in any society no one element of change can be clearly understood except in relation to other elements. Biological factors -- birth rates, disease, malnutrition -- must be investigated in relation to the physical environment and the total culture of the society in which they occur. Functional aspects of culture -- family life, economy, education, religion -- must be studied in relation to each other rather than simply as isolated segments of group life."[1]

This study of the economy of a rice growing village in Central Thailand is a part of the Cornell University Thailand Project which includes studies carried on by a group of research workers representing a variety of disciplines. The field work was begun in 1948-49 and was resumed in 1952-54.

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1. Alexander H. Leighton and Lauriston Sharp, "Notes for Field Research Workers" (Department of Sociology and Anthropology, Cornell University, New York, 1952), p. 1. (Mimeographed.)

Chapter II

MAN AND WORLD

771 Bang Chan had for years heard preaching from Buddhist scriptures. Co-existing with these teachings were Hindu elements referring to Brahma, Shiva, and others. People [192] also believed in an animistic lore concerning frightening ghosts and spirits (phī), protecting deities (thēwadā), maternal goddesses, princely spirit-lords, and other supernatural guardians of a more or less benevolent nature. To these beliefs were added special bodies of knowledge, such as sacred literature from India and traditions of astrology from both China[8] and India. Other elements might be traced to Muslim influence, just as Muslims shared some of the foregoing references with their Buddhist neighbors. Bang Chan shaped its views of nature and man from all these sources. However, we shall not try in what follows to specify the sources of its beliefs.

826 774 184 192 ### The Human Body

The body of flesh, blood, bones, and other materials, harbored the noncorporeal aspects, in particular a person's merit store (kam; Skr: karma) and his several souls, viz., the Khwan, the winyan, and the four chettaphūt (cf. J.R. Hanks, 1959). Views of the human body formed no unitary system, but were as varied as their origins. Thus, sometimes villagers distinguished the material from the non-material: "a human being is composed of two aspects: rūp (body) and arūp (non-body)." Sometimes learned persons referred to the Hindu-Buddhist concept of 32 parts of the body, one of which, the winyān-soul, was the "organizer" of the others.

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8. No trace was discovered of the Chinese concept of Yin as female, dark, cold, and evil, etc., and Yang as its opposite.

[115] 9. Ming (Mc.F. 880) was once given as a term for "soul" by a Muslim informant, but without further information.

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The genetic connections of those who did not help in cash or labor at, say, cremations or cooperative work-parties were forgotten. Degree of help was a measure of kinship solidarity, and even marked the outer boundaries of kinship.

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The word "help" turned up over and over again in the context of childbirth. Birth came about because a married couple, already steeped in the knowledge that they had been so helped by their parents, "helped another individual to new life" through the mingling of semen and blood. The midwife's role was merely to "help." When a woman engaged a midwife, her words were, "Will you come to help me?" A baby having trouble breathing right after delivery "had to be helped for half an hour." Most important, only through the reciprocal help of mother and child was rebirth to earthly life implemented at all. Parturition was an active, cooperative venture between 2 autonomous beings. The child set the time for labor to start by "deciding to be born" when his 32 parts were "complete,"[38] and he had worked off sufficient sin in purgatory to permit rebirth. The mother by her labor "helped the child to be born," but she could not succeed unless he actively "helped," too. Though other assistance to her was desirable, such as persons to support her back and press out the infant, only his help was essential. Without it she had a hard or unsuccessful labor. A woman who gave birth successfully without outside help created no stir because it was evident that the baby had been helpful.

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38. Informants were not uniform in opinion here. Some said the khwan (or winyan) was the first "part" to establish itself--arriving at the moment of conception--others that it was the last (Textor:262). In either case it was highly volatile during pregnancy, and the trapping by winnowing at birth was the major means of rooting it in the person. During pregnancy, medicine for wind in the fetus was given "which was not effective if there were no khwan," but whether the khwan was the mother's or the child's was not certain.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

858 828 child is clearly a social inferior, and is due all the prerogatives of his position: he is to be dealt with gently, kindly, and benevolently, with sympathetic regard for his incompetence; correlatively, he must be taught to express deference and obedience to superiors. Rather, the equality awarded the child results from the recognition that in the workings of the cosmic scale it is impossible to ascertain what the child could once have been or eventually will become, and he, like any soul, is always *potentially* of the same value as any other person. It is precisely for this reason that most Bang Chaners, if they mention it at all, are only mildly pleased rather than particularly proud that one of their own grew up to become an admiral in the Thai Navy. It comes as no great surprise that such a thing can happen. To them, it is no more unusual than that the prime minister himself should be a person who was born and reared in a village. (By the same token, the peasant background of these two individuals creates no special sense of personal identification with them on the part of the villagers. They are perceived simply as two unique *individuals*, their peasant roots being viewed as only one of the literally countless factors that made them what they are today.)[27] To a large extent, the equality of the child derives from the premise that he is not so much a child as he is a human being who happens to be at a particular stage in his ontological

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time). When probed further and asked if their parents' training may have had any influence on these individuals, they replied "yes" and "maybe" in the case of the admiral, but disavowed all parental influence in the case of the *nagkleeng*. A few said that the *nagkleeng* became that way because of bad friends.

One villager, phrasing his comment as a personal conjecture, volunteered that the notion of parents being the major influence on a child's character is a "modern" idea. Another informant, the wife of a school teacher and well versed in her husband's teaching training manual (prepared in Bangkok by Western-trained educators) argued that a person's character is dependent "mostly on the influence of the home and school." However, since on other occasions she complained to me that one of her sons "does not have an *ʔupanidsaj* for studying, and there is nothing a parent can do but let the child have his own way," it would suggest that her commitment to the pronouncements of her husband's mentors was not too well internalized.

To avoid confusion, it might be added that from a historical point of view only one of the above cosmological forces (*kam*) is strictly Buddhistic in origin. The others are either Brahmanic (*khwaan* and *phroomlʔkhid*) or traditionally Thai (*ʔupanidsaj*, *winjaan*, and *caj*). Of all the terms, *kam* and *ʔupanidsaj* are the ones most frequently referred to when discussing an individual's character.

[115]

[27] It is precisely for this reason, as I indicated in an earlier writing on Thai social structure (see Sharp *et al.* 1956: 163) that Thai society "cannot be said to have a class system in the classical European sense of the term." People identify with others as individuals, not as representatives of social classes.

[565] [571] [554]

The very fact that individual peasant boys can climb the social ladder to attain some of the highest social positions of the land, without it even being considered particularly noteworthy, attests to the fundamental equalitarian nature of the ideas underlying the Thai social system despite the obvious emphasis given to status and hierarchy in individual face-to-face relationships.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

123 friends" never numbered more than eight or ten people, out of a total population of 1,771.) Although their opinions differed in detail and covered a considerable range, they seemed to agree that I had a *good heart*. One villager said that he knew I had a good heart because children like me, "and children are only attracted to people who have good hearts." On the other hand, another more critical person said that my personality was just like that of a child, "because he always shows his feelings. He does not know how to be cool." The contrasts the villagers saw between myself and other researchers were particularly instructive. Of another field worker, an informant said: "he is not a kind person like *Aacaan* Herb, but he knows how to treat people in the Thai way. *Aacaan* Herb does not know how. He laughs too loud and does not use flattering words. He does not help me as much as the other person either." Yet, in contrast, another villager said: "I like *Aacaan* Herb because he likes me. He tells funny stories. He is not like some of the other *farang* who leave as soon as they get information from you."

123 The ultimate importance of these personal assessments are not easily
124 determined. One villager perceptively noted, for example, that although
[115] the "boss" of the Cornell team was a "good person," it really did not make any difference whether he was good or bad "because he is the 'boss' and bosses have to be respected." Of more direct relevance to the research was
[125] the fact that those individuals whom I counted among my warmest friends were not necessarily my best informants; in fact, some became inordinately anxious and evasive while taking the Sentence Completion Test and TAT. On the other hand, some villagers whom I had never seen before responded to these tasks with obvious enthusiasm. Even the villager who complained about my having wasted his time was a good informant, in the sense of appearing stimulated by and genuinely involved in responding to the sentence cues. It is clear, however, that villagers who liked me were the most approachable of informants, and were more ready, at least initially, to acquiesce to interview requests. The crucial factor here may well be the difference between responding to the field worker versus responding to the research; that is, even though all the respondents were originally induced into being interviewed as a favor to me—and their willingness was in part a function of how much they liked me—such favors did not necessarily carry over to the substantive purposes of the interview: reacting to my queries in a concerned and committed way. Thus, some informants went through the entire interview experience carefully fulfilling the interpersonal "obligation" but all but ignoring its content; others were so stimulated by the content that their initial attitudes toward me, positive or negative, became largely irrelevant. The vast majority of informants of course fell between these two extremes; and in no case were either the interpersonal or substan-

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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Table 28 shows estimated prices of land in Bangchan in 1948 and in 1953. These prices are estimates made by our informant who is a son of Hajji Sa-ard mentioned in an earlier paragraph. He is one of the best informed persons in the village, has visited Mecca, and has received a higher education than any other person in Bangchan with the possible exception of one store-keeper who had spent a few years in the Military Academy in the 1910's.

Our informant, who will henceforth be called by his real name -- Hajji Direg, based his estimates of land prices in Bangchan on what he was willing to pay. He was aware of locational variation in prices of land in the village. Strictly speaking, this is not contradictory to our assumption of homogeneous nature of soils in Bangchan; for slight variation in Direg's estimated prices was due, according to him, to differences in the land levels which affected the cost of irrigation and drainage. Direg divided Bangchan into seven land-price zones (Table 28 and Map I). It is seen in this table that the 1948 price ranged from 200 baht per rai in Zone 7 to 300 baht per rai in Zone 1, averaging 249 baht per rai.

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Table 28 shows that the average price of agricultural land in Bangchan rose from 240 baht per rai in 1948 to 1,583 baht in 1953, an increase of more than five times in six years. Most remarkable was the increase of the price of land in Zone 1 from 300 baht per rai to 12,000 baht per rai. The increase in the price of land in Zone 1 shows that land

[TEXT CONTINUED ON PAGE 163]

243 594 461 [464] row man. He could not very well be substituted by his younger sister who was also needed to perform the housework. A worker was thus hired for the period of two months -- from the middle of June to the middle of August -- primarily to help in plowing. Phan also partially helped in plowing and harrowing in part of the morning session before he started his work for the Cornell team at nine o'clock.

[496] During the cooperative work season, Chom represented the family in cooperative uprooting and cooperative harvesting, and Phuan in cooperative transplanting, weeding and harvesting. Phan also represented the family in cooperative work scheduled for Saturdays and Sundays when he was free from Cornell duty.

243 461 128 Work records of all workers of this farm were kept by the author throughout the work season from June 4, 1953 to February 14, 1954. At the beginning, the author stayed overnight with the family. Family workers were requested to give accounts of their activities of the day. To facilitate more accurate accounts regarding the time of the work, a clock was [115] given to the family. When family workers became acquainted with the type of information that was needed, Phan, our row man, was assigned to make a daily report on the kinds and time of work done by each worker. Phan's daily report was taken down by the author in the labor schedule specially prepared for the purpose.[3] Later, when Phan's reporting skill was well developed, he was asked to report on the daily labor records only four times a week, usually Monday, Tuesday, Thursday and Friday.

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3. See Appendix B.

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

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MATERNITY AND ITS RITUALS
IN BANG CHAN

[Introductory, P. i]

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[P.ii]

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MATERNITY AND ITS RITUALS IN BANG CHAN

OOO

by

Jane Richardson Hanks

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[P.i] [Title Page]

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THE CORNELL UNIVERSITY SOUTHEAST ASIA PROGRAM

000 The Southeast Asia Program was organized at Cornell University in the Department of Far Eastern Studies (now the Department of Asian Studies) in 1950. It is a teaching and research program of interdisciplinary studies in the humanities, social sciences, and some natural sciences. It deals with Southeast Asia as a region, and with the individual countries of the area: Burma, Cambodia, Indonesia, Laos, Malaya, the Philippines, Thailand, and Vietnam.

The activities of the Program are carried on both at Cornell and in Southeast Asia. They include an undergraduate and graduate curriculum at Cornell which provides instruction by specialists in Southeast Asian cultural history and present-day affairs, and offers intensive training in each of the major languages of the area. The Program sponsors group research projects on Thailand, on Indonesia, on the Phillipines, and on the area's Chinese minorities. At the same time, individual staff and students of the Program have done field research in every Southeast Asian country.

A list of publications relating to Southeast Asia which may be obtained on prepaid order directly from the Program office is given at the end of this volume. Information on the Program staff, fellowships, requirements for degrees, and current course offerings will be found in an Announcement of the Department of Asian Studies, obtainable from the Director, Southeast Asia Program, Franklin Hall, Cornell University, Ithaca, New York, 14850.

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FOREWORD

Dr. Jane Richardson Hanks has been associated with the Cornell Thailand Project as Research Associate in Cultural Anthropology since 1952. Dr. Hanks' field work, with emphasis on family life, was concurrent with a dietary study of families in Bang Chan, and observation on dietary practices of mothers and feeding and growth of infants. She is co-author of Food Habits and Nutrient Intakes in a Siamese Rice Village, in which she contributed her insights as an anthropologist to the observations of her nutritionist co-workers. The facts recorded in a report on the nutritional aspects of maternal and child health, and many observations in the field notes of her co-workers from other disciplines, take on new meaning in the light of Dr. Hanks' study of maternity and its rituals in Bang Chan. References to these and other related reports are included in the bibliography.

In a society where health and well-being are thought to be determined primarily by merit, where illness and early death are accepted as deserved sufferings for sins of an earlier existence, the health worker might be perplexed as to how to implement his teachings. Yet the parallel importance of habit, the concept that the first occurrence sets the pattern for all subsequent occurrences of like nature, opens the way for the introduction of many desirable practices. The need to reconcile new ways with old is emphasized in this study. In her chapter on "Guides for the Introduction of Changes," the author gives practical illustrations which assure realization of her hope that this report will be of interest not only to anthropologists but to all who are concerned with maternal and child health.

Hazel M. Hauck
Professor of Food and
Nutrition, Emeritus

Cornell University
Ithaca, New York
October 1963

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The author wishes to express her gratitude to Dr. Lauriston Sharp, Director of the Thailand Project, and to the other members of the Cornell research group. Her debt is especially great to Dr. Hazel M. Hauck, who set the frame for the study of childbirth, and to Dr. Saovanee Sudsaneh. Their assistance has been unstinting and their notes, turned over in full, have been a rich mine of information. Additional materials came from Dr. Sharp, Dr. L.M. Hanks, Dr. Kamol Janlekha, Dr. Robert Textor, Mr. Loebongs Sarabaya, Mr. Judun Kongsa, Mr. Aram Emarun, and Mr. Singto Metah. Assistance at various points was given by Dr. Charles Archaimbault, Dr. J. Ingersoll, and Dr. Herbert Phillips. Many insights also came from the members of the Wartenstein Conference of the Wenner Gren Foundation in 1959, in particular Dr. Robert Heine-Geldern, Dr. Kenneth Wells, and Dr. Siribongs Boonleng. The lifelong research of Phya Anuman Rajadhon permits this regional study to take its place in a larger scene. To all of these institutions and persons thanks are extended.

For the sustained friendliness and courtesy of the people of Bang Chan who made every visit happy and fruitful, the author is particularly grateful.

I am deeply grateful to Dr. Henry F. Dobyns for his kindness in seeing this paper through the final phases of production, to Dr. R.B. Jones for certain linguistic corrections, to Mr. Warin Wonghanchao for preparation of the glossary, and to Mrs. Marilyn Cartier for preparing the manuscript for printing. The paper was prepared for reproduction by the staff of the Comparative Studies of Cultural Change of the Department of Anthropology under Contract AID/csd-288 with the U.S. Agency for International Development.

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[P. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

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779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

84 A soul desiring rebirth flew into the womb of a woman at
[775] conception. By care and imitative magical practices, both
774 parents helped the fetus grow but the mother gave the baby its
[789] body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not
846 wander from home throughout life. A post-partum rest of
392 several days was taken beside a hot fire, the purpose of which was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman.
793 The comparable ceremony of maturation for men, when they too were changed from "raw" to mature, compassionate, and strong
789 males for their calling of fatherhood and leadership, was
562 ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to
[688] nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

844 This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

128 The understanding of, and the attitudes toward, modern
844 medicine are given along with findings accounting for
846 acceptance or rejection of modern hospital care for parturients.
369 Accepting the changes that were observed in the practices
178 surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

interest of improved maternal and child health, a few suggestions are made.

Purpose and Method

The purpose of this study is to set down the ethnographic data concerning childbirth in Bang Chan, following out the economic, social, religious, and cosmological aspects as needed to clarify the behavior and the psychological attitudes noted. The hope is that not only anthropologists but persons working in programs of maternal and child health will find the data useful.

The data were gathered from Buddhists and Muslims in Bang Chan by interviews and direct observation. Because Dr. Hazel Hauck, in the course of nutritional studies also made inquiries "from the standpoint of anthropological study rather than because of an assumed relation to nutrition or health" (1959:3) she first opened up the broad outlines of the subject. The author, with Dr. Saovanee as an interpreter of unusual competence, and Dr. Saovanee herself then pursued the subject further, including interviews at the Minburi Health Center and at Cha Choeng Sao.

A few comparative references such as to McFarland's dictionary and Phya Anuman's researches are given, but the focus is always kept on Bang Chan. Though many of the findings will have a certain pertinence in Bangkok, the fact that Kaufman found striking differences in Bang Khūat only 8 kilometers away shows how cautious generalizations must be.

The transliterations of Thai words are only approximations, based on the system promulgated by the Royal Institute of Thailand; the tones have been omitted. With the translation always adjacent and a glossary provided at the end of the volume, the author feels there should be little confusion. Proper names which are generally known in a different transcription are left in their familiar form. In referring to works by Thai authors western custom is followed but in referring directly to the authors themselves Thai custom is followed, as it should be in direct address.

Chapter I

THE COMMUNITY OF BANG CHAN

The Geographical Setting

In the populous flat central plain of Thailand where Bang Chan was located, fenceless geometric rice-fields, dotted by clumps of trees, stretch as far as the eye can see. Houses, clustering occasionally into hamlets, line the canals that serve for domestic use, drainage, irrigation, and communication. A few rounded-up roads lead out from Bangkok, the national capital on the Menam Chao Phraya, the great central river.

The monsoon divides the year into three seasons: a hot and wet (late May through November); a cool and dry (December to mid-February); and a hot and dry (late February to mid-May). The temperatures range annually from 59° to 89° F. (15° to 32° C.) with monthly means of 77° to 86° F. (25° to 30° C.) (de Young:5). A drop at night averages around 18° F. (10° C.) in April, and 22° F. (12° C.) in January, while the relative humidity varies between 85 per cent and 81 per cent (Hauck, et al.:12). Rainfall averages about 50 inches a year, 40 of which fall in the wet season (Janlekha:21). Because of the run-off from the mountains in the north, once a year the Menam Chao Phraya slowly rises, fills the canals and then overflows its banks, covering the plain for hundreds of miles to a depth of three feet or more. In Bang Chan, the water stood on the land from June until January, with its peak in October. From February to May the canals ran low, and the land dried and cracked from the intense heat.

The Community

In 1954, 1700 persons (336 families) lived in Bang Chan. Muslims, comprising 10 per cent of the population, lived as fully Thai citizens in all parts of the community in economic and social symbiosis with Buddhists. A few ethnic Chinese had married into Thai families and were accepted.

The community spread over an area of about 7000 rai (1000 hectares or 5 square miles). Bang Chan Canal bissected

Bang Chan Canal bissected

the community and joined, about one mile south, Sāensaēb Canal, a broad old waterway connecting Bangkok and Minburī with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Minburī, two miles east, cut through one side of the area. On it lay Bang Khūat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō paet," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Minburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Minburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Minburī, Kilō paet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoe), one located in Minburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

1. A new large school has since been built away from the temple compound.

361 Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended 351 to live in proximity. Around the houses were kitchen gardens and threshing floors, and behind them, the fields. Bananas grew 245 abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, 241 while fish were plentiful. Water sources were the rain, kept 226 in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large 312 tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

146 General Nutritional Level

The population was physically well-formed with few physical [142] deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. Food at the not-infrequent festivals [272] was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The [178] change-over, some decades ago, from home pounding of rice to [256] steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community.

2. Dr. H.M. Hauck, personal communication, 1959.

Modern Medical Resources

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Since no modern doctor or midwife lived in Bang Chan nor visited regularly or on call, the nearest modern medical assistance was at the Health Center[3] in Minburī. This was an out-patient clinic and small hospital established by the Ministry of Public Health to give modern care, instruction, and occasional free issues of such items as dried milk and cod-liver oil. It was conveniently located on the big Saensaeb Canal, near smaller canals and a foot-road, and only a few hundred yards from the bus terminal at the end of the auto road. The staff comprised a first-class doctor, a nurse-midwife (whom we shall call "the nurse"), a dental hygienist and a sanitarian. The main building had offices and pleasant waiting-rooms, with living quarters upstairs for the staff. Adjacent was a well-built and well-ventilated smaller building, with two good-sized rooms, one for general, and the other for maternity cases. The maternity half was divided again into a small room for labor and delivery, and a larger room for recovery with space for 2 persons. Beds were not used; patients were comfortable on the floor with mats. Relatives provided and cooked the food for each patient on their own portable charcoal braziers in a special area. Room and delivery were free, but a charge was made for medicines.

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In Bangkok, 20 miles away, on the northern edge of the city nearest to the community, was the fine new Women's Hospital to which one wife had gone for delivery before she became a Bang Chan resident. The other hospitals of the city were occasionally used for other medical or surgical reasons by Bang Chan residents, but not for maternity cases.

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In Minburī were also a few "second class practitioners." These were not graduates of Thailand's recognized medical schools, but they had some modern medical knowledge. A former medical orderly in the army, for instance, utilized his training to set up a practice. These practitioners used both traditional and modern systems. They would on rare occasions come to a Bang Chan farm house on call. They enjoyed the confidence and patronage of the most educated, progressive, and affluent element in Bang Chan's population, such as the teachers and many of the leaders, both young and old, who, in their patronage, saw themselves as less old-fashioned. Their large practice was lucrative, fees of 1000 baht for a course of injections being cited. Though consulted for maladies of pregnancy, to our knowledge they did no obstetrical work.

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3. In 1957 a new building with expanded facilities was opened in Minburī. All our data refer to the old arrangements.

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The Chinese druggists, many of whom stocked among their traditional pharmacopeia a few modern medications, gave out occasionally to their customers information derived from the manufacturer's instructions for use. People with minor indispositions sometimes sought a druggist's advice. He suggested traditional or modern remedies, depending on the wishes of the customer. Thus, the druggists also acted as a bridge to the use of modern remedies.

Facets of Social Life Pertinent to Childbearing:

Communication and Transportation

People went to Mīnburī, and less often to Bangkok, to buy, sell, work, or visit relatives. A few adults had never been outside Bang Chan.

Along the road buses passed Bang Chan every two or three hours during the daytime only. Mīnburī was a ten minute ride, Bangkok, an hour. Mīnburī had no taxis, and no telephone existed to call a taxi from Bangkok. Two or three persons owned bicycles.

Within Bang Chan, transportation varied with the season. From June to February travel was entirely by boat, even to a neighbor. A message to a local midwife, for instance, could be carried quickly by a speedy paddler in his skiff. If an emergency trip to the Mīnburī Health Center appeared necessary, a person could be rowed fairly comfortably along the canal that bordered the road. Going by boat to Bangkok, a whole day's row away, or four hours by the motor boat from Mīnburī, was not considered convenient even for passenger traffic, much less for a sick person or a woman in labor.

The inconvenient time of year was the three month dry season. Boats then could hardly go on the canal that ran through the middle of Bang Chan, while the smaller canals became muddy or even dry. Walking barefoot over sharp stubble in tropical sun was hard. To transport a woman in labor, assuming she could stand it, an improvised stretcher could be made, but to subject her to the jolting bus was usually foolhardy. It was not customary to flag down passing cars. If things went wrong for a woman in labor during the hot, dry season, there was practically no chance of getting her to a hospital, and none of getting modern help to her.

Work Habits in the Economy

Because of the annual flood the land was admirably suited to growing a single bounteous crop of rice. After all needs for

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janiekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 16 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand [Kingshill 1960:7]).

Besides the work in rice-fields, women dug and cleaned

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[503] Besides the work in rice-fields, women dug and cleaned
[226] canals and ditches, mounded land, and fished in many ways, the most laborious of which was plunging a heavy basket into the mud to catch burrowing fish. In the household chores, in which men shared to some extent, they carried water, cut and fetched wood, tended livestock, cultivated kitchen gardens,
[501] pounded rice in mortars, and cleaned houses. Boats were rowed by paddling or sculled by standing and pushing a single large
[354] oar. Cooking was time consuming. The low stoves were on the
[352] ground or floor. Since there were no tables or chairs, one squatted two to four hours a day to cut or pound ingredients,
[516] stir the curry, or wash the dishes.

868 The training of boys and girls for farm and household
561 work was thorough and started early. By 18 years of age,
461 boys and girls with few exceptions were experienced in every step of farming. Janlekha's chart (1955:82) indicates the progression (parenthetical additions are the present author's):

Age	Method	Kinds of farm work
5 - 7	not forced, but allowed or induced to work if they want to	light hauling, removal of weeds which have been turned over by harrowing
8 - 12	mild pressure	light hauling, removal of weeds which have been turned over by harrowing; some household work and help in the kitchen - girls only - (sometimes boys)
13 - 14	moderate pressure	hauling, weeding, buffalo-tending, transplanting, chicken-feeding, fishing, household work (boys and girls)
15 - 16	high pressure	all kinds of farm work, harrowing, harvesting, and uprooting - boys only - are started at this age.

872 Children worked in the fields before and after school
461 which, compulsory for all children aged eight to fourteen, was held from 9 a.m. to 3 p.m. five and one-half days a week. Vacations coincided with peak work seasons so children could help in the fields or at home.

This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

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Marriage

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As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Mīnburī to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

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Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.[4] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:62) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

[702] [793] 584 583 581

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4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

[832] [775]

581 It was not felt necessary to marry. Because of the strong
589 economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married.
[593] One group of grown siblings of both sexes stated they were "too happy together to marry."

836 Pre-marital chastity was more or less observed. If a girl
848 became pregnant before marriage, her parents brought pressure, usually successful, on the boy to marry her. The occasional illegitimate child was raised without stigma in the girl's family, though problems arose during pregnancy and delivery (cf. "cone of wood" below). The mother later found a husband. One father was angered because he felt his daughter's pregnancy wrecked her chances for a marriage of prestige. He was conspicuous for his social aspirations towards city ways.

864 Information on human sexual matters was gathered by the
831 young sometimes by accidental observation of parents and others, through hints from hearing cursing, and by conversations with grandparents, older siblings, and friends of the same sex. Men joked on sex matters at the all-male rice-uprooting parties. Being antithetic to the ascetic prescriptions of Buddhism, sex talk was highly charged. Sex was never discussed in mixed company.

Residence

592 The nuclear family of husband, wife, and unmarried children was the primary social and productive unit, but other resident kinship units larger and smaller also occurred. After marriage,
[591] the couple usually lived for a time in the house of the parents of one spouse or the other; then, as soon as they could afford it, set up housekeeping in their own house. Of a sample of 96 families in Bang Chan, 30 set up independent households at once after marriage, 16 after one year, and the rest, a few per year, on throughout 10 years; 15 of the families never had a house of their own but lived with other relatives (Janlekha:37). Of 298 families, 59.4 per cent lived independently as a nuclear family, while 34.9 per cent lived with other relatives in the house. (The remaining were single persons living alone, or priests at the temple in the "ecclesiastical family.") The average size of the households (not necessarily the nuclear families) was 5.7 persons, with a range of 1 to 14, the median
361 being 6 (ibid. 28-29). The house of a new couple was usually built adjacent to parents or relatives, and certainly within
621 calling distance or sight of some other household. Social patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

close touch with each other's activities and needs. 621

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time. 621 844 592 844 476 593 [462]

Wealth Differences:

Way of Life 556 875 441

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable. [464] 556 511 178 369

Housing

342 The type of house, whether big or lowly, made a difference in the comfort and care of women. The big houses were teak-paneled and floored with a good roof of thatch, tile or corrugated iron. Their high piles insured dryness during flood season. The sleeping and living space was a single airy open room, often with one or two sides balustraded rather than solid, and protected from the weather by the roof's overhang. The kitchen was sometimes a separate room. There was always one small enclosed room, perhaps ten feet square, or larger, with a door and a window. This room was used for keeping valuables under lock, and whenever privacy was desired: as a marriage chamber for bride and groom, or as a quiet room for a senile parent. Because of its almost solid walls, it was poorly [844] ventilated and hot. Childbirth took place in this little room, if convenient, or out in the main part of the house. The fire-rest was in this room so that the dreaded wind could be kept out.

342 The poor lived in modest earth-floored cottages of bamboo
184 frame, thatch sides and roof, with one or two raised wood plat-
352 forms for sleeping and sitting. In the rainy season, these
844 cottages could be damp. In fact, one October the water was observed ankle deep inside a house, and the wife splashed around at her chores. Under the latter conditions, a woman in childbirth would be moved to some kinsmen's house. Delivery took place on one of the sleeping plarforms, and post-partum rest was on a plank raised off the earth floor, unless space permitted that the plank and temporary fire-floor be placed on the platform. On one observed occasion reed mats as protection from drafts were temporarily set up, making an enclosure about three feet high within which a mother lay in her post-partum rest period.

Cash

434 Cash was short to everyone. The poor felt very poor and
426 the rich did not feel rich. This was because the rice-money,
[556] which came in a lump sum once or twice a year, was at once turned over to clear debts, to make large purchases of agricultural equipment, to repair the house, or to perform elaborate ceremonies. What was left over was not kept around the house for day-to-day expenses for fear of robbery, but was immedi-
434 ately loaned out. Thus cash was not available for emergencies
844 which in childbirth might mean taxis or hospital care. Being
556 rich or poor made little difference in Bang Chan, however, as to the quality of the obstetrical help given.

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 50 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygymous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap.V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

597 Adoption was fairly common, though not always of lasting satisfaction. On the other hand, in this watery domain, the
842 trouble (lambāk) in raising children, mostly involving
855 ceaseless tending, was such that a childless woman was accorded a little surface envy as one who had missed or avoid-
845 ed a lot of trouble. The attitude towards twins was ambivalent. "Twins are unlucky because there are more mouths to feed, more labour, trouble, and not enough milk. With twins, a poor family will never rise again." "No one will marry a twin for fear of begetting twins." "If twins are of a different sex, one must die." Yet others considered twins lucky "because they could be nursed at the same time, and given the same things."

855 Wealth differences also affected these attitudes,
842 especially if babies came in close succession. Comments
184 heard were: "Why do poor people have more children than the rich?" "Many visitors come bringing gifts to a rich parturient because she is respected. No one likes to talk to a poor person." "Those who have a baby oftener than every 3 years will never be rich. Fortunately, 4 of my 7 children died." The increasing cost of raising children was a concern. In one of the few families that had plans for their children's education, the father underwent a vasectomy after his 9 fine children were born, because he "feared he would not be able to feed them all." His wife, reassured that the operation had not "hurt" her husband, "was glad he had done so."

847 Abortifacients and Contraceptives

[779] Episodes concerning abortifacients were whispered about both Muslims and Buddhists. A Buddhist who induced abortion was seen as impeding an individual's rebirth and disobeying a religious prohibition on taking life, tenets which did not obtain among the Muslims. Abortifacient medicines to be used with abdomen-pressing were quietly sold by Muslims.[6] "Unmarried Muslim girls use them mostly," reported one Buddhist, "and they almost die in the process." A Buddhist curer had similar expensive medicine, but "unlike the Muslims, he will
842 not destroy the baby." Chinese boat-vendors also carried contraceptive medicines (yā) which were secretly discussed by wives. A husband reported his wife as saying, "Old ways

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6. Fraser (193) reports that in the Muslim village of Rusembilan, abortions were openly practiced, (as if part of a Muslim cultural heritage).

are more reliable than the new," implying familiarity with both. One Buddhist headman earnestly sought of the field-worker information on medicines, or "mechanical devices" about which he had heard, but bemoaned the costliness.[7] 842

To the concepts underlying childbirth, both as physiological processes and their meanings in Bang Chan's world view, we devote the next chapter. 128

7. Hauck (1956) finds that the number of pregnancies compared to the years of marriage is so low as to suggest (1) relatively low fertility in many cases, or (2) the existence of some (unknown) method of birth-control (pp.31-32). She finds an unusual feature of menstrual history as compared to western standards in a somewhat older age at menarche (median and modal age was 15, with a range from 13-19 years). The onset of menopause occurred anywhere from 35-55 or even later,which is somewhat later than in western societies (pp.30-31). [145]

Chapter II

MAN AND WORLD

771 Bang Chan had for years heard preaching from Buddhist scriptures. Co-existing with these teachings were Hindu elements referring to Brahma, Shiva, and others. People also believed in an animistic lore concerning frightening [192] ghosts and spirits (phī), protecting deities (thēwadā), maternal goddesses, princely spirit-lords, and other supernatural guardians of a more or less benevolent nature. To these beliefs were added special bodies of knowledge, such as sacred literature from India and traditions of astrology from both China[8] and India. Other elements might be traced to Muslim influence, just as Muslims shared some of the foregoing references with their Buddhist neighbors. Bang Chan shaped its views of nature and man from all these sources. However, we shall not try in what follows to specify the sources of its beliefs.

826 774 184 192 ### The Human Body

The body of flesh, blood, bones, and other materials, harbored the noncorporeal aspects, in particular a person's merit store (kam; Skr: karma) and his several souls, viz., the Khwan, the winyan, and the four chētṭaphūt (cf.J.R. Hanks, 1959). Views of the human body formed no unitary system, but were as varied as their origins. Thus, sometimes villagers distinguished the material from the non-material: "a human being is composed of two aspects: rūp (body) and arūp (non-body)." Sometimes learned persons referred to the Hindu-Buddhist concept of 32 parts of the body, one of which, the winyān-soul, was the "organizer" of the others.

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8. No trace was discovered of the Chinese concept of Yin as female, dark, cold, and evil, etc., and Yang as its opposite.

[115] 9. Ming (Mc.F. 850) was once given as a term for "soul" by a Muslim informant, but without further information.

826 [764] [763] [754] [752] [845]

As to the gross structure of the body, some persons learned about the skeleton when, in preparing corpses for cremation, the undertaker stripped the decaying flesh from the bones, usually in the presence of relatives and spectators of all ages. Occasional autopsies because of suspected sorcery, and surgical removal of a fetus from a deceased mother by caesarian section led to some knowledge of organs and blood vessels. Male and female masseurs of considerable competence were trained in the Chinese neuro-muscular system. A system of "origins," e.g. that the elbow-origin was in the arm pit, and the chest originated at the spine, might relate to the Chinese concept of linkage points on the body, in particular, acupuncture. In Bang Chan's popular conceptualization, the protecting skin which enclosed the body was thin at the top of the head and especially so at the stomach area. An old image also persisted that the body cavity itself was a relatively undivided space extending from neck to pelvis. Inside the cavity, food dropped from the top, faeces packed down at the bottom. Through the body curculated slowly the blood; several kinds of water (nām) (McF. 453) e.g., the nām khrəm (refuse-water) (ibid. 453) in the abdomen; and several winds (lom) (ibid. 728) e.g., the pushing lom bēng (ibid. 487), and the pulling lom chawat (ibid. 287). The small hair-whorls noted on the head, hip, or shoulder were construed as minor vortices of these currents, or as souls (khwan).

827 [192]

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Foremost in people's minds were the elemental constituents of the body. The human body, along with every animal, plant, or mineral in the world, was made up of 4 elements (thāt): earth, fire, water, and wind (air).[10] This ancient four-fold view, also familiar to the Greeks, had mixed in Bang Chan with the traditional five-element Chinese system (metal, earth, fire, water, wood) because gold, iron, and wood were also spoken of as constitutional elements, and there may have been others. Some persons said that the proportions of the 4 major elements were the same for everyone; others, that they varied for different temperaments, which were also affected by the presence or absence of elements other than the basic 4.

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10. "The body, comprising about a bushel of powdery earth-element, is held together by half a bushel of juicy water-element, and propped up by the windy-element. The fiery element digests what is eaten or drunk and preserves the body". (Visuddhi-Magga. [Warren:157-158]).

All food was also made up of the 4 elements. Here rice was of particular importance. The body was seen as built and maintained by rice. Flesh in fact was rice, an image probably derived from Buddhist scriptures. 11

Each element carried with it its substantive aspect of heat, flowing, etc., and its astrological nature and relations. Elements could be compatible or incompatible with each other. Earth, water, wind, iron, and wood for instance were compatible. Gold "got along" with all elements. Fire, though, was incompatible with wind, water, and wood for it could destroy their proper proportion.

The effect of astral and planetary relationships at the moment of birth on one's constituent elements induced qualities of character.12 Mind and body were a continuum. Because family members were born at different moments of time, intrafamilial temperamental differences were expected.13 Persons made up of incompatible elements quarreled. Thus, friction might occur between parents and children. For a husband and wife, who lived in especially close proximity, the constitutional elements were of special importance. Through marital relationships their elements were in physical contact. Consequently, in the old days, a couple comtemplating marriage ascertained through their horoscopes the compatibility of their natal elements to determine whether they could live together without destroying each other. For instance, a girl with much fire in her make-up was easily angered and prone to fevers. She could not make a successful marriage with a boy with much wood.

Physiology

A single physiological process controlled the functioning of the body and the mind; i.e., the equilibrium of its elements. If the elements were in proper balance, proportion or harmony, a person was healthy; if an element were excessive or deficient,

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11. "This, my formed body, is composed of the 4 Elements, generated by Father and Mother, built up from rice, porridge and sour gruel," says the Buddha (Suriyabongse 1951:11).

12. Merit, the other determinant of character, is discussed in "Influences on Health" below.

13. Cf. the proverb "The joints (knots) on the same stem are nevertheless unequally spaced, so even brothers are of different minds," (Gerini 1904:14).

753 826

a condition which also affected the functioning of the others, he was ill or emotionally disturbed.[14] For example, dropsy, swelling, and yellow eyes came from excess water; cholera and constipation from earth mists. Wind and fire were the great trouble-makers.

Wind "was stronger than the other three elements." Either blowing wind or still air easily penetrated the skin and caused difficulties all the way from flatulence, stomach-ache and diarrhea to a minor head-ache and dizziness ("if wind whirls inside the body, the house swims around"); from incessant crying to serious interference with breathing, hence fainting and death. An accident, such as a cut or broken bone, disturbed, and might "let out," the air. Acute pain ensued if "rigidity" of earth, fire, or water interfered with the proper movements of the internal winds.

828 826

Anger and fever were both in the category of excess fire. Since fire was particularly implicated in disturbed social relations, coolness was emphasized as the desirable state of body and mind. The blessings for both sexes at birth and at the marriage ceremonies enjoined the individual to be "cool and happy." There was some evidence that cool natures were tender (on) natures. Since women by nature were assumed to be "tender," and men not, a difference in element constitution may have been sex-linked. However, everyone knew of women who were not tender. For persons abundantly endowed with fire, temper control through temperature control was a constant preoccupation, for the allowable margin of fluctuation was especially narrow.

262 826

Food occupied an especially important place in a person's welfare because food controlled the fire element.[15] The following material on diet is the background for some of the dietary injunctions during pregnancy and lactation.

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14. In view of Thailand's ancient Indian contacts, the parallels (and differences) between Bang Chan, and Hindu Ayurvada as described by Opler (1963:32-38), are noteworthy.

15. "What was drunk or eaten by its decaying created the fire element in the body" (Suriyabongse 1954:12).

[177]

Diet in Body Maintenance and Curing

Because food created fire, the daily diet could be a source of illness or a therapeutic means. Every food had known properties for heating or cooling, and for other effects as well. Guava fruit, alcohol, and turtle or cobra curry were heating. Eggs were cooling. Depending on the occasion, ice and iced concoctions were over-heating or over-cooling. They were always "dangerous during menstruation." Banana varied according to the variety: kluāi hōm (fragrant banana) was undesirably cooling and caused either diarrhea or constipation (Hauck, 1959:27); kluāi nām wā was less deleterious (salaēng) while kluāi nam was good for the sick or for parturients (Boonlong).

Properties in food changed in cooking. Boiling made rice "ripe" (auk) and so available as nourishment (Anuman Rajadhon:77). Even the method of cooking varied the properties. For the sick and for parturients, the banana variety called kluāi hak muk was good if baked, but not if cooked in syrup (Boonlong).

Some foods were "incompatible" with, and so aggravated, certain illnesses. Air-borne food in the form of smell was incompatible with, and compounded, a condition of wind excess. Death or blindness ensued. On the other hand, asafetida might be tied to the wrist of a new-born baby so that the smell, an established carminative, might cure the excess wind in his stomach manifested as flatulence.

Beneficial foods were encouraged. Of all these none surpassed rice, the main sustenance of the body, "the only true food" (Yong Chutima, in Hauck, 1959:27) and source of "strength" to the farmer. Rice was a safe food. It never disturbed elements. Eating rice, as compared with meat, had no overtone of taking life. One could eat one's fill without any sin. Most of all, rice nourished the human khwan, for each grain contained a part of the khwan of the divine Rice Mother. Furthermore, any food offered ritually to a spirit or to make merit acquired strengthening properties, and was afterwards given to priests, children, or to the sick.

Foods with known dangers were avoided. "Kluāi tānī banana, a variety full of seeds, was never eaten because it contained a female ghost (phi)." Jackfruit was avoided by lactating women as a direct source of wind-excess. Fruit in general was not dangerous but "did not give enough strength for a rice farmer. It was all right for an orchardist."

People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauck, et al: 42-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny kluai nam, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" kluai nam wā. Here orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plus--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (wisāt:powerful) or natural (tām thammachāt) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "khun"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paroxysm, flatulence, convulsion,

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16. Phillips (p. 65) reported that parents did not give their child a disliked medicine because "it offends him.... It is better not to give it to him than hurt his feelings."

17. This small skin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely pained (cf. Textor:116-127). Suspected khun was one of the few reasons why a family would authorize so grave a violation of the body of a deceased member as an autopsy.

828 753 or fainting, and also such localized trauma as abcesses. Similar behavior followed the influence of malevolent magical amulets, incantations, and love magic. Natural intrusions may be exemplified by the seasonal influences of rain, which brought on too much water element; of heat, which increased fire; and of wind, which cooled too much or brought in certain fevers, e.g. north fever (khai nŭa). An accident was a natural cause of disequilibrium. A cut might let out the air or a soul.

774 [761] [953] Any lost soul, if not restored, meant death. Souls were lost from falls or frights or from spirit attack, a condition recognized by persistent crying, hysteria, and unconsciousness. The exits were at the top of the head, the palms of the hands, and the soles of the feet, the latter 2 sometimes localized at the 2 thumbs and the 2 great toes. One of the old beliefs associated an element with one of the four čhĕttaphūt souls (Textor:130). When one of these souls was lost one whole element was gone. Loss of the khwan soul was more frequent than any other, especially during childhood. Its care [844] throughout life was very much in mind. The khwan[18] played an especially prominent part during childbirth.

765 [262] [757] If a person were only slightly sick, he might first try to overcome his physical complaint by attention to diet. Very rarely did he by himself buy some medicine at a drug store. If it were a case of a child's lost khwan, women performed the rite for its recovery. When the khwan of an adult was affected, men performed a strengthening rite (thaw khwan), or a priest gave a holy water bath. If the person were very ill, holy cotton thread (săi sin) was tied at wrist, ankle, and neck so as to shut off the soul exits. An elder relative or spouse might also "bon," i.e. vow food or liquor in return for the help of supernatural beings; or, with Buddhist "sacred things" in mind, promise the ordination of the afflicted person, or oneself, or some interested relative. In this case, the relatives had long since turned for help from the arts of medicine.

278 755 The Arts of Medicine

Medical knowledge comprised on the one hand a pharmacology of materia medica, and on the other, the far more important

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18. The conceptualization of this soul was Brahmanic in source, rather than Buddhist (cf. Martinie, 1952:370).

magical formulae and incantations (khāthā cf. Textor 1960:80-98; 67-79). It was one of the branches of occultism (saiyasāt [McF. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khāo (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khāo. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō raksā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyae). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.19

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

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An ill individual made a preliminary self-diagnosis to ascertain which was the pertinent specialist to consult. A quick cure occurred if the diagnosis were correct, because the specialist then had the exact curing agent and magic for that disorder. If the first mɔ̄ were unsuccessful, the patient moved on without embarrassment to another. In fact, a person might be a-curing with 2 or 3 mɔ̄ at once, and a modern doctor besides (cf. Hauck, 1956:37):

> "She goes to Mɔ̄ Suk who is good for spirits, and to Mɔ̄ Plung at Lam Pakachet who is good for headaches and vomiting. Two years ago her child was sick with nan chak and was cured by Mɔ̄ Suk. First she took the child to Suk but a few days later went to Sawad at Lolae because she was afraid the child would die. Sawad gave tablets. She did not revisit either mɔ̄ because the child recovered. Mɔ̄ Suk helped most because he had experience in magic" (SS.).

[571] For reasons of convenience, however, people also developed lasting relationships with particular mɔ̄, usually the nearest, or a kinsman, to whom they turned first for medical help.

75. 826 Medicines cured either by direct rectification of deficiencies or excesses or on a principle of counter balance. Their effectiveness was increased by incantations. A rhinoceros in massive presence caused earth excess in the form of cholera (Bangkok Calendar, 1869:73), but a bit of its bone restored earth deficiency. Cobra was a direct ingredient for heat, but only sour tastes gave water element. A mɔ̄ described the medical theory behind curing techniques for the heat-rash, boils, and fever sometimes suffered after childbirth:

> "If the body is hot, fire is in excess, by which the other elements are heated. Thus the blood cannot move freely, and cells are deprived of their normal blood supply. The cells die, thus creating a boil or abcess. If the fire element is higher, the water of the body is lowered to a deficiency. Drinking water alone will not restore the water level. Sour tastes must be given. If the patient is thirsty, the lung is hot."

Influences on Health

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In Bang Chan, a discussion of sickness and health merely 826
in terms of element balance would be true but insufficient, or even superficial. After all, whether manipulated by oneself or by a professional curer, elements could only be controlled within certain limits. Far deeper questions were posed, probing the ultimate nature of health, life, and death. What 812
determined the particular proportions of a person's 4 elements 772
with which he had been born, and whether he had, say, a 787
preponderance of wood from Jupiter or gold from Venus? The immediate answer of astrological confluences on the date of birth would be true, for each day had its own qualities and aspects, but it was not enough. Why had he been born on that date to that set of governing factors? In life, why did one person meet the circumstances that created illness, while another lived in glorious health? The answers to these questions must be sought in the Buddhist moral and cosmic beliefs.

812
The Buddhist universe operated on a principle of immutable law. Each person received his just due, suffering for his own 771
sins, enjoying reward for his virtue. There was no personified deity to help, forgive, or blame. Moreover, attachments were the cause of sorrow. Because existence was fraught with desires, all life was basically painful. Even flashes of happiness by their cessation caused sorrow.

771
In this universe and on this earth, individuals, each a unique and independent entity, were born to live and die, over and over again, throughout eons of time. They bore no relation to each other. Separate and autonomous, each was in charge of his own destiny. All beings formed a single grand scale of existence from demons in hell, through such lowly creatures as worms and insects, upward through dogs, cats, buffaloes, and elephants to mankind, then on up to angels and gods in the last paradises before the peace of Nipphān (Nirvana).

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The insight of the Buddha showed the way to break the 775
sorrowful eternal cycle of rebirth and reach Nipphān. The 782
Buddha perceived that meritorious behavior caused one to progress up this ladder of existence toward freedom from incarnation. In each life merit (bun) could be accumulated by compassionate behavior: caring for priests, and being kind and generous to persons less able to care for themselves. With merit one's next life was happier and freer of restrictions. A dog had more merit than a worm, a buffalo than a dog. [825]

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775 Man was higher on the scale than woman.[20] Progress toward
[562] Nipphan was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phī) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good health and long life, a kindly personality, many fine children, wealth, high status, intelligence, and luck. Astrologically, he was born on a day
[775] of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death, deformities, unhappiness, poverty, and had a cruel nature.
[753] Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

751
789 The long-range protection against all illness was to
[577] live virtuously and make merit. However, to guard against temporary supernatural intrusions, everyone possessed and usually wore Buddha lockets and other amulets. Some
[782 underwent tatooing, men having Cambodian or other figures,
304] women, 2 small dots tatooed on the torso under the arm.

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20. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

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There were also the protecting rites of the life cycle, and Buddhist, Hindu, Muslim, and animist rituals to ameliorate events in every walk of life.

Chapter III

PREGNANCY AND PARTURITION

842 **Conception**

Conception occurred when a khwan-soul flew into the womb of a woman during sexual intercourse. "A father and a mother are equally important because there is no birth in the world without both. An infant is the product of both sexes," said a priest in a Bang Chan sermon.[21]

842 775 [782] [828] The little being in the womb from the moment of conception was a specific individual who had lived many times before, meritful or sinful according to its previous actions. Desire for rebirth was in itself evidence of inadequate merit to effect release from incarnation. Though this life was to some extent a fresh start, his character (nisai) and heart (chai) were already largely formed through his store of merit and ingrained habit from former existences.[22]

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[779] 21. The teachings of the Buddha state: "Rebirth takes place when a father and a mother come together, and it is the mother's period, and the one to be born is present" (Suriyabongse:20).

22. He bore with him the last ideas spoken to him at his most recent death. The Visuddhi-Magga tells how this carry-over occurs. One of the categories of karma, was the "close at hand, karma remembered at the point of death [which] springs up with [a person] in rebirth" (Warren:246). As King Mongkut lay dying, everyone in the room called out "arahat!" in his ear incessantly so that by "remembering it at the point of death" he might be reborn an Arahat (E.R.E. "Siam": 487). Another pertinent category of karma was the "habitual": "karma that has become habitual through frequent repetition. This brings on rebirth when [other] forms are absent" (Warren:246). Here is the basis for the inborn character, heart and ingrained habit (cf. J.R. Hanks, 1959, and the section below on "Habit" (khoei).

The Pre-natal Baby

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The baby's body "started as a hair." After conception it was necessary that the father, with his semen during intercourse "strengthen" the baby. There was less, if any, intercourse in the last weeks of pregnancy, though no prohibition against it. Food eaten by the mother, "transformed into blood," built the baby's body. For the first 3 months the child was a "clump of blood." By the third month the mother felt a shaking (saan) at the clump. This was the "khwan soul flitting in and out of the baby's heart." The picture of pre-natal growth was expressed by the chant at the tonsuring ceremony:

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> "The body of a child inside its mother's womb grows gradually like droplets of oil coagulating at the end of the yak's hair. The 5 apertures appear, the nose, 2 ears, and 2 eyes; and then the hair, hands, and feet. The infant's hands embrace its placenta from which it sucks water day and night. There it sits on its mother's faeces while her newly eaten foods pack closely on its head. Its chin rests upon its knees, its face is turned toward the mother's back as it leans back against her belly. It looks like a monkey in the rain, sitting, waiting, trying to warm itself in a hole at the foot of a tree" (S.S.).

Before birth (and after), the baby was weak and tender (ɔ̃n), with especially soft, thin skin.

[826]

The Pregnant Woman

In pregnancy, a woman saw herself as moving toward the fulfillment of her long adumbrated female office[23] of nurturer. The essence of her femaleness, to be "soft and yielding, to lengthen life by nourishing others" was heightened.

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23. To paraphrase Fortes: "office," subsuming both status and role, means "calling, occupation, or life-task." It serves "instrumental or utilitarian ends," yet also has the "other dimension of duty and responsibility enjoined, sanctioned and above all symbolized in ceremonial or ritual forms placing it in the moral order" (Fortes:62).

843 She was "more sensitive, tender, and delicate," and more vulnerable to outside influences, both good and bad. For her goal of nourishing a beautiful child, her greater sensitivity gave her the means. Because of the physical unity of mother and child, her every sight, sound, touch, taste or smell, every thought and action reacted on the child. Out of compassion she sought out beautiful sights and avoided ugly ones; she behaved virtuously and tenderly. As the tonsure-chant put it:

> "A child's skin is as soft as cotton. His mother dares not eat hot-tasting foods lest they burn this tender skin and make him suffer. Awake or asleep, she is careful in sitting and reclining lest he be hurt inside. She is merciful, and sensitive for her child. His pain is like that of a tiny helpless bird being clubbed by savage hunters. She will not taste incompatible foods, nor the sweet nor the peppery, even though she thirsts for them...." (S.S.).

She took every opportunity to associate herself with words or actions which implied success in situations analogous to parturition. For instance, in order that her child would "come out" more easily she cooked and ate a lotus bud, carried by monks and chanted over, especially those used at the termination of Buddhist Lent, when the monks "came out" (ɔ̄k) of their sequestration (Textor:169-170).

The father, too, shared in the responsibility, for it took both a father and a mother to bring forth a child. Quarrels were avoided for they made for a quarrelsome child. A man was particularly enjoined to help by keeping his wife in a happy mood. The father's industriousness in collecting wood for his wife's post-partum fire made for an industrious child. As a good example for the child and for their own [182] "merit," a pregnant woman and her husband chanted prayers (mon:skt:mantra) at night together before retiring. Thus their child would be "easy to raise" (Textor 1966:87).

On the other hand, pregnancy was a period of uncertainty when a woman was easily upset emotionally. Because childbirth was "like a war" when a woman might die, "defeated by her pregnancy"(phaethong), she felt uneasy.[24] If she were frightened, her child's khwan would fly off in terror. The baby died in the womb if its khwan did not return. Because of increased sensitivity and vulnerability her elements and those of the baby were frequently thrown off balance. Wind easily entered through the thin skin of her stomach where she carried the unborn child. It caused pre-natal disorders all the way from queasiness and minor vomiting in early pregnancy to miscarriage and death. "A woman felt dizziness and numbness because of wind in the fetus. In a month she suffered a miscarriage."

A pre natal pain that did not seem to be a labor-pain was diagnosed as the very dangerous naem, "a thick lump of blood and wind that moved quickly." As in other illnesses, element harmony was restored by medicines, holy water, and by modifications of diet.

Women knew of possible supernatural invasions of the womb during pregnancy. If a woman had beforehand lost a baby at birth or through miscarriage, and the body had not been properly buried, she might be seriously troubled by its restless ghost, fully as powerful, it must be remembered, as an adult's.

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24. The image of battle was traditional (cf. Anuman Rajadhon: 108). Phaethong (McF: 599), a combination of food craving and vomiting (Anuman Rajadhon:115) paralleled the dola-duka of Ceylon (cf. Obeyesekere), but without the hostilities built in by the Sinhalese.

843 [775] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phī tai thang klom, caused "the worst of all possible deaths." The phi krasū spirit,25 entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). The [753] supernatural disease missile called "khun" might also strike. "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extra pain [751] occurring just before the baby comes out." To protect [304] themselves, women wore extra talismans or had 2 dots tattooed under the arm.

843 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 2 visible teeth, which indicated it was a non-human, yak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of women giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (McF.46). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb sat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

Sometimes these aberrancies were viewed as desirable sources of supernatural power, but on other occasions, they were seen as a sign of demerit, caused embarrassment, and were suffocated at once (if alive), and buried. 845 847

If a woman died pregnant, her body was at once brought to the temple where the unborn child was removed surgically. The usual solacing sermon, rites "to lead the deceased to live in her right place in the next world," and cremation took place, with the fetus laid beside its mother so that it "would come out normally." The mother and child were separated to prevent a ghost which was double-powered. No prayers were chanted at home before exsection "lest they make the power of the spirit stronger." Moreover, any violent or premature death caused an angry ghost. The ghost of a premature child had a heavy load of sin, for its stay in purgatory, where sin was worked off, had been interrupted (Textor:262). An unscrupulous mǒ was eager to get possession of any ghost for use in sorcery, and a double ghost was stronger than any other. Ghosts were obtained by plundering the mortuary chambers of the temple prior to cremation. By feeding (liang) it, a mǒ controlled it. The ghost of a male infant was preferable because it was "stronger than that of a female." In the light of this situation, not only should the body of a pregnant woman never be left alone " so that no one can get at them (sic)," but a pregnant woman herself ought not to be alone.[26] The behavior towards the Rice Goddess, Mother Posop, who was "pregnant" when the grains in the stalk filled out, illuminated many of these attitudes: "Mae Posop feels weak, hungry, and uneasy. She is eager to taste sour and sweet foods. She is a woman and beautiful in her pregnancy." To allay her hunger the 845 766 [775] 845 775 754 775 843 782 [754] 843 782 776

26. In Cambodia, a pregnant woman might be murdered, even by her husband, so that the murderer might gain the malevolent power that possession of her new double soul would afford. (E.R.E. "Cambodia": p.159). This specific statement was not found in Bang Chan but might be part of the shadowy background to local reluctance to leave a pregnant woman alone. [171]

843 782 776 farmers brought to the fields an offering of two kinds of bananas (kluai hŏm and kluai namwâ), sugar cane, taro, young coconut and cakes; and fresh earth burned and offered with oranges and other kinds of fruit."[27] She was also given the things "dear to women": new clothing, perfume, face-powder, hair lotion and a mirror. In the annual harvest ritual, when some woman (never a man) escorted the Goddess from the field to the rice bin, participation was forbidden to a pregnant woman because "the Goddess-Mother might be jealous of the woman's heightened beauty" and so be malevolent. Also, "being now emotionally weak and easily upset, a woman might be frightened by seeing the Goddess, who, after all, is close to being a spirit (phî).

843 262 The prominence of food cravings in this traditional description leads to a consideration of diet in pregnancy.

Diet in Pregnancy[28]

As long as everything went well, pregnant women "ate as usual." The underlying premise was that each woman early in childhood had established a regular diet suitable to her individual make-up of elements, and eliminated foods that because they did not agree with her or were disliked, were judged "not compatible." A woman could eat as usual because the ordinary daily foods, rice, coconut, etc., were "safe." The modifications introduced to beautify and protect the mother and baby were made on the basis of the properties and

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27. The goddess was following traditional "defeated by one's pregnancy" (phæethông [Mc.F: 599]) symptoms of desiring "sour, salty, or strange things such as burnt earth." Like any woman, her craving for sweets indicated that a heavenly creature was to be born; for fruits, that she would bring forth an animal; for burnt earth, that the god Brahma would be born (Anuman Rajadhon 1961:115-116).

[114] 28. This section does not purport to present a dietary study in modern nutritional terms. Hauck's study (1959) of maternal and child health gives information on foods eaten, craved, disliked, or viewed as "good for" or "not good for" women during child-bearing, and also on illnesses found among pregnant women, including beri-beri, nausea, cramps, and fainting. The data here add to her information on behavior and stress traditional views as to the purpose of the dietary injunctions.

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qualities of foods. Chili peppers were avoided because they "burned the baby's skin." The cooling khûai namwâ banana ensured a cool-tempered child. The fact that one woman ate cobra curry and suffered heat, while another took it comfortably, indicated, however, that what was bad for one might not be bad for another. Individuality of constitutional make-up explains why views varied considerably on proper diet in pregnancy and lactation (cf. Hauck 1959:2,16). Those who were eying urban ways added to the variety by occasionally following modern medical advice. A school-teacher, for instance, ate eggs regularly and during pregnancy----not the "old way."

Women were urged to eat a great deal for they were eating for 2.[29] Cravings were not compelling, but to increase food intake, preferences were indulged, even when involving out-of-season fruits, expensive, or "dangerous" items (Hauck, 1959:14).[30] "A pregnant woman can eat any kind of food because she is sailing on a tremendous ocean [a traditional phrasing, cf. Anuman Rajadhon:108)] No one can predict whether she will live or die. One wants to eat chicken and kills it herself. Another has dreams and nightmares about craving certain food." She who flouted the Buddhist prohibition on taking life and killed a chicken to eat was not criticised. She was shouldering

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29. "To increase the appetite" was of frequent concern (cf. Hauck, 1959:27, and Sharp et al., 1953:256-260). Food in quantity and the appetite to consume it was one of the main props of social relationships and of personal security (L.M. Hanks, 1963).

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30. Some of the likes and dislikes mentioned turned out to be a recitation of the traditional food injunctions set down in the old "textbook," Promcindas, quoted by Phya Anuman Rajadhon (116). That fresh fish tastes and odors were the most frequent dislikes (Hauck, 1959:14) should be seen alongside the following "symptom of pregnancy sickness: if the mother desires to eat meat and fish and raw things----a creature of hell has come to be born" (ibid:116). Such an idea might well discourage the eating of fresh fish and underlie Yong Chutima's statement that "women were supposed to eat less meat than men" (quoted in Hauck, et al.,1958:42), and found as a prevalent attitude in Cha Chung Sao (H.M.H.). The out-of-season fruits, Chinese noodles (an expensive or party fare) and hot foods (dangerous) fit certain craving-categories of Obeyesekere (pp. 338-339).

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sin for the sake of nourishing the child. Some Thai village women followed a local Chinese belief that eating a female chicken gave strength during pregnancy. Eating a rooster, though, caused miscarriage through "ectopic gestation." Thai Muslims recommended chicken whole-heartedly.

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Medicines

Beginning early in pregnancy, one or more kinds of medicine (yā) were taken. These hot-tasting medicines of ginger, galanga, pepper, and such in 28 per cent alcohol were either bought from the big selection at a Chinese drugstore, or were made up at home from alcohol or water and an envelope of ingredients. A woman made the choice herself with the advice of experienced persons. Even the Muslims who ordinarily frowned on alcohol permitted their women to take it at this time. A few women, though, said they "did not like to get drunk," so took their medicines in hot water. The quantity varied from two to six spoonfuls per day, with big increases as delivery approached, e.g. "two big cups a day of it during the ninth month."

The primary purpose of medicine was to increase the appetite, but there were other reasons. Fragrant Medicine (yā hauaum) cured wind. One Muslim midwife's mixture "stimulated the amniotic fluid." Other preparations had more general objectives. One label advertised "strength and good blood to men and beauty to women;" another promised to "maintain the mother's body and make the inner organs do their work properly" (H.M.H.).

In the last months, the reason for the medicines was to build up the body's heat. This purpose was not affected by hot tastes, which burned but did not necessarily raise the heat, but rather by alcohol, cobra, and specific decoctions. A label cautioned, though, "Not to be used by pregnant women with fever," lest the increment of heat be excessive. Snake Brand medicine, an exceedingly hot concoction used primarily post-partum, was occasionally taken in mild dosage during pregnancy. (Used full strength it caused miscarriage, so was rumored to induce abortion). The heat raised the body's temperature far above the ordinarily desired coolness so as to implement birth.

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The Physiology of Birth

At parturition the body's usual needs were reversed. The child could not be ejected under the normal, cool condition of the body. The pushing and pulling winds inside the body that ordinarily circulated slowly had to be

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speeded up with heat to the point of blasts. The strength of the contractions of labor was in direct proportion to the speed of the winds' circulation. The great pushes of the expulsive lom beng "broke down" the sac with the amniotic fluid (nam thūn hua: water-that-supports-the-head-of-the-child), and forced out the child, water, and the placenta.

After the child was out, the mother was cold, weak, and exhausted. Her uterus was full of harmful fluids. Heat was needed more than ever not only to warm her but to give the winds "the power and push" to drive out three undesirable birth-waters: "The blood that looks like ordinary blood but is bad,"; the amniotic and abdominal body water (nām khram:refuse water); and the pale, viscous, repugnant "fish-water" (nam khāo plā). Therefore, a hot fire was built, close to which the mother lay (yu fai), turning all sides of her body towards the flame. She bathed in or drank hot or warm boiled water (nam suk: cooked, or ripe, water). She ate safe foods like rice and dried fish,[31] and kluai nam bananas, continued to take alcoholic medicines of the hottest sort, such as Snake Brand, and occasionally might be given cobra or other hot curries to eat. For a first-born, a woman stayed eleven or nine days by the fire (always an odd number), with stays shorter for each successive child, but never less than five days.

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Complications sometimes developed because of inadequate control of the heat. A "headache and a hot body" indicating "stagnation of the blood and the fishy-smelling-water," was cured by a heat-producing decoction. Rashes often occurred, causing small boils that might develop into sores. To soothe these, turmeric was painted on. In the most dangerous cases the heat "drove the bad blood to the heart, to the face or belly" where it was recognized by serious swelling, with resulting madness or death. In fact, one mō felt that the

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31. The reasons for rejecting fresh fish during pregnancy ("lest a creature of hell be born") would not hold after parturition. Yet fresh fish was rejected then too "as bad for the womb." One suspects that the less odorous dried fish was substituted so that the odor of fresh fish, like air-borne, incompatible food, would not affect adversely the "fish-smelling" post-partum discharge (nam khāo plā). In Hauck's list of foods "bad for mother during the post-partum rest," the reasons are apparent: Sour tastes did not dry out the body, but built up water; egg was too cooling; jackfruit brought in wind; glutinous rice and the sugar of sweets "wet the uterus;" fruits did not give strength and were excessively cooling (cf. Hauck,1959:15).

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heat could be better controlled by medicine alone, saying "I do not prohibit a fire, but if called because of difficulties such as a temporary paralysis, I always take the patient off the fire and prescribe a decoction, or recommend more pickled medicine (yā dong)." "Damage to the thigh ligaments," treated by a masseur, was said to result from insufficient rest by the fire. If the baby died, the mother did not curtail her fire-rest but finished it out as planned. As will be seen later, the fire-rest had far deeper meaning than just physiological restoration.

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Chapter IV

THE BIRTH OF A CHILD

Dūan and her husband, Song, had a 2 year old son, Chai.[32] They lived and worked with her widowed mother, Lek, and her unmarried sister, Mī. The comfortable house stood high on piles, surrounded by rice fields. On a nearby mound lived Sāi, 60 years old and full of energy, the youngest sister of her grandmother.

Now Dūan noticed that again her menses had stopped. Her mother had described before her marriage what this meant. With happiness in her eyes, as the first time, she told her husband, then her mother, and at the first opportunity, her husband's parents. There was no reason to keep her pregnancy secret. Since she and Song would be happy to have either a boy or a girl, she did not seek out the ritual means which existed to induce a child of a particular sex.

During the months of anticipation, Dūan worked along as usual in farming and house-keeping. Lek reminded her of prudent behavior. "Women are easily upset when pregnant. It is up to you to put yourself in a cheerful mood. Everything you do will affect the infant in your womb. If you see a scarred person, your child will be scarred. Be calm, look only at pleasant things and avoid jerky motions. Do not overeat, lest the child be a glutton. If you sleep during the day and are inactive, you will also have a lazy child. Some girls are trying to be like Bangkok people, pleading that they cannot do heavy work in the last few weeks of pregnancy, but that will cause a difficult labor."

To increase her appetite, early in her pregnancy Dūan visited a Chinese pharmacist to get medicine. He had so

32. This account puts together data from several informants. Particularly illuminating phrasings are quoted exactly, over and above the conversations, which, though fictionalized, are also direct transcriptions.

843 278 many kinds she hardly knew which to choose. He also had all-purpose kits for mother and baby, even one with 14 different kinds of medicine "to control the body's temperature and keep the organs functioning"(H.M.H.). She decided on one of the favorites, pickled medicine (jaa dauaung), and from then on took a spoonful twice a day. She avoided all peppery-hot foods which would "damage the delicate complexion of the infant in the womb, burn off its hair, and maybe even kill it." Some women said they craved sweet, hot, or sour foods, but Dūan did not. A friend who had never eaten cobra curry so longed for its hot taste during her pregnancy that her mother gave her a small dish. She could not resist secretly finishing the whole pot! What heat and sleeplessness! To cool herself, she had sat in the canal. The baby, saved only because its mother drank the water from a young coconut fruit, "could resist the cobra heat because it was 6 months along, but even so, it shed its skin at birth." But another woman, pregnant 7 months with her t ird child, also craved cobra curry, ate a lot, and said she did not feel hot. Nothing at all happened! The second woman was nearer to delivery, so stood the heat better, but more important, each individual was different. Because of virtue and sin in former lives each woman--and man, too--was born under different astral confluences and had lived and suffered differently.

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843 759 About the seventh month, Dūan pondered who should help her at her delivery. Some of her friends were delivered by their own mothers, but Lak had undertaken the delivery of another daughter's child, and the baby had died in an hour. Dūan suspected that her mother, therefore, would prefer not to do it, and knew that she herself would feel uneasy. So she decided for safety's sake to ask a midwife. She and Song could well afford the ceremonial offering with its customary 20 or so baht, even though the midwife said it was "as you please." A great many women never consulted with a midwife beforehand at all, but just sent word to the nearest one when the pains started or when trouble was encountered. Midwives varied in their capabilities, however, and Dūan wanted not only a good one but someone she knew well. Muslim midwives were said to be skilled, but they happened to live too far from her. Dūan decided to ask her elder aunt, Sāi, who was a well known midwife. Everything was right about Sāi She had experienced hands, a true desire to help, and effective magic; and she was a relative. Best of all, her own babies had eaten and slept well, had cried little, and now were grown to maturity. With such proof of merit, capabilities, and fortunate relations with supernatural powers, what better person to help Dūan start her baby on its earthly existence? Actually, if something happened, and Sāi could not come, Dūan knew she would not be alone or unassisted. Almost every woman, and quite a few men, had

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seen childbirth not once, but many times, so willing hands abounded. So, one day, Dūan went to Sāi. "Will you help me, and come when I call you? Please do not go far at that time." Sāi agreed, knowing in her heart she had expected to care for Dūan. No day could be calculated because the baby decided when to be born. Dūan came home very fast, for doing so would help ensure a fast delivery.

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As the weeks passed, Song, the new child's father, collected outside the house a great cone of sakae firewood from their land. This wood was for the post-partum fire beside which Dūan would lie for many days. As the fire had to be very hot, a great deal of wood was needed, all to be collected beforehand. Song also covered the outside of the pile with thorny woods to keep away evil spirits. On her part, Dūan knew that everything needed for delivery was ready in the house as part of the regular household staples or utensils. Nothing need be bought except possibly a little Borneo camphor to mix with lemon grass for faintness, and alum. The midwife should never bring anything with her because it was essential to use what was in the house. Anything lacking could be quickly borrowed after the pains started. The little cushion on which the baby was to lie was cut, and half-filled with kapok. It was not sewn up, lest it induce by example a closed-up exit from the womb, or suggest a mal-placed or deformed baby which had to be delivered onto a pillow. No one wanted to prepare for such an unhappy event. No clothing was bought for the child ahead of time for then the child might die, and all would have to be destroyed.

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Dūan felt at ease and yet somewhat frightened at the prospect of the pain ahead. At an ordination she attended one night she listened again to the chant she had heard many times:

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> "In childbirth a woman has pain all over her body...She is losing her soul and feels so frightened, despairing, and suffering that she throws herself up and down from time to time as if her mind were terribly wounded by the poisonous arrow of a hunter. She is uneasy and moans loudly as if a big mountain had fallen down upon her, and she is supposed to wait for death. She does not recover even if massaged by someone. She does not think of her pain, but tries to save the child's life, when, after the pushing wind comes, he is born" (S.S.).

On other occasions she pondered the deep satisfaction of her maternal role, then laughed in recalling a crafty woman who

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844 "faked labor pains to hold down her errant husband!" or so a sour mother-in-law said (Hauck,ibid.).

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789 Finally, one day, Dūan felt uncomfortable and decided not to go out to plow. Lek prepared for her hot-tasting medicine. When Song came in at eleven from work, he went to the garden, to the little house of the family's protecting spirit (san phra phūm), lighted incense and offered flowers, asking that it and the ancestors help his wife and keep away evil ghosts. He also prayed for help of the ancestors. Mī went to ask Sāi not to go far away that day and to ask in what exact direction to push over the woodpile. Sāi replied, "Push it over in the direction the snake lies today, so that Dūan and the wood lie parallel with their heads and its apex in the same direction to the north and east. Never let them be to the south and west." A passing boatman saw the wood go over. "There's news to tell!" he said. "The child is being born!" Dūan thought she ought to send away her little son, but he refused to go, and stayed by his mother the whole time. Song's sister came by for a visit, but stayed to help after getting word to their parents. It was no time for visitors, especially men, but any helpers, male or female, were welcome. Lek prepared the all-important ceremonial gift, the khwan khāo (soul-rice), for the midwife, which validated, and insured the use of, her private magic. She put a bunch of bananas, 7 betel pepper leaves, 7 areca nuts, flowers, incense sticks, a candle, and 20 baht into a bowl filled with dry rice grains. A little later she strung the holy thread around the 4 walls of the house. On each side she attached "yan," (Skr.: yantra). These protective cloths, about 10 inches square with magical letters and drawings, kept away the terrifying phī krasū spirits, seen as lights at night, who, attracted by bad smell and blood, would creep up the housepost, eat Dūan's blood, intestines, and faeces through her anus. Then Mī went again to Sāi to report that "the pain was increasing." These words were the signal to Sāi that it was time for her come.

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As Dūan was to profit from the magic, it was better that she herself hand the midwife the khwan khāo bowl. Sāi lit the incense and offered the bowl in gratitude to the teacher who had given her her magic. She whispered in the direction of Dūan's head, "All good spirits in the high heavens and in the locality, help and do not obstruct at this delivery! Give happiness to mother and baby!" Placing the bowl on a high place to the side of Dūan's head, she said, "My teacher is long since dead, but will hear this request, and will pass the request and the khwan khāo to her teacher, and so on, back all those thousands

of generations, to the hermit Phra Khulīmān, who first discovered this magic. He got it from Phra In (Indra). He will make it good." 844 789

Dūan was sitting in the main part of the house. Her mother was seated behind her, arms under Dūan's arms, pressing down on the abdomen with every pain. She, Song, and others had taken turns thus supporting Dūan's back all afternoon. Dūan hoped it would not be like the first time when she had screamed with the pain of the tender spot where they constantly pushed. Their toes, digging into her thigh, also had left large bruises. Some women in the area had tried arm ropes, hung from the ceiling, on which to pull, and some women tried lying flat, but sitting while someone pressed was the usual way. Sāi examined Dūan, and announced that labor was not very far along. She moved Dūan around so she faced another direction. "No wonder you are having a hard time," she said. "Your feet were pointing toward the sān phra phūm spirit house and you were not properly in line with today's direction of the celestial prince-snake (Chao Nāk). By turning you thus, the baby will be born with, and not against, the scales that lie on the nāk's back. The snake's direction differs each hour of the day, each day in the week, month, and season in the year. Today is Monday, so your head must be in the east, but Sundays, for instance, it must be to the north. You must also not face the Great Ghost (phī luang).[33] Another being to respect is the Chao Krung Phā Lī (cf. Textor:487-490). Offerings to him must be at the feet or sides. If offered at the head, he would be angry at your disrespect, and you would have a fever and a terrible time. My grandfather taught me this from his Pali book. His was more accurate than the books in Thai one sees in the market." 844 789 844 789 823 844 789

Song was asked to boil up several kettles of water using this sakān wood. Husbands always did that. "I was recently asked," said Sāi, "to help at a woman's fourth child. I had been there for all the other 3, and for every one her husband was absent, gambling, I heard. He said he did not want to stay there because it was an awful sight. So it is, but there must be a man around, the husband; if he is dead, or gone, then a father or brother. I refused to accept that case because of the husband's neglect." 844

The winds that circulated in Duan's body were not speeding

33. Textor (378,423) relates that it makes a complete circle of all directions throughout 24 hours, and its direction of the moment must be avoided.

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[278] fast enough to break the amniotic sac. Sāi made her a medicine of mung bean and sugar, both of which wet the uterus, and murmured some magic words to help. Later she worked with her hands at the vagina, twisting the sac a bit to break it. Suddenly the sac ruptured.

Now the child was almost there. The head showed well. Sāi sat down directly in front of Dūan to do the pressing herself. With one hand she held or gently pulled on the baby, with the other she pressed on the abdomen with every [789] contraction. As she started in, she said magic words. She worked for an hour--no midwife would press more than that--until at last the child was out. A little boy! With her finger Sāi removed the blood from his mouth, and pucked out the lips. Breathing was slow in coming, so she shook him vigorously, then laid him down. Quickly she chewed up an onion and spit it over his body. "Ah-h-h!" A cry, though not very strong! Seeing the new baby appear, Chāi, who up to then had been constantly near his mother, rushed precipitously from the house, and refused to come in for hours, in spite of Song and Lek's coaxing.

[787] Everyone had observed an auspicious circumstance: the cord was looped around the baby's neck! This imitation of the holy cord (mongkhon) placed around head and neck in Brahman rites of passage was a rare and good sign. "A cord looped thus could never kill a baby," someone said.

Since the placenta was slow in coming, Sāi prepared to cut the cord while Dūan rested and sipped the fiery snake brand medicine. Depending on circumstances she might cut it [278] before or after the placenta was out. Taking a rhizome of phlai (McF. 804), a traditional healing root, she laid it on a clod of soil brought in from outside. From one of the [412] old bamboo house beams, someone had sliced with a knife a sharp-edged, tapering sliver to serve as a cutter. The cord was stroked 3 times, starting near the baby's stomach "to remove the dirt." Then "something that is in the umbilical cord" was pushed back towards the baby's stomach "to prevent [798] a flow of blood." She measured the cord from the baby's abdomen to his knee, and tied off 2 places in it with the holy unspun cotton cord used ordinarily in rituals. Laying the part between the 2 knots on the phlai on its bed of soil, and saying her magic "w'nvān a sam pa nō," she cut [757] the cord with the bamboo cutter. With a chicken feather which had to come "from the mother's yard," she collected a few spider webs from the rafters, mixed them with coconut oil, and painted them around and on the cord-stump, also "to stop the blood-flow." While doing this, Sāi said, "One midwife I know severs the cord by tying it with the thread at 3 places, then burns it with a flame."

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Lek watched over the baby, while Sāi turned towards Dūan. "One looks to the mother first, unless the baby needs help more." First Sāi gave Dūan medicine for the placenta. She rubbed her hands with alum and tried unsuccessfully to work down (klōm) the slippery placenta. Then she told Dūan to get on her hands and knees, and exert all the force she could. Dūan crept around the floor but it still did not come. Sāi then tried hitting Dūan's back 3 times with Dūan's own pillow. Finally she gave Dūan a leaf of betel pepper to chew, hoping to induce a wind-producing nausea and so push out the placenta. In the end Dūan resumed her sitting position and it was pressed out. So the baby would not get pimples, the placenta was cleaned carefully, then put into an old pot, mixed with 2 dishes [751] of salt, and set aside.

While Lek sewed up the partially completed cushion, Sāi laid the baby along her legs, and washed him with soap. Sometimes she washed the baby before the cord was cut, if the placenta came quickly. She used salt to remove the greasy fat from his body, though would have preferred "fermented tamarind to protect him from pustules that enlarge to sores (rōk phuphōng)." "Soft tissue like a stomach covering his head! What a good sign of progress and fortune!" she exclaimed. She powdered him with face powder (dinaōphōng), and painted his abdomen with turmeric,[34] "so wind will not make him cry." Covering him with a little piece of old cloth, she laid him on Lek's old winnowing tray (kradong). [787] [278]

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It was the moment to winnow (rōn) the baby, and link it to home and family. While Lek got the holy unspun cord, others placed on the tray with the baby all manner of traditional things to influence the progress and well-being of the child during his lifetime. Sāi put on the phlai, the clod of soil, and the tapered bamboo she had used to cut the cord "because they will never be used again," but actually these things had a far deeper meaning to all present. Song laid on a school exercise book and pencil, so that his son would have knowledge and a good memory. Mī got a needle for sharp wit. If the baby had been a girl, the needle would have given sewing skills. When all was in readiness, Dūan had to decide on the ones to raise the child aloft, catch the tray as it was dropped, and bless him as the holy thread was tied on. She had to choose these persons carefully, for the child

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34. Other mixtures (used also on the mother) were lime-bergamot lemon; or phlai (if possible the one on which the cord was cut), wānnam (acorus calamus) (Textor:64-66) and mahāhing (asafoetida) with burned betel leaf. These were all to keep out wind.

844 989 852 would later manifest their characteristics. Much as Dūan loved her own mother, Lek ought not to winnow the child because she had had the misfortune to lose 3 babies in infancy. An older person was desirable, for longevity, too, indicated virtue, and the child would then also live long. Of all the women present, besides her mother, Sāi was the one Dūan trusted and respected most, and Sāi had raised healthy babies. Dūan turned to her. "Please winnow and bless the baby." She wanted, as every mother did, to catch and so claim the child for herself.

Sāi seated herself close to Duan, picked up and raised high the tray with the little boy and the auspicious items. Waving the tray in a circular motion slowly from left to [539] right, clockwise, she recited the old words: "Three days a spirit child; on the fourth day, a human child! Whose child is this? Is this the child of a female pot? Of a jar? Come, take this child!" Three times Sāi chanted these old words and on the third, Dūan cried out, "Mine!" The tray with the child was gently tossed in her direction. She caught it as it slid toward her. Then Sāi took the [774] holy thread and tied some around each of the child's wrists and ankles to seize and "welcome" its soul (kānrapkhwan), giving the while the traditional blessing. "Come, khwan! [539] Come my own child! Stay well and eat well! Do not get sick or have fever! Be cool and happy! Feed your father and mother until they are old. Hold the walking stick with the gold head, or the stick with jewels on its top! Stay at home like the bottom of the house post! Watch the house like a cat! Eat and stay here! Never go roaming! Be fat as the golden ash pumpkin, heavy as the long melon, strong as an elephant in must! Be the head priest when ordained and the leader of men when you leave the priesthood! Come, khwan!"[35] Thus Dūan claimed the child for herself and for her family, to nourish and raise. Because such a fine person as Sāi had started this son on its life-habits, and Dūan was already sparing no efforts in assuring his progress, he would be a good boy, and reciprocate her pain and effort.

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[539] 35. Another version added the words, "Have the strength of Hanuman! Hold the stick with the iron head! Be a student." For a girl, "If you have a family, keep cool and happy! Earn your livelihood (than mā hā kin)! Have enough to use and eat! Do not lower (ram) your face, or eyes," i.e. "don't be poorer than your friend." A China-born Thai woman's blessing was "Mother, nourish, and care for this child. Do not let it be hurt or have fever."

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The next step was to prepare for Dūan's post-partum days of rest beside the holy fire. Before the baby arrived the fire-floor had been prepared, but not lighted. Song had chopped down a banana tree, and quartered and trimmed the trunk into four good planks. Along a wall inside their house he had laid them in a square about three feet on each side and 18 inches deep. He remembered that at Chāi's birth, the fire had to be in a corner, because of the direction of the celestial Snake. Lek picked up a large round basket and went out to get the soil, which had to come from the north side of the house. Three full baskets she was to get, no less, but there could have been five. She heaped the soil into the frame, smoothing it to a good fire floor. After she poured in the last load, she picked up three handfuls of earth and put them back in the basket. Quickly she took them back to the spot she had been digging and tossed the three handfuls one by one onto the earth, murmuring to the spirit of the land that she was returning the earth she had taken. Back in the house, in each of the four corners of the fireplace, Sāi planted a little banana leaf bowl containing rice, sticks of incense, a candle, and flowers. "Some persons add areca nut and betel pepper leaves, but I was not taught to do it that way," she commented. A fire of the sakae wood was laid, and the placenta and cord in the pot placed at the back where they could dry with the heat. To prepare Dūan's bed, Song searched the house for a smooth plank about 14-16 inches wide. Not one! So he ran over to a neighbor and borrowed a good one. He cut two banana trunk sections to set this plank up so that it was as high as, and two or so hand spans from, the fireplace. Sāi checked that firewood, woodpile, and plank were all parallel to the celestial Snake. Then the fire and the incense in the corners were lit.

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Meanwhile Sāi had been washing the lower part of Dūan's body and legs with warm, boiled water. She painted Dūan's abdomen with turmeric, lime, and alcohol, putting a little on the hands and arms, and now gave her a fresh skirt. "To cure the womb" Sāi also gave her a "filtrate" of tamarind, salt, and water to drink, the same potion people also gave to the cherished buffalo on the rare occasions when a calf was born. Finally, she asked Dūan to lie on the floor a moment. Putting her foot on Dūan's hip she pressed hard, three times on each side, to "close the hipbone" and get the pelvis back into place again.

Now that the fire was going nicely and Dūan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sāi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dūan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaichiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dūan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

As Dūan was resting quietly, Sāi made three "taping fruits" (lūk prakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dūan's legs to cure the birth wound (phlāe). The other two were set aside for use on subsequent days. Sāi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dūan, on the side away from the fire.

With satisfaction of a job well done, Sāi and Lek sat together for a quiet chew of betel. "Lek," said Sāi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that best

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36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

37. The deities addressed were māe phra phlōeng and māe phra phai. Another Pali-Thai magic formula to control fire was: "Phra Mōk Khan Lē Nō will extinguish the fire from hell, na mō phut tha ya." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mō...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Textor 1960:483-485).

date of all, Sao Hā Day, one Saturday in April, which was the fifth day of the waxing moon of the fifth month, in the year of the Big Snake. That boy is truly blessed. He will be the best and most respected doctor or teacher. He is in school now and people are always telling him he is bright. Chāi came on a Monday, so he'll be charming, but, alas, always roaming away from home! This new little son has his mother's features, which is as desirable as a daughter's having her father's features. Still, no one knows what characteristics come from a parent. One more thing, Dūan. Now you may take medicine as you please." Shortly after, Sāi took leave until the next day.

The new mother turned her face toward the fire and tried to sleep. It was night. Lek was close by, and Song slept in his mosquito net near Chāi's cradle. The fire was so hot it kept waking Dūan. Though the smoke made her eyes smart it kept the mosquitoes away. In spite of the discomfort, Dūan was eager to have the fire as hot as she could stand it, for this heat and that of the medicine would dry her uterus, rid her of the bad blood and waters of childbirth, restore her strength and stimulate her milk. She forced herself to drink as much hot boiled water as possible to keep out the dreaded wind element that might get into her body and cool her. When, however, the fire was overpowering, she dripped water from a handy jar with a cloth.

The next day, Sāi returned. With warm, boiled water she bathed Dūan--this time the upper part of her body also--and the baby. The boiled water was much more important for the mother, but being available, was used for the baby, too. Sāi washed the soiled clothing and the baby's little cloths. Turmeric was again painted on both Dūan's and the baby's abdomen, head, and neck to protect from wind. Sāi questioned and examined Dūan. Measuring a handspan down from Duan's groin, she pressed outward gently. "I want to see if these particular ligaments on the thigh are joined. They are often damaged and do not heal if the time by the fire is too short. Some mothers cannot walk at all. They have to call a masseur for regular treatment." To "make the ligaments well," she tapped Duan's body all over with the second of the tapping-fruit balls and had her sit on one while bathing. She massaged the muscles, stiff from lying quietly near the fire, by pressing in the ball with her hands and even feet. Medicinal herbs were warmed and laid on Dūan's breasts so that the "useless early milk [colostrum] which would give diarrhea" could be worked out and thrown away. "The real milk is not ready for the baby until the third day," Sāi said, "but if the baby is crying much, and if there is milk some mothers start nursing on the second day."

Almost from the moment of his birth, whenever the baby

853 cried, Lek had dribbled from her finger warm boiled water into his mouth. Now she mashed up for him a little klûai nawm̄ banana, honey, and water. Song happened to pass as he was going to work and saying, "Let me give it to my son this first time," took the child in his arms, and pushed it gently in with his fingers. "This variety of banana does not cool, or give diarrhea because its tissue is harder. Uncooked is better than baked because it is easier for the baby to swallow," said Lek, "but baked food is incompatible if wind is in the body." Then she painted medicine on the baby's tongue with a feather.

DÛan turned to Lek. "Who would be the best person to start my child on good nursing habits?" Lek mentioned a relative who had much milk for her handsome child. This woman gladly came to give the baby his first suck.

Sāi came the third day for the same duties. It was the last day for her, unless something serious happened. DÛan's milk came in somewhat that day. She asked, "Is it true, as people say, that the 2 breasts give milk of different consistency, that one is water and the other rice?" Sāi answered, "That is an old saying. The important thing is to feed from both breasts at each nursing. Here is medicine for the baby of honey, charred betel leaf, and water. Give it 3 times a day to cool his neck. His medicine is mostly to cool him slowly; yours is to keep you hot on the inside, while the fire warms you outside. Both are to keep out wind. DÛan, I would suggest 13 days by the fire, but you are the one to decide. It was 15 for your first child, but each time can be less. Be sure it is an odd number of days. My, women are certainly making it short these days! My first fire-rest was 27 days. And think of all the changes coming in! That trader-woman across the canal is using one of those small hot-ashes pots on her stomach. She is lying on a mat under her net, with her new baby. Her 2 other little children come in and out! No fire at all! I have heard they use rubber hot water bottles and electric warming devices in Bangkok. Well, it probably is all right provided there is heat, but to have plenty of milk and strength to work in the fields, then you have to lie by a real fire. The longer you stay, the stronger you are. Bangkok ladies do not have to farm! They want the fire for the fine pale golden color it gives their skin (cf. footnote, p. 71)! Well, now I shall take my final leave." She reached up and took her khwan khāo bowl. Smiling, she left the house.

From then on, Lek and Mī were certainly busy, caring for both children, doing things for DÛan, boiling up quantities of water, and cooking. Song put the wood on

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the fire for her during the first day or so, lest in her straining, Dŭan's womb "move to a new place," but Duan did it herself thereafter. The smoke was harder on others than for her for she was on the floor. She could leave the plank to bathe and to relieve herself through a crack in the floor. As soon as Chăi got over being frightened of her turmeric-yellow stomach, he often came and lay beside her on the plank, though it was a squeeze! She took her medicine and often sipped hot water, feeling very modern with her brand-new thermos bottle. Constantly turning her back or front to the fire, she poked or dripped water on the flames to make coals. Once she tossed on a dry palm leaf, and as it flared up, put a cloth over her head to trap the smoke and heat. Though a rash developed on her body, she was complimented by Lek on the care she was taking of the heating and drying process. Unfortunately, a neighbor who wanted to help brought in some of the wood one day. Not remembering that to make noise with the wood caused diseased red eyes in the baby, she dropped the bundle with a crash! Alas, "sang" disease, of course, came at once. So the near-by mŏ who always cared for them had to be called, but he used no medicine. "For eyes red from 'sang'," he said, "never use any eye-medicine as drops, or they will be permanently damaged or blind. Such eyes have not enough resistance to win over the strength of the medicine. A drop of mother's milk, any mother's, in the eyes is the cure."

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Uterus pain was said to last one day for the first child, 2 days for the second, and so forth, increasingly. As Dŭan seemed to be in considerable pain, Lek resorted to an old cure: she secretly took the bamboo knife and the phlai from the baby's tray and put them under Duan's plank bed without telling her. Slowly the pain diminished.

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If anyone spoke of uterus pain to her during the fire period, Dŭan would suffer still more. If a visitor spoke of the hotness of the fire, little boils would appear on her body. The fire, being thus made too hot, would have to be put out, and Duan "would be weak for a long time." This was because actions or even words occurring beside the holy fire set a new and permanent pattern. Neighbor's children were kept away lest they inadvertently exclaim about the heat.

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A few relatives with gifts of banana, turmeric, and face powder dropped in, but visitors mostly stayed away. "It is an ugly sight," said Dŭan, "lying here with only a cloth over me, half naked and yellow, and I fear there might be an unpleasant smell."

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The winnowing tray, with the baby on a pillow now covered with a plastic cloth, rested on a low table, the legs of which stood in bowls of water to keep away ants. At first an old dome-shaped fish trap had been set over it to prevent draft and

854 mosquitos, but then Song bought in Mīnburī a bamboo frame with be-flowered netting. He also bought little mits to tie onto the baby's hands, so the fingers would not be sucked. Not every baby got these! Most of the time the baby lay naked, but was wrapped when nursed. One cool day they put over him a thick blanket. Lek, Dūan, or Song bathed him in boiled water 3 times a day and always after his excretions, which were wiped off with cloths. Then fresh cloth was put under him. On the seventh day since he was thriving, [856] he was bathed in ordinary rain water. Every day Lek vigorously squeezed his fingers and legs "to make them straight," which made him yell each time. To speed the drying of the [298] cord, a charred leaf of betel pepper was applied for a while to his navel on which Dūan spit saliva several times a day.

853 Dūan's milk supply was only fair. For milk stimulation they pressed her nipples and kept the fire hot. She was [262] also taking daily a special nursing curry of banana flower and vegetables (khaēng līang). One day she ate a cobra curry. A neighbor offered to help nurse the baby but Duan [854] refused. "It is a pitiful sight to see one's child at another's breast." Whenever the baby wailed he was given boiled water but was not necessarily at once picked up. If his crying continued, however, Dūan washed her breasts with warm water, pressed out and threw away a little milk, moistened the baby's lips with water, then lifted him on the pillow to her plank. She laid him beside her and leaned over him to nurse, though occasionally took him in her arms. He was nursed about 10 times a day, and also received honey, boiled water, and a bit of banana, too. One day the baby cried a lot, so they painted him with [278] turmeric and gave him baked cobra fat in alcohol to warm him up.

846 As to her own diet, Dūan followed the usual practice
262 of limiting herself rigidly to rice with salt, dried fish, and baked klūai namwā banana. Egg was too cooling: "like glutinous rice, it brought pus to the unhealed cord and the vaginal wound." Dūan also avoided "jam" bean which caused madness, fruit, and sweets. Whatever she ate affected her child by secreting into her milk. If she were sick, he would be so too. If he alone became ill, she must watch the foods both he and she ate. All these food instructions would stop only when nursing stopped a year or two later.

846 Duan decided to stay only 11 days by the fire, though Sāi had said 13 and she would have liked to stay longer. However, she wanted to get back to work because the transplanting season was approaching. Besides, the

wood was getting low. Friday (wan suk: day of happiness) was the best day of all to leave the fire, but for her, Friday happened to fall on the fourteenth day after delivery. It was better to come off on another day than to risk taking such an important step on an even-numbered day. Even numbers were always associated with the even corners of a coffin.

Usually the fire period went off safely, but not this time! One day, the heat "seemed to come up suddenly" and choke Dūan. She rose gasping and ran to the window for air. Horrified at the terrible danger of cool air, Lek hastened to get her back to the board. Then by accident Dūan dripped too much water on the fire and put it out! Later, Dūan was almost unconscious, felt unhappy (klum) and as if "the fire were burning inside her." Lek called both Sai and the mǭ. As the mǭ entered, Lek handed him the expected offering of incense, flowers, candle, and a baht and a half for his khwan khaw. He prayed to his teacher, then made holy water and a decoction both of which he gave Dūan to drink, saying, "The bad blood and the fish-water did not flow out well, a common trouble after childbirth. Since your body is not cold and the fire has not been out a half-day, you could start the fire up again. But as it is never good to put out the fire like this, I am taking you off it. Take a pot of salt, heat it well and wrap it in a cloth. Put that on your abdomen. Drink no cold water, or you will die."

Dūan was sad that she had to leave the fire early and on an even-numbered day, but one always wanted to obey a mǭ. All had gone so well when Chāi was born! That time she had taken the usual steps, choosing a Friday to come off the fire. Now she could not choose. Her formal leave of the fire was as before: The mǭ prepared earth holy water (nampon thoranīan), some of which she drank, and some he sprinkled on the fire. She then knelt down facing the fire and touched her forehead to the floor 3 times, asking the Mother of the Fire to bless her and her child, and to keep them well. She went outside to bathe, first with warm water to cleanse her body, then with holy water, and put on a clean skirt. Returning to the house she seated herself quietly, for she was not supposed to do anything for a time. Others in the family broke up the fireplace. The baby was taken off the winnowing tray. Warm water mixed with the holy water was dropped in his mouth. After being bathed in the holy water, he was laid in a little cradle made of a long cotton scarf, spread apart with sticks, and swung between 2 houseposts.

Now that the fire-period was over, they stopped all boiling of the water for the baby and Dūan. Rain water was substituted, but whenever the baby seemed sickly, boiled water was used. When their rain-water ran out, they got some at the temple. Both Dūan and the baby continued taking medicine for many weeks.

846 [789] Seven days after the end of the fire period, Dŭan sent a message to the mɔ̌ to look in his book as to what direction from the house she should bury the phlai, the bamboo knife, and the pot with the now dried placenta and cord. She already knew some of the procedure: burying should take place on a Monday or a Friday; south was right during the first three months of the lunar calendar, November, December, January; and the full moon of the twelfth month (October) was especially good, for the moon waned thereafter. Chāi had been born in October, so north was right for him, but for a girl it would have been east. Song or Lek or anyone could bury the pot, but most mothers did it themselves. If it were buried in the wrong direction, the baby would die, and if not under a tree, he would leave them and their home, and roam. The instructions came. With the things in her hand, she walked toward a big jackfruit tree. Beside it was a sakɛ̄. Either was good, so she chose the sakɛ̄ which, being nearer the house, might strengthen by that much the roots that would keep her boy at home. After burying the pot and all, she returned directly to the house, remembering to pick, as she came, a fruit, a vegetable, a leaf, and then a piece of wood, all useful things. In the house she added them to the usual household stores. By doing so, and by using them up shortly, she ensured that her new son would be a good worker, who on returning home would always bring something to add to the requirements and wealth of the household. Once buried, the placenta, "like ashes," was ignored and the spot forgotten.

846 262 [461] [753] [957] 862 Within a month after childbirth, Dŭan was back at farm work, even to the back-straining pounding of rice in the big mortar. For three months she avoided fruits, particularly guava and jackfruit. Then, since the baby was thin, she gave up vegetables, especially gourds, corn, and the green plants that grew in the canal. One day, because she carelessly ate some salted field crabs, the baby got thrush on its tongue. They cured him by smearing the milky juice of a peel of klŭai nam banana on the cloth sheet covering his cushion, then wiping this on his tongue (cf. Anuman Rajadhon 1961:153). So the year passed, and then another. Not long after his third birthday, Dŭan realized she was pregnant again, so took steps to wean him. She painted her nipples with "black medicine" (yā dam), a bitter and hot tasting ointment made from the boraphed rhizome (McF; 474). Then she sent the child over to her mother's older sister's house for four nights. To make quite sure, she followed an old ritual way, too. She boiled an egg hard and peeled it. Holding the egg behind her back, she turned her face away from her son, and handed it to him behind her so that she could not see his face. "Henceforth, you shall not nurse any more," she said. Without looking at him, she walked

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away from him straight out the door. Thus the child was successfully weaned. Duan would have "pitied" him too much to wean him so soon had a new baby not been on the way.

Chapter V

BIRTH CUSTOMS: THEIR SIGNIFICANCE

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Physiological ideas clarify only part of DGan's tale. To illuminate other underlying tenets, we begin with the idea of help.

Help

[812] In "Influences on Health" (p.27) it was pointed out that Bang Chan conceived of individuals as unique beings, each with his fate in his own hands, with no bonds nor responsibilities to any other being. In an earthly existence, though, it would be difficult to obtain satisfaction or even life itself under such separatist terms. What relationship was possible between such autonomous beings? How in fact was rebirth brought about? Help (chuai) was the fundamental principle for organizing social interaction. Without help, the villagers saw existence not only as lonely and ineffective but even unrealizable. With it, personal and mutual goals were achieved, and life was enriched. People were "independent agents serving each other because it is mutually beneficial" (Phillips:63).

Responsibility for initiating help lay formally with persons of greater age or higher status. Elders assisted juniors, government officials assisted peasants. They received in return gratitude, obedience, and respect. Parents received care in their old age from the children they had nurtured. In the ordinary walk of life, particularly in a household, though, aid took the form of a continuous give and take with associates. The view of help as the mainspring of social action cut through many a problem of initiating aid or waiting on another to act, for fundamentally, on the cosmic scene, all beings were equally old. The child who helped most by giving over his earnings was loved most by his parents [593] (Phillips:69); when married, children helped their parents less than before marriage, still less if they cooked in separate kitchens in the same house, and much less when they moved to a separate house, for their time and cash went increasingly to maximize their own interests.

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The genetic connections of those who did not help in cash, or labor at, say, cremations or cooperative work-parties were forgotten. Degree of help was a measure of kinship solidarity, and even marked the outer boundaries of kinship.

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The word "help" turned up over and over again in the context of childbirth. Birth came about because a married couple, already steeped in the knowledge that they had been so helped by their parents, "helped another individual to new life" through the mingling of semen and blood. The midwife's role was merely to "help." When a woman engaged a midwife, her words were, "Will you come to help me?" A baby having trouble breathing right after delivery "had to be helped for half an hour." Most important, only through the reciprocal help of mother and child was rebirth to earthly life implemented at all. Parturition was an active, cooperative venture between 2 autonomous beings. The child set the time for labor to start by "deciding to be born" when his 32 parts were "complete,"[38] and he had worked off sufficient sin in purgatory to permit rebirth. The mother by her labor "helped the child to be born," but she could not succeed unless he actively "helped," too. Though other assistance to her was desirable, such as persons to support her back and press out the infant, only his help was essential. Without it she had a hard or unsuccessful labor. A woman who gave birth successfully without outside help created no stir because it was evident that the baby had been helpful.

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38. Informants were not uniform in opinion here. Some said the khwan (or winyān) was the first "part" to establish itself--arriving at the moment of conception--others that it was the last (Textor:262). In either case it was highly volatile during pregnancy, and the trapping by winnowing at birth was the major means of rooting it in the person. During pregnancy, medicine for wind in the fetus was given "which was not effective if there were no khwan," but whether the khwan was the mother's or the child's was not certain.

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844 In view of the stake of a child in the successful outcome of his own birth,[39] under what circumstances might a child not be helpful? This was explained by merit (bun) and habit (khoei).

Merit

782 828 761 844 Since merit, gained through virtuous behavior, determined a person's character, circumstances, health, and longevity, the merit of mother and child set the course of childbirth. It will be recalled that persons who lacked merit because of previous sins were cruel, lived short lives, and had to endure suffering, while meritorious persons enjoyed success, kindly natures, and long life. Yet an outwardly fortunate person might be at the point of merit-exhaustion, when suffering commenced. Any mother who suffered greatly lacked merit. In one case, "7 babies of a woman died young while the eighth and subsequent ones lived, proving she had to suffer greatly to work off some misdeed in former existences. She was given the trouble of bearing and feeding the child, and the child did not have enough merit to grow up, and so to feed her in return." Her punishment was to bear non-meritorious children who could not live. A woman's premature[40] death in childbirth was caused only by her own lack of merit.

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[171] 39. By way of contrast, consider how parturition is pictured in the United States. The active role is played by the midwife or doctor, or some other outsider, who "delivers," i.e. "liberates," the child from the womb, or frees the mother and baby from one another. "A child is born" presents the child as completely passive; in "to have a baby" the mother is relatively so. The most active English renderings are "to bear a child" and "to give birth to a child." It is noteworthy that modern anaesthetics have tended to increase the passivity of the mother.

40. The idea of a natural term of life was described in the Visuddhi-Magga: "The Karma that caused conception has ripened to a termination, although the dependence for continuing the series constituting the term of life be not exhausted. Death by the exhaustion of the natural term of life occurs when the span of life, the nutritive powers... proper to any given grade of existence come to an end..." (Warren:252).

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A midwife or doctor could not be blamed, unless it was felt they did not help as much as they could have.

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A child lacking in merit died. Such individuals, for some reason, did enough at their own birth. Words of comfort to a surviving mother were, "your baby did not have enough merit to live." If particularly sinful, it died after making delivery unusually painful. "Once a child was born dead, but it teased the midwife by moving its legs a bit. Consequently, its death was not the fault of the midwife." The child's lack of merit was proved by its death and its maliciousness. There was no hostility towards any child born in a hard delivery, for if both mother and child survived, the demerit that caused the suffering was the mother's.

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On the other hand, a meritorious woman with a meritorious baby had a short, easy delivery. Such a child was considerate: "he will not hurt his mother, will help her to bear him easily, and will live."

A woman who safely came through childbirth felt deep satisfaction and new security. Bearing a child in itself did not bring any merit, though it was an act of mercy. Merit could come later with the ordination of a son. However, why one woman had successful or short labor, and another not, was unequivocally clear and accepted. If delivery were normal, she was confident of her and her child's store of merit. If not, she bore the anguish, convinced that she had brought it on herself in some previous life. Since sins were worked off with pain, every thrust made her future lives happier. Fear was minimized, for if death came, it was merit-determined.

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775 Moreover, her life would some day begin again. Whether birth
844 was rapid or slow, the experience of the suffering deepened her sense of compassion and, as will be shown, brought her closer to fulfillment of her life role.[41]

Habit

153 If mutual help organized relationships, habit (khōei)
82 stabilized them. Khōei means "to be used to, accustomed to,
853 habituated." A first occurrence was an example and set the pattern for all subsequent occurrences. With one performance
[761] one was accustomed to an action. For instance, shortly after the temple was built 2 people died, deaths in Bang Chan "always occurred in pairs;" it was the temple's "habit." Moverover, "the head priest could never expel a priest because he had never done so." Again, a few women saw to it that during this period their babies were given a few grains of rice (even though they were far too young to be offered any rice regularly), so that "later on, if they got sick,
[171] they could always at least eat rice," for "they would be used to it." "Glutinous rice was not good for babies in Bang Chan, but in North Thailand [where it was a staple] it could be eaten because people were used to it." Someone had set the example which started the custom.

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844 41. Bang Chan's Buddhist phrasing of the meaning of pain and
154 death in childbirth seems to indicate that childbirth occurred
171 under psycho-cultural conditions that induced relaxation and reduced fear and pain. An "easy" delivery lasted 2 hours.
114 According to a modern medical theory, (Dick-Read: Childbirth Without Fear, passim) lack of fear of childbirth leads to mental and physical relaxation which in turn reduces pain and labor. Dr. Dan Bradley observed that labor was shorter among Siamese women than among non-Siamese. "Facts seem to prove that parturition is both shorter and easier to Siamese mothers than is usual to Europeans and Americans" (Bradley, 1865:79). We accept his first-hand observation because he had 40 or more years of experience in delivering babies, both Thai and non-Thai (missionary wives, etc.), and suggest that it may be taken as proof of mental and physical relaxation derived from lack of fear. Although the missionary women may have been frightened because they were in a far country, Dick-Read argues that fear of childbirth has long been present among American women and this fear has the effect of longer, harder labor.

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A major clustering of first experiences, and so of habit formation, was in intra-uterine existence. Every experience of the mother was shared by the fetus. After birth, a baby daily formed habits of eating, sleeping, and crying, and later, as a child, habits of respect, obedience, truth-telling, etc. To create good habits efforts were bant to control and ameliorate any first experience: to make it as correct as possible; to seek out favorable astrological moments; to ask auspicious, skilled, or learned persons to be part of the initial action. An example was the establishment of nursing. When the baby was put to the breast the first time, the objective was not nourishment but to establish a good habit, viz. copious and strong sucking from an ample milk supply. Only after this first nursing did breast-milk as nourishment become important. If on this occasion he did not nurse well, he would have the habit of eating poorly all his life. Moreover, whatever the mother's experience with her first-born, it would not only be repeated every time he nursed, but set the nursing pattern for all subsequent children she bore. For her first-born, though, a mother would have had no previous experience of making milk. She had to be taught, or shown, how to make good milk, just as the baby had to be taught to suck, and later taught to eat rice. Consequently, the first-born baby was almost always first nursed by another person (not necessarily a kinswoman) with copious milk. Then 2 or 3 days later, because the example had been set, good milk came in and the mother started nursing. What was to be avoided at all costs was a first suck of colostrum, which appeared to be "unfit, early milk" from an insufficiently lactating breast. This would be a poor precedent. Until a mother decided her milk was right for nursing, a baby subsisted usually on honey and water, and maybe a little crushed banana. If a woman were not satisfied with her nursing capacities for her first-born child, when the second child was born she might ask another lactating woman to give the baby a first nursing so as to improve her own habit.[42] One woman flatly said her own milk was always unfit as proved by her babies' health, so she used a bottle of (canned) cow's milk from the start. She felt she had the habit

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42. Bradley (79-80) felt that the dehydration attendant on lying by the hot fire significantly reduced the quantity and quality of the milk.

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153 of making poor milk. Any woman whose milk flowed early and
853 well needed no example, for she was seen as having the habit as an in-born characteristic so deeply ingrained that it came through from a previous incarnation.[43] After nursing was established by the mother, babies were not often given over to another woman's breast because they were reputed to refuse it, "being not used to it."

In sum, the nursing patterns in Bang Chan varied with the previous lactating experience (if any) of the mother, and the ordinal position of her children.

Hauck shows the old way of establishing good eating
[262 habits in a baby. "If a mother ate small amounts of many
846] different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time" (1959:14). Through the beneficial effects of the fire, any deleterious qualities of the foods were eliminated (as we shall see in "The Fire of Maturity") and the child had his first experience with these foods in the breast milk.

153 Bang Chan's life was full of secondary opportunities for starting new habits. Every rice crop, every boat purchased, every house built, and all the rites of the life cycle could, if handled properly, start a fresh and fortunate sequence on its way. We shall have more to say of this in discussing maturity.

789 Imitation
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The familiar principle of imitation (Anuman Rajadhon: 154), the influence of like making for like, operated throughout daily life in Bang Chan. An action, event or presence emanated an analogous influence on its surroundings. A woman returned from a visit to the midwife with all possible speed in order to achieve a speedy delivery of her child a few weeks hence. Another pregnant woman visited the temple on the final day of the rainy-season Buddhist

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[829] 43. Bradley's informants gave an example of a deeply ingrained habit: "European and American mothers can better dispense [with the fire-rest] because their own mothers from time immemorial have never been in the practice of the custom, and consequently their constitutions do not at all require it (p.79)."

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retreat (ōk phanaā) in order that her child would come out (ōk) more easily. Here none sought to divide the worlds of the [844]
natural and the supernatural, or to mark off "imitative magic" from the "learning by example of the natural world." A stronger influence came from more powerful agents, so that the effects of the Buddhist temple carried greater effect than the actions of a mere neighbor. Yet any like influence was of aid, especially in a verbal similarity. Thus, an event occurring on a Friday was apt to be auspicious because the Thai name for [196]
Friday contains an element identical in sound (though etymologically different) to the word for happiness (wansuk= Friday; suk=happiness), and for the fortunate status of true adulthood (suk=mature, ripe).

Stability in a Floating World

829
In explaining why some children were "born easily and were easy to raise" (liang ngāi) certain persons simply said, [761]
"They were born into the right family. Those born to the wrong family usually die." In defining the "right" family, merit, habituation, and helpfulness converge.

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Most families were thought to live together as a group in life after life. In view of the separateness of souls, how 782
was this brought about? The key lay in the conviction that people who made merit together met in future lives. Since most 593
merit-making was undertaken as an enterprise of the nuclear family, sometimes with close kinsmen and friends, they would 829
find each other. Some of the eagerness of friends to help (chuai ngān) with cash or labor was in order to meet in later 761
lives. These persons were used to each other, used to helping each other, and so might marry. Thus, if they lived rightly, the nuclear family, maybe with an infusion of beloved old friends, expected to carry on in the next existence. Although a family's prosperity proved its merit, and its wealth facilitated making more merit, continuity in time was not limited to the wealthy. Proof that a couple had been married in a previous life lay in the birth of a boy as first born. Such a couple was known as a "khū" (pair), and divorce was held to be highly unlikely.

How did a child find its "right" family? After whatever [774]
necessary stay in purgatory, the khwan soul of a deceased member roosted in a tree near to its old home, then flew into an accustomed womb. One recalls the start of the blessing (p.48), "Come, khwan! Come my own child!" A woman hoped that the khwan was one previously born to her. "A couple lost its first child. Later the wife was fearing for the life of their sickly second-born." The husband said, "It is according to your sin and merit. If the child is your own child, he will live with you. If not, he cannot."

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761 Since only meritorious children were born into the
775 "right family," they were helpful and so easy to raise. The
593 easiest to raise were reincarnations of babies deceased in
829 the mother's present life. "A girl of three died. Her father
782 dreamed he was at her coffin. She asked for water which he gave her, then brought her home. Months later a boy was born, so easily raised up that people knew it was a reincarnation of that girl." Here amiability and the change to male sex demonstrated merit. In another tale, "a woman lost many babies at birth. Her husband, thinking it was the same child trying to be born to that mother, marked the forehead of the last deceased baby. His surmise proved correct, because the next baby born had this mark on its forehead."

This assumption that a woman's children were born to her over and over led to a measure of control over the cooperativeness of the child in the womb. A child trained to "good habits" became a meritorious adult who, when reborn, would of course "help" his mother in childbirth. It was advisable to set one's own child into paths of proper behavior, for he could be born again to a descendent, and in all likelihood to oneself.

On the other hand, families were not closed groups. "Like a leech that sticks in one place, then goes to stick somewhere else, so a deceased person may be reborn somewhere else," said a priest. The marriage blessing stated, "May angels, not criminals or beggars, reincarnate as your children." Thus was explained why upright parents might have a disobedient, roaming child. He had roamed into a new family which perhaps he had met during a pleasant casual visit to them in another life. If he did not stay home to make merit with his present family, a wayward child would roam out of it as easily as he came in. Here was the ultimate danger in visiting around too much.

761 Because all individuals lacking in merit died off at
593 birth, some of whom because they got into the wrong family,
782 a selective process continuously weeded out the extremely non-meritorious so that those who were born usually survived. In fact, Hauck's figure of 90.6 live births [163] (1956:33), the percentage of total pregnancies shows how many meritorious babies were born to the right family!

852 The Winnowing Ceremony

844 This ceremony, described in Dūan's tale, was usually
774 performed shortly after delivery, though it might occur anytime during the first three days of a baby's life. The child, placed on the tray (twins were laid together or separately) was claimed by the mother or the father, who

852 844 774 [608]

called out "Mine!" ("khōng chan" [female speaking] or "phom" [male speaking]). Never did a parent say "ours!"[44] Sometimes the mother might ask a relative or friend present to claim the child, and so become a godparent.

As the first human step to control the volatile khwan, the first objective of winnowing a baby was to seize it (kan rap khwan) and so "complete" the child's person.[45] By tying holy thread at the wrist and ankle soul-exits, the khwan which had flitted in and out of the womb was given root. It was still flighty, but now it had a life-long home.

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Secondly, the child was given membership in a human family. Connection through blood and semen did not establish kinship. At first, the child hovered between corporeal and non-corporeal existence. "The child is not fully human for the first 3 days." This period was under the supernatural control of Mother Sū, for babies "never died during the first 3 days after birth. They might be born dead or they died 6 or 7 days later." The shock of dropping the child on the tray "made him forget his life as a spirit." When someone cried "mine!" the child finally cut his relationship with the spirit-world. As an old woman explained, "The ties are the important part [of the ceremony]. They show that the child belongs to someone. Once a tie fell off one wrist. The child cried and cried until it was restored," fearing its lost khwan would attach itself elsewhere. The claiming set up kinship as a contract before witnesses. Whoever announced responsibility for the child's care, and this was usually the mother, deserved reciprocal care in old age. Other relatives would also help to bring him through to maturity. He would not be so frightened of an evil spirit because of family support, nor of the "ghost of an ancestor" who would be recognized as a relative.

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Third, the ceremony strengthened the child. By giving him through the ties a stable khwan, he "grew better, cried less, and did not get sick."

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The incorporation of as many auspicious elements as possible into the ritual was customary. Since the child took

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44. A winnowing tray (basket) had the capacity to "trap" spirits. It could seize or trap not only the khwan soul, but, at New Year's, one of the fun ghosts (Textor:371).

45. There is no convenient way of expressing "ours" in Thai in this restricted sense (id.).

852 856 789 after whoever claimed him, a mother might ask a "wealthy person, of polite, calm, and good character" to do this. The baby also started an association with whatever items were placed on his tray with him. Besides the most common ones mentioned in Dûan's tale were ink and books (which induced learning); gold, rings, jewelry, money (wealth); bergamot thorn, a tin of kaffir lime (sharp wit); and a razor (a good wood-cutter for the fire; said to be a Muslim custom). When the baby was finally transferred from tray to cradle these items were returned to household use. The bamboo cutter, rhizome of phlai, and earth associated with cutting the cord were taken off the tray and buried with the placenta. Their significance lay as part of a binding ritual. The phlai and earth might be taken off ahead of time.

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Binding Rituals

829 774 Because Bang Chan accorded autonomy to every individual, whatever his age, everyone had the free choice to go wherever his advantage lay. In infancy and childhood, the khwan soul might flee at any time, and could only be recaptured by a khwan-calling or khwan-ladling rite (Textor: 396-411). After about the age of 8, a tham khwan ceremony helped to bind in and strengthen the khwan soul. In daily life, the fear that a loved one, whatever his age, would withdraw or run away if unhappy, frightened, or overburdened dogged people their whole lives. Casual episodes were sometimes viewed with alarm. Once a boy of 10 on his own initiative went off to live a few days with his grandmother only 10 minutes away by boat. His mother complained that he had wandered (pai thîeo) and feared it would become a habit. Parents dreaded that grown children would find work away from the village; that daughters would elope; that adopted children or spouses run away; or even that their child, at marriage, would elect to go live with his in-laws. At any time a husband might go into the priesthood leaving his wife and children to fend for themselves, though here the wife had to give her permission and the motive was sympathetically viewed.

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A traditional jesting threat was to "go away to the jungle-forest" (pai pâ).

The economic and social base for this fear of losing a child to the world was that children were a parental investment with an anticipated return: for the trouble of bearing and raising them, children should work for the family until their marriage. Furthermore, a boy was to bring his parents merit by being ordained, while a girl was to care for them in their old age. If a child moved away

before completing these obligations, the parents lost out on their anticipated reward (cf. L.M. Hanks, 1962).

Since waywardness (nai thīao) was considered a continuous threat, magical means were taken at the moment of birth to ensure that a child stay close to the family that raised him. The blessing following the winnowing ceremony invoked immovable things: the post, the cat that traditionally never roamed far, the pumpkin that sat and fattened:

> "...Stay at home like the bottom of the house post. Watch the house like a cat. Eat and stay here! Never leave home. Be fat and heavy as the ash pumpkin..."

The most important binding actions utilized, or brought the child into physical contact with, objects long associated with family, in particular the house and land. The umbilical cord was cut on earth or phlai dug from the house-land itself with a bamboo "knife" sliced from one of the deeply sunk house posts. Of these "the knife is the important thing." The phlai also had medicinal purposes. With a feather "from the mother's house" the baby's navel was smeared with cobwebs from a spider whose web indicated long undisturbed residence. They buried the placenta either under some large old tree that stood near the house, or under the house stair. The old family winnowing tray, old clothes, and well-used family possessions were used first before any new furnishings were purchased for the baby. A fire of sakāe wood grown on premises boiled the water for the baby and mother, and heated the mother. Sakāe "was planted when a house was first built so that every generation of occupants would have it available for use at confinement" and also for firewood at other times (cf. McF. 834). All these binding rites assured that the child being rooted to a home terrain, would not wander frightened, and so "would not cry." He also would be at home to participate in the merit-making that would reconstitute the family in another existence.

If a child were born away from home, how was this bond to his locality established? On one to two occasions when the child was born at the Minburi Health Center, Hauck (notes, 1954) observed a solution to this dilemma. The mothers returned home, as was customary, within a few hours of delivery and were established by their respective fires. Their babies were winnowed and laid on their trays with the usual auspicious book, pencil, and needle. Neither tray held any bamboo, clod, nor phlai, however, for these had not been used. On one tray, though, was laid a steel knife from the kitchen, mute proof that a family cutting instrument ought to be there. On another occasion, a father asked to be given his child's placenta so as to bury it on the house site. In so far as possible, people in Bang Chan tried to carry on the old rites.

000 in Bang Chan tried to carry on the old rites.

848 The Cone of Wood

372 When a child was conceived out of wedlock, the first problem raised was, "Who will build the wood pile?" The actual father had to come forward and identify himself, for he and no one else could perform this duty. A child could not be born without the father giving this assistance.

593 This cone of wood represented a "womb" towards which
84 a father actively played out his role. His child was in it.
789 While building it, his behavior affected the child, just as
372 his wife's behavior acted on the child in her womb. If the pile were incomplete before the onset of labor or gave out before the fire-rest was terminated, the child would "never finish any task in its life." The very manifestation of industriousness involved in collecting the wood, though, made the unborn child industrious. Gathering a quantity of wood for this big pile was not easy. Old houses had plenty of wood, for they stood in thick groves, but new houses sometimes stood bare and stark in the fields. He placed spiny Indian jujube or Chinese date (phutsǎ) and Manila tamarind (ma khăm thêt) all over the outside to protect
[824] this "womb" from invasion by malevolent spirits. Thus he also protected his wife's womb. Sakae wood was preferred because it was smokeless. Collecting a mixture of woods was easier, but then the fire smoked. Mixed or all sakae, whichever the constitution of the pile for a woman's first confinement set the pattern for all her later ones.

At the onset of labor, the father had to open the way for his child to come out of the womb, so the pile was tipped over in a direction paralleling the position of the Great Snake. This astrological orientation was exactly that of the woman in labor. Unless the mother's head and the apex of the fallen wood pile coincided with the direction of the head of the Snake, with the open end of womb and cone below, "with and not against the lie of the snake's scales," the child would have to struggle against these scales as he came out. By tipping the cone of wood properly the father helped his child to an easy exit.

The thorns protected the womb and the baby inside from all evil spirits during the months of pregnancy. With the onset of labor, the holy cord which surrounded the mother took over this function, and kept away such dangerous spirits as phi krasu and, if the baby died at birth, the violent New Baby Ghost (cf. Textor:261).

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Even after the child was out, the pile of wood was still a drying womb to be treated carefully. It was also the wood for a consecrated fire. To drop a piece of this wood carelessly both injured and desecrated. If this happened a disease of the eyes "sang," came at once for which no male medical powers had any remedy. The only cure was in women's hands, that essence of maternity, "a drop of mother's milk--any mother's." The larger implications of this linking of fire and maternity are dealt with in the next section.

The Fire of Maturity

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In the events surrounding the birth of the child, the significant step for the woman personally was the post-partum rest period by the fire (yū fai). Far more was at stake than just drying the uterus. The fire rest was one of the series of rites of the life-cycle which marked the course of an individual from birth to death. The others were the cutting of the umbilical cord, first head shaving, top-knot tonsure, ordination (for men), marriage, and cremation. Through the consecrated fire a woman formally achieved full maturity: she became suk (cooked, ripe, mature). Maturity did not come just by bearing a child. The fire brought about the transformation.[46] [885]

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How was mature womanhood viewed? What was the essential female role and office? Bang Chan saw a woman as one who "feeds and lengthens lives." As the custodian of growth she was, first, the guardian of the vital, essential khwan soul, and especially of the immature, flighty khwan of growing persons. [774]

Secondly, a woman was a donor of nourishment (liāng).[47] Her primary responsibility was to nurture children and other tender beings. She nourished the fetus with her blood. After [827]

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46. "The fiery element digests what is eaten or drunk...and cooks the body and gives it its beauty of complexion. And the body thus cooked is kept free from decay" (Warren:157-158).

47. All the deities "concerned with the welfare of our bodies and our khwan" were maternal (mâe), e.g. Rice, Water, Earth, "Mother-Goddess" (Mâe Sū), and several Mother-Princesses (Chao Mâe). Fire, and maybe wind, were both female (mâe) and male (phra) (Textor:485). To these deities, "higher" than ordinary spirits, Bang Chan "owed more." [776]

562 [827] [853] delivery, "her blood was purified to a white color to become the milk of the breast."[48] Nursing a child was the essence of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 462 252 264 [182] [431] [786] 593 888 In a wider context, not only all their household members but people anywhere were the objects of women's nurture: women were in charge of the cooking even if occasionally helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor houshold, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry any more." She construed this as proof that she had ample merit, but it also meant that she was a great donor who gave continuously and took little. Women usually offered the early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When age pushed women past their mature capacities, they returned to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 857 [291] [593] A desire to give tender care and nourishment was deemed inborn in all women. Although sex was not strongly differentiated in babyhood,[49] by age 3 a hard-to-handle skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 17 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phūm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[854] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

Only when the youngster was satiated did she gobble the remainder.[50] Parents often commented that girls in general were obedient and good, but boys were not. Everyone spoke, however, of exceptions. The capacity to play the female role grew with the child. It was not completed with the physiological maturity of first menstruation but only with ritual maturity.

The rituals to fit a woman for her office, described as "directly related to the welfare of the child," had 4 specific purposes. They perfected her as a compassionate being; restored and strengthened her body; improved her capacities as a nourisher; and strengthened her own khwan. The key to each of these aims was the holy fire.[51] Because actions taken by the fire were immediately and permanently effective, every effort was made to induce auspicious happenings. Words spoken by the fire had compelling effect so even ordinary speech became magical. Speaking of the fire's hotness so raised its heat that a mother was burned. For this reason, uninformed or careless visitors like children or foreigners were a danger.

According to Buddhist thinking, suffering developed compassion. Through the discomfort of pregnancy, followed by the anguish of childbirth and the heat of the fire, a woman became compassionate and so achieved the guide-line for moral behavior. Then a woman was sure to be touched with pity for the younger or less fortunate. One teacher despite the inconvenience went home twice a day from school to nurse her new baby because she "pitied" him too much to hire a wet-nurse. It was "pitiful" to see a child at another woman's breast for it implied that its mother was either unwilling or unable to nurse it. Thus, babies were rarely nursed by others than their own mothers.

The fire also strengthened a woman by ridding her of bad blood and foul fluids. Wind and Fire, the 2 spirit guardians of the elements necessary to the occasion, were invoked to assist in the drying of the uterus. In addition, strengthening

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50. Boys too fed their younger siblings but their purpose was a power-play: "to assure obedience in the future" (cf. Hanks and Phillips:648).

51. This fire was kept entirely separate from the one for cooking and boiling of water. It was ritually lit and ritually extinguished at the end of the fire-rest.

In addition, strengthening foods like rice and fish, the staples for stout farmers, were stressed. Fruit, "which gave no strength," and vegetables (except for the nursing curry mentioned below) were avoided.

The holy fire also transformed a woman into a better nourisher. It gave her new, lasting beneficial nursing habits. As one man explained, "the very nature of water is changed by boiling over a fire. It becomes suk (ripe)." Similarly, a woman's body, her very nature, was permanently changed to suk by the fire's heating. The fire, in fact, made suk all the food she ate beside it. Since this food was turned into milk, her breast milk became suk and so more nourishing, and did not disturb elements.[52] "Food eaten while lying by the fire, when eaten later on (during lactation) by the mother, does not cause diarrhea in the baby." Jackfruit ordinarily caused wind-trouble during lactation, but one woman ate it during the fire-rest, and at once "got used to it, so she could eat it all the time." To make themselves better nourishers, some women spoke of the desirability of "eating a bit of every kind of food." The "nursing curry" (kaeng lLang) was a mixture of vegetables.

Finally, the consecrated fire strengthened a woman's own khwan. She could better withstand convulsion if attacked by a spirit.[53] She was able thereby to handle a khwan even without the special magic that existed for it.

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52. To be nourishing even the daily rice had to be made suk by boiling (Anuman Rajadhon:77). It may be that no food was considered nourishing unless suk, either naturally (like ripe fruit) or by cooking.

53. "...when 'involuntarily' entered by ghosts...maidens in the 17-25 age bracket tend to convulse more violently than do women of more advanced years"(Textor:406). "Maidens" were presumably not married and so not suk.

Thus she performed several rites involving the maintenance of the immature khwan of children and of rice.[54]

The acme of maternal virtues was manifested in the "good nourishers" (lîang dî). These women had borne many children who "nursed and slept well, did not cry, and easily established good habits." They were lîang dî not just because of the time spent by the fire, for that time could be matched by persons who had lost babies. They were special persons of more than usual capacities for success in nurture. Good to have around for their auspicious influence, they were called upon to inaugurate or help processes concerned with health and growth. They performed, or caught the child in the winnowing ceremony, or gave babies their first suck. They were the persons to whom a sickly child was brought so that his health might be improved by calling the soul and tying holy cord at wrist and ankle (riak khwan).

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54. If a child indfcated by continuous crying that he had lost his khwan, a mature (suk) woman had to be asked to call it back ritually and re-tie it into the body with sacred cord at wrist and ankle. There was no special magic. Her words suffice. Khwan-ladling, a more elaborate and compelling form of the same ceremony, used magical formulae (Textor:401-402). One of Phillips' sentence-completion tests was, "If one is frightened, the best thing to do is..." Of the respondents, 7 women, including one Muslim, would set to work to "call back the khwan" (Phillips:267-268). No man suggested the latter.

In the agricultural rites, women handled the rice's khwan in basically the same way when it was immature: inviting the young Rice Goddess to stay and grow in the field, and transporting to the house the child-like seed that only next year would grow to maturity. For these rites a woman used an incantation if she knew one. That she could also handle the rice khwan by speaking "extemporaneously" (Textor:429), indicated that her mere words were enough. If no one else were available, a non-suk woman could call the khwan of a child or of the Rice Mother by reason of her in-born female potency, but could not "ladle" a khwan.

When the khwan was mature (after a person was about age 10) men took over its care. In the men's thaw khwan (khwan-strengthening) rite, here, too, women were the ones to carry off the cloth-and-leaf covering of the baisî (tiered offering) into which the khwan had flitted during the ceremony. The rice-ceremony at the threshing floor was a thaw khwan, so was performed by men.

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156 (riak khwan). Theirs was an augmented personal potency[55] in
nurture not unlike the mana so widespread in the Asian-Pacific
area.[56] The best midwives were liang dī, though not all liang
[759] dī were midwives. This societal peak was not an unattainable
ideal. In the community, certain women were pointed out as
liang dī and some of them recognized in themselves the vali-
dity of this title.

562 The association of rice, motherhood, and khwan now stands
794 clear. Rice made suk by cooking over a fire, was the essential
776 food not only for the body but for the khwan. Growth and life
262 depended on the nourished khwan. Rice came from a maternal
figure, the Rice Goddess, Mae Phōsop (cf. J.R. Hanks, 1960).
Human mothers, too, when made suk, gave suk nourishment: the
milk of the breast was merely transformed rice. Whenever rice
was eaten throughout human adulthood, the Rice Mother continued
her nourishment, for in each grain was a bit of her khwan,
nourishing to the human khwan. The rice-bowl and ladle, used
in many a ceremony, stood for the maternal care given a human
khwan, and by extension, personal care throughout life. When-
[782] ever the rice bowl with offerings (khwan khao: soul-[of]-rice)
was presented by a parturient or by a sick person, loving care
comparable to maternal care was being requested.

182 The idea of re-birth, of a fresh start within the pure
885 area encircled by the holy cord, with auspicious words and
846 consecrated fire, was deep in every life-cycle rite. The
562 particular circumstance of the fire of parturition was a
372 forthright cooking to bring out and increase a woman's
essential femaleness, to transform her from a youthful,
partial giver into a complete, mature donor of nourishment.
Such was the satisfaction of women in this female role that
many said they would like to be reborn as women. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:375) for a quick run-down on a definition of mana.

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to be reborn as men. All women were eager to undergo the post-partum fire at least once. After that modifications might be entertained.[57] Whether the baby lived or died was not pertinent, for the benefits of the fire were for the mother.

Comparison of Male and Female Maturation Rites

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The parallel ritual that fitted men to perform their masculine role was ordination into the Buddhist priesthood. The well-documented Buddhist ends should not be permitted to eclipse this other personal goal. Just as the fire prepared a woman for motherhood, so ordination changed an immature youth into a man ready for marriage and fatherhood. He too was transformed from raw (dib) to ripe (suk). Men gained compassion through denial and suffering. Since their natures were seen as hard (khaeng), strong, bent on gain, influence, and power, possibly destructive and concupiscent, the severest deprivations were invoked: the renouncement of the gratifications of sex and food. Of the 2, the deprivation of food involved the greatest break with previous habits, for since babyhood, food had been a symbol of maternal care. Hence, a man was cast on his own. His only refuge and support was the Buddha, the law, and the Brotherhood. This self-denial induced the suffering that, coupled with knowledge gained from study of the scriptures, led to compassion. The suffering in no way

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57. The fire-rest though desirable was not obligatory. In 1865, Bradley said it could be "dispensed with in times of civil commotion, for fear of the enemy" and "no damages whatever were suffered whatever to mother or child" (p.79). Like other life cycle rites it was postponed if not convenient (nadwk). Also in times of peace, "a few mothers here and there cannot lie by the fire," and a few say, "they will not" (ibid:p.79). Bang Chan would accept this viewpoint freely as reflecting an individual, constitutional set of elements, or as an autonomous decision of an individual. The woman would never feel herself as competent as a ritually mature person though.

885 deprived a man of his masculine strength but was expected to
793 change him into a kind and merciful being.[58] It took at least
562 a three month season (phansā) in the priesthood to make a man
785 mature, responsible, and effective. That this moral fitness
[778] was not obtained overnight was given vivid illustration: if a
Buddha Amulet, designed for invulnerability, failed to be effective when tested by having a gun fired at it, it was "sometimes jokingly dismissed as a monk (phra) who has just been ordained (bwat mai)" (Textor:529). This interesting episode illuminates
789 one other important result achieved by both men and women in
885 their respective maturation rites: authorization to handle magic.

Magic and Maturity

In Bang Chan, magic was powerful. Whatever the purpose, whether beneficial or nefarious, it was effective if all conditions were met. Lest such power fall into unscrupulous hands, the community limited its availability and use to those who had gained the moral qualities and fitness to handle it wisely. Only the ritually mature could be counted on to be compassionate, strong, responsible adults, and so were permitted access to occult powers. Whether by ordination or the fire-rest, to be suk was an absolute prerequisite to magical knowledge. It did not give magical power, but qualified one to seek it out. Since no career in medicine was possible without magic, no man could be a mo who had not been previously ordained.

789 The uses of magic by man had entirely different objectives
562 from those of women. Their respective fields did not

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58. "A monk was changed...to be meek and mild." By seeking his morning alms he "show(s) mercy towards creatures" (prot sat) (Anuman Rajadhon:76-77). Women's tenderness in their maternal function was not associated with shyness. A compassionate woman with a strong winyān soul (which projected the quality of the heart) was enterprising and effective (cf. J.R. Hanks, 1959). Where sexual characteristics were confused, instability in behavior appeared. The cultural expectation was that children and women were delicate (ōn), older people and men were hard (khaang). "A male who is easily induced to convulse is one who had a 'soft' heart (ōhai ōn).; ...and also a 'soft' khwan (khwan ōn).....Such a young man is excitable rather than predictable and dependable, and hence is cause for parental anxiety" (Textor:405).

overlap at all. Magic was wielded by men to gain power over spirits, persons, elements, and forces. It had either social or personal benefits. The role of highest social benefit, corresponding to the liang dī in women, was the khwan-specialist (mō khwan) who conducted the life-cycle, khwan-strengthening (thām khwan) (for persons and for the rice) and many other ceremonies for the mature khwan. This role demanded men of the highest qualifications in probity, erudition, and personal dedication. Men also had the formulae for curing, house- or boat-blessing, invoking guardian spirits (sān phrā phūm), etc. Men could make protective amulets to render the wearers safe from bullets, knives, spirits, and all sorts of hostile forces in the world.

On the other hand men's magical objectives could be aggressive and hostile. The gamut of amulets, missiles, love-oil, and incantations (Textor:passim) showed the potential for attack and why the converse need for invulnerability was so strong. Men had a nurturing (liang) role, but only for non-human beings, e.g. buffalo, pet birds, and guardian spirits of house and land. Subverting this role for hostile ends, they obtained possession of the ghost of a recent corpse by gathering the drop of oil at the chin, and nourishing it (liang) for use in sorcery. For a man, nourishing something gave control.

All of the powers of men's magic were available to women on request for any purpose, hostile or not, but the "owner" had to be the mediating agent.

A woman's magical knowledge was linked exclusively to her female task. It did not give power over people. It could not be destructive. No female sorceress existed in Bang Chan. No woman feared the magic of another woman in childbirth nor at any time. A woman's magic was devoted solely to promoting the processes of growth and life. Thus it controlled the searing heat of the fire, invoked the Spirits of the 4 elements, and helped at various points in childbirth. It handled the soul of the Rice Goddess and of Mother Sū, guardian of children. It restored any frail and wandering khwan to its proper bodily abode. Such was a woman's magic.

To insure separateness the respective provinces of magical activity were ringed with sanctions. Contact with a woman's skirt, undergarments, or menstrual blood completely negated any of a man's protective amulets (re tattooing, cf. Textor: 102). Though this reflected the traditional avoidance between sexual phenomena and Buddhism, it might also indicate a tacit moral evaluation of the magical powers of men and women: the powers for growth were ultimately ascendant over those for power, for men had nothing that undid a woman's powers. Though women were easily prey to men's magical control, as by

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with man's magic, a severe sanction fell on her. She became the host of the phi krasu who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mo, she could do everything a mo could do. Men were never mediums. Bang Chan's only medium was possessed by a male mo.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

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59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phi krasu as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "auk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phi krasu's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

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The medium's powers as a mɔ̄ appeared to be entirely equivalent to a man's.

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To summarize, the fire-rest enabled a woman to acquire fruitful habits, new status, and the right to handle magic. The implications of the ritual clarified the role of women and the associated symbolism of rice, and by contrast the role of men. The nature of the magical resources available to each sex laid the groundwork for a career in midwifery for women, and for men, a career as a mɔ̄.

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Comparison of the respective rites of maturation points up certain contrasts and parallels between men and women. Women achieved compassion and maturity through their sexual role, while men achieved these qualities by denying their masculinity. Even a bounty of merit, which a man achieved directly by ordination, came to a woman through procreation, by the ordination of a son, or as a wife if her husband were ordained. Many activities were done by either sex, but each had certain exclusive proprietary areas. If women were donors of nourishment, men too had their donor roles, sexual, economic, religious, etc. Each paralleled the other in the formal steps to maturity, building the way for a complementary social and marital partnership for which both were ritually and psychologically well prepared.[62]

62. In contrast, note the psychological ill-preparedness, leading to severe tensions in Ceylon (Oberesekere, passim).

Chapter VI

MIDWIFE AND MǑ

1759 In Bang Chan it was easy to ask, "Who has delivered babies?" The answer would run into dozens of names. To respond to "Who are the midwives?" an informant would give the names of 6 or 8 persons, then add, "Some people call them professional midwives but some do not. X is not a midwife but she knows how. Y delivers babies, but only out of pity. Z has delivered 30 babies or more, but she is not a midwife." If asked, "Are there doctors among those who deliver babies? " he would say, "Mǒ (doctors) never deliver babies."

Before a definition of a midwife is given, a general picture of midwifery in Bang Chan is needed.

844 ### The Practice of Midwifery

Normal childbirth, a cooperative venture between mother and child, was not an illness. It called only for the help of kin or neighbors. Anyone who had seen or experienced childbirth at least once before was considered a possible, though not necessarily competent, "deliverer" of a child. [593] The husband was supposed to be present to assist; failing whom a father or brother should attend. Consequently a good many men had witnessed birth. The spectacle was disliked, however. Anyone, though, young or old, male or female, kin or not, might offer or be asked to help. Private magic was [779] not essential, though it was necessary for someone with incense, flowers, and a candle in hand to inform (bɔ̀k), the Lord Buddha, the ancestors, and the ordinary protective spirits of the land and home and so enlist their help. The customary post-partum rituals and blessings were not esoteric. Enough popular astrological knowledge was known, or quickly and freely available from a priest at the temple, to orient the woman in labor. Consequently, many a woman was delivered by her mother or other kin. One poor farmer and masseur, with the assistance of his sister, delivered all but one of his own children. On another occasion, a visit- [759] ing kinsman, by chance a medical orderly in the Royal Thai Navy, safely delivered a relative. In all these cases the cost or "gift" was less, or non-existent, and the convenience

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greater, for relatives were at hand. Some of these ordinary persons developed skills of considerable consequence.

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If difficulties developed, then a more experienced person, perferably a midwife, was needed. But many a midwife assisted at normal births. Because difficulties might arise from a deficiency of merit either in the mother or the child (one could never know which), many women preferred to have in attendance, for peace of mind, either a midwife or an experienced person to insure the presence of expert help. Sometimes they were engaged in advance, more often just sent for "as pain is increasing," it being not always certain whether the case was normal or not.

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A few women were delivered at the Mīnburī Health Center. These were rarely normal cases. The Center was turned to as a last resort in dire circumstances, with the result that sometimes the woman died in the boat on the way. A few persons of rather more modern outlook, such as wealthy farmers, teachers, and traders, had been delivered there and recognized its usefulness.

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The midwives lived in all parts of the community, with 3 in the populous central temple area. No one was more than a half-hour's paddle, or an hour's walk from the home of some midwife. What was desired, however, was a particular person, even though he might not be the most accessible one.

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Since midwives were all heads of large families their clientele was mostly their kinsmen. They also took care of non-kin who lived in their locality. A daughter or other close relative who had married out would be attended wherever she was, if she did not return home for confinement.

In choosing a midwife, a parturient sought out not only skill but favored a kinsman over a non-kinsman, a close relative over a distant one, a near person over a far.[63] Occasionally, to sustain an image of progressiveness, social superiority or of wealth display, a midwife from outside Bang Chan was imported. Sometimes proximity, convenience, and

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63. A male and 2 female kinsmen-midwives were called by the man's sister to deliver her, and all came. He did not deliver her because she was "too close a relative," but he said a brother "could deliver a sister."

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affection overrode kinship.[84] Thus affinal relatives and non-kin neighbors were also requested to assist. Buddhists attended Muslims and vice-versa, (though Muslim women preferred female assistance).

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In emergencies the professional midwives' area was the whole community. They travelled long distances to attend women who were not close kin. No parturient, however, even in an emergency, was ever attended by a complete stranger. In all likelihood, every adult in the community knew the midwives at least by sight.

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As to the size of the practices, reported activities ranged from the Muslim midwife's estimate of 10 per year, down to 2 or 3 per year.[85] The 2 men and the most competent female midwife reported about 4 per year, a figure probably weighted on the side of the difficult cases per year. It is noteworthy that the men, in spite of being as we shall see both mǭ and midwife, did not have larger [462] practices than the women. It was considered basically a woman's skill.

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None of the midwives derived much income from their practices, nor did they expect it to be significant. Their main income came from rice-growing from which, however, the women and one of the males had largely retired because of age. The other male midwife was exceptionally busy as a labor contractor, builder of houses, land-owner, and headman as well. The midwives found the 5 to 30 baht offered

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84. Two teachers who were in the kinship category of granddaughter (lān) to the 3 best midwives, and lived only a few hundred yards from them, were delivered by a woman who was mother-in-law to one and husband's older sister to the other and who was "not a midwife but knows how." Since labor was quick and normal, no higher help was necessary. On the other hand, all 3 of these midwives turned up to help at the confinement of another cherished "granddaughter." Only one of them actually delivered the infant but other functions were diplomatically divided up by the young mother.

85. Hauck studied 46 babies, aged up to 3 and so not all born in one year. Thirty-one were delivered by 4 of the professional female midwives (12,8,7,3 respectively); a male midwife and an "experienced" person had done 2 each; 11 [602 women, one each (Hauck, 1959:617). A few of the latter 11 [571] were ordinary kin, not midwives.

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in the khwan khāo "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mɔ̄ or to the Minburī Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

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Though living like other elder citizens of the community, in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mɔ̄ was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (tham ɛchIp [Mc.F. 990]) when others who had equal or more experience were not so considered?

The Role of the mɔ̌

756 844 A mɔ̌ never delivered the baby and never even touched a woman in labor, for this was not part of his specialty. If labor were slow, or weakness were setting in, he came to give a decoction to raise the fire element within the body, speed up the winds and so strengthen the contractions. He also gave holy water for general strength and to clear out, if such there were, any obstructing spirit or magical disease object like khun. Because of his experience, though, he might stand beside the midwife or other woman instructing; for instance, "Pull now!" "Watch out for the eyes!" His advice was more often sought after childbirth if fever or swollen body were in evidence, for these were the results of "inadequate outflow of blood and fishy-water." Because they were called in case of debility, the mɔ̌ were the ones who suggested when it was advisable to send a parturient to the Minburi Health Center.

756 84 No priest-mɔ̌ was ever called for childbirth because of the contact with a woman's genital area, though they were consulted on menstrual and pre-natal irregularities.

759 The Specialty of the Midwife

Midwives were called mɔ̌ tamyaa (doctor-expert-in-occultism; pounding, as in a mortar [McF. 365] crouching, [McF. 682]). There were 4 or 6 women, both Buddhist and Muslim, and 2 or 3 Buddhist men, who had delivered 100 or so babies apiece. They ranged in age from 50 to 70. Dozens of women had delivered babies one or more times but were not accorded the title of midwife. [192]

759 845 The foundation of their specialty was a greater than usual manual skill, developed over long experience. "We have only our hands," said one woman. The more expert could handle certain mal-positions, and did not hesitate, but only with permission, to put the hand into the vagina to turn the baby or "unstop the blood." They were better judges of the progress of labor, whether normal or slow, and of the symptoms of debility. They were more likely to keep calm in the face of extreme suffering where the parturient's relatives, over-eager in their desire to help, sometimes inflicted

severe injury, such as bruising by excessive pressing, or even in hysteria pulling the child to pieces in their effort to get it out.[66] [759 845]

Secondly, a midwife offered success, not only as proof of competence, but as a substantive asset. It will be remembered that the initial shape of an event set the invariable pattern for its subsequent occurrences. Thus a parturient was virtually certain of successful childbirth if she called on a person who had the habit (khɔ̂ɔi) of success. It could not turn out otherwise. We have also seen that these successful midwives were good nourishers (liiang dii). A new mother wanted to associate herself with such a fortunate sequence. Once established, a midwife's reputation was not unduly tarnished by the loss occasionally of a mother or baby. She might explain, "The woman did not do as I said," or "I was not given permission to do what I could have done, for her family feared she would be even more hurt by my putting my hand into the vagina." Death was, of course, only due to the running-out of the deceased's merit. [761]

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66. To give something of the measure of their skill: if the feet of the baby appeared first, one man "straightened the legs by hand inside, held the chin carefully as the head came through," while another said, "Do not press or reach into the vagina. Let the baby come naturally." If an arm came first, or it were a breech presentation ("the baby is turned over"), the procedure was to "pull and press lightly," but it was conceded that neither the mother nor child could be saved. Expulsion of the placenta was frequently difficult. "It may take 2 hours or stay in 2 days or more. Some die when it is left in, but some do not." The technique of removal was to give a medicine, press, pull with the hands rubbed with alum for a better grip, with the woman in a crawling position. Some reached into the vagina to locate it. One woman had analyzed her practice so as to know when to expect trouble: namely, in the later pregnancies and childbirths, i.e. the sixth and seventh, say, rather than in the early ones during a woman's younger years.

As to mortality, one "professional" man estimated 30 deaths of babies out of 238 deliveries in 50 years. Hauck (1956) reported 90.6% live births (pp. 32-33), 7% of the babies dying in the first month, 11% within the first year (pp. 39-41). One should remember that the professionals had a greater proportion of difficult cases. One woman had delivered over 100 babies and "all lived." [165] [163]

759 In these 2 qualifications of skill and success, some of the explicitly non-professional old ladies were recognized as easily matching the professionals. What then was the definition of a professional midwife?

759 789 What the professional midwives alone did was to deliver non-kin, for which they had to have magical formulae and reliable celestial knowledge. The incantations gave a midwife the right to be called a mō tamyaa, for he or she was using to a greater or lesser extent the sacred wisdom of occultism (saivasāt). Here midwifery was like any other craft or endeavor. One could cure, sing, and build a boat without magic, but with it, the chances of success and effectiveness were increased. The incantations could "ease delivery," "get a baby out that had died inside"(for this baby could no longer do his part), "prevent the poison of the fire from burning the mother," and give other special help. That this magic was the crucial difference between the professional and non-professional was illustrated by the old lady who had delivered 30 babies, but vehemently[67] denied being a midwife. "I am not a professional. I have no magic. I only pray to the Lord Buddha and think of sacred things each time."

759 787 A professional also had more detailed astrological knowledge of the orientations of relevant celestial beings so that delivery would be "helped and not obstructed." This knowledge was in no way a professional secret, but if complications during childbirth were evident, it was necessary to have accuracy, and convenient that the midwife had it.

759 562 212 191 778 To certain villagers the designation "professional" could not be applied to women because, never having been ordained, they had not learned to read, as men supposedly had, not only Thai but Pali and Cambodian, the languages of medical and magical lore. "A professional midwife has a book. No woman can become professional because she cannot read." The idea was that incantations were correct only if taken from the sacred texts at the temple, though in fact the formulae were taught orally. One male midwife had a sacred book in his private possession, which was proper, for sacred books were inherited by males.

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67. Her vehemence may reflect either pride in being so successful without magic--a true liang dī--fear of being reported as unlicensed (see below, p. 145); or consternation lest she be accused of using magic to which she was not entitled.

sacred books were inherited by males.

In the light of this definition, only the 2 or 3 males were true professional midwives. They gave elaborate annual ceremonies of homage to their teachers (wai khrū) attended by all the persons who had profited from the teacher's magic that year. However, all the male midwives were also fully qualified mō. Their ceremonies were large because they were dedicated to the teachers of their curing powers as well as midwifery.

The male midwives, then, were in a somewhat different category than the females. They were mō who had, in addition, trained their hands for midwifery as an "extra specialty." Midwifery seems to have been one of the few areas where skilled hands were considered of greater importance than magic. "We have no magic for delivery," said one male midwife, knowing that nothing but merit could guarantee success. Because they had access to the incantations for element and spirit control, and could make holy water, the midwife-mō could spare the parturient the necessity of getting in an outside mō, if such were needed. However, one part of the midwife's job the men could not do. To protect their male powers of invulnerability they were forbidden to wash the woman's clothing. A woman or a female midwife always had to do this. Men also could not provide the female "mystique" particularly related to the khwan and to growth.

However, the community did not adhere to this narrow definition of professionalism, for several of the experienced and competent women, Buddhist and Muslim, behaved as professionals and were accorded the title of mō tamyān. Their magical formulae, being congruent with their female office of promoters of growth and life, were especially effective. Like a mō they received the ritual gift of the khwan khāo, hallmark of the possession of occult formulae, which the patient presented to assure the benefits of magical knowledge.[68]

68. This ritual bowl of rice and offerings was never excused even between the closest kin. If forgotten or misused, the "teacher" punished the midwife with pains, and had to be mollified with a food offering. The magical benefits could not be withheld once the khwan khāo had been accepted. It was not accepted if the patient were too near death to be assisted. If the patient died, the whole gift, cash, rice, and all, was given at once to the temple to make merit.

759 Although as to fees, they said, "It is as you please," these
[465] women received as a rule the higher honoraria of 10, 20, and 30 baht. They did not have a separate teacher-rite but paid their respects during regular temple events, such as offering a pig's head and the other items during someone's ordination, though the Muslim midwife had her modified teacher-
[212] rite in a separate home ceremony, not at the mosque (cf.
[214] Appendix:Muslim Customs). It was even said of the best female midwife that "she had a book." She was literate in Thai. Even if her book were a popular astrological guide, it carried the reverence accorded all books. Whatever it
[789] was, its possession increased her aura of reliability. Though the women did not receive their magic at the temple but rather from a kinsman in the maternal line, their incantations, which appeared to be in the Pali-Thai tradition, were no less effective.

759 The professional midwives, both men and women, saw themselves as individual custodians of sacred knowledge and competent in a technique. They were not only interested and ready, but obligated to give expert care to anyone, anywhere it was needed.

The non-professional midwives always thought of themselves as voluntary helpers of kinsmen, acting "out of pity" and carrying on their female responsibility for new life as
[562] elder women helping their younger relatives. The idea of giving nurture and assistance was so deeply ingrained in the female office that the professional midwives saw themselves fundamentally as volunteers.

Learning Midwifery

The decision to deliver a daughter or a wife was not momentous. One did not have to be "muk" to deliver a baby. The same practical and compassionate motives that led a mother or husband to do this led some of these people to seek out professional techniques so that they might "help more." One woman, bearing her own child at 25 with intense suffering, became angry (Chan Thai) because "the midwife did nothing to help, but just sat and chewed betel while others did all the work." In desperation she called in her own mother to deliver her. She also "felt she had many relatives who would need her help." Another was asked by her mother's brother, a midwife, to accompany him as he was getting too old. He then gave her his magic. A man took up the specialty after his first child, a son, died at birth from ineptness, he thought, of the midwife. Another man, though, took it up as a "minor extra" to his career as a mo. All learned the skill by accompanying and helping an

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established midwife who was a "close relative."

Sometimes the interest arose in young people. A girl started at 15 to accompany her mother, a midwife, as helper and delivered her first case alone (an emergency) at 20. A boy of 15 also helped his mother's sister, who was a midwife. Later, when married, he delivered some of his own children, but denied that he ever intended to take up the calling. One young man in his 30's, was seen going "as a team" with a well known old mɔ̄ who directed him in the manual operations but who did not ever touch the woman himself. He also assisted one of the female midwives, but had not yet delivered a baby alone.

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The first child delivered by anyone was always the child of a close kin. Only with success at this first delivery would a person even consider doing it again. The second case, and the next few were confined to the potential midwife's close relatives, children (lūk), grandchildren, and the children of siblings (lān). Thus, the skills were validated within the kin circle before a midwife felt ready to practice outside.[69]

With success, a person of developing skill might be willing to include non-kin in his clientele, i.e. become a professional. One resolved only to help relatives but her "fame spread." As another said, "seeing it was safe, I was encouraged to go on." By this time, magical formulae had been

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69. Daughters-in-law were within the validating circle if circumstances were "convenient"--i.e. if their own mothers did not deliver them and if they lived with their husband's people. No witchcraft was feared between women. A mɔ̄ in his specialty also had to validate his skills within his close kindred before non-kin would call on him. A reputation began at home.

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759 sought, ritually requested of some relative who was a mid-
571 wife.[70] Some persons though continued to limit themselves
602 to delivering their relatives, and never sought magic at all.

Two Worlds: The Natural and the Supernatural

759 To deliver a baby as a midwife or even as an unskill-
772 ed kinsman, embraced 2 aspects: a manual or technical, and a magical. These aspects corresponded to Bang Chan's 2 great worlds of knowledge and experience: the natural and the supernatural.

Midwifery was not alone in embracing both of these categories. Every activity, bus-driving, dancing, printing, or other, had its incorporated magical means to augment the probability of success. Though with the manual or technical skills of the natural world alone one could come through all right with even a modicum of supernatural help, success was greater. No one wanted to take the responsibility and risks of "going it alone" especially when the resources of the supernatural world were so freely and easily accessible to everyone. At the very least, one could start an enterprise on Friday (Wan Suk: Happy Day). The closer an enterprise was to the margin of life and death, however, the larger the supernatural element. In farming, curing, and midwifery, for instance, the ritual component was strong.

[874] Since these 2 worlds were qualitatively different, each required a different method of learning. The supernatural world, immaterial, royal and sacred, was learned

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[189] 70. Three women had recieved theirs from their mother, mother's mother, and mother's older brother, respectively. A retired midwife planned to give hers "to the daughter or grandchild ("lan":sex not specified) who was interested enough to ask for it." One man had received his from his father's father. Childbirth magic would hardly be a suitable topic of conversation between priests, but it might have been passed down there, too. The midwife whom one accompanied while learning probably was the source of one's magic. Women's magic was passed down the maternal line only, whereas men could get theirs both from kinsmen and at the temple.

by instruction from a ritually[71] approached teacher. "One cannot accidentally learn. One has to ask to be taught." As a practitioner in this field, the title "mɔ̌" signalled expertise; where teaching was involved, the title was khrŭ (teacher [McF. 183]) or ʔāhān (professor [McF.990]). Speech was the key to this tradition, in spite of sacred books and wall-carvings in the temples.[72] Modern education, being book-and-teacher based, shared in this aura. There, even today, listening is more comfortable than reading.

Techniques of the practical, natural world were learned not by teaching but pragmatically by observation, example and experience. Eyes were the key. "I know because I saw," said a midwife. At the highest level of achievement in the natural world one was expert (nák), e.g. convict (nák thôt, an expert in being punished) a tourist (nák thîaw, an expert in roaming around).[73] Within the natural world, an intense pragmatism reigned always emphasizing visual phenomena. People were keenly

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71. To speak ritually one held in the hand the trio of incense, flowers, and a candle. This was the way to cross over from the profane to the sacred world, to inform (bɔ̀k) or make a request of, a sacred being (a teacher, priest, king, or deity). The tiny flame of the offering invoked holy fire, and so had the effect of making one's words compelling, for no one could gainsay a request under such circumstances. A husband about to deliver his wife held incense, flower, and candle in hand as he requested the help of ancestors and spirits. (Bishop Pallegoix saved the existence of his mission by thus approaching the King [Pallegoix, Vol. 7:701]). The trio of offerings, whether at the 4 corners of the lying-in fire-floor, or in "bat phlī krathong" at a "thaw khwan" rite, or even in an ordinary khwan khaw made all actions and words compelling.

72. Because words, immaterial and invisable, lay at the base of occultism, words as continuous agents of power permeated Bang Chan's ordinary daily life. This was why words, verbal play, and punning initiated action: pregnant woman attended the monks' "coming out of retreat" (ʔɔ̀k phansā) so that the child would "come out" (ʔɔ̀k) easily.

73. It should not be forgotten that most activities in the supernatural world had their technical sides, and the term "nák" was used there too. A curer had to learn his herbs; a dancer, his steps; and a master of ceremonies, the words of the chants.

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812 aware of what they observed and interested in experimentation. One woman, observing a mother who did not take any medicine, and even ate jackfruit, commented that she was "quite strong." Another watched what happened to a parturient who had no one to boil water for her, so used canal water. "She is healthy!" she exclaimed. Another decided to test whether not burning up all the wood made a child unable to finish his work and found the maxim untrue.

Just as supernatural knowledge was individually transmitted from a teacher to a pupil, so knowledge learned by observation was personal, even idiosyncratic. The actual observer of a phenomenon might change his ways accordingly, if he wished, but no one else would do so unless he too "saw it with his own eyes." The habits of one did not become the habits of another unless the same visual experience had been shared.

Because of the separation of the occult and the practical, the old midwives of Bang Chan would find it inconceivable that technical aspects which should be visually transmitted could be taught from a book.

Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

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Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire. For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

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Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous magical protective needle.

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"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments, modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1955:155-195). It was sometimes better not to claim competence outside these customary lines. One MD said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease.

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Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "woman are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

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178 An old woman summed up significantly 2 attitudes saying, "In the old days people made more merit and so lived
812 longer, but because we had no hospitals, the children died
782 younger." The relation of good health and longevity to proper religious and moral behavior was fundamental in Bang Chan. If merit did not suffice, medical attention, traditional or modern, could not prolong life. Children,
855 however, were tender (ɔ̀n) and easily prey to sickness.
958 Traditional care could help them, but being delicate and
178 tender like city people, children could also be helped by modern hospital care.

Between the 2 systems people sensed little conflict,
757 for each patient made a preliminary diagnosis of his symptoms and sought the type of assistance his diagnosis and
755 convenience indicated. Mɔ̌ with some knowledge of both
178 systems might offer their patients a choice of remedy. With the right diagnosis, magic, and medicines, a quick cure was expected. If not forth-coming, people were disappointed and moved to another specialist for his help. Modern medicine merely took its place as one more recourse.

The basic handicap of modern medicine was that it had no magical resources or holy water. "Its effectiveness is limited to the properties of the ingredients." Old medicine on the other hand had, in addition to these properties, "The strength of the mɔ̌'s incantation plus the power of every person who learned and used that incantation, back to the time of its discovery, centuries ago." Thus where the medical schemes offered the same specialty, as in fevers, bone-setting, or obstetrics, the old appeared to offer more resources.

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758 Besides its deficiencies in magic and strength-making attributes, modern medical care had other drawbacks.
178 First, it was not accessible. A trip to Bangkok for medical purposes involved far more time than a day. Minburī's Health Center was a feasible trip, even for a woman in labor (stays ranged from 6 to 24 hours). Home arrangements for tending children, feeding buffalo, and other chores were less demanding. Bang Chan's eagerness for local modern care was shown when a Bangkok physician visited Bang Chan for a few times as part of a nutrition study. He was besieged with private requests for medical advice. Secondly, modern medical care was expensive. In Bangkok, after the expense of getting there, taxis, food, and housing costs for accompanying relatives, hospital, and doctor's fees sometimes meant losing the family gold and even land. Minburī's costs were closer geared to farm income, but medicines appeared costly. "Modern drugs taste and act better, but the poor have to use the old." Third,

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to make use of modern facilities one suffered confusing and unhappy experiences. Bangkok traffic was dizzying, even if one knew just where to go. Hospitals had beds, not mats, and the personnel were strangers. Foods were often unfamiliar or violated traditional injunctions concerning heating and cooling. People were brusque, impersonal, and overbearing to country people. One woman complained, "I am afraid of the doctor there. She scolds me and does not treat me like city people. She will not explain what the sickness is." Minburi's clinic was small, set up in more familiar terms, and the staff known personally to many villagers.

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Finally, there was the problem of finding an experienced escort, i.e. someone who "knew the way." More was involved than just convenience. In all walks of Bang Chan's life, no one ever presented himself to a school, to a household, anywhere, without a personal introduction from someone who had been there before, and so was accustomed (khoei) to it. It was not hard to find someone who had been to the Minburi Health Center, but it was difficult to find one who had been to a hospital in Bangkok, knew what to do, and had the time, money, and inclination to act as escort. The latter was always a relative by blood or marriage or the sick person's self himself (Hanks and Hanks, 1955: 160). Actually, five or ten persons might accompany an ill person, only one of which was acting as the recognized go-between. Many of those who had been to a hospital or clinic as patients had previously accompanied others merely as escort, or to visit (Goldsen and Ralis 1955:31).

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Who had actually tried modern medicine for one reason or another? About a third of the household heads had used some modern clinic or hospital for treatment or hospitalization (Goldsen and Ralis 1955:31). Use was more frequent among (1) the literate, (2) those exposed to the mass media of radio and movies, (3) those accepting certain urban ways, and (4) those having greater contacts with the city in the way of visits, but users were not of a noticeably higher economic level (ibid:37). Women went no more frequently than men (ibid:32). No figures indicated how many of these occasions were for childbirth, but our interviews point to a small number. Taking the will for the deed, two women teachers who appeared to be the first to plan ahead to be delivered at the Minburi Health Center--but who did not get there because labor was too quick--seemed to be viewing the use of modern methods as a means to higher status.

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Why was modern obstetrics so largely eschewed? What had been Bang Chan's experience, unfavorable or favorable, that colored their attitudes? First, home was the most convenient place for care. Bangkok was ruled out categorically as too far. In fact, Minburi might be too far if labor manifested its normal celerity as the case of the two teachers showed, or if complications had developed. Furthermore, a Chinese resident of Bang

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743 Chan during a period of residence in Bangkok was delivered
844 at the Woman's Hospital and at a later pregnancy at the
178 Minburī Center. With her last baby, however, she elected
[759] to be delivered at home by the local midwife as more convenient in order to assure from her bed supervision and proper care for her other children. One young woman of very high social and economic standing preferred to import a midwife from a community six kilometers down the canal, and bear her child in her own home rather than attempt getting to a hospital.

Moreover, basically the Minburī Health Center was seen
[845] as a place for sick people, while normal childbirth was not a medical matter. To plan ahead for medical care there was to invite an abnormal delivery. The Center also suffered a poor reputation for success because difficult cases, hopelessly advanced, were the usual ones brought in. "At the Center are many ghosts," people said.

743 Some comments were genuinely favorable. The cleanli-
759 ness of the hospital was greatly appreciated. Anyone who
178 witnessed the skill of the doctor or nurse-midwife held it in respect.

Techniques of delivery were sometimes mistrusted,
75 sometimes admired. "They pull out the child with their
844 hands, which is dangerous." "The fecal pump is unneces-
743 sary." "One may not crawl during labor." A mō-midwife
178 who witnessed the nurse-midwife at work said approvingly, "She can force a baby out, but our midwives can only press harder," and "The hospital knows when a baby will come." The stopping of the flow of birth fluids by an injection was resented as affecting strength adversely, yet the injection that "made the placenta come so fast I couldn't notice it," or "gave the mother strength when the baby was stronger than she" was liked. The pills for pain were enthusiastically received. The hospital's closed windows "protected the baby from wind element," but the journey home dangerously exposed it and the mother to cooling wind. The dietary recommendations during recovery appeared wrong: eggs, which were "too cooling," or fruit, which "gave no strength." The suggestion of a nurse that scissors be used to cut the cord was resented as uncomprehending of village living problems ("we haven't any!" and "scissors always rust") and also as unwise ("rust gives tetanus poisoning").

75 Another criticism was the lack of personal warmth and
844 pity manifested by modern physicians and nurses, unlike
178 the attentive, reassuring mō. By forbidding abdomen-pressing, they were accused of "not doing enough," even of

"not wanting to help." The mother and baby were seen as having to fend for themselves. The very confidence built up in modern medications led to a conviction that doctors maliciously withheld available, effective medicines. "She died at the Center because she needed medicine but was not given any." Personality factors sometimes were involved: one doctor was considered incompetent, fearful of complicated obstetrical cases, and brutally indifferent to a countryman's views and circumstances--("Since we have no room, why don't you charter a bus to take your parturient wife to Bangkok?"), whereas another was friendly and wise. Since doctors were part of the respected government hierarchy which enjoyed superior knowledge and status, and also of the supposedly compassionate medical tradition, they were expected to be competent, kind, and protecting. Those who failed in winning confidence undermined the status of modern medicine.

The midwives themselves thought of the Mīnburī Center not only as a recourse if a case were in deep trouble, but also as a personal convenience. One male midwife, who was also a headman, [illegible] and carpenter-contractor, was often too busy to stay with a woman in prolonged labor. To turn her over to another midwife other than a kinsman would damage his reputation. Knowing Mīnburī well, he found the Center a convenient solution to his dilemma. He had respect for the nurse-mid wife's skills, which he had witnessed, and regarded the doctor as a colleague on his own level, a view probably not reciprocated. The women midwives, too, always considering themselves at bottom volunteers, when faced with pressing home chores and the "impossibility of turning a relative over to another midwife," utilized the impartial service of the nurse-midwife. One cloud impeded the female midwives from making full use of the occasion as an opportunity for observation and so instruction. They refused to identify themselves as midwives out of fear of legal sanctions. Having neither taken the course prescribed by the government for "ancient" midwives nor paid the fee, they were not licensed. Thus, they lived in dread of fines if their calling became known outside the community. They knew they were permitted to deliver babies within the family, but outside those rather hazy boundaries, they took refuge in an old view, "I am not a midwife. I only help out of pity."

All in all, the people of Bang Chan had fitted modern medicine into their broad medical scheme where it could be accepted on its merits, if not blocked off by inconvenience, high cost, and discourtesy.

Chapter VIII

CHANGES

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In studying change in the customs surrounding childbirth in Bang Chan, we have D.B. Bradley's description of birth in Bankok in 1865 as a base-line on which to project our findings. Since most of the population of Bang Chan (Thai, with a few Laotians, Mon, Muslims, and Chinese) stems from Bangkok, we may reasonably assume that the parallels derive from a true historical connection. Bradley's description fitted Bang Chan as if written today.

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> "Siamese theory in regard to the part which external and internal fire plays in the functions of life and health is made to work powerfully...There is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which, if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child...[Thus a woman lies by the fire]... exposing all parts of her body, and more particularly her abdomen, to that drying process, so that the uterus shall be forced to shrink up quickly to its normal dimensions, and the sanguineous streams which had been diverted to support the child before birth, shall, by fire, be driven backward to their more usual limitations, all which is...a sine qua non to a sound constitution and good health in the future..." (Bangkok Calendar, 1865:78-84).

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Bradley showed that some behavior one might call "change" today was a recognized alternative in 1865. For instance, in Bang Chan a few women "are made too unhappy (klum) by the fire so cannot use it. They should take extra amounts of pickled medicine" (yā dong). Bradley wrote, "a few delicate females...who cannot endure [this] usual treatment, are compelled, against all their ...fears of the consequences, and all the importunities of their

friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of ...medicines" (p. 81).[74]

The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: <u>fai chut</u>) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Mīnburī Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered net-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (<u>suk</u>) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a <u>mō</u> did the same (with the possible exception of the sponging with tepid water), that as a <u>mō</u>-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorization, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calendar, 1871:107-109).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1920's.

178 a new way was a woman bearing her first child because she
184 was not yet ritually matured. This she wanted to be.
372 Moreover, her self-interest led her to try to profit as
846 much as possible from the experience of elders by first
885 following the old way. By incorporating the experience of successful child-bearers into her own and the baby's life and by asking them to initiate actions auspiciously, she augmented by that much her own competence, and laid the groundwork for her future progress. Self-responsibility engendered respect for elders. Thus there was no split between old and young over innovations. Experience gave grounds both for conservatism and for changing, but at different age levels.

178 Secondly, changes were adopted by the rich who,
184 spending their money rather conspicuously, sought to main-
556 tain and enhance their social position. Their wealth and position were in themselves unquestioned as signs of merit earned in another incarnation.

178 The changes being introduced to Bang Chan were of two
554 kinds: first the prestigeful, and second, those giving no increment of esteem, i.e. idiosyncratic changes of taste or convenience; or those reflecting individual circumstances. The prestigeful innovations were oriented towards the use of market novelties, modern medical care, urban standards of cleanliness and beauty, and other ways termed "progressive" associated with the city of Bangkok, cynosure of the eyes of the rich. These values were leading certain families away from their original occupation of farming, into the fields of teaching, trading, carpentering, cottage-industry, etc. Since these new occupations brought in steady cash and large land holders, too, had a good income, an association was found of
372 wealth, prestige, urban interests, and innovation. Com-
846 ment on the hot ashes container (fai chut) indicated that
178 it was a strong symbol of prestige and progress. To use it was "to get away from ignorance and the old way of doing things." It was "cleaner, not hot or ugly, and more convenient." One teacher took it up after reading an advertisement in the newspapers that described glowingly its more efficient healing effect. On the other hand, one woman abandoned the fai chut because "it was not hot enough to rid her of stiff muscles," so she went back to the use of the fire. "It is all right for rich Bangkok ladies who want to avoid a scar, but it does not give
177 enough strength for a farmer." She had no urban preten-
178 sions. Also in this prestigeful aggregate, observed here
278 and there, were the market novelties mentioned above:
854 bed, mat, and mosquito net instead of the plank-bed; kits of medicine from the Chinese pharmacist instead of the old

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home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

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To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Mīnburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 2 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccessibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grew up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

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In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Mīnburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

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are less eaten today because they are too expensive."

A slight trend towards depersonalization might be part of the aping of urban behavior, or idiosyncratic, or of more general significance.[76] The Rinburi Health Center may have been used to avoid certain face-to-face situations. A woman whose labor was prolonged was taken there by her (male) midwife who had to get to a meeting. He preferred the impartiality of the Center to turning her over to another midwife. A woman took up the hot ashes container so "others would not have to wait on her." Another appeared to have obtained a midwife from outside the community rather than seek out someone inside and closer at hand. A very poor woman used no boiled water because of inadequate help in the household to prepare it. Whatever the circumstances of her social isolation, ordinarily kin or neighbors would have seen to it that this job was done. This episode too was watched by neighbors who commented that since her health remained good, boiling might be unnecessary. Finally, to advertise certain medicines, a firm handed out yan, the magically inscribed cloth, to suspend on the holy cord that surrounded the mother. This was a long way from the personally inscribed "yan" of old.

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A final reason for the acceptance of change was the larger number of choices of behavior because of a broader horizon. Bang Chan had never been an isolated community, for pilgrimages and visiting through easy boat-travel had been for decades part of its life. Yet the growing number of literates, the establishment of bus and other transportation services to the city, the experience, for a few, of work in Bangkok or of military service in Korea, the continuous association with non-Thai, (Chinese, Muslims, a Cambodian, and now the Americans), and the now somewhat diversified economy of the community all led to the increased familiarity with other ways of doing things. Patterns of childbirth were already reflecting this awareness.

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Unchanging in the scene at childbirth was the necessity of supernatural assistance, and heat to ripen and restore the mother.

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76. I feel this evidence is slight, and set it down merely as a point for future observation.

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AQ7

Chapter IX

GUIDES FOR THE INTRODUCTION OF CHANGES

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The government of Thailand provides in Bangkok and in other centers of the country up-to-date facilities for training in modern midwifery. It has also created in some places special opportunities for the traditional midwives to upgrade their skills. One of the objectives of the Minburi Health Center was to carry on a certain amount of instruction in modern views. For reasons that have been explained, no one in Bang Chan ever had or even sought modern instruction. The midwives of whom we have spoken grew up entirely in the folk tradition.

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On the basis of the material presented at length in the previous pages, a few suggestions are here advanced which may be of help to these public programs in maternal and child health.

1. Build a program around the idea that it will help women in their age-old role of caring for, raising, and nourishing (liang) children. Emphasize that through new techniques they may increase their strength and care better for themselves and the babies.

2. Change existing practices as little as possible.

3. When a change is offered, ask that the midwife, mother, or whoever observed it watch for certain results which allow them to judge it in relation to the old. The idea is strong that aspects of the natural world can be analyzed and considered pragmatically, then legitimately utilized as a basis for modifying customary behavior.

4. Pay special attention to the places where the old and the new come into conflict and seek ways to resolve these conflicts.

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As an example, let us consider these points in relation to cutting the umbilical cord. Modern instruction recommends the use of scissors--neat, sterilizable, handy--to avoid infection while cutting the cord. People in Bang Chan wish to avoid this infection, too, but for them scissors are unsatisfactory for several reasons: they are scarce, they rust--and

844 178 177 412 this rust is believed to cause tetanus--and they are unsuitable for the ritual objective at the moment of cutting. It will be remembered that cutting the cord on a rhizome of phlai or soil with a bamboo sliver from the housepost guarantees that a child will not roam away from home. Could the bamboo sliver be dipped in "heating" alcohol, or passed over the flame of a holy fire? Could the old family kitchen-knife--long associated with the household--be substituted and dipped in the beneficial heat of boiling water? Such a knife once was substituted on the winnowing tray. Might the phlai or soil be covered with a boiled, clean, old cloth? If modern science succeeds in coming up with an acceptable substitute, one sees the possibility of a very small change making a big difference in the amount of tetanus poisoning observed (Hauck, 1956:41). One should then ask the midwives to watch as to whether the new method reduced the infection called "death because of a red or green face and clenched fists."

262 [261] In diet "the concept that a good choice of food is important to the health of both mother and child" (Hauck, 1959:2) was very much shared by modern science and by traditional ideas but the basis of choice was entirely different.77 Modern science has ascertained that certain foods are beneficial because of certain nutrients, while old beliefs have set up certain foods as desirable because of properties of heating, cooling, compatibilities with the elements, etc. The nature of these properties should be collected and listed. If dietary deficiencies in Bang Chan are noted, the foods that combine the needed beneficial qualities in both systems should be stressed. A hot-tasting tonic (yā) with appropriate dietary supplements, to be taken daily during pregnancy, and another kind during the post-partum period, might be acceptable. The period of the fire-rest is the best place to initiate dietary changes for whatever is done by the fire becomes a habit beneficial to mother and child. The use of boiled water should be encouraged as "making for [illegible]." Again, disturbance of customs is minimized, and the presence or absence of "increased strength" and healthiness can be observed experientially.

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*77. Hauck felt the concept was lacking, but it appears only that the grounds of choice were different.

Hospital Delivery

If modern obstetrical method is demonstrably more effective and easier, let the midwives, mō, and relatives see it! If amiably received by the doctor or nurse, they will bring in patients, and accompany their relatives. The midwives--and many non-midwives--know the practical difficulties, and will be keen and interested observers. In so far as possible any persons accompanying a patient should be permitted actually to assist in some way. Perhaps the country midwife could be allowed to deliver the baby with nurse or doctor alongside to instruct and comment. Such experience is more effective than a dozen travelling demonstrations-with-a-doll. 006

Discussions with the (non-midwife) mō who must handle prenatal disorders and abnormal childbirth should be conducted by the doctor, not the nurse, for doctors are viewed as colleagues on the same level. [759] [829]

In sum, everything modern should not be expected to be better than the traditional. The complete rationale underlying some modern behavior cannot be grasped at once. Explanation must be given as the second class doctors do it: in terms that can be understood. The foundation for cooperation between modern and traditional medicine is solid. It is the common objective of healthy mothers and children.

[P.108 is blank]

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GLOSSARY OF THAI TERMS USED

104

อาจารย์	ājchān	Professor
อำเภอ	amphōe	District office
อรหัต์	arahat	Priest who has achieved the highest status in Buddhism
อรูป	arūp	Non-body
บาท	baht (bāt)	Base monetary unit
ไบศรี	bāisī	Tiered offerings
บางชัน	Bang Chan	Name of place
บางกะปิ	Bāng Kapi	Name of place
บางขวด	Bāng Khūat	Name of place
บัตรพลีกระทง	bat phlī krathong	To give offerings or a small container for offerings
บอก	bōk	To inform
บน	bon	Vow food or liquor in return for the help of supernatural beings
บวชใหม่	būat mai	Newly ordained
บุญ	bun	Merit
ฉะเชิงเทรา	Cha Choeng Sao	Name of a province
ชาย	Chāi	Name of Duan's son
ใจ	chai	Heart

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ใจอ่อน	čhai ɔ̀n	Soft, or tender, heart
เจ้ากรุงผีหลี	Čhao Krung Phĕ Lĭ	Name of a spirit
เจ้าแม่	Čhao Mæ̂	Mother-princesses (deities)
เจ้านาค	Čhao Nâk	Prince-snake
เจ้าพ่อ	čhao thân	A spirit of the place
เจ้าที่	čhao thî	A spirit of the land
เจียมใจ	čhep čhai	Angry
เจตภูต	čhĕttaphût	Soul
ช่วย	chûai	To help
ช่วยงาน	chûai ŋān	Help to do the work
ดินสอพอง	dinsɔ̌phɔ̄ŋ	Face powder
ดิบ	dip	raw, uncooked; not (yet) ordained
ตวน	tuan	A woman's name
ไฟชุก	fai chut	Chamber, fire-box
ฝากทอง	fàk thɔ̄ŋ	To deposit gold
หนุมาน	Hanumān	King of the monkeys in the Ramayana
แกงเลียง	kǣŋ lîaŋ	A nursing curry made of banana flower and vegetables

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กรรม	kam	Karma
การรับขวัญ	kânrapkhwan	Seizing and welcoming the soul
แข็ง	khaeng	Hard
ขนม	khanom	Puddings
ไข้เหนือ	khai nʉ̂a	North fever
เคย	khôəi	Habit, to be accustomed to
คนทรง	khon song	Medium
ฉัน(ผม)	khǐng chan (phom)	Mine (female [male] speaking)
คู่	khûu	Pair
คุณ	khun	Supernatural disease missile
ครู	khrûu	Teacher
ขวัญ	khwan	Soul(s)
ขวัญข้าว	khwan khâo	Ritual rice offerings, rice-soul
ขวัญอ่อน	khwan ʔòn	Soft, tender, immature soul
กีรานาท	Kiiŋ Pâat	Name of a place
กลับไปเป็นเด็ก	klap pai pendak	Back to being a child; senility; second childhood
กดทับ	klòm	To press down

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กล้วย	klûai	Banana
กล้วยหักมุก	klûai hakmuk	A variety of banana
กล้วยหอม	klûai hɔ̌m	A variety of banana-fragrant banana
กล้วยน้ำ	klûai nam	A variety of banana
กล้วยน้ำว้า	klûai namwá	A variety of banana
กล้วยตานี	klûai tāniī	A variety of banana
กลุ้ม	klum	To feel unhappy
กระด้ง	kradong	Winnowing tray
ลำสักกะโดก	Lam Phakaohât	Name of a place
ลำบาก	lambâk	Trouble
หลาน	lăn	Grandchild
เล็ก	Lek	A woman's name
เลี้ยง	lîang	Feeding, nourishing
เลี้ยงดี	lîang dī	Good nourisher(s)
เลี้ยงง่าย	lîang ngâi	Easy to raise
ลอยกระทง	Lɔ̌i Krathong	A festival
ลพบุรี	Lɔ̂phá	Name of a place
ลม	lom	Wind
ลมปัด	lom bàng	The pushing wind
ลมกระชาก	lom chawat	The pulling wind

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ลูก	lûk	Child; children
ลูกประคบ	lûk prakhop	A medical compress
แม่	mâe	Mother, female
แม่โพสพ	Mâe Phôsop	Rice goddess
แม่พระพาย	Mâe Phra Phai	Goddess of Wind
แม่พระเพลิง	Mâe Phra Phlêng	Goddess of Fire
แม่ย้	Mâe Sŷ	The mother-goddess, guardian of infants
แม่ธรณี	Mâe Thoranî	Mother Earth
แม่น้ำเจ้าพระยา	Menam Chao Phraya	Menam River
มหาหิงคุ์	mahâhing	Asafoetida
มะขามแขก	makhâakhêk	Manila tamarind
มี	mî	A woman's name
มีนบุรี	Minburi	Name of a community
มิ่ง	ming	Soul
หมอ	mŏ	Doctor, specialist, person authorized to handle any saiyasàt (magic)
หมอดู	mŏ dû	Astrologist, foretellers
หมอขวัญ	mŏ khwan	Soul-ceremonialist, soul-specialist
หมอนวด	mŏ nûat	Masseurs
หมอผี	mŏ phî	Exorciser of spirits, disease, missiles or objects

104 หมอปลึง	mǒ Plụng	The personal name of a particular specialist in saiyasāt
หมอรักษา	mǒ raksā	Curers
หมอเสน่	mǒ sanè	Love-and-hate-magic specialist
หมอสุก	Mǒ Suk	The personal name of a particular specialist in saiyasāt
หมอตำแย	mǒ tamyāe	Midwife, expert-in-pressing
มนต์	mon	Prayers
มงคล	mongkhon	Holy cord
หมู่บ้าน	mūbān	Hamlet
นโม พุทธาย	Na mō phut thā ya	Traditional incantation of the five names of the Buddha to prevent spiritual dangers
นัก	nak	Expert
นักเที่ยว	nak thīeo	An expert in roaming around; a tourist
นักโทษ	nak thôt	A convict
น้ำ	nam	Water
น้ำคาวปลา	nam khāo plā	Fish-water (the viscous fluit expelled after parturition)
น้ำคร่ำ	nam khram	The abdominal body water, refuse-water

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น้ำสุก	nam suk	Boiled (ripe or cooked) water
น้ำหูนหัว	nam thūn hua	The amniotic fluid (water that supports the head of the child)
น้ำมนต์ธรณีสาร	Nammon Thoranīsān	Earth holy water
นิพพาน	nipphān	Nirvana
นิสัย	nisai	Character
ยอก	yôk	To come out, leave
ออกพรรษา	Ôk Phansā	End of Buddhist Lent
โอมมิ่งโอมหินโอมไฟสุวาหา	ōm ming ōm fūn ōm fai sawā hā	Incantation used by Muslims
อ่อน	ǒn	Tender, delicate, soft, weak
ไปป่า	pai pā	Go away to the jungle or forest
ไปเพี้ยว	pai thīeo	Wander, waywardness
แพ้ทอง	phâethông	Defeated by pregnancy
พรรษา	Phansā	The 3-month season, of retreat usually called Buddhist Lent
ผี	phī	Ghost, spirit
ผีกระสือ	phī krasū	One kind of ghost; filth-ghost
ผีหลวง	phī lūang	Great ghost
ผีตายทั้งกลม	phī tāi thang klom	Spirit of one who had died violently

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แผล	phlæ̌	A wound
ไพล	phlai	Zingiber casumunar, a traditional healing root
พระ	Phra	An honorific title for male deities and monks; a conferred title of nobility.
พระอินทร์	Phra In	Indra
พระขุนแผน	Phra Khunlæ̌n	An ancient hermit's name
พระโมคคัลลานะ	Phra Mok Khanlā Nó	Phra Mogdallana, one of the Buddha's disciples
พระมหาชินกาล	Phrom Chindā	Name of an old Thai textbook, cited in Phya Anuman Rajadhon's "Life and Ritual in old Siam," W.J. Gedney, Ed.
พุทรา	phutsā	Spiny Indian jujube or Chinese date
โปรดสัตว์	prōt sat	Show mercy towards creatures
เรียกขวัญ	rīak khwan	Calling the soul
ไรหูด	rók phuphūng	Pustules that enlarge to sores
ร่อน	rɔ̂n	To winnow
รูป	rūp	Body
สไบเฉียง	sabaichīang	Shoulder scarf

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สะดวก	sadūak	Convenient
แสนแสบ	Sānsaēp	Name of a canal
แสลง	salaēng	Deleterious
สาย	Sāi	A woman's name
สายสิญจน์	sāi sin	Holy cotton thread
ไสยศาสตร์	saiyasāt	Occultism
สะแก	sakaē	Combretum quadrangulare, one kind of firewood
สั่น	san	Shaking
ศาลพระภูมิ	sān phra phūm	House of a guardian spirit
สันชัก	san chak	Convulsion
สาง	sāng	A disease of the eyes
เสาร์ห้า	sao hā	Saturday, the 5th day of the waxing moon
สวัสดิ์	Sawat	A personal name
ส่ง	Song	A man's name
สุก	suk	Mature, ripe
สุเหร่า	surao	Mosque
ส่ำ	tam	To lower
ตามธรรมชาติ	tām thammachāt	Natural
ทำอาชีพ	tham āchīp	Profession
ทำขวัญ	tham khwan	A soul-strengthening rite, ordination

104 ทำมาหากิน	Tham mā hā kin	Have enough to use and eat (to earn a living)
ธาตุ	thāt	Element
เทวดา	thēwadā	Protecting deities
ไหว้ครู	wai khrū	Homage-to-the-teacher ritual
วันศุกร์	Wan Suk	Friday, popularly viewed as "Happy Day"
ว่านน้ำ	wānnaa	Acorus calamus, medicinal root
วิญญาณ	winyāh	Soul
วิญญาณสัมปะนี	winyān a sam pa nī	A magic incantation
วิเศษ	wisēt	Powerful
ยา	yā	Medicine, tonic
ยาทุบ	yā chup	Rub-on medicine
ยาดำ	yā dam	Black medicines, a bitter and hot tasting medicine
ยาดอง	yā dɔ̄ng	Pickled medicine
ยาหอม	Yā hɔ̌m	Fragrant medicine
แย้ม	Yɛ̂m	A bean thought to cause madness
ยักษ์	yak	Giant
ยันต์	yan	Jantra, a small protective banner

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ผี	yīn	Supernatural power, suspicious, augury
ผีไฟ	yī fai	Host period by the fire

[p. 124 is blank]

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist [illegible], whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every [illegible] gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year. Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different [illegible]. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the thaw khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
591 the steps in the Buddhist winnowing ceremony and performed
[852] them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khăo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
[774] "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist,
[782] meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the
[177] poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 Completely Muslim was the stress on physical and
[783] moral purification as an objective of every rite, and
[304] conversely, the prevalence of the idea of defilement.
[764] "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate pro-
[831] cedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before
[834] burial," implying thorough measures beyond his ordinary
[562] experience. Procreation was viewed as dangerous and contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on her chosen midwife, and gave her a gift of betel
[273] pepper leaves and areca nut to assure her services (fāk thong: to deposit gold). On returning home, she went as fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim mid-
795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was
[562] stricter about utilizing the privacy of the small enclosed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khăo contained "7

The Muslim khwan khao contained 7 items"--a young (or ripe) coconut with its water; thread or "a skein of yarn"(used not to tie in the khwan but "for the teacher"); 7 pieces or areca nut; 7 betel pepper leaves; one "heavy" (15 gram) yellow wax candle; one "bag" of incense; rice; and 30 baht in money.[78] The khwan khao was not offered with the idea of its reaching phra In (Indra) ultimately, but rather the local princely spirits of the land, chao thi, chao thao, and Mae Thorani (Mother Earth). It was waved 3 times by the midwife over the abdomen of the woman in labor with the prayer: "Spirits of the land, Mother Earth, may the delivery be easy!" The khwan khao was then placed at the mother's head. The woodpile was knocked over so as to point to Mecca, which was west, a direction avoided by the Buddhists. "When nearly ready to deliver, a Muslim midwife turns the mother's face in the direction where the family's hens hatch their chicks. If they have no chicken, then in any direction."[79] If delivery were slow, a Buddhist mo was called to "shift the mother to new places" until the baby came out.

Muslim women lay post-partum by a fire for the usual physiological reasons. In making up the fireplace, instead of a cluster of incense, flowers, and a candle, this purely Hindu-Brahman-Buddhist trio, they sprinkled salt "to keep away evil spirits" on the dirt at the corners. Salt, oil, or alcohol was spewed over the fire and the woman's body, or only magic was recited, "to control the poison of the fire." "Of these, salt is best," said a Muslim midwife, but "whichever a midwife used first has to be continued for the rest of her life as her way of doing things, because the habit has been started that way." The Muslim magic for controlling the fire was "om ning om fun om fai sawa hai." "So be it, stove, rocks (or mountains), fire, be cool, may a blessing rest to you," though "om" is the Pali-Buddhist "mystical word." The placenta was not put in a pot beside the fire, but was washed by the midwife several times until perfectly clean, then was mixed with salt and buried in the dirt directly under the fire. When the fire was finally destroyed, the placenta was dug up, washed again, and immediately buried (not in a pot), with the

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78. There was some evidence that the thread and incense were included only when a Muslim midwife was delivering a Buddhist woman.

79. To the Muslims this was an act of imitative magic. The Buddhists saw the action of a setting hen as a quick source of information for the parturient's orientation. The hen always avoided the direction of the phi luang (Textor:378).

795 844 phlai and bamboo cutter under the house "so the child would not roam away from home." The circumcision (akiko) performed up to the eleventh year, allied a child to a human group. "Circumcision is to accept the new-born baby into the status of human beings" In a corresponding ceremony for girls, the To Iman "cut a little piece of the labia." However, some Muslims had the full winnowing ceremony performed. If it were not, the child was raised aloft in the midwife's hands with the words, "Mother Sī, Mother Sāk, may this child be cool and happy!" The new-born baby was then laid in a cloth cradle. Fruits were hung over the tray or cradle. If a lactating Muslim mother accepted another's child to nurse, the 2 babies had to be of the same sex "lest later in life they marry, in which case theirs would be an incestuous, brother-sister marriage." The Buddhists entertained no such idea, so nursed babies of either sex as needed. A Muslim view of colostrum as "like pus from a sore" carried a more negative overtone than the Buddhist's statement: "At first the mother's milk is too dilute to be useful."

795 759 At the annual homage of a Muslim midwife to her teacher each of her patients of the year sent a kilogram of sugar, one coconut, one or 2 liters of glutinous rice, and a hen (if a baby girl had been born) or a rooster (if a boy). The chicken was killed by the midwife and made into curries for mosque officials (men) invited to the ceremony. The incense and candles were burned "while she thinks of her teacher."

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/For the special use of fire during the post-partum period of recovery from childbirth, see category 846./

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7
Bang Chan

FOOD HABITS AND NUTRIENT INTAKES IN A SIAMESE RICE VILLAGE

000

STUDIES IN BANG CHAN, 1952-1954

Hazel M. Hauck, Saovanee Sudsaneh and Jane R. Hanks
with the assistance of
Anusith Rajatasilpin, Sapha Ingrasud,
Mary D. Campbell and Dana Thorangkul

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Bang Chan

000 THE CORNELL UNIVERSITY SOUTHEAST ASIA PROGRAM

The Southeast Asia Program was organized at Cornell University in the Department of Far Eastern Studies in 1950. It is a teaching and research program of interdisciplinary studies in the humanities, social sciences and some natural sciences. It deals with Southeast Asia as a region, and with the individual countries of the area: Burma, Cambodia, Indonesia, Laos, Malaya, the Philippines, Thailand, and Vietnam.

The activities of the Program are carried on both at Cornell and in Southeast Asia. They include an undergraduate and graduate curriculum at Cornell which provides instruction by specialists in Southeast Asian cultural history and present-day affairs and offers intensive training in each of the major languages of the area. The Program sponsors group research projects on Thailand, on Indonesia, on the Philippines, and on the area's Chinese minorities. At the same time, individual staff and students of the Program have done field research in every Southeast Asia country. Study centers are maintained in Bangkok and Djakarta in addition to special library and other research facilities at Cornell.

A list of Program staff and publications is given at the end of this volume. Information on current course offerings, fellowships, and requirements for degrees will be found in an Announcement of the Department of Far Eastern Studies obtainable from the Director, Southeast Asia Program, Morrill Hall, Cornell University, Ithaca, New York.

FOREWORD

114 The research sector of the Cornell Thailand Project concerned with health, sanitation, nutritional status, and diet has been directed since 1950 by the senior author of this paper, Dr. Hazel M. Hauck, Professor of Food and Nutrition in the New York State College of Home Economics, Cornell [12] University. In this report, she and two of her colleagues present some of the results of a field research project designed by her and carried out by the authors among the rice farmers of the village of Bang Chan in the central plain of Thailand during 1952, 1953, and 1954. Professor Hauck's account of other aspects of this field investigation was issued in 1956 as Data Paper Number 22 of the Cornell University Southeast Asia Program under the title, Aspects of Health, Sanitation and Nutritional Status in a Siamese Rice Village. Since 1948, Thai and Americans have been working in the Bang Chan farming community to define some of the problems involved in changing peasant cultural behavior, including health and food habits.

While in the field in 1952-53, Professor Hauck began the arduous task of systematically collecting detailed data on the diets of a carefully selected sample of Bang Chan villagers. This work was continued during 1953-54 by Miss Saovanee Sudsaneh, the junior author of this report. Her assignment was a demanding one, for once begun there could be little deviation from an established schedule designed to cover diurnal and annual cycles in the preparation and consumption of food. Miss Saovanee together with a suitable companion had to sleep in the village, rise before dawn, and proceed during the dry season by foot, and by boat during the longer wet season to the homes selected for study. Some of these households were situated two or three miles from the Project's village headquarters. Only one could be visited in a day. All homes had to be reached well before pre-daylight breakfast preparations were begun so that equipment could be readied and preliminary observations made. After a year of this dawn to dusk visiting, Miss Saovanee retired to a more normal daily round of post-graduate study in nutrition at Cornell, where she received her M.S. degree in 1956, and at Harvard, where she is a candidate for the doctorate. She plans to return to Thailand to teach and do research in nutrition at Kasetsart University.

The necessary companionship for Miss Saovanee during her field work in Bang Chan, a companionship involving, of course, the same rigorous and taxing schedule, was cheerfully provided by Dr. Jane Richardson Hanks of Bennington College, the third collaborator in the preparation of this report. Dr. Hanks has worked with the Cornell Thailand Project since early

1953 as Research Associate in Cultural Anthropology. Her research in the field during 1953-54 and subsequently in the United States, which has been primarily concerned with various aspects of Thai family behavior, has enabled her to contribute valuable data and insights to the present report.

Lauriston Sharp, Director
Cornell Thailand Project

Cornell Research Center
Bangkok, Thailand
November, 1957

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Bang Chan

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122 For the period of her field study, 1952-53, one of us (M.M.H.) received an award for advanced research from the United States Educational (Fulbright) Foundation in Thailand. Another (S.S.), who was field worker with the Cornell Thailand Project during 1953-54, was enabled to come to the United States for graduate study through a travel grant from the same Foundation. She held an assistantship in the Southeast Asia Program at Cornell University 1954-55, and the Anna Cora Smith Scholarship for Research in Home Economics, 1955-56.

114 122 To their co-workers in the field, Dr. Amnuith Rajatasilpin and Miss Sapha Indrasud whose services in connection with the medical inspection were provided by the Food and Drug Administration, Bangkok, through the courtesy of its director, Dr. Thong H. Chutima, the authors express their appreciation.

Most helpful information concerning techniques which might be used in carrying out dietary studies was provided by Miss M. W. Grant of the Applied Nutrition Unit, London School of Tropical Medicine. Dr. Amara Chandrapanond suggested adaptations suitable to the local situation.

The transcription of Thai terms was checked by Mr. Marvin Brown. Dr. W. J. Dress assisted by checking the scientific names of food plants for which the authors had previously obtained identification. Many minor points were cleared up by discussion with Thai students in this country. The help of all these persons is gratefully acknowledged.

Most of all, the authors are indebted to the people of Bang Chan; to all who patiently answered their questions, to Khruu Sawad Sangtong and Khruu Yod Nakon who obtained diet records from children in the third and fourth grades, and especially to the members of the eleven households that participated in the quantitative dietary study. These people not only cooperated generously, but [illegible] friends. For their kindly hospitality the authors are deeply grateful.

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SUMMARY

A general description is given of conditions in a 105 Siamese rice village, 1952-54, as they relate to food supply 26 and food habits. Activities at various seasons of the year [220] are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

105 Food was mostly home produced and an important factor 262 in the standard of living was the number of productive hands 433 available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods [235] were used. Nearly all of the families in Bang Chan raised [433] chickens, and some raised ducks, but about 3/5 of all eggs [244] produced were sold. Every family had some sort of kitchen [245] garden, including banana trees and other plants, but spices and chili were much more commonly grown than vegetables and [222] fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

[443] Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, cocomut, palm sugar and small amounts of vegetables.

[434] Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. [178] Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

105 Preparation of some typical dishes, meal service and 264 techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

105 262 Sweets and fruit were the items most commonly eaten. Fruits were seldom eaten except as snacks.

271 105 The customary beverage with meals was untreated water. Rain water was preferred for drinking, but for 3 or 4 months of the year, water from the canal or fish pond was used.

105 262 Attitudes toward food, and foods considered appropriate for the very young, the old, for the pregnant or nursing woman and for use during illness, are briefly discussed.

105 126 146 Quantitative food intake for 11 families was recorded on a total of 44 survey days distributed throughout the year. Two groups of families, in which individuals were matched so far as possible as to age and sex, were selected on the basis of apparent difference in nutriture. The sample was not stratified with respect to economic conditions, but those in Group B, chosen for apparently better nutriture proved to be, in general, more prosperous than those in Group A, chosen because of signs of poor nutrition.

105 146 Food values were calculated on the basis of published analyses. Conservative nutrient allowances were estimated for residents of Bang Chan. On the average, calories, protein, iron, niacin and ascorbic acid in the diets of persons in Group B approximated or exceeded these allowances. For Group A, this was true for niacin and ascorbic acid only. Average intakes of riboflavin were estimated to be about 1/3 or less of the allowances, and estimates of calcium intake were about 20% of the allowance for Group A and 30% of that for Group B. Vitamin A values of diets for both groups appeared to be low, and thiamine intakes marginal or low. The signs observed among persons in these families were generally those associated with low intakes of thiamine, riboflavin and vitamin A.

Rice contributed about 4/5 of the calories and over half the protein in diets of both groups. Animal foods, chiefly fish, furnished about 2/5 of the protein. Intake of fats and sugar was small. Snacks of fruit contributed about 1/6 of the total ascorbic acid for Group A, and about 1/9 for Group B.

Seasonal variations in food preparation, meal patterns, food costs and caloric and nutrient values of foods eaten are discussed. Higher caloric intake during heavy work seasons was largely accounted for by larger amounts of rice eaten. The highest intake of protein for both groups occurred in the post-harvest season, when fish ponds were drained.

Questions for further study are proposed, and possible approaches to improving food habits and nutritional status in Bang Chan are suggested.

INTRODUCTION

121 This study of food habits and nutrient intakes in a Siamese rice village was undertaken in connection with the Cornell Thailand Project. The project is one of several under the auspices of the Department of Sociology and Anthropology, which are focused on the process of cultural change
114 in non-industrialized societies. Dietary studies designed to contribute to a base-line description of the community were carried out from September, 1952 through May, 1954. Local headquarters, where members of the research group kept equipment, and could stay overnight, were maintained in the village.

128 The observations to be reported fall into two general categories: 1) descriptive information concerning many aspects of the food situation in Bang Chan and 2) quantitative information on food intake, and its estimated nutrient
126 value, for 11 selected families. Qualitative information on food in Bang Chan was obtained from several sources: 1) field notes made by various members of the Cornell research group, 2) structured interviews with mothers about their own food, and that of small children in the family, 3) records of food eaten during 24-hour periods, submitted by children in the third and fourth grades of the elementary school as homework for the health class, and 4) weighed dietary studies carried
114 out in 11 selected households. Quantitative information on food intakes was obtained from the latter source only. Most of the data to be presented were obtained between September 1952 and June 1954, but supplementary information was obtained from a diary for 1955, kept by a school teacher at the request of the research group, a study of innovations made by Ralis in May 1955 (Goldsen and Ralis, 1957) and information provided at our request by members of the Cornell research group who were in Thailand in the summer of 1957.

A general account of the economic, political and social organization of Bang Chan in 1948-49, together with some material on health and diet was given in the first interim report issued on the Thailand Project (Sharp et al., 1953). The second interim report concerned aspects of health, sanitation and nutritional status in Bang Chan in 1952-54 (Hauck, 1956), and the third was a report on factors related to acceptance of innovations (Goldsen and Ralis, 1957).

THE COMMUNITY

Location, Climate, Transportation

131 Bang Chan is situated in the rice-producing area of central Thailand, about twenty miles by road northeast of Bangkok.

4

132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 2,000, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [143] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [221] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [433] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [735] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part of the Thai-Buddhist community. Information to be presented [028] on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

193 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the 484 nearest market town, ran through one edge of the village. Bus 487 service was available along this road, to either Bangkok or [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

443 noodles. Their prices were higher than in Minburi or Bangkok, but their service was such a convenience that many people rarely went to town. Some adults in Bang Chan had never been to Bangkok though almost all had visited Minburi, about 3 [431] miles from the temple. Venders often extended credit, and also accepted items such as fresh fish, fruit, and eggs on a barter basis, thus providing an outlet for small amounts of home products. When the subsidiary canals were dry, however, venders could not get to some parts of the village.

Home Sites and Houses

General Arrangement

361 487 Since the canals provided the chief means of local transportation for much of the year, and also supplied water for many household uses, houses were built near the canal, usually within sight of a neighbor's. Home sites were mounded up to a level of two or three feet above that of the fields, but even so, water might cover the mound at the peak of the rainy season. Old wooden houses were set in a grove of bamboo, bananas and other fruit trees and vines, occa- 343 sionally betel and coconut palms. Nearby might be a shed for the water buffalo which were the draught animals used in farming. Rarely one saw a walled privy.[1] On the same mound might be a cottage built by parents for married children or by an affluent farmer for a hired hand. In this case, the threshing floor, firewood from trees on the mound, and area 342 for kitchen garden would be shared. Many houses were built on stilts to avoid flooding when the water level was high. If the house was elevated sufficiently, the area underneath provided a relatively cool shelter during the hot season for the buffalo, and even for family members for some of their daytime activities.

Depending on the resources of the family, houses were built of either thatch or wood, roofed with thatch, galvan- 352 ized iron or occasionally, tile. Split bamboo or matting might be used for dividing walls if the house had more than one room. Wooden flooring was usual, but in simpler thatched houses with dirt floors, the buffalo might be sheltered under the same roof with the family. In such a house, one or more low wooden platforms were built for sitting and sleeping. Wide cracks between floor boards conveniently permitted betel 364 chewers to spit without the need for a spittoon. Those who 247 were preparing food or clearing up after a meal could also thus discard refuse or dispose of leftover food that was to 349 be given to chickens, without leaving the kitchen. Some

1. cf. Hauck, 1956, p. 45-6 for description of latrine facilities.

364 garbage was customarily fed to animals. As previously reported (Hauck, 1956) "Each family seemed to have its own pattern for disposal of garbage which was not fed to stock. Those who threw it in the canal, did so consistently, except when the nearby canal was dry, and those who threw garbage elsewhere, did this consistently. No one was observed to burn or bury garbage."

The Kitchen Area

354 In the larger houses, the kitchen was usually a small separate room with a wooden floor and at least one window for ventilation. A low table or wooden case with sides built up several inches, and filled with clay, served as the "fireplace." On this stood the clay stove, and hot pans and pots were set there when removed from the fire. In homes with an earthen floor, the fireplace might be built directly on the ground. The clay stove was several inches high, shaped so that rice pots and curved frying pans would fit into the large segment of a circle which was its top. An open space was left in front to facilitate building and maintaining the fire. Firewood was kept nearby. Most families also had a portable clay stove in which charcoal was burned. This might be used as an auxiliary unit, for outdoor cooking on a hot day or when traveling by boat.

Matches, although available, were hard to protect from dampness. Kerosene filled cigarette lighters of a cheap and efficient type were commonly used. As kindling, one might use coconut husks or purchase resinous bits of wood that would hold a flame for sometime.

Although only a small amount of firewood was needed, as it was used for cooking only, local supplies were inadequate. In all seasons, some was brought in from other areas. One family participating in the survey planted trees each year for firewood. The wife in another household used to return to her parents' home to gather a boatload of wood as needed. Because charcoal was more expensive than wood, and none was produced in the village, it was used for home cooking by only about 10 per cent of the village families, primarily those such as storekeepers and venders who did not have time to cut firewood.

352 In many kitchens clean dishes were placed upside down on
251 a slatted wooden rack. The other common item of furniture was a free standing ventilated cupboard or food safe. At its best, this was screened, and the legs antproofed in some way, as by putting them into small containers partially filled with kerosene, or rubbing them with powdered pitch; but relatively few
251 village families had such well constructed food safes. Families that did not own a food safe often kept leftover cooked foods in a basket, or covered with large dishes on a tray. Fish and sugar must be kept away from ants, but cooked rice,

251 which did not attract them could be left anywhere out of reach of dogs. Raw rice was stored in a large jar or oil can while salt, fermented fish, shrimp paste[1] and fishsoy[1] were kept in smaller jars or bottles. Such containers were customarily covered. Dried food materials such as onions, garlic, chili peppers and other seasonings were often kept in a basket hung from the roof. Paddy, i.e. unhusked rice, was kept in a large bin of matting or wood, the excess sometimes simply piled on an uncovered mat on the floor.

128 Descriptions of two kitchens, one in a relatively prosperous household and one in a poorer home in Bang Chan, are included in excerpts from field notes, Appendix A, p. 93.

312 In a few homes, a clay water jar was kept in the kitchen or nearby, but more frequently foods were washed, and cooking water obtained at the canal or fish pond.

The water level varied between heavy flood and threatened drought. There were no deep wells in the whole area. Rainwater was collected from the roofs and stored in jars, but during the dry season, the canal or fishpond, although low, must supply the needs of the household. In some, drinking water drawn from the fishpond was preferred, and an effort might be made to keep buffalo from wallowing in it, and to avoid contaminating it with fecal or food wastes or by bathing. Others considered the moving water of the canal preferable to pond water.

General Social Factors Affecting Nutritional Level

462 In Bang Chan, most farm and household tasks were shared by men and women. Both sexes plowed, planted, harvested and dealt with rice buyers; managed buffaloes, boats, and children; cooked, fished and cut wood for fuel; hired out as labor hands, "living in" if desired.

554 184 Though there were clear differences in socio-economic status, the daily life of the people was much alike: whether owners of land or renters, whether farming large or small acreages, the rich and the poor worked in the fields at the same tasks, produced or gathered much of their sustenance, and ran out of cash periodically. Socio-economic status was roughly defined in terms of food: a poor man "had one meal only to forego another;" a rich man "had or could get what he wanted to eat." (Sharp et al. 1953, p. 264.)

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1. Description of these products will be found on pp. 17-18.

594 What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the 434 families, living in tiny separate cottages.[1] Usually with in- 444 adequate or no land, they earned an irregular income by hiring 423 themselves out for farm or other work. At the other extreme, 596 in a hamlet-like cluster of dwellings, lived a closely affili- 592 ated group of kin. A senior couple more or less headed the 476 married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

855 Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or 1252 go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes stay- 596 ing home from school to do so. Where the adult cooperative 476 group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons 1870 could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

241 Plowing could be done by a man and wife, but for both 462 transplanting and harvesting which had to be done within a few 476 days, large groups were necessary. Two patterns of auxiliary 464 group labor prevailed: reciprocal cooperative work, and hiring of labor.

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114 1. Janlekha, 1955, categorized families as 5% "one- 162 person," 59% nuclear, 8% limited extended (including one or 594 more parents of a spouse), 27% extended (including dependent 596 married couples or other collateral relatives), and the temple 423 residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

426 Because of scattered farms and frequent shortage of cash, borrowing food and other items, and many exchanges of service were necessary. Blood-kin were easier to approach, and in the larger social unit, nearer. Borrowing from a non-kin neighbor was supposed to be less frequent, and the favor had to be returned more promptly and exactly.

434 Most opportunities for increasing cash income such as hiring out as temporary farm labor, digging canals, marketing eggs, mushrooms, or cooked snacks, took one out of the home, often overnight. In the small family, one partner was left at home. Both could not go because fear of theft forbade leaving a home unoccupied for any length of time.

The Buddhist Priesthood

792 At the temple lived twenty or thirty priests under the abbot, with a group of boys to serve them. The priesthood was maintained by daily voluntary offerings of food, with larger donations of food and commodities at certain times. Persons who thus "made merit," by supporting the priesthood, by giving to the needy, and adhering to the ethical tenets of the Buddhist religion, reaped a reward of health, happiness, wealth and eventually, freedom from rebirth. The immediacy of these beliefs must not be underestimated. Men only were ordained. They might resign at any time after three months, but some spent their lives in the priesthood.

792 262 431 In Bang Chan, throughout the year, the priests set out at dawn to receive cooked food for the day. They appeared at houses by more or less specific arrangement and were given a generous share of the food prepared by the family for its own use, sometimes with the addition of fruit and other delicacies. Each priest stopped at two or more houses. The food then was brought to the temple to be eaten at 8 and 11. For the rest of the day the priests fasted, i.e. they ate no solid food, but drank liquids such as tea, soft drinks, and recently, tinned milk and a fortified malted milk drink. Priests were also invited to eat in homes not only at large ceremonies, but at small merit-making occasions. Sporadic special food offerings were also received. If a buffalo died, much of the meat was usually given to the temple. Traditional practitioners, mid-wives, and ceremonialists always gave the priests a portion of the fees from their practice which consisted in 1 or 2 liters of milled rice, a bunch of bananas, and perhaps cash. On the numerous Buddhist holidays and at specially organized temple convocations, quantities of cooked, preserved and raw foods were brought to the temple and apportioned among the priests. From this bounty a meal was served to the priests, who ate while the villagers looked on in satisfaction.

One of the duties of the abbot was to coordinate the

792 262 931 village offers of regular service, the holiday offerings, home invitations and sporadic gifts so that all priests had places to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut or hardship.

782 794 262 About mid-July, Buddhist Lent changed the food habits somewhat. This three-month period corresponded with the height of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering, and thereafter the priests went regularly on their appointed rounds.

796 261 On Buddhist holidays, the people did not usually eat any of the food brought to the temple, but on (3)thauad (2)ka-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bounteously.

792 857 262 Residing at Wat Bang Chan in 1954 were 22 boys, aged 10 to 16, sent to serve the priests, get their living and attend school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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792 262 737 235 1. Amounts of food given usually exceeded the actual needs of the priests and temple boys. One instance was noted in which food was sent by the priests to a needy old person nearby. Leftover rice was dried and sold for chicken feed.

114 104 2. The transcription used throughout this report is that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

22] The year starts with May, the beginning of the rice-
132 year. At this time the rains began to soften the parched
241 ground, and the heat slackened. School re-opened. Farmers
512 turned to plowing, harrowing, raising the seedlings. Both
871 sexes worked about equally in field labor, boys from 14 and
462 girls from about 15 years of age performing tasks according
887 to skill and strength. Everyone was in the field at dawn.
The buffalo, but not the farmer, rested through the noonday
heat (about 10 a.m. until 2 p.m.) and also on the weekly holy
264 day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third
[262] meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

221 With the rains, the canals had filled, so that by June
132 buyers with big rice boats could return. The few farmers who
501 could afford to hold onto a portion of their last year's crop
443 sold it for a better price at this time. Vegetables and
241 fruits which had died in the long drought were replaced, and trees were planted.

24 In July the heavy transplanting season began. Because
221 of cooperative work habits or hiring out, people worked
132 solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly con-
[312] trollable. Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School
871 vacation was scheduled at this time so both teachers and
857 children could help. Older children might work in the fields,
887 while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food
433 for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ‹----WET----›							‹--COOL--›		‹--HOT--›		
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	---→ heavy		moderate	‹--heavy--›		‹----light----›			‹----negligible----			
Canals	rising			high		(floods)			lowering fast		low,dry	
Cultivation of Rice	plowing----→ seedbed grown					growing		early var. mature				
	TRANSPLANTING							‹--------HARVEST--------›				
School	vacation								vacation		vacation	
Cash available Source	cash in hand---------- rice					‹----cash shortage----›					cash in hand-- main rice sale	
						cash jobs---------→						
Fruit;vegetables	--→	‹-new planting-›							‹----annuals die----			
Fish: Supplies	ponds drained-→								‹----ponds drained------			
Maturation		‹------many varieties----------›							‹--best varieties--›			
Preserving	‹---much---›	‹----------moderate----------›							‹----------most------›			
Ceremonies	ceremonies-------→			‹-----Buddhist Lent-----›							‹--ceremonies---	
Dietary survey	--→	‹-----Round I------›				‹--------Round II--------›			‹----Round III----›		‹--Round IV-	

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 18°F (10°C) in April and 22°F (12°C) in January.

221 132 243 244 234 262 245 503 496 1

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

221 Despite the availability of fish and of vegetables in
435 the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

221 The two months of September and October during which
[512] the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit
[188] and take trips. A few might go on a pilgrimage. Therefore,
[24] in this season, all family members were less often together
[22] at the evening meal. Fishing was a continuous occupation,
[43] with some preserving and home craft. Jobs such as selling
[85] food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

[343] High water caused time-consuming inconvenience only in
[131] earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

243 By November, the earliest varieties of rice matured.
221 Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could
[467] not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into
[226] the night. At this time also many varieties of fish matured
434 and men fished night after night. Just when the convenience
426 of purchased food was greatest, cash was exhausted. With
443 rice money in sight, venders might be generous with credit, but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

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[504] 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

There was an important psychological difference between
221 the two work seasons. At planting time, people were anxious;
243 at harvest they were happy. People saw cash just ahead, for
459 the crop was now safe. Each host of a cooperative work party
466 gave at least one big convivial feast, the best he could pro-
527 vide and even the hired laborers got a round of liquor. People
461 joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

221 When the crop was in, the people rested, fished, and be-
224 gan to prepare for big ceremonies demanding organized work.
527 Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fish-ponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

221 Most farmers sold their rice in February. Capital was
45 invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they
[87] were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

221 The land dried up and cracked, rainwater for drinking
132 gave out, and some canals were reduced to mud. Cherished
312 plants were kept alive by watering, but no new planting could
241 be done. Buffalo, which at other seasons were confined and
231 fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another.
796 Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather
[563] slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, underzilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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1. In some large houses, two related family groups lived together but maintained separate kitchens.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

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1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

Killing
fish was apparently regarded more lightly by many Buddhists than killing of larger animals, but fishing on (1)wan (4)phra, the weekly holy day, was forbidden. Fish were caught from the canal with nets, traps, spears and hooks. Some were trapped in trenches in the rice fields. Techniques varied with the varieties of fish mature and plentiful at different seasons.[1] Moreover, every house had a fish pond. It was usually the hole from which earth had been removed for mounding the home site, and was connected by a ditch to the canal. Fish were lured from the canal into the pond by clearing it of injurious undergrowth, planting appropriate fish-feeding plants, of

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Smaller fish were preserved as fermented fish. The fish with bones left in, were salted overnight. This product was called (1)plaa (1)raa. For fermented fish to be used as seasoning, in various dishes, the liquid was drained off, then the fish were washed and mixed with salt and specially prepared rice. This had been soaked overnight, fried and pounded. The mixture was allowed to ferment in a small jar for from 2 weeks to 2 or 3 months, depending on the product desired. Large bones were removed by putting the product through a colander before use. Fermented fish had the advantage that it could be eaten without further preparation, and the flavor was generally liked.

Small shrimp, which were caught in quantity during only about 3 weeks in February, were made into shrimp paste as follows: the shrimp were washed, mixed with salt and allowed to stand overnight. The liquid was drained off, and the shrimp were spread out on trays and exposed to the sun for a day or so. Larger ones might then be beaten to loosen the shells, which could be winnowed away. For very small shrimp, this step was omitted. The shrimp were then pounded thoroughly in a mortar, and stored in a jar for about a month before use. Very small fish were sometimes made into fish paste in the same way. The yield was about 2 kg. of the tannish or grayish colored shrimp paste from 4 baskets (4/5 tang) of shrimp. Shrimp paste or (2)ka-(2)pi was an essential ingredient of Thai hot dishes.

The liquid which was drained off from the mixture of fish or shrimp and salt in the first stage of preparing fermented fish or shrimp paste was used by some villagers to prepare (4)nam (1)plaa or fishsoy. The liquid was boiled with certain green leaves such as mango leaves, onion, garlic and salt for from 30 minutes to an hour, then it was strained. The resulting red-brown liquid was bottled and was ready for use as a condiment.

1. Sharp et al. (1953, pp. 185-196) described some common fishing techniques and listed 32 varieties of fish known to be found in Bang Chan in 1948-49.

228 which the leafy vegetable (2)phag (2)ka-(2)cheed is one, and digging a deep hole at its entry. At the proper time the opening was plugged. The fish grew in the pool and were taken as needed, sometimes, for convenience, several at a time, to be kept alive in a large pot near the house. By draining the pond fish were "harvested" (p. 12). Yields varied, but villagers had the impression that they had de-
B54J clined considerably over a period of years.[1] In 1952, at the suggestion of FAO, the Thai government tried to increase the supply by introducing tilapia culture. During the first three years of the experiment about one-third of the families in Bang Chan had tried to raise tilapia, but in the summer of 1957 members of the research group were told that no one had persisted (see Appendix A, p. 101).

235 Eggs. - Chickens were raised by about 90% of the families in Bang Chan, and over 70% owned 10 or more. In contrast, only 37% of the households had ducks, and only 13% had 10 or more (Goldsen and Ralis, 1957, p. 56). Ducks were regarded as trouble makers. Moreover, chickens could feed "naturally" and certainly helped themselves to paddy from the bin, whereas ducks did not eat paddy, but had to be provided with bran and broken rice.

235 Most of the eggs produced were sold. Janlekha (1955)
443 estimated the annual production of chicken eggs in Bang Chan
433 as 366,540, and that of duck eggs as 268,200 eggs. According
262 to the information which Janlekha obtained from 106 households in 1953, about 4/5 of the chicken eggs were sold as a secondary source of farm income whereas more than 3/4 of the duck eggs were home consumed. Slightly over 2/5 of all eggs produced in the village were consumed there. On a per capita basis, the average annual consumption of 708 eggs for an average family size of 5.7 persons (Janlekha, 1955) amounted to a little over 1/3 of an egg per day. Home consumption of eggs might be less in households in which enough chickens were raised to make regular sale of eggs possible. Thus in 5 of the 31 households studied by Sharp et al. (1953, p. 197) all hen's eggs produced were consumed at home.[2] For these families, an average of 452 eggs per family per year or about 1-1/4 egg per family per day, were thus available. Home consumption in the 26 families which sold eggs amounted to an average of 215 per year or about 0.6 egg per family per day. One informant commented that a rich man could eat an egg every day, but she could not afford to do so. She said she sold eggs, when she had them, and bought foods to eat with rice.

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1. Sharp et al., 1953, pp. 191-192.

2. This probably means that eggs were not sold in quantity, not that none were used in barter (cf p. 5); thus the number of eggs available may be overestimated.

244 Vegetables and Fruit. - Although kitchen-gardening has been encouraged by the Thai government, vegetables and fruit were grown in Bang Chan to a limited extent only. Every family had some sort of kitchen garden, but many edible plants which can be grown in the village were grown by relatively few families. [235] The list of fruits grown in Bang Chan in 1948-49 (Sharp et al., 1953) included four times as many items as were grown by one or more of the 11 families that participated in the dietary study. The list of vegetables and spice plants grown or gathered by these families included 27 items, as compared [244] to 41 listed by Sharp et al. Spices and chili were more commonly grown than vegetables and fruit.[1]

244 One affluent household whose food expenditures for 1949 245 were reported by Sharp et al., (1953, pp. 214-215) produced 433 for home use, 125 kg. of palm sugar valued at 200 baht and 500 coconuts, valued at 450 baht. Home production of both of these was unusual. Few families in Bang Chan grew either sugar palms or coconut palms and expenditures for coconuts and palm sugar were usual. During the major flood of 1942, villagers noted that coconut palms survived whereas all other fruit trees were destroyed. After this, a number of farmers planted coconut palms, but they had not yet begun to produce.

361 In 1954, about 120 acres (300 rai) of the total of about 311 2800 acres (7000 rai) of land in the village were used for [351] home sites and home gardens for 336 households. Individual home sites usually varied in area from about one-quarter to one acre, and were occupied by buildings, threshing floor and space for poultry as well as trees and garden space. Portions of this might be under water for several months of the year. Increased home production of fruit and vegetables would in many cases necessitate increasing the size of the home site by purchase, mounding or both. Ordinarily, increased land for the kitchen garden was obtained at the expense of some of the

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[245] 1. In a typical farm garden in Bang Chan one would find bananas growing, and a number of plants used for seasoning [249] curry. Various kinds of chilies, lemongrass, bergamot, of which both rind and leaves are used, and galangal were grown by all families who participated in the dietary study. Both sweet and holy basil were commonly grown. Many families grew one or more varieties of gourds and of eggplant, some of which [262] can be trained to grow on a tree or trellis. The inflorescence of the banana was also used as a vegetable. Leafy vegetables were not commonly cultivated but some families grew (2)phag (2)ka-(2)cheed, a green water plant, in gardens staked out at the edge of the canal, or in a pool, and some had trees, [222] the leaves of which were edible. Swamp cabbage or (2)phag [262] (3)bung grew wild along the edge of the canals and was the most commonly used green leafy vegetable. A few families [245] grew guava, jujube, star gooseberry, Manila tamarind, mango and pineapple.

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361 rice land. Water-ways, however, were public areas, and any
[505] convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

262 Mushroom culture as a side line activity of rice far-
344 mers developed during the period when this study was in
433 progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

[434] As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

262 Relatively few foods were purchased, but some of these,
432 such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

262 Estimates of mean annual consumption and cost of pur-
435 chased foods, for 106 households in Bang Chan are shown in
128 Table 1.

262 The list of purchased foods presented by Janlekha (1955)
432 was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)ma-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23--- Analyst]

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Table 1. Mean Annual Consumption and Cost of Purchased Foods, for 106 Households[1] in Bang Chan, 1953

(Adapted from Janlekha, 1955, p. 316)

Foods purchased	Estimated Amount	Estimated Cost baht[2]
Raw fish	16.6 kg.	83
Fish sauce (fishsoy)	36 bottles	54
Shrimp paste	6 kg.	27
Pork and beef	8.4 kg.	84
Vegetables	1 kg.	1
Onion[3]	11.3 kg.	34
Garlic[3]	11.3 kg.	34
Coconut[4]	196 fruit	292
Chilies, dried	7.6 kg.	53
Limes[4]	80 fruit	16
Tamarind[4]	6.3 kg.	19
Palm sugar[3]	71.4 kg.	152
White sugar	4 kg.	16
Total		865
Average cost per day		2.53
Average cash expenditure per person per day for food		0.44

1. Average size, 5.7 persons.

2. At the time of the study, one baht equaled about 5 cents.

3. Not produced in Bang Chan (Sharp et al., 1953, pp. 295 and 299).

4. Little production in Bang Chan.

262 preserved vegetables which were purchased and used frequently
432 by families participating in the dietary study.

262 The food costs reported by Janlekha (1955) were esti-
435 mates recorded from memory at relatively frequent intervals. The average per capita cost, 0.44 baht per day, was similar to the average cash expenditure of 0.47 baht per person among 11 families participating in the dietary study (based on the average of 4 survey days for each family). Thus, in Bang Chan, cash expenditure for food appeared to be relatively small, i.e. farm families produced a large share of all food consumed. If money were not available to buy, they would still have enough to eat, but it might lack variety. One informant said, for instance, that he usually bought a coconut every other day, but during October, when cash was short, he bought none. Janlekha (1955) considered the estimates obtained for expenditures for fruits and vegetables less reliable than for items purchased more regularly.

262 In Table 2, the percentage distribution of food
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Table 2. Division of Food Expenditures by Food Groups, for Eleven Families that Participated in the Dietary Study, 1953-54

	A 6 families[1] %	B 5 families[1] %
Animal foods	30.8	39.3
Fruits[2]	30.3	26.3
Vegetables[3]	28.7	17.0
Fats and Oils	3.3	8.4
Sugar	3.6	3.5
Pulses, nuts	--[4]	0.9
Spices, etc.	2.7	--[4]
Miscellaneous	0.7	4.5

1. Based on 4 days per family.

2. Primarily coconut.

3. Chiefly non-leafy

4. The dash indicates no purchase or a value of less than 0.1%.

262 511 expenditures by food groups is shown for the 11 families that participated in the dietary study.

Consumption of canned foods was negligible. Some canned fish and fruits were on sale at stores in the village, in 1952-54, but were seldom seen in homes.

262 272 854 855 Sweetened condensed milk, which was served in coffee sold at the stores, was occasionally bought for the children. On one occasion, a woman was seen buying milk diluted with hot water as a beverage. Among 526 records of food eaten by school children during 24 hour periods, milk appeared twice only, once with coffee. Dried milk, for infant feeding, was used occasionally. During 1952-54, several instances were noted in which dried milk, mixed with water, was used to feed an infant while the mother was at work in the field or engaged in vending, but we encountered one case only of an infant who was not breast fed. This was an infant whose mother died when he was five days old, and who was reared by grandparents.

262 443 [277] Relatively few items of food were available at the village stores. In the inventory of the largest of the three stores in the village in 1948-49 (Sharp et al., 1953, pp. 211-212) the following items of food were listed: big dried chilies, shrimp paste, onion, garlic, fish sauce (fishsoy), salted fish, fresh chilies, limes, coconut, coconut oil[1], brown (palm)sugar, tea, coffee, condensed milk, orangeade and lemonade (carbonated), sweets, liquor, ingredients (including a lime paste) used together in betel chewing.[2]

New stock received in December by a local vender who kept a few items for sale at her house included mature green beans, black beans, peanuts, sweet potatoes, salted turnip, pickled garlic and tomato sauce.

272 443 515 Larger stores served as informal men's clubs where tea, coffee with condensed milk, and carbonated beverages were sold primarily for consumption on the premises. The proprietor of a new store, built in December 1952, sold no liquor.

273 [443] We have no estimate of the amount of liquor sold in Bang Chan, although for those who drank it, its caloric value might be of significance.[3] About 9% of the householders interviewed

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[354] 1. Listed by Sharp et al. with non-food items, as much of it was burned in lamps.

2. Included here as food since some calcium may be obtained from this source.

3. One observer estimated the intake of certain village men who drank regularly as at least 2 oz. of rice liquor (28-35% alcohol) per day, representing about 100 calories. The estimated intake of women who drank regularly was about 1 oz. per day.

273 in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

433 434 443 Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary [42] study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

121 In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

221 242 122 [128] From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953, and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 29 --- Analyst]

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Chart 2. Annual Calendar of Fresh Foods Commonly Used in Bang Chan[1]

	No. Records[1]	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Fish													
Climbing perch	114	x[3]	x	x		x	x	x	x	x	x		
Eels	27	x	x	x		x	x	x		x	x		
Field crab (salted before use)	16	x					x	x		x			
Oysters	22		x	x			x			x			
Notopterus notopterus	10	x						x	x		x		
Serpent head	99	x	x	x		x	x	x	x	x	x		
Silurus	66	x	x	x		x	x	x	x	x	x		
(1)plaa (1)thuu	163	x	x	x		x	x	x	x	x			
Other Animal Foods													
Beef	30	x				x	x	x	x	x	x		
Chicken	72	x	x	x		x	x	x		x			
Eggs	142	x	x	x	x	x	x	x	x	x	x	x	x
Frogs	18	x	x	x				x		x			
Pork	51	x	x	x		x	x	x	x	x	x		

1. Based on 539 records obtained from school children, and observations in 11 households on 44 survey days. Figures in the column headed No. Records indicate the number of 1-day records on which the item appeared.

2. No records were obtained from school children during March, April or August, hence absence of the item from these columns means simply that the 4 households visited in each of these months did not use the item.

3. x indicates that the item appeared frequently on records obtained in this month. Note that frequency of use may be influenced by farm work and circumstances other than relative availability.

Chart 2. (continued)

	No.[1] Records	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Green and Yellow Vegetables													
Basil, sweet		x	x	x	x	x	x	x	x	x	x	x	x
Chili, fresh		x	x	x	x	x	x	x	x	x	x	x	x
(3)Khii-(2)leg	10			x		x	x	x		x			
Lettuce	49	x	x	x		x	x	x		x	x		
(2)Phag (2)ka-(2)cheed[4]	138	x	x	x	x	x	x	x	x	x	x		
Pumpkin	19	x	x	x				x		x	x		
Snap beans	12	x	x	x	x				x	x	x	x	x
Swamp cabbage	147	x	x	x	x	x	x	x	x	x	x	x	
Sweet potato	72			x	x	x	x	x			x		
Other Vegetables													
Bamboo shoots	53	x	x	x	x	x	x	x	x				
Banana, inflorescence	25	x	x	x		x	x	x		x			
Calabash	31	x	x	x		x					x		
Cucumber	10		x	x				x			x		
Egg plants[5]	29	x	x	x	x	x	x	x	x	x	x	x	x
Garlic		x	x	x	x	x	x	x	x	x	x	x	x
Gourds, bitter	11			x	x					x			
Gourds, towel	11	x				x	x	x					
Lotus stalks	48	x		x		x	x	x	x				
Mushrooms	25	x	x			x	x	x		x			
Onions		x	x	x	x	x	x	x	x	x	x	x	x
West India pea tree flowers	39	x					x	x	x	x	x		

4. Thai names are given when English equivalents are not known. For scientific names see Appendix C, pp. 126-127.

5. Several varieties of egg plant were used. On many records the variety used was not indicated.

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Chart 2. (continued)

	No.[1] Records	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Fruits[6]													
Banana[7]	129	x	x	x	x	x	x	x	x	x	x	x	x
Chico	17						x	x					
*Guava	14						x	x		x			
*Jujube	18							x	x	x			
Longan	41			x									
*Limes		x	x	x		x	x	x		x			
*Mango	25		x								x		x
*Orange	48					x	x	x	x				
*Papaya	11			x		x	x	x		x			
*Pineapple	63	x	x	x						x	x		
Rambai	46	x		x								x	
Sandorica	18	x	x										
Singharanut	22						x	x	x	x			
*Star gooseberry	28	x				x					x		
Source of water[8]													
For drinking:													
Rain		x	x	x	x	x	x	x	x	x	x	x	x
Canal										x	x	x	x
Fishpond		x	x									x	x
For food preparation:													
Canal		x	x	x	x	x	x	x	x	x	x	x	x
Fishpond		x										x	x

6. Good sources of ascorbic acid have been marked with an asterisk.

7. Bananas of the (4)nam-(4)waa variety were most commonly used.

8. Data for households participating in the dietary study.

listed on 10 or more of the 24-hour dietary records obtained. For items which were major ingredients, the number of records on which the item appeared, is given.[1] Thus (1)plaa (1)thuu, which is bought by residents of Bang Chan during the busy work seasons, was used more often than any other single variety of fish named. Of the varieties caught locally, climbing perch, serpenthead, and silurus were most commonly used. Fermented fish, not included in the calendar, appeared on 53 records, and fish with kind not specified, on 180. Eggs were used more often than any animal food other than fish. Among green vegetables, swamp cabbage and (2)phag (2)ka-(2)cheed were commonly used. Bamboo shoots and lotus stalks were prominent among the non-leafy vegetables. Bananas which are grown in every garden and are available all year round were much the most common fruit, although other seasonal fruits were eaten more often in 6 of the 9 months in which school children submitted records.

Some idea may be obtained of peak seasons for use of various common foods by noting the months designed by X. Thus in January and May, serpentheads were listed on about 1/3 of the records, and were frequently served at more than one meal. Sweet potato, usually fried and eaten as a snack, was listed on 35 of 52 records obtained from school children in September. Flowers of the West India pea tree were listed on 10 of 55 records in October, and 12 of 88 in November, with occasional mention on records obtained in 4 other months.

Fruits were eaten much less often than one might expect in a tropical area where many varieties are available and fruit can be grown the year round. They were most often eaten by children as snacks, although pineapple and papaya were usually, and banana occasionally cooked in "with-rice" dishes such as curry. In September, fruit was included in the diets of less than 1/3 of the children. An average of more than one serving of fruit per child per day was recorded in 5 months only, May, June, October, November and February. In May, when (4)ma-(1)faj or rambai was in season 46 of 76 children reported having eaten it. Pineapple, listed by 35 of 61 children in June, was most often served in curry at one or more of the family meals. In October, oranges were eaten by 30 of 55 children who submitted records. Bananas (mostly of the (4)nam-(4)wa variety) topped the list in November and February.

Items mentioned on fewer than 10 records, and hence arbitrarily omitted from the chart, are worth noting as they

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1. No figures are given for sweet basil, garlic, onions, chili or limes, which were so often used in small amounts as seasoning that the count obtained would give no clear idea of the extent of their use. Some common spice plants were not mentioned on the records.

262 might provide clues to ways in which the diet may be improved.
128 Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

128 At the end of Chart 2, sources of water for drinking and food
312 preparation have been included, not only because water is
271 properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

271 Untreated water was the customary beverage with meals.
549 Ordinarily no distinction was made in source of drinking water
853 for children and adults although boiled water was given to mothers and infants to drink during the post partum rest
658 period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink
572 hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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114 1. See Sharp et al., 1953, pp. 193-196 for a list of 32
136 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits
244 grown in Bang Chan, and p. 295 for 11 fruits known to be used
245 but not grown there; pp. 296-298 for 41 vegetables grown in
262 Bang Chan, and pp. 299-300 for 24 other vegetables used.

824 2. (4)Khlyb was the term used in Bang Chan for an uni-
852 dentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

118 3. Golden and Ralis, 1957, p. 57. The answers to:
126 "Do you drink tea frequently, occasionally, seldom or never?"
272 were: often, 22; occasionally, 68; seldom, 158; never, 85.

271 contaminated drinking water, but the traditional use of boiled water for newborn infants and their mothers, and its occasional use for sick persons, might provide the starting point for a desirable change.

Meal Preparation and Service

Processes and Equipment

252 The principal processes involved in food preparation for which equipment was required are: cutting solid food into bite-size pieces, pounding spices and flavoring materials, grating coconut, straining, boiling, sauteing in a small amount of fat, steaming, and roasting on a stick or metal support over the fire. Although foods were steamed or roasted only occasionally, the processes were familiar to all.

358 The Thai kitchen had no oven. When the term "baked" was used, it might mean cooking with dry heat on a rack over the fire (as banana baked in the skin) or without fat in the frying pan (as small dried fish toasted in this way).

128 415 Equipment used during meal preparation by the 11 families observed on 44 survey days is listed in Appendix A, p. 96, that used in serving and eating food, on p. 96.

252 415 559 184 The type of food preparation and service was much the same in the relatively well-to-do and the poorer households in Bang Chan. The chief difference in equipment for food preparation and service in families of different economic status was in the number of items of one kind which were owned. Thus a poor family might own one knife and one clay water jar, whereas an affluent family would probably own several knives and a number of water jars. Equipment used on special occasions, as in preparation of food for large numbers of people, was owned by well-to-do families only. Some had enough equipment for large cooperative work parties.

Persons Responsible for Food Preparation

252 462 Food was usually prepared by the homemaker and/or older daughter, if one were at home, but all members of the family who were old enough to help, had some knowledge of food preparation and did prepare food as the occasion demanded. While preparing, cooking and serving food were more frequently carried out by women than by men, adults and school-age children of both sexes had some competence in this area. While certain activities are normally assigned to men and others to women, the Thai maintain no rigid compartmentalization and are unembarrassed when a woman does a man's job or a man does

252 462 a woman's" (Sharp et al., 1953, p. 88). For instance, the husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was 252 867 sick or resting after childbirth. The ability of boys as well as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had (Hauck, 1953). 252 Responsibility for food preparation increased with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 554 887 Certain men of eminence, e.g. headmen and elders, would not be asked to cook at all, but as they aged, they might return to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for 2 months because his wife had back trouble. 252 562 Some dishes were cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 261 868 A premium was put on good cooking, and certain women who were noted for their cooking were in great demand for large scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 264 Food was commonly prepared twice a day, in the morning and late afternoon. The meal pattern was the same for breakfast

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114 262 1. Suvarnakich (1950) described the Thai diet in a general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

252 and dinner, either meal taking an hour or two to prepare.
264 Snacks might be eaten at any time. Adults often ate just the two principal meals, but children, especially the small ones who were not in school, might eat whenever hungry. The school children often purchased snacks from venders on the school grounds. If food was to be offered to the priests, who went around the village about seven o'clock in the morning, breakfast preparation was begun early, between 4:30 and 5:30 a.m., although family members might eat at various times during the morning: the husband before he went to the field, older children, before school time, babies and small children when the mother had time to feed them, and so on (Appendix A, p. 95). Preparation of supper usually took place sometime between 2:30 and 6 p.m. Whenever possible, family members ate together at the evening meal, but many exceptions were noted.

252 Rice is the principal item in every Thai meal. In Thai
262 the general term meaning "to eat" is translated literally "to eat rice." All food items are divided into two classes: rice and "with rice," or (2)kab (3)khaw. Among the families studied three or four "with-rice" dishes were usually prepared during the day, i.e. for the two main meals, but the number varied in different families, and according to season. One or two of these dishes would usually be "hot" i.e. highly seasoned with fresh or dried chili peppers. Fish was the food item second in importance to rice, but the typical "with rice" preparation, whether hot or mild, contained more than one food item in addition to a variety of spices and flavoring materials (Appendix C, p. 118).

262 Between meal snacks might be any available leftover
264 food,[1] fruit, or items purchased from a vender.[2] Such snacks were not regarded as meals, however, as no Thai considers that he has eaten a meal unless he has eaten liberally of rice.

252 The general method of cooking rice was the same throughout the village. The rice was washed two times in water from the canal or fish pond, and was then boiled in a large volume of unsalted water for about 24 minutes. The rice pot was

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1. Leftover foods from breakfast were eaten later that day with or without reheating. "With-rice" was seldom left over from the evening meal, but rice was frequently kept over night.

252 2. Deep fat frying of bananas, sweet potato slices and the like was commonly observed, both among venders who sold their wares on the school ground, and those who travelled by boat. This method of cooking was never observed in ordinary home food preparation probably because fat was in relatively short supply.

usually covered. A common practice was to remove the cover and stir the rice once, toward the end of the cooking process. When the rice was almost done, surplus cooking water was drained off, and often after a lapse of time, the covered pot was put back onto the fire which had been allowed to die down, for about 6 minutes.[1] Thus the final cooking was essentially a process of steaming. Total cooking time varied from a little over 20 minutes to three-quarters of an hour, depending primarily on the amount of rice cooked. The finished product was moist enough to form a ball when pressed between the fingers. Left-over rice, if not eaten cold as a snack, was reheated by being added to the hot rice at the next meal. Rice water was commonly given to pets if there were any. In 4 families which participated in the dietary study, rice water was given to infants, one 11-year old boy served himself liberally to it, and one adult man was observed to drink rice water before meals.

The many recipes for preparation of "with-rice" dishes may be grouped into two categories, hot and mild. Hot dishes always contain chili and varieties of spices which are hot tasting. One type of hot dish is curry which may be designated as either "hot" or "sour". Thai curry consists chiefly of fish or any available kind of meat, with or without vegetables. To make curry, shrimp paste, chili and spices were pounded thoroughly and then mixed with the meat and condiments and frequently with coconut milk. All were boiled together. Vegetables, if used, were added when the mixture was nearly done. Both vegetables and meat were cut into small pieces and washed before cooking. With the exception of dried chilies and tamarind, foods were not ordinarily left to soak in water. Sour curry differs from hot curry in that it contains less chili and spices and has a mixture of tamarind ((4)ma-(1)dan might be substituted) crushed with water added to it.

The other type of hot dish is (4)nam (3)phrig or chili sauce. It is made of shrimp paste, chili, garlic and other spices ground together in the mortar and then mixed with lime juice, sugar and salt or fishsoy. (4)Nam (3)phrig was always served with either raw or cooked vegetables. One informant commented that (4)nam (3)phrig was the everyday food among the villagers.

Preparation of mild dishes varied. These included panned vegetables, meat or eggs cooked with small amount of fat and a variety of spices and condiments including black pepper but not chili. Fish were sometimes roasted or boiled. Vegetables might be eaten either raw or cooked in coconut milk without seasoning. If vegetables were simply boiled in water,

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1. Median times for a series. In 15 instances cooking time before draining ranged from 18 to 38 minutes and rice was steamed from 2 to 12 minutes after draining.

252 cooking water was discarded. In Bang Chan, foods were not usually cooked a long time.

In most village homes, one fire only was built for ordinary meal preparation. Rice was cooked first, then "with-rice" dishes, no attempt being made to serve the rice and accompanying foods hot. Indeed, with the frequent use of chilies, one might have the sensation of eating hot foods, no matter when they were taken from the fire. Notes on the preparation of a meal in one household that participated in the dietary study, are included in Appendix C, p. 119.

Meal Service and Techniques of Eating

264 Food was generally served in the kitchen area. When possible, family members ate together at the evening meal, sitting on the floor, each one old enough to feed himself having a bowl of rice before him. The "with-rice" dishes were placed in the center of the group. Family members helped themselves to portions of the "with-rice," using the right hand to take solid foods, and a serving spoon for fluid foods. Enough rice for a bite was pressed together with the fingers of the right hand, so that grains would not be scattered as the rice was conveyed to the mouth. "With-rice" of semi-fluid consistency was eaten by dipping the ball of rice into it, or more exactly, touching one side of the ball of rice to it. The amount of "with-rice" was generally small, and to take more than one spoonful onto the plate at a time would appear greedy.

264 593 When families did not sit down to eat together, those who ate first were expected to take no more than their share. The wife saw to it that her husband had a liberal serving of the best food available. She also gave generously to the children, holding back, eating last or what was left, herself. In a well-to-do household, where food was ample, the mother would be as well fed as others; in a poor household she might be short-rationed day after day.

When priorities in serving were observed,[1] young children, "not old enough to know better" were not expected to wait until the elders had been served. A frequent pattern at both breakfast and dinner was for older children to feed the younger ones before their own meal; elders in the family then ate, and husband and wife ate together if possible, or as convenient to their separate schedules. In the morning if 594 food was to be offered to priests, family members did not ordinarily eat until after the priests had been served. If necessary, however, the priests' food could be served onto a 600 tray, then others might eat. The observer often had

1. See footnote 1, p. 49.

The observer often had
126 opportunity to make notes on foods eaten by various family
262 members. Two examples of these are included in Appendix A, p. 97.

Snacks

262 We have noted that various family members ate the morn-
264 ing meal, in particular, at different times, and that children
355 especially might eat leftover food between meals. Most Bang
Chan school children[1] ate snacks, which were usually different
from foods eaten at a regular meal. Doubtless most of them
were purchased from one of the venders who were to be seen on the school grounds daily. Fruits and "desserts" were most commonly eaten, although a variety of other foods, not a part of the usual Thai meal, were also listed. Sweets were listed about 450 times on the 539 records obtained. Many of them had a base of rice, rice flour or glutinous rice with sugar, and included coconut, banana or other fruit. Some were made with legumes, and a few contained egg. Fried bananas, fried sweet potato slices, bananas or beans cooked in syrup, and bananas cooked in sweetened coconut milk were also listed. A few items such as ices, flavored syrup poured over shaved ice, and candies, had little nutrient value other than caloric content.

272 A glass of milk, and milk with coffee, were each listed
once. These might have been obtained at the store adjoining
the school grounds. These instances are worth noting primar-
ily because, although dried and tinned milks were obtainable, milk was seldom given to village children after weaning.

262 Many children were given a bit of cash each day, and
437 Janlekha (1955) commented that some children who did not have
355 any might barter an egg for snacks. One could tell fairly
261 well from the children's records what the venders offered for sale on a given day. Some influence of season was apparent; thus ices and syrup over shaved ice were eaten more often during the hot dry season, and cooked foods such as fried Chinese noodles appeared primarily in the cool season.

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126 1. With the cooperation of teachers of the third and fourth grades in the Bang Chan elementary school, records of food eaten during 24-hour periods were obtained from children in these grades at intervals of about one month during the school year. This was a regular activity in the health class. A total of 539 records (from 1 to 8 for each child) were obtained from 75 boys and 72 girls. To facilitate recording, each child was given a sheet of paper, with spaces for his name, the date, and kinds of food other than rice, eaten at the morning, noon and evening meals, and as snacks. These records were collected primarily for information on meal patterns of village families for comparison with the limited sample in the dietary survey, and on seasonal use of various foods.

262 Some snacks, i.e. seasonal fruits, may have been picked from the home garden, and items such as lotus seeds were probably gathered wherever the children found them.

Comments on Foods Eaten by School Children

126 264 855 In addition to the high percentage of school children who ate snacks, a conspicuous observation was that many ate no regular lunch (Table 3). We did not ask the children to record when they ate snacks, but only what they ate. The number of snacks recorded by individual children did not, however, appear to be related to whether or not they had eaten lunch. For example, among the 76 children who provided 24-hour food records during May, 1953, the average number of snacks recorded by the 39 children who ate a regular lunch and the 37 who did not, was about the same, i.e. a little over three per child.

Table 3. Number and Percentage of Children Who Ate Snacks, and Who Missed Lunch, Arranged by Months in Which Records Were Obtained

Month[1]	No. of Records	Children who ate snacks		Children who missed lunch	
		No.	Percentage	No.	Percentage
May 1953	76	73	96	37	49
June 1954	61	56	92	32	53
July 1953	79	77	98	53	67
Sept. 1953	52	49	94	36	69
Oct. 1953	55	50	91	22	40
Nov. 1953	88	81	92	57	65
Dec. 1952	18	14	78	10	56
Jan. 1954	69	64	93	41	59
Feb. 1953	41	39	95	33	81
Total	539	503	93%	321	60%

1. Note that although the figures are arranged by month, the records were obtained over a period extending from December 1952 through June 1954.

264 855 [262] Most of the children who ate lunch regularly brought rice and some of the "with-rice" dishes prepared for a family meal in a lunch pail. Menus for breakfast and noon meals were often identical. Children who lived at a distance may have found it harder to carry lunch, especially when they had to walk to school, but the month by month record of the percentage of children who missed lunch (Table 3) does not indicate any clear seasonal trend. Even children who lived nearby might neither bring lunch nor return home during the noon recess. We were at the home of a school teacher, a short distance on foot from the school, when his two children returned in the afternoon. The mother said that they usually waited until after school to eat, but were having no snack on that day because for the first time, they had carried lunch to school.

126 262 Thorangkul (1957) scanned all of the dietary records to note the frequency with which the following food groups occurred: protein-rich food, carbohydrate-rich food other than plain boiled rice, vegetables and fruits. She considered the records of each child as a unit; thus if a boy for whom 5 daily records were available, had recorded protein-rich food such as fish, eggs, or beans 16 times, he was regarded as having more than 3 "servings"[1] of such food per day. The frequency with which various food items occurred in the daily diets of these children is shown in Table 4.

Considering the day's record as a whole, some protein-rich food, usually fish, was included in the records of 97% of the children. Such protein-rich food appeared two or more times per day in the records of over 80% of the boys and about 90% of the girls. In contrast, no fruit was mentioned in the records of about 10% of the children, although fruit was one of the commonest snacks. Vegetables were not mentioned in the records of 10% of the boys and 3% of the girls. Only about one-fourth of the vegetables recorded were green or yellow.

For 75 children for whom we had 4 or more records, Thorangkul (1957), to obtain a rough estimate of the adequacy of the children's diets, grouped the records into three categories, based on the number of times protein-rich foods, vegetables and fruits appeared. On the average, children whose diets were placed in Class I had at least 3 "servings" of protein-rich food, 3 "servings" of vegetables and 2 of fruits. Diets in Class II included some from each of the food groups each day, but the items were recorded less frequently than in diets in Class I. Diets in Class III did not include foods from each of the food groups emphasized, each day. On this

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[104] 1. The term serving is used here to designate each time an item appeared in the daily food record. Thai do not have "servings" as the term is used in Western countries.

Table 4. Frequency of Occurrence of Various Food Groups in the Daily Diet of 147 School Children in Bang Chan

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(Adapted from Thorangkul, 1957)

Number of servings[1]	Protein-rich food	Carbohydrate-rich food[2]	Vegetables	Fruit
	Percentage, based on records of 75 boys[3]			
3 or more	47	8	28	8
2 to 2.9	36	15	23	18
1 to 1.9	13	40	30	37
0.1 to 0.9	3	37	9	26
None	1	-	10	11
	Percentage, based on records of 72 girls[3]			
3 or more	68	13	21	10
2 to 2.9	21	17	38	27
1 to 1.9	4	22	34	38
0.1 to 0.9	3	48	4	15
None	4	-	3	10

1. The term serving is used here to designate each time an item appeared in the daily food record.

2. Other than plain boiled rice, which is an essential part of every Thai meal.

3. Average frequency of occurrence was computed, considering the records of each child as a unit.

basis, nearly a third of the children who provided diet records had diets which were classed as III (Table 5). Almost all of the girls and about 4/5 of the boys in this group missed lunch. Indeed the common habit of eating just two main meals, with snacks, was probably one important determinant of the number of servings of protein-rich foods and

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Table 5. Diet Classifications for 75 School Children in Bang Chan, and Percentage of Children with Each Diet Classification who Missed Lunch

(Adapted from Thorangkul, 1957)

Diet classification[1]	Percentage of children	Percentage of children who missed lunch	
Class I	8	Boys	46
		Girls	45
Class II	61	Boys	73
		Girls	68
Class III	31	Boys	81
		Girls	98

1. See text for basis of classification.

vegetables eaten, since items from these two food groups were not commonly eaten as snacks. Note, in the illustrative records presented in translation (Appendix A, p. 98). that the child whose diet was considered to be in Class III did not eat a regular lunch on any of the six days for which records were available, whereas the child whose diet was classified as I ate a regular lunch six times out of seven.

Family Food Shared With Others

Throughout the year families prepared especially good meals for persons who came to work cooperatively with them. Every rice-grower entertained his cooperative harvest crew, some the transplanters. Hired laborers were not usually served such feasts, but the conviviality of the harvest season called for a round of liquor even for them. One harvest dinner for 48 cost 50 baht, plus eels (60 baht) and rice. Cooperative home pounding of rice was still practiced in some households and thought to be fun. In one day enough rice to produce 40 tang (640 kg.) was pounded by groups of 15 to 20 workers; in an evening 20 tang were done. If 40 tang were milled, workers were served a full meal; if 20 tang, a dessert only. Other occasions were fish-pond draining, house raising and repair. Each participant in the fish-pond draining at Household 21 was fed (3)khaaw (3)tom (soupy rice) for lunch and "an enormous supper," in addition to receiving the traditional pot of fish. If good food were not served at these functions people

264 would not come willingly to work. When a family with a repu-
476 tation for stinginess diluted the (3)khaaw (3)tom too much,
[574] the group refused to eat any, thereby reminding the host of his obligation for hospitality.

574 Guests to whom meals were served fell into four categories: 1) kin, 2) visiting dignitaries, 3) priests and 4) drinking companions. Kinfolk who came as guests were married children, or those who were away at school or work, or kinsmen from Bangkok or elsewhere. The older the relative or the greater the distance travelled, the greater the honor accorded him. Foods were exchanged. Two visiting ladies travelling in a large boat, made an annual round of all their relatives, bringing certain "city" foods and receiving substantial gifts of rice, fish and fruit. They stayed for several days as guests of one family, then moved on. Every person from Bang
[43] Chan who visited a relative in Bangkok carried big packages of food, usually rice or eggs, as gifts. With the inflated prices in Bangkok, it was advantageous to have a "country cousin" who might bring food. Visiting kinsmen always recognized the need for eventual reciprocity.

Visiting dignitaries were usually entertained by hamlet headmen. Meals served to visiting officials, policemen and others might be elaborate, involving cooperative help in preparation, but reciprocity, if any, rarely took the form of a return meal.

[792] Regular visits of the priests, as well as the invitation of priests to the house for special events, have been mentioned. Priests might also come from afar, usually staying at the temple but receiving generous offerings of food from people of the community.

[562] The custom of convivial get-togethers of either or both sexes was well established. Men traditionally enjoyed "stag" dinners of four up to twenty or more whenever the ingredients for a turtle, frog, cobra or other snake curry were available. Chicken curry might also be thus served, and once a catfish mash was prepared by a male visitor from the north. These curries were cooked by men, and the host served liquor freely.
784 The all-male character of the occasion reflected the old re-
938 strictions on women's partaking of flesh foods (see p. 42),
913 but older women did not hesitate to join in the drinking.
[524] Women also got together in drinking parties, sometimes to play cards.

In addition to sharing food with people in these four categories, the general rules of hospitality required that anyone who came to the house at meal time, should be offered food, or at least a drink of liquor, tea, or plain water.

Attitudes Toward Food

262 To older Bang Chan residents, to lack rice was to starve
[26] even though fish or vegetable fare were at hand. Since rice
262 was the staff of life, many important customs clustered about
243 it. Ceremonies to the Rice Goddess accompanied the raising,
[197] selling, and storing of rice. When the unhusked rice was in the bin, it could not be withdrawn at any time as needed, but astrological charts had to be consulted to make sure the day
[198] was auspicious. Paddy could never be withdrawn on Friday, a day sacred to the Rice Goddess. After cooking, the best rice was said to be at the mouth of the pot, so this was offered on ceremonial occasions. Important rules were that when cooking rice, the cover of the pot must never be laid in a mortar and it must be inverted, never laid down flat; otherwise one would be short of rice. One must never scrape the top of the rice with the cover, or the "soul" of the rice would be scraped
[34] out of the pot. Moslem residents murmured an Arabic prayer
[35] every time the rice was put into the pot, and every time the pot was put onto the fire, as well as before eating.

261 Rice has been generally regarded as the strength-giving
262 food par excellence. A portion of Chutima's (1939) description of the "old system" follows:

> Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal. Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply.

The quotation indicates first that in the past, rice was considered much more important as food than the "with-rice" dishes. Since the Food and Drug Division of the Ministry of
[65] Public Health has been attempting to encourage the eating of more "with-rice," the attitudes found in Bang Chan are of interest. One informant stated that only rice can make children fat, and that the "hot taste" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish, and was weak; he refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk (evaporated or dried milk, diluted with boiled water) expressed the opinion that the ancient belief was based on thrift. He said that thrifty

262 people did not want to spend much on a baby, therefore they
261 said that if a child ate too much "with-rice" he would be potbellied but thin in the upper part of the body, and that eating eggs would cause dental caries. This grandfather said he believed the truth to be just the opposite, but that goods things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice," one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

262 Secondly, Chutima suggests that particular foods were associated with, or suitable for, particular age levels, and a given sex. Data obtained in Bang Chan indicate that certain foods were associated with conditions such as pregnancy, lactation, and the puerperium, with occupation, and even
553 socio-economic levels. For infants, breast milk was considered most suitable. The newborn infant was not usually put to the mother's breast for about 3 days after birth, and if a relative or neighbor did not nurse the infant, the small banana called (3)kluaj (4)nam-(4)waa (see p. 46), raw or baked, was crushed and fed to him before his mother's milk was available. This banana and rice, as (3)khaaw (3)tom and (3)khaaw (2)piag (two watery preparations), sometimes crushed with (3)kluaj (4)nam-(4)waa, were always the first solid foods introduced while the infant was breast fed. No other foods were introduced early. Some infants received fish and egg by 6 months of age, and a majority ate these foods by the time they were a year old. Some two year olds had not yet been given vegetables, and very few infants ate them before they were one year old.

855 Giving of "holy food"[1] to children suggests concern for
[776] strengthening children through dietary as well as other ritual means.

262 At the other end of life, as old age approached, the
888 diet was supposed to change, ideally to a completely vegetarian one. Since one was soon to face death, one gave up eating meat and even fish, if possible, so as to avoid taking life. It was considered pitiful or wrong for an old person to fish. Being able to go without food was associated with merit. Those who stayed overnight at the temple on the Buddhist holy day went without solid food from before noon until the next morning as the priests did. One elderly woman remarked that when she stayed overnight at the temple she did not feel hungry, and did not eat anything at night, but other women, feeling hungry, drank coffee or milk at night. She

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1. See p. 50.

262 888 understood that her merit helped her not to be hungry. Once she asked an eminent layman about eating at night. He said, "If you are not hungry, do not eat. If you feel hungry, it is better to eat. If someone invites you to eat, it is sinful to refuse."

261 Even young adults had a strong revulsion against gluttony. One of the symptoms of a man who went mad and had to be committed to an institution was that "he ate too much." A woman was despised because "she ate in secret. She stole eggs from her husband, sold them in the market, and then spent the cash on food which she ate there, instead of bringing it home." Definitions of a glutton were, "A 'with-rice' eater," or simply as "one who eats alone." These comments highlight the counsels of eating in moderation and in company. On the other hand, a full stomach was valued for "home is where one eats one's fill."

262 562 262 220 At maturity, when farm and other tasks were shared as equals, men and women ate almost the same food. The old proscription against animal food for women was somewhat relaxed, but not entirely. To sustain farmers during the seasons of hard work, however, extra quantities of rice and rice alone, were considered essential. "With-rice" was pleasant but not so necessary. Any shift away from a diet of rice as ordinarily cooked in Bang Chan was construed as a shift either in occupation or in health. For example an eminent citizen who gave up farming took to eating (3)khaaw (3)tom often. This soupy rice, a staple dish for infant feeding, had interesting socio-economic connotations. It was served as a light lunch to cooperative farm-workers to be followed at the day's end by a real meal. It was also "delicate" food, suitable for the sick, for city-people, for those who did not toil with their hands and backs. Consequently, when this man ate this "delicate food" more often, he was consciously or unconsciously serving notice on the community that he was not going to do farm work any more, for (3)khaaw (3)tom could not possibly have sustained a farmer's strength. Caustic villagers hinted that he was putting on airs.

262 843 846 Among conditions in which some change from the usual diet was found were pregnancy, post parturition and lactation. Relatively few foods were generally considered to be tabooed under any of these conditions, but many women preferred to limit intake to "safe" foods if there were any possibility that certain foods might cause harm.

[126] Information was obtained from 42 mothers about the food they ate during the post-partum rest period. Two said they ate as usual, but for the remainder, the diet was considerably

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[192] 1. Literally "beautiful rice." For method of cooking, see p. 33.

262 curtailed. About half ate soupy rice rather than rice as
843 usually prepared. All ate fish, but over half ate salted
846 fish only, and about one-fourth ate fresh fish only. Rice and fish were apparently the only foods considered safe by all of these mothers. The only other food eaten by half or more of them was banana of the (4)nam-(4)waa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeaeng (1)liang, a broth made with dried fish, and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some. When asked what foods they considered good for a woman who had recently borne a child, no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the post-partum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

262 Fear of illness from eating incompatible foods after
342 child birth was rather strongly expressed by many informants,
753 even by some who knew of Chinese customs which were different
829 from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home in the village, were not forbidden at the government health and maternity center at Minburi.

126 The 45 mothers who were interviewed during lactation,
262 but after work had been resumed, ate more nearly the usual
846 diet than was the case during the post-partum rest period. As in pregnancy, the mothers apparently had no notion of special dietary needs during lactation, but foods considered undesirable during lactation were mentioned 27 times. The list included 12 kinds of food, and four attributes of food, i.e. sour and hot tastes, fermented foods and raw foods. No food was considered harmful by a majority of mothers, the one which occurred most frequently, jackfruit, being mentioned by 8 only of the 45 informants.

262 Reasons were seldom advanced for considering various
753 foods unsuitable for mothers or children. During pregnancy,
853 the hot-tasting foods, i.e. those made with chili, were said by one informant to injure the baby's complexion. When asked at what age a child could have adult food, mothers might say at one or two years, but often specified without giving a reason, that the child could have anything but the hot-tasting foods. A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby, 1 or 2 months old, ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana"[1] caused

1. The type of banana most familiar to people in the United States.

262 753 853 constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

The belief that eggs would cause dental caries, and should therefore be omitted from children's diets, was expressed by the mother in a poorly nourished family. The possibility that such ideas arose from unwillingness to spend much money on food for a child has already been noted (see p. 42).

262 753 758 Information on food suitable in illness was obtained only incidentally. The Thai did not appear to have a consistent theory as to the cause of disease (Sharp et al. 1956, p. 489), and residents of Bang Chan did not seem to associate any of their illnesses with contaminated food or water. Choice of food in illness was probably associated in some instances with the idea that the body is composed of the four elements: wind, water, fire and earth, and that sickness results from or is a symptom of imbalance in the proportions or arrangement of these elements. Thus the "fragrant banana" and eggs, because of their "cooling effect," were said to be forbidden in measles. A child who was getting measles was restricted to rice and dried fish. In contrast the small, [853] rather flavorless banana, designated (3)kluaj (4)nam-(4)waa, was said to have "no cooling effect" and was considered an acceptable food in illness, as well as for newborn infants.

262 758 784 In one instance, when a patient had been taken to the hospital with severe diarrhea, a nurse instructed other family members not to eat ices, syrup (see p. 36), or raw vegetables, nor to drink unboiled water. The informant who told us about this offered no reason for these precautions. These foods were simply "forbidden" to the family of a patient with severe diarrhea.

717 824 845 Notions as to what is fortunate or unfortunate may also affect agricultural processes. The many ceremonies associated with culture and use of rice have been mentioned (p. 42). The idea that a papaya tree growing near the house was "unlucky" was attributed to Thai by a young Thai Moslem in Bang Chan. When we commented on the papaya tree near his front door, he said the papaya tree dies easily and does not like water, but his was planted on high ground. According to this informant few villagers would be willing to grow papaya trees near the house. He considered the non-specific threat of harm as unreasonable, though he said that if specific harm were said to [717] result, he would be concerned about it. The midwife at Minburi Health Center said that she urged each woman who came there for delivery to have more banana, mango and papaya trees planted for home use. Before raising of papayas can be successfully encouraged, however, the idea that papaya trees bring back luck must be overcome.

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

262 A discussion of food habits in Bang Chan would be in-
796 complete without some description of ceremonies ((1)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

796 The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-
527 teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion
264 of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

[782] Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could
[554] afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and
527 at festivities. Thus, there was reason to make a (1)ngaan
796 as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

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[196] [461] 1. Significantly the same Thai word is used for work and for ceremony.

[302] [881] [155] 2. Topknots, formerly worn by all Thai children, used to be cut ritually at the time of puberty. In Bang Chan, the growing of a topknot had become primarily an attempt to improve a child's health. Few school age children wore topknots. They were usually cut earlier than puberty.

[575] 3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

796 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the [476] time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives [782] and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A 764 big cremation might require planning in detail for years ahead: 796 invitations to priests and relatives in distant parts of the 574 country; hiring an orchestra and obtaining ceremonial gear. For the largest events, when the guest lists ranged upward to [533] 60 or so priests and 400 other guests, one borrowed the hun- [426] dreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person, [258] usually one of the "professional" cooks of the village. The [476] day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

[262] The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an 262 annual homage-to-the-teacher rite. It is the nearest approxi- 796 mation to a quantitative record of food for a ceremony that 895 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either 796 at 7 a.m. or 11 a.m., or both, always at least in part by the 792 host, who sat and chatted with them. No one else ate until

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)deaaeng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chauaun, with its head and tail; a green coconut with its cocomut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

In Bang Chan when donations for a new school
264 building warranted buying the foundation materials, so that
476 volunteer labor was solicited for their installation, some of
946 the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

782 The spirit-offering, or the portions eaten by a partic-
864 ipant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests.
262 The pork was cut up and eaten with a hot sauce, or put into a
782 "with-rice" dish. It was especially appropriate with liquor.

262 The use of food ritually was not limited to the ceremon-
755 ial season nor to big events. The same purposes underlay the
852 use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

43 The benefits of a (l)ngaan accrued to every participant
554 down to the last worker and contributor according to the degree
796 of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

796 One assistance in the financing was that every invited
476 guest made a contribution, customarily 5 to 10 baht, which
435 helped defray the costs. In 1952, household heads reported these contributions as totalling from 30 to 1,000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (l)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

435 Some information as to the cost in baht of the larger
796 ceremonies held in 1954, and their scale, was obtained from
[124] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[744] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000. Guests gave 2300.

[583] B: Rite of forgiveness after elopement: a meal, with 5 bottles of liquor.

[184] C: Moslem: 2 buffalo slaughtered. 400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
[583] sugar cane, fruits, sweetmeats and other things. At more modest weddings and the rite of forgiveness for a couple who had eloped, food might differ from the usual fare only by including the three essentials of a wedding: pork, chicken and alcohol.

273 Increased consumption of alcoholic beverages during the
796 ceremonial season was indicated by the sales of one local
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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[574] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

443 storekeeper: about 800-900 liter bottles per month during
973 the 3 months dry season as compared to about 350 bottles per
796 month during the 9 months of the rice season.

184 Moslems never served liquor at their weddings, crema-
[273] tions, and other auspicious events. Moslem residents occa-
sionally attended Buddhist (l)ngaan in spite of dietary pro-
[262] scriptions that Buddhists did not observe.[1] A medium (spiritualist) commented however that because pig's head was essential for her homage-to-the-teacher rites, some Moslem sick persons preferred to go to the Buddhist temple for treatment. There the priest-practitioner could afford to set up a separate kitchen for his Moslem patients, and so spare them the distress of confronting pork. To one big ordination Moslem guests brought their own food. Buddhists came somewhat more often to Moslem ceremonies.

262 We do not have enough information to appraise the nutri-
574 tional significance of food eaten at ceremonies. Some indi-
476 viduals got a great deal of it, others very little. One must
264 remember that the (l)ngaan was not a public but a private event at home, to which guests came on invitation. Although cremations and the teacher-rites of priest-practitioners were held at the temple, and so had a semi-public character, no one who was not invited presented himself for food. Of the participants, the working group undoubtedly received the most food; they were there the longest time, had regular meals, tastings and snacks throughout the (l)ngaan meal itself. This group comprised the host, co-sponsors and their immediate kin; other relatives and friends who were asked or who volunteered to help. The feeling was, if one were "very fond" of the host, one volunteered to cook. If less close, one was invited as a guest, but made the usual cash donation. Sociable persons combining skill and energy were invited often and volun-
[585] teered often, hence spent many days at ceremonies. Young unmarried men and women were asked and liked to be asked to work, for such occasions offered a great chance for fun and flirting.

114 Different degrees of participation may be estimated
476 from Janlekha's (1955) figures for reported contributions
796 ranging from 30 to 1000 baht in a year. Since a contribution of 5 to 10 baht per (l)ngaan was customary, the villager with the lowest reported contribution probably attended from 3 to 6 ceremonial occasions. Attendance at 100 or more (l)ngaan is unlikely, hence the villager who gave as much as 1000 baht probably made larger contributions per (l)ngaan.

574 What sort of persons or groups in the village were in-
796 vited as guests? Every host's list included his older

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[702] 1. Moslems were said to resist army service because they were afraid they would have to eat pork.

196 574 relatives, his other kin and friends according to bonds of affection and respect. Certain priests of pleasing personalities, wide acquaintance or kinship in the community, or of valued skills, were invited more often than others, as were prominent elders and hamlet headmen. An invitation usually went only to the elder couple in a family. It did not automatically include the children. If married sons or daughters were invited, they were asked separately. Poor individuals were included only in the festivities of their close kinfolk, their immediate neighbors, maybe their own hamlet headman, or persons to whom they were obligated. Unless they were aged, their presence was validated only by hard work. Reciprocity was a factor, for one who could not reciprocate presumably would not be asked, nor would he volunteer. The few who were "anti-social" for whatever personal reason rarely attended.

262 574 196 858 Most members of the working group and guests left at home their children of such age as to require watching. Nursing babies might be there, hung in a hammock. Though the children who ran excitedly about seemed numerous, most of them were the children, grandchildren, nieces and nephews of host, co-sponsors and relatives, so could not be excluded.

To sum up, those who shared least in the diet of the ceremonial season were the dependent children, i.e. up to the age of 6 or so, the less gregarious, and the poor who had no way to reciprocate. Children from 7 to adolescence shared in a limited way, attending (l)ngaan of their own close kin or of a geographically close neighbor. Parents sometimes took snacks from the feast home to the children. On the other hand, persons of prestige and popularity, especially if aged, were asked frequently.

262 796 Doubtless for those who attended many (l)ngaan, the food eaten during the ceremonial season differed considerably from the usual family fare. We have no way of knowing whether it was better than usual because of a larger intake, for instance, of pork and meat in general, or whether the total nutritive value was less satisfactory because of increased consumption of "empty calories" in the form of sugar and alcohol.

242 264 796 During the (l)ngaan season the home meal schedule was frequently disrupted in the families of the participants. The main cook might be absent, too tired, or too full to feel like cooking a big meal at home. In anticipation of a feast, preparation of the usual breakfast or dinner or both might be abandoned, with reliance on a few snacks for the stay-at-homes to add to their rice. Thus the food intake of family members who did not attend the ceremonials might be adversely affected.

000 One other aspect of (l)ngaan which should be mentioned

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One other aspect of (1)ngaan which should be mentioned
952 in connection with food and health is the opportunity for con-
796 tamination of food. The villagers did not associate sanitation
781 with health, hence the hazards of a community meal which many
[751] persons helped to prepare were many. Two incidents observed the day before an ordination in early April, will illustrate. In the final stage of making Chinese noodles, rice flour paste was extruded through a perforated disk into an enormous pot of boiling water. When done, the product was removed with a fish net, and plunged into the canal to cool, after which women helpers spread it out on banana-leaf covered trays. Dishes were also washed before use in the canal, which was then too low for boats. Since, however, many people drank untreated canal water at this season (see p. 28), the added hazards for the participants caused by these procedures may have been slight.

262 In summary, food plays a major role in ceremonies and
792 festivities, which are concentrated in the 3 months' dry season. Proposals for dietary improvement in Bang Chan must take into account not only the possible effects of the (1)ngaan season on the total nutrient intake, and on opportunity for exposure to contaminated food, but also the importance of these affairs from the standpoint of merit and prestige, and the relatively great financial burdens which villagers therefore undertake because of them.

QUANTITATIVE DIETARY STUDY: FOODS EATEN AND ESTIMATED NUTRIENT INTAKE OF SELECTED FAMILIES IN BANG CHAN

Procedure

121 Selection of the Sample
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146

Medical inspection designed primarily to discover possible signs of nutritional deficiency was carried out in advance of the family dietary study. The suggestion of Grant (1948) that matched groups, of contrasting economic or other status be studied, appeared to be appropriate to the situation in Bang Chan. Our hope was to be able to select from the random sample of families given medical inspection (Hauck, 1956) a group of families (A) in each of which several members had clinical signs which might be evidence of malnutrition, and a group of families similar in age and sex distribution (B) in each of which the members were largely or wholly free from such signs.

125 When the medical inspection of the random sample was
146 complete, however, too few of the families were found to meet our criteria for inclusion in Group A, i.e. the group of apparently less well nourished families. Additional families for

125 this group were located by checking the list of school chil-
146 dren, all of whom had been examined, for instances in which 2 or 3 children in one family had signs possibly indicative of malnutrition. The remaining members of their families were then examined. Families appropriate for Group B were chosen from those in the random sample.

Note that the groups for inclusion in the weighed dietary study were selected on the basis of apparently contrasting nutritive status. They did not represent a random sample of village families, although 7 of the 11 families included in the dietary study were in the random sample chosen for the medical inspection. In the absence of recommended dietary allowances for Thai, study of food intakes of two such groups seemed likely to yield more useful information than would be obtained from a dietary survey of a random sample of the population.

The groups chosen for study included 11 households, 6 in Group A and 5 in Group B, with 30 members in each group, paired so far as possible according to age and sex. When the survey was begun, however, 2 additional members were found in the households in Group A and 7 additional members in Group B. These were relatives and hired helpers who remained in the households throughout the survey year. The field worker who carried out the dietary study rearranged the matching plan somewhat, so that 32 reasonably well matched pairs were obtained (Table 6). In planning this rearrangement, the observer had in mind pairing persons of similar size, so far as possible, in addition to pairing by sex and approximate age.

Estimation of Caloric and Nutrient Allowances

Because of the 5 additional unmatched persons in Group B, males aged 23, 15 and 4 years, and females aged 79 and 62, some means was sought of checking the validity of comparing calculated per capita food and nutrient intakes for the two groups. By selecting matched groups differing in apparent nutriture, we had hoped to avoid comparing calculated nutrient intakes with an arbitrary standard, but comparison of estimated per capita nutrient needs of the two groups appeared to provide one means of checking the probable comparability of our groups, even though their members were not all matched as originally planned. No nutrient allowances had been proposed for Thai, however, so Nicholls' (1951, p. 315) allowances for people in the tropics were modified by taking into account information in Recommended Dietary Allowances of the National Research Council, Food and Nutrition Board (1953) and FAO recommendations concerning caloric requirements (FAO Committee on Caloric Requirements, 1950). The resulting basic table of allowances for Thai people in Bang Chan (Table 16, p. 104) is conservative, and probably represents something like a

[Text continues on page 57 --- Analyst]

125 Table 6. Persons in the Two Groups of Families in the Dietary Survey, Matched According to Age and Sex, So Far As Possible

Group A (6 families, 32 persons)			Group B (5 families, 37 persons)		
Code Number	Sex	Age	Age	Sex	Code Number
521	M	63	64	M	711
621	M	52	53	M	701
995	M	50	48	M	601
991	M	41	42	M	751
981	M	38	39	M	731
971	M	30-33	25	M	603
523	M	23	22	M	605
623	M	21	20	M	713
522	F	60	59	F	712
622	F	49[1]	49	M[1, 2]	703
996	F	44	44	F	602
992	F	37	38	F	732
982	F	35	39	F	752
905	F	31	31	F[2]	704
525	F	20[2]	22	F	604
986	M	15[2]	15	M	606
309	M	12	13	M	754
206	M	11	12	M	485
184	M	10	10	M	755
153	M	10[3]	13	M[2, 3]	705
266	M	10	7	M	167
524	M	5	6	M	733
483	F	13	15	F	702
320	F	12	10	F	229
130	F	10	10	F	128
107	F	8	8	F	180
187	F	7	7	F[2]	706
997	F	3[3]	16	F[3]	753
983	F	6	6	F[2]	707
984	F	3[1]	4	M[1]	756
972	M	1	2	M	735
985	M	3 mo.	3 mo.	M[2, 4]	757
			23		709
			82	F[4]	758
			79	F[2, 4]	708
			15	M[4]	714
			4	M[4]	734

1. Not matched by sex.
2. Extra persons who were not in groups as selected.
3. Not matched by age. In the case of the 10 and 13 yr. old boys, actual body sizes were comparable.
4. No corresponding person in Group A.

126 nutritional floor for this population, beneath which mainten-
146 ance of health cannot be assumed. From this table, allow-
ances were estimated for persons of each age and sex, for
Groups A and B (Table 17, p.109). Estimates were made for
each quarterly period or Round, during which each family was
visited once, and these were averaged to obtain mean per cap-
ita allowances for each group for the year (Table 18, p. 108).
In each group, one woman was in late pregnancy during the
third Round, and a new infant had been added to each group in
the fourth Round. Since young infants in Bang Chan are given
little more than mother's milk, allowances for the fourth
Round were adjusted to account for an additional nursing
mother, but not for the infant itself. Differences in esti-
mated per capita allowances for Groups A and B were trivial
(Table 18, p.108), hence we felt justified in comparing the
estimated food and nutrient intakes of the groups as orig-
inally planned, even though Group B contained 5 persons not
matched with persons in Group A.

Method of Collecting Data

124 The procedures we planned to use were first pretested
125 in several households to give the observer experience and to
be sure that the method would actually work under conditions
in Bang Chan. Following the pretest, each family chosen was
told in a preliminary interview, what the observer wished to
do, and in what ways family members would be expected to
cooperate (Appendix C, p. 109). All families that were asked
to participate in the study consented. They were not noti-
fied in advance just when the observer would visit. Observa-
tions on each family included food intake for a 24-hour
period, 4 times during the year: twice during the rainy
season, and once each during the cool and the hot, dry
seasons.

Survey days were planned so as to avoid special festi-
vals when food preparation might be unusual. Six of the 44
survey days fell on (1)wan (4)phra, the weekly holy day. The
families visited on (1)wan (4)phra did not, however, take
food to the temple on those days, hence food preparation and
consumption was probably not unusual.

Alternate visits to the families in Groups A and B were
planned so that seasonal variations in food supply would not
be apt to account for any observed differences in food intake.
Again, our plan could not be fully carried out. Occurrence of
cooperative transplanting and other interfering circumstances
made some modifications in schedule necessary. Since the ob-
jective was to learn about the usual family food intake, the
study was not carried on when several members of the family
were away from home, or when the participating family was
preparing to feed neighbors who were helping with farm work.
In such a case, the field worker would go to the nearest

124 participating household which had not been visited during that
125 Round of the study. The order and dates of visits to Groups A and B, data from which were used in calculating food and nutrient intakes are shown in Table 7. During three periods of about one month each all visits were to families in Group A, hence some differences in the use of foods between the two groups might be attributed to the order of visits.

Table 7. Order and Dates of Visits to Households Participating in the Dietary Study[1]

Round	Date	Group	Household No.	Round	Date	Group	Household No.
I	May 26, '53	A	67	III	Nov. 26, '53	A	67
	June 4, '53	A	222		Dec. 3, '53	A	222
	June 11, '53[2]	A	2		Dec. 10, '53	A	2
	June 24, '53	A	12		Dec. 17, '53	B	21
	July 2, '53	B	21		Dec. 21, '53[2]	B	23
	July 8, '53	B	23		Jan. 7, '54	A	103
	July 16, '53	A	103		Jan. 14, '54	A	12
	July 23, '53	B	16		Jan. 18, '54	B	16
	July 31, '53	B	25		Jan. 28, '54	B	25
	Aug. 6, '53	B	20		Feb. 4, '54	B	20
	Aug. 13, '53	A	215		Feb. 10, '54	A	215
II	Aug. 27, '53	A	222	IV	Feb. 18, '54[2]	A	67
	Sep. 3, '53	A	2		Feb. 25, '54	A	222
	Sep. 10, '53	A	67		Mar. 4, '54[2]	A	2
	Sep. 24, '53	B	21		Mar. 9, '54	B	23
	Oct. 1, '53[2]	B	23		Mar. 18, '54	B	21
	Oct. 15, '53	A	103		Mar. 24, '54	A	103
	Oct. 22, '53[2]	A	12		Apr. 1, '54	A	12
	Oct. 29, '53	B	25		Apr. 5, '54	B	16
	Nov. 5, '53	B	20		Apr. 25, '54	B	25
	Nov. 12, '53	A	215		Apr. 30, '54	B	20
	Nov. 19, '53	B	16		May 8, '54	A	215

1. Two visits, data from which could not be used due to abnormal circumstances, are not included.

2. (1)wan (4)phra, the Buddhist holy day.

124 On the basis of experience during the pretest, the ob-
125 server began the 24-hour period of observation with an unannounced visit in the afternoon, in time to see the preparation for the evening meal. This proved to have several advantages. A householder whose home had been visited at the evening meal, and who anticipated the observer's return before breakfast, could restrain the dog, if necessary; or the homemaker might postpone washing the rice until the observer arrived to weigh it. Without such cooperation on the part of the homemaker, our records would have been much less complete
[403] than they were. Since few village families had clocks, the time when the homemaker said she would start breakfast was always approximate.

125 Foods were weighed in both the raw and cooked states,
262 and foods given to priests, fed to animals, left over, etc. were weighed so that the actual amount eaten by the family could be calculated. Previously cooked foods included in the survey meals were weighed and raw weights estimated from information obtained in other observations. If possible, snacks were weighed. School children and others who ate snacks away from home were asked to report them to the obser-
128 ver, and weights were estimated. The guides prepared for
262 the observer are included in Appendix C, pp. 110-111. Data were recorded on the schedule, shown in Appendix C, pp. 116-120. and essential information such as the weights of food, after allowing for weight of containers, was later transferred to the shorter form shown in Appendix C, p. 121. As examples some of the data obtained on 3 of the 44 survey days are shown. Examples of notes on procedures in food preparation are included with these records. For examples of notes on the food intake of individuals see Appendix A, p. 97.

Calculation of Nutritive Value of the Diets

Figures from the original records were transferred to the Form for Calculating Raw Weights of Foods Eaten (Appendix C, p. 121), and the edible portion of each raw ingredient consumed was calculated by adjusting the gross amounts according to the use made of the cooked food and the number of family members present. Procedures followed are outlined in Appendix C, pp. 113-115.[1]

Few analyses of Thai foods had been made in Thai laboratories, and most of these were for proximate composition only. Therefore, data from other available sources were used. Since Handbook No. 34 of the United States Department of Agriculture "Composition of Foods Used in Far Eastern Countries" (Leung

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[114] 1. Many of the calculations were checked by Mrs. Mary Barkley Campbell, who made independent use of the data.

et al. 1952) included more of the foods used than any other table, it was used as the primary source of information. Other food value tables (p. 92) were used to supplement it. When two or more values were found for a given food, the more suitable one was selected on the basis of the nature of the food and the method of preparation for sampling, i.e. whether this method was similar to procedures used in Bang Chan. While this study was in progress Tables Showing Food Values for Calculation of Diet Records compiled by the Food and Drug Division, Department of Health (1953) and intended for use in Thailand, were published. These tables, however, included few analyses made in Thailand, and references were not given to the sources from which the values were compiled. For these reasons, the Thai table was used as a supplement only when values could not be found elsewhere.

For convenience in calculation, a table was compiled which contained the most appropriate values available for all items of food eaten on the survey days (Sudsaneh, Campbell and Hauck, 1954). A list of foods for which no nutritive values were calculated, for lack of available information, is given in Appendix C, p. 124. Foods for which values were found elsewhere than in tables, or for which values were imputed by the authors, are listed in Appendix C, pp. 124-125.

Although values for coconut milk were found, they did not seem to be appropriate for the product as prepared in Bang Chan. Coconut milk, (4)naam (2)ka-(4)thi, is a product made at home from fresh coconuts, and used frequently in preparing curries and other dishes. Families in Group A used considerably more water in proportion to coconut meat in making coconut milk than families in Group B, hence a single set of figures was not appropriate for both groups. Since "expressed coconut milk" which had been analyzed in Hawaii (Hawaii Agr. Expt. Sta. Bull. 77, 1936) appeared to be similar to coconut cream, (5)hua (2)ka-(4)thi, as prepared in the village, the composition of coconut milk was estimated by assuming it to contain carbohydrate, protein and fat in the same proportions as "expressed coconut milk" but to be more dilute (Appendix C, pp. 128-129)

Division of food into various food groups, and foods included in each, is shown in Appendix C, p. 126. For each survey day, the adjusted consumption of like foods was added together and the calculated total intake of each food item for each household during one 24-hour period was transferred to the Form for Calculating Nutrients in Foods Eaten. The nutrient content was then calculated. Two such calculations are shown (Appendix C, p. 122). Nutrients available[1] per capita

1. Figures used were for the edible portion of raw food, or the food as used in food preparation, i.e. dry salted radish, shrimp paste, etc., with no allowance for cooking losses.

per day were calculated for Groups A and B by Round and for all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

Although our sample was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

From the viewpoint of parents, the "peak of life" was the time when children were no longer dependent, but productive, unmarried workers whose earnings stayed within the family. Household 16 was such a family, forward looking, progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analyst]

511
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Table 8. Summary of Economic Conditions of the Two Groups of Households Participating in Dietary Studies

Household Group and Code No.	Members	Land: Rai Worked	Land: Rai Owned	Buffalo[1]	Food Cost[2]: Total	Food Cost[2]: Per Cap.	No. of Priests Fed	Sources of Income
Group A								
222	5	0	0	0	2.96	0.59	0	Labor contractor; hired out as labor; boat repair; fishing; vegetables sold; canal digging.
12	3	12	0	1	2.70	0.90	0	Rice production; occasional work in Bangkok.
215	5	14	0	1	1.59	0.32	0	Rice production; wife, a medium.
67	5	16	6	1-0	2.52	0.50	0	Rice production; eggs sold; road jobs.
2	6[3]	20	0	2	3.97	0.66	3	Rice production; "professional cook".
103	8	47	12	5	2.04	0.26	2[4]	Rice production; eggs, fish, mushrooms sold; buffaloes raised.
Mean		18.2	3.0	1.6	2.37	0.49	0.7	
Group B								
23	8[3]	6	0	1	1.56	0.19	0	Rice production; selling fish and vegetables; masseur.
21	4	25	25	3	1.92	0.48	3	Rice production; headman
16	8	47	47	5	2.70	0.34	2	Rice production; vegetables, fruit sold; road jobs.
25	8	50	50	3	7.97	1.00	2	Rice production; eggs, mushrooms sold.
20	9	66	51	11	2.47	0.27	2	Rice production; ceremonialist; doctor; carpentry; trading; eggs collected and sold.
Mean		33.8	34.7	2.6[1]	3.32	0.45	1.8	

1. The buffalo belonging to Household 67 died during the year. In Household 20, the brother who moved in owned several buffalo, thus the total for Group B was more than the number shown.

2. Average cash expenditure per day, in baht. (One baht equalled about 5 cents) Household 222 received rice as part of wages.

3. Babies born during Round IV were not included. In Household 23, a 12-year old son served as temple boy and was away from home much of the time.

4. Rainy season only, when priests could come by boat; counted as 1 in computing average.

2; Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

125 592 511 434 463 [262] fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and [235] housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household [357] 67 were shy. One or the other of the two older children [359] often stayed home from school to look after the baby, so [124] that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed [152] of limited food. The wife was frequently ill. In Household [44] 222, the 14-year old daughter often gathered and sold vege- [388] tables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the [465] activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. [435] Maintenance of a son in school in [871] Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

431 262 792 [719] All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

511 [128] Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 8. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from venders almost every day. They said [554] [922] "Some do not pay money to buy food, but pick or get it from the canal or gardens --this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

433 511 Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

243 [465] 256 [262] Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

244 [554] [845] Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chilies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

222 262 Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)sa-(5)noo flowers were used by 3 families on one day each;

256 Table 9. Use of Home-milled and Polished Rice by Households
262 Participating in the Dietary Study

Group and Code No.	Round of Dietary Study[1]							
	I		II		III		IV	
	HM[2]	P[2]	HM	P	HM	P	HM	P
Group A								
2		x		x		x		x
12		x		x		x		x
67	x			x		x		x
103	x		x			x	x	
215		x		x		x		x
222		x		x		x		x
Total No.	2	4	1	5	0	6	1	5
Group B								
16	x		x			x		x
20		x		x		x		x
21		x		x		x		x
23		x		x		x		x
25	x			x		x		x
Total No.	2	3	1	4	0	5	0	5

1. For dates, see Table 7, p. 58.

2. HM and P stand for home-milled and polished rice respectively.

222 truffles were used as snacks on 2 occasions, and (1) bauaun,
262 (2) phag (2) tob, lotus stems and lotus seeds, the latter as a snack, were used once each. The two groups of families appeared to grow fruits and vegetables and to gather edible
244 wild plants to about the same extent. Two families, one in each group, raised mushrooms during the period when farm work was slack.

5

244 Table 10. List of Edible Plants Grown by the Two Groups
245 of Households Studied

Name of plant[1]	Number of Families	
	Group A	Group B
Green and leafy vegetables		
Basil	3	1
Bean, string	1	-
Chili	6	5
Coral[2]	-	1
(3)Khii-(2)leg[2]	1	1
(4)Khlyb[2]	-	1
(4)Ma-(1)dan[2]	2	1
Morinda	-	1
(2)Sa-(1)daw[2]	-	1
Other vegetables		
Bamboo	1	2
Calabash	3	1
Egg plant	2	1
Gourd	1	-
(2)Kha-(1)cauaun	1	-
Mushrooms, straw	1	1
West Indian pea tree[2]	1	1
Fruits		
Banana	6	5
Guava	1	1
Jujube	1	-
(4)Ma-(1)dan[2]	2	1
Mango	1	1
Manila tamarind	1	-
Star gooseberry	1	-
(2)Ta-(1)koo	-	1
Spice plants		
Borgamot	6	5
Galangal	6	5
Ginger	2	-
(2)Ka-(1)chaaj	1	2
Lemongrass	6	5

1. See list, Appendix C, p. 126 for botanical names.

2. Trees

235 Eggs and poultry. - Every household which took part in the survey raised chickens, and 3 of the 11 households had ducks also. In both groups of families, most of the eggs produced were sold. Home consumption of eggs on survey days was small.

228 Fish. - Each family studied had a fish pool. One family only, Household 25 in Group B raised tilapia. They began tilapia culture during the third round of the study, too late to ascertain how this might affect fish consumption in the family.

251 Preservation of Foods at Home. - Home food preservation was practiced to a very limited extent only, fish products being the principal ones produced.

Dried fish. - Families in both groups salted and dried fish throughout the year whenever they were available in excess of immediate needs.

Fermented fish. - In 10 of the 11 households, fermented fish was prepared. The 6 families in Group A had prepared a total of 30 kg., and 4 of the 5 families in Group B, a total of 29 kg. The largest amount prepared in one household, for one year was 10 kg.

Shrimp paste. - Because shrimp were caught in insufficient quantity, shrimp paste was prepared by only 6 of the 11 families. Four families in Group A prepared a total of 26 kg., and 2 families in Group B prepared a total of 7 kg. These amounts were insufficient for their needs.

Fishsoy. - One family only, in Group A, prepared fishsoy. All others in both groups purchased this product.

Buffalo meat. - During the survey year, the buffalo belonging to one family died. Some of the meat was used fresh for curry, and the remainder was salted, dried and sold.

Comparison of Caloric and Nutrient Intakes of the Two Groups With Each Other and With the Estimated Allowances.

128 146 In Table 11, the estimated calories and nutrients available to the two groups of families, are shown together with the estimated allowances.

146 On the average, the number of calories, and amounts of protein, iron, niacin and ascorbic acid in the diets of persons in Group B, the apparently better nourished group, approximated or exceeded the conservative allowances. For Group A, this was true for niacin and ascorbic acid only, the calories being 11%, protein 15% and iron 21% below the allowances.

146 Table 11. Comparison of Calories and Nutrients Available to Groups A and B, with Each Other and with the Estimated Allowances

Average per capita per day

	Estimated amounts available[1]		Allowance	
	Group A	Group B	Group A	Group B
Food energy, calories	1731	2009	1935	1955
Protein, gm	50	59	59	59
Fat, gm	14	22	-	-
Carbohydrates, gm	342	384	-	-
Calcium, mg	129	194	650	650
Phosphorus, mg	847	895	-	-
Iron, mg	6.9	8.4	8.7	8.8
Vitamin A, I.U.	2047	1340[2]	2522	2548
Thiamine, mg	0.68	0.76	0.93	0.96
Riboflavin, mg	0.37	0.28	1.07[3]	1.06
Niacin, mg	11.3	11.5	9.3	9.6
Ascorbic acid, mg	27	23	24	24
Thiamine/calorie ratio	0.39	0.38		
Thiamine/non-fat calorie ratio	0.42	0.42		

1. Estimates based on values for edible portion without allowance for cooking losses. Analyses for a number of common foods were incomplete (See Table 13, p. 75).

2. No values found for flowers of Sesbania roxburghii, therefore these are not included.

3. Slightly higher allowance for Group A because of presence of one more nursing mother in this group than in Group B.

146 Average intakes of riboflavin were estimated to be about a third, or less, of the allowances. Estimates of calcium intake were, on the average, only 20% of the allowance for Group A, and 30% of that for Group B. Although the calcium allowances were thought to be conservative, estimated requirements based on calcium balance experiments are believed by some investigators to reflect usual intake rather than need, and the extent to which man may adapt to a low calcium [141] diet is still undetermined. Among residents of Bang Chan, no evidence was noted other than short stature and small bones, which might suggest a calcium deficiency.

The vitamin A value of diets of both Groups A and B [164] appeared to be low. Clinical signs possibly associated with vitamin A deficiency, i.e. xerosis and phrynoderma, occurred among residents of Bang Chan (Hauck, 1956), and as would be expected from the method of selection of the two groups, such skin signs were more prominent among members of Group A than Group B. On this basis one would expect the vitamin A intake of Group A to be less than that of Group B, whereas the reverse appeared to be the case on the survey days; but the higher estimated vitamin A value for the diets of Group A than Group B may not represent a real and consistent difference. The yellow (2)sa-(5)noo flowers, for which no nutrient values were found, were used rather liberally by some families in Group B at one season and may have contributed vitamin A value. Moreover, owing to unavoidable changes in the plan for alternating visits to the two groups of families, those in Group B were visited more often when the level of water in the canals was low and the leafy water plants were not available. The unusual intake of a large amount of yellow sweet potato by one family in Group A on one survey day may also have tended to [263] distort the picture. Families in Group A, however, used substantial amounts of sweet basil leaves, whereas in Group B, this herb was used for seasoning only.

The estimated amount of thiamine available per capita, before cooking, was 73% of the estimated allowance for Group A and 79% for Group B. Since over four-fifths of the thiamine content of the foods used by each group came from rice, and the thiamine loss when rice is cooked as it was in Bang Chan has been estimated as 75% or more (Tmangraksatve and Srisukh, 1955) the actual per capita intake of thiamine must have been below the value of 0.23 mg. per 1000 calories which the Food and Nutrition Board, National Research Council (1953) con- 146 sidered to be the minimal requirement for adults. According 164 to Nicholls (1951, p. 87), a ratio of Thiamine: Non-fat Calories of 0.3 - 0.35 is borderline and too low, and ratios below 0.3 are associated with beriberi-producing diets. That the diets of some of these people, as eaten, were in fact dangerously low in thiamine, is attested by the occurrence of beriberi and history of beriberi among them. Of the 15 persons, 20 years of age or older in Group A, 7 had knee jerk

146 absent, and in 6 of these, ankle jerk was absent also. In
164 Group B, the apparently better nourished group, one adult and two school boys had knee jerk only absent. In Group A, Household 12, the father, mother and 21 year old son all had both knee jerk and ankle jerk absent. The son was diagnosed by the examining physician as having frank beriberi at the time of the medical inspection. In Household 2, the father and 23 year old son had both knee jerk and ankle jerk absent, but the mother had no signs of thiamine deficiency. In Household 67, mother and father had both knee jerk and ankle jerk absent. The mother had lost 3 of her 6 children when they were 3 or 4 months old, with symptoms such as convulsions and voiceless crying, suggestive of infantile beriberi. When the third child died, the mother had symptoms of beriberi, and the physician who conducted the medical inspection considered the death of this child to be due to infantile beriberi. Clearly the thiamine content of diets of some of the families studied was inadequate to meet their needs under varying conditions of activity and stress. Beriberi was the one frank deficiency disease observed while these studies were underway in Bang Chan (Hauck, 1956).

146 Fat provided only about 9 to 10% of the calories. Coconut oil contains only about 0.5% of linoleic acid (Anantakrishnan, et al., 1949), but the essential fatty acid content of the diet as a whole was not estimated.

146 In summary, although the estimated nutrient intakes of
164 Group B were in general more favorable than those of Group A, the contrast between the two groups was not striking. Perhaps we should have anticipated this from the fact that the groups did not present a clear contrast in apparent nutriture. In Group A, 19 of the 30 persons examined had a total of 36 possible signs of nutritional deficiency. In Group B, 8 persons had a total of 9 such signs. Judging by both the apparent nutriture of the household members, and by their estimated nutrient intakes, the diets of both groups were in need of improvement.

146 Contribution of Food Groups and Certain Common Foods to the Nutritive Values of the Diets

[128] Contribution of Food Groups and Individual Foods. - The percentages of the total calorie and nutrient intakes provided by various food groups for households in Group A and B are shown in Table 12.

146 Rice and other cereals. - Rice was the staple food,
262 which provided over 4/5 of the calorie intake and more than half of the protein for both groups. Much of the difference in calorie and protein intake of the two groups was due to the greater rice consumption of Group B. Rice was also the

[Text continues on page 72--- Analyst]

Table 12. Percentage[1] of Total Caloric and Nutrient Intakes Provided by Each Food Group

Food Group	Family group[2]	Calories	Protein	Fat	Carbohydrate	Minerals			Vitamins				
						Ca	P	Fe	A	B_1	Ribo.	Niacin	C
Rice and other cereal	A	85	57	23	92	23	75	52	1	82	38	66	-
Home-milled rice		20	14	7	21	8	24	16	-	26	13	25	-
All other		65	43	16	71	15	51	36	-	56	25	41	-
	B	82	54	16	93	16	75	46	-	84	51	64	-
Home-milled rice		9	6	2	10	3	12	7	-	14	9	13	-
All other		73	48	14	83	13	63	39	-	70	42	51	-
Fish and other animal foods	A	7	37	40	-	34	18	15	4	7	21	28	-
	B	7	40	29	-	43	19	15	10	8	29	29	-
Green and leafy vegetables	A	1	2	1	-	14	1	8	79	2	31	1	25
	B	1	2	1	1	23	1	17	76	2	10	2	38
Other vegetables	A	3	3	3	3	15	5	13	15	7	8	3	58
	B	2	3	4	2	8	4	7	5	5	8	4	37
Coconut and products (other than oil)	A	2	1	18	1	-	-	-	-	-	-	-	-
	B	3	1	21	1	-	-	-	-	-	-	-	-
Fruit	A	1	-	1	1	3	1	2	2	2	2	1	17
	B	-	-	-	-	2	1	1	9	1	2	-	23
Fats and oils	A	1	-	14	-	-	-	-	-	-	-	-	-
	B	3	-	29	-	-	-	-	-	-	-	-	-
Sugar	A	1	-	-	2	4	-	9	-	-	-	1	-
	B	2	-	-	3	4	-	14	-	-	-	1	-
Miscellaneous and spices	A	-	-	-	1	7	-	1	-	-	-	-	-
	B	-	-	-	-	4	-	-	-	-	-	-	-

1. Figures rounded to nearest whole number. The dash indicates value less than 0.5%. Analyses for a number of common foods were incomplete (see Table 13, p. 75).
2. Group A included apparently less well nourished families, Group B, apparently better nourished families.

most significant source of phosphorus, iron, thiamine, riboflavin and niacin in these diets. Although the calcium content of rice is low[1], about 23 and 16% of the estimated calcium content[2] of diets of Groups A and B respectively came from the cereal groups. Glutinous rice and various products such as noodles made of rice flour were eaten occasionally in small amounts. These and other cereals and cereal products, such as wheat bread and popcorn contributed little to the total nutritive value of the diets.

Animal products other than pork fat. - Fish and other foods of animal origin furnished about 2/5 of the protein in the diets of both groups. From 20 to 30% of the riboflavin and niacin and substantial amounts of phosphorus and iron were provided by this food group, also. For families in Group A, these animal products provided substantially more fat than the group of fats and oils as such, whereas Group B obtained about the same amount of fat from these two food groups. The estimated contribution of vitamin A from this group was small. Specific analyses for most of the varieties of fish used in Bang Chan were not available, however, hence many calculations were made on the basis of average values for "fat fish," "lean fish," and "dried fish."

Although a substantial part of the calculated calcium content of the diets came from animal products, the amounts were only about 8 and 9% of the estimated allowances for Groups A and B respectively. Fermented fish are reported to contain 1126 mg. per cent of calcium (Knudson, 1955) but the amounts eaten were relatively small. Two families only in Group A used a total of 217 grams of fermented fish on survey days, and two families in Group B used a total of 608 grams. These amounts, though they represented servings of only 20 grams per person for the two families in Group A, and of 36 grams per person for those in Group B, nevertheless increased the estimated average calcium intakes substantially, so that 43% of the calcium in diets of Group A, and 34% in diets of Group B, were provided by animal products. The tiny dried fish which are eaten whole, were not used by the families studied on any of the 84 survey days.

On the average, the contribution of animal products other than fish to the nutrient content of these diets was small.

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[256] 1. According to Knudson (1955), addition of calcium carbonate to rice during the milling process was not practiced in Thailand.

[276] 2. No attempt was made to estimate calcium intake from betel chewing, although this might be considered a dietary source of calcium. Six of 15 persons twenty years of age or older, in Group A, were betel chewers, whereas among 14 persons over twenty in Group B, 9 chewed betel regularly and one occasionally.

[146] Eggs were eaten occasionally; pork and beef were bought in-
[262] frequently and in small amounts by some families. One family only, ate chicken; other meats eaten on survey days included buffalo, frogs, eels and field rats.

Vegetables. - More than three quarters of the estimated vitamin A value of these diets was provided by green and leafy vegetables, although the pale yellow sweet potatoes, eaten in quantity by one family in Group A increased the vitamin A from other vegetables substantially. The greater use of swamp cabbage, a wild aquatic plant by families in Group A, may be explained by the fact that more visits to this group occurred when the water level in the canals was relatively high. Families in Group B, however, used a greater variety of greens, especially leaves from a number of trees. For [263] families in Group A, sweet basil contributed substantially to the vitamin A and riboflavin content of the diets, whereas families in Group B used this herb in trivial amounts for flavoring. No nutrient values were found for lemongrass, which was used regularly in substantial amounts for flavoring. Persons in Group B got a greater percentage of their calcium and iron from green than from other vegetables, whereas those in Group A obtained as much or more of these nutrients from other vegetables.

Nearly 3/5 of the ascorbic acid intake of Group A was provided by other vegetables as compared to 1/4 from green vegetables, whereas Group B obtained about equal amounts of ascorbic acid from green and other vegetables. Egg plants[1], calabash and white radish were most commonly used in quantity. Onion, garlic and dried chilies were used daily, but in smaller amounts. With the exception of one family which ate a large amount of sweet potato on one survey day, consumption of tubers, i.e. sweet potato and taro, was small and usually in the form of snacks eaten by children. Legumes were seldom eaten in Bang Chan. Two families had bean sprouts on survey days, and children occasionally ate mung beans and peanuts as snacks,

Fruit. - Although technically a fruit, the coconut does not resemble fruits as a group in its contributions to the diet, hence coconut and other fruits are treated here as two sub-groups. Coconut meat, and its products, coconut milk and coconut cream (Appendix C, p.128), were used almost daily in the participating households. These coconut products contributed about 1/5 of the total fat of the diet, for Group A,

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[244] [252] 1. Many varieties of eggplant are grown in Thailand. Three were used on survey days: the pea-size variety which was frequently put in hot curry, a round type which was served raw with chili sauce and a long variety which was either panned with a small amount of fat or used in curry.

146 more than fats and oils as such.
262

Bananas were grown by all families that participated in the study, but were eaten only occasionally, primarily as snacks. Tamarind and lime were used often in small amounts in making sour curry and chili sauce, and bergamot rind was used for seasoning. Papaya and mango, both of which are good sources of vitamin A and C, were each eaten once only during the survey. The green papaya was used in curry. Fruits are relatively abundant in Thailand, the year round, yet fruit made minor contributions to the diets of families studied in Bang Chan.

Fats and oils. - Fats were used in small amounts to pan fish, meat, eggs and vegetables, and provided about 1/7 of the total fat in the diet of Group A, and 2/7 for Group B. Coconut oil, which was less expensive than pork fat, was more often used in Group A.

Sugar. - Palm sugar was used in small amounts in the preparation of many "with-rice" dishes, and occasionally in snacks, i.e. guava dipped in a mixture of sugar, salt, chili, mung beans cooked in palm syrup and the like. The amounts used were small, and the contribution to nutritive value was slight. By Western standards, the consumption of sugar in Bang Chan was almost negligible.

146 Spices. - Spices were commonly used in food preparation,
263 particularly in hot dishes (i.e. those made with chilies) but little information on their nutritive value is available.

146 Alcoholic beverages. - In the families surveyed, all men
273 except the elderly father in Household 21 drank occasionally, but most of the women did not. The husbands in Households 12 and 67 drank heavily at times. No estimate can be made of the contribution of alcoholic beverages to caloric intake in these households.

146 Summary of Nutrient Contributions of Foods Commonly
262 Eaten in Two Groups of Households. - The contribution in terms
(285) of calories and nutrients of certain foods used by 25% or more of the families studied, i.e. by 3 or more of the families on at least one survey day is shown in Table 13. Items selected for inclusion in this table are those which either made significant contributions to the nutrient content of the diets of Groups A and B respectively, or were major items in terms of amounts used or frequency of use. For certain items used frequently for seasoning, information on nutritive value was too scant to warrant inclusion in this table. Figures given are for average consumption per capita per day, based on all persons in the specified groups, and all survey days. For items used by all or most families every day, such as rice, fresh fish, chili, coconut products, and sugar, the figures represent approximately the usual daily per capita consumption.

Table 13. Contributions in Terms of Calories and Nutrients of Selected Foods Commonly[1] Eaten by Groups A and B

Foods	Frequency[1] of Use	Average values per person per day											
		Wt.	Calories	Protein	Fat	Carbohydrates	Ca	P	Fe	Vit. A	B_1	Ribo.	Niacin	Vit. C
		gm		gm	gm	gm	mg	mg	mg	I.U.	mg	mg	mg	mg
Group A														
Rice		399	1440	28	3	316	28	634	3.5	(0)[2]	0.54	0.14	7.5	(0)[2]
Eggs	9	4	8	1	1	0	3	8	0.1	48	0.01	0.01	0	0
Fish, fresh	31	57	58	10	2	0	19	124	0.6	0	0.03	0.04	2.4	0
Fish, dried	8	6	12	3	0	0	4	2	0.2	0	0	0.02	0.2	0
Fish, fermented	2	2	2	0	0		19			0	0	0.01	0	
Fishsoy		5	2	0	0					0	0	0	0.1	
Shrimp paste	33	3	3	1	0					0	0	0	0.2	
Swamp cabbage	4	20	3	0	0	1	9	6	0.3	750	0.01	0.01	0.1	4
(2)Phag (2)ka-(2)cheed	4	3	1	0	0		6		0.1	204	0	0.01	0	2
Sweet basil		4	4	0	0	1	3	2	0.1	504		0.09		20
Calabash	3	11	2	0	0	0	1	2	0.1	8	0	0.01	0.1	18
Chili, fresh	17	4	1	0	0	0	0		0	126	0	0	0	8
Eggplants	10	13	3	0	0	1	2	5	0.1	4	0.01	0.01	0.1	1
Radish, white	5	7	2	0	0	0	0	6	0	1	0	0	0	1
Sweet potato	1	18	22	0	0	5	5	9	0.1	74	0.02	0.01	0.1	14
Banana	2	3	3	0	0	1	0	1	0	14	0	0	0	0
Coconut milk[3]	22	144	30	0	2	2								
Coconut oil		2	15	0	2	0	0	0	0	0	0	0	0	0
Lard		-	4	0	0	0	0	0	0	0	0	0	0	0
Sugar, palm		6	22	0	0	5	5	2	0.6	0			0	
Total			1637	43	10	332	104	799	5.8	1733	0.62	0.36	10.8	21
Total from all foods			1731	50	14	342	129	847	6.9	2047	0.68	0.37	11.3	27

See footnotes p. 76.

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Table 13, cont.

Foods	Frequency[1] of Use	Wt.	Calories	Protein	Fat	Carbohydrates	Ca	P	Fe	Vit. A	B_1	Ribo.	Niacin.	Vit. C
		gm		gm	gm	gm	mg	mg	mg	I.U.	mg	mg	mg	mg
Group B														
Rice		438	1579	30	3	345	29	654	3.7	(0)	0.56	0.15	7.4	(0)
Glutinous rice		8	30	1	0	7	1	12	0.1	(0)	0.01	-	-	(0)
Eggs	7	5	9	1	1	0	3	10	0.1	58	0.01	0.01	0	0
Fish, fresh	32	72	75	13	2	0	25	158	0.7	0	0.04	0.05	3.0	0
Fish, dried	10	12	22	5	0	0	7		0.3	0	0.01	0.03	0.5	0
Fish, fermented	2	4	5	1	0		46			0	0	0.01	0	
Fishsoy		3	2	0	0					0	0	0	0.1	
Shrimp paste	28	2	3	1	0					0	0	0	0.1	
Swamp cabbage	5	9	2	0	-	1	6	4	0.2	542	0.01	0.01	0.1	3
(2)Phag (2)ka-(2)cheed	2	3	1	0	0	0	6		0.1	198	0	0.01	0	2
Calabash	1	10	2	0	0	0	1	2	0.1	7	0	0.01	0.1	1
Chili, fresh	8	3	0	0	0	0	0		0	48	0	0	0	6
Eggplants	3	5	1	0	0	0	1	2	0	2	0	0	0	0
Radish, white	2	12	3	0	0	0	4	3	0.1	3	0	0	0	2
Coconut milk[3]	16	76	52	1	4	3								
Coconut oil		3	27	0	3	0	0	0	0	0	0	0	0	0
Lard		3	30	0	3	0	0	0	0	0	0	0	0	0
Sugar, palm		11	43	0	0	11	9	4	1.3	0			0.1	
Total			1836	53	16	367	138	849	6.7	858	0.64	0.28	11.4	14
Total from all foods			2009	59	22	384	194	895	8.4	1340	0.76	0.28	11.5	23

1. All items were eaten by 25% or more of the participating families. Under "frequency of use," the number of times the item was used as a main ingredient of a "with-rice" dish is indicated for 24 survey days for Group A and 20 survey days for Group B.
2. ( ) means imputed value; 0 means none or insignificant amount; - means no values available, but probably contains measurable amount; blank space means that no information was found.
3. Different values were used for the calculation of nutrient content of coconut milk for Groups A and B (see Appendix C, pp. 128-129).

146 For items used less frequently, the figures are correspond-
262 ingly less than the usual amount eaten. Thus, sweet potato, which is represented as 18 grams per day per person in Group A, actually appeared on 3 records only. One family of 8 persons ate 1200 grams of sweet potato at one meal and a substantial amount later the same day. Most items appear on the lists for both groups, but sweet potato, sweet basil and bananas were included on the list for Group A only, and glutinous rice which is used as a sweet in this area, appears on the list for Group B only. Note that a few common foods account for most of the nutrients in the diets of both groups. These common foods account for only about 80% of the calcium and vitamin A value and slightly less of the ascorbic acid in the diets of Group A. The list for Group B accounts for about 70% of the calcium and 60% of the ascorbic acid in the diets of this group. The variety of green leaves used once or twice only on survey days by Group B, and the number of different seasonal fruits used by both groups in small amounts as snacks, probably account for this.

264 Contribution of Snacks to the Nutrient Content of Diets. -
[355] On the average, 4 out of 5 children had one snack per day,
262 whereas only one adult in 6 did so. The following items appeared most commonly: various kinds of fruit, 40 times (orange 7, banana 6, pineapple, watermelon and mango each 5 times, guava, jujube and Manila tamarind each 2 times, olives, rambutan, rambai, star gooseberry, (2)ta-(1)koo and Thai nutmeg each once,) coconut and bread each 13 times, glutinous rice 8, mung bean 7, truffles 6, products made of rice flour 6 times, and a variety of other items including rice noodles, sweet potato, taro, bean sprouts, lotus stalks, lotus seeds, popcorn, products made of cassava flour, sugar cane, pork and milk from 1 to 4 times each. Salt, and/or palm sugar were
[146] eaten with a number of the snacks. Although they contributed only about 2% of the total calories, and from 1 to 3% of most nutrients, snacks contributed 16% of the total ascorbic acid for Group A and 11% for Group B.

Seasonal Variation in Food Preparation, Meal Patterns, Food Costs and Calorie and Nutrient Value of Foods Eaten

128 In Table 14, a summary including the number of meals
258 prepared, time spent in meal preparation, number of "with-
264 rice" dishes, and cash expenditures for food is given by
[435] rounds, for families in each group.

252 Number of Meals Prepared. - Food was cooked twice on
512 each survey day in 3 of 6 households in Group A and 3 of 5 households in Group B. Heavy farm work or vending which kept the mother away from the house sometimes accounted for once-
[443] a-day food preparation. One housewife who took food to market in Bangkok, cooked food twice a day only during the period shortly before the birth of a child, when she was not vending.

[Text continues on page 79 --- Analyst]

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Table 14. Summary Concerning Meal Preparation, by Rounds[1] for Two Groups of Households Studied

Description of Items	Group A				Group B			
	Round I	Round II	Round III	Round IV	Round I	Round II	Round III	Round IV
No. of meals prepared - 2	5	4	4	4	4	4	5	3
- 1	1	2	2	2	1	1	0	2
Range of cooking time, hrs.	0.8-6.0[2]	1.0-2.6	1.3-2.7	1.3-4.0	1.7-3.2	1.4-4.1	2.2-3.3	1.0-3.2
Average cooking time, hrs.	3.7	2.0	1.8	2.4	2.5	3.1	2.8	2.0
Range of no. of dishes prepared	2-8	2-5	1-4	1-4	2-5	2-7	2-6	2-5
Average no. of dishes prepared[3]	5	3	3	3	3	5	3	3
Range of no. of hot dishes	0-3	0-2	0-2	1-3	0-2	1-2	1-2	0-2
Average no. of hot dishes	1	1	1	2	1	2	1	1
Range of no. of mild dishes	2-7	0-3	0-3	0-3	1-3	1-5	1-4	1-3
Average no. of mild dishes	4	2	2	1	2	3	2	2
Range of cash expenditure for meals/day (bahts)[4]	1.53-4.45	0.61-6.30	0.12-4.52	0.66-2.88	0.71-16.24	1.07-11.86	1.12-4.13	0.45-3.47
Average cash expenditure for meals/day (bahts)	3.01	2.96	2.39	1.70	4.85	4.11	2.61	1.36

1. For dates, see Table 7, p. 58.

2. If time waiting for a vender was not counted, the range of cooking time would be 0.8-4.1 and the average would be 3.2 hours.

3. "With-rice" dishes only. Rice is always cooked whenever a Thai meal is prepared.

4. One baht was equal to 5 cents at the time of studies.

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7
Bang Chan

252 Another, who had time during Round IV to prepare food twice a
262 day, preferred to prepare more in the morning when she expected
264 to offer food to her son who had just been ordained. In two
512 instances an evening meal was not prepared because the father
[525] and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

262 Cost of Food Purchased. - The lowest cash expenditure
435 for food by any household on a survey day was 0.12 baht, for
511 a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year pro-
262 gressed was apparent. Most of the rice was sold at the end
432 of Round III. The cash went for capital investments, not
[221] food, during Round IV. With time to drain ponds and to fish intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

146 Calorie and Nutrient Value of Foods Eaten. - The
221 seasonal variation in calorie and nutrient intake of the two
[128] groups of families is shown in Table 15. As one would expect, the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 --- Analyst]

146 221 Table 15. Seasonal Variation in the Average per Capita Intake per Day of Calories and Nutrients by Two Groups of Households

	Family Group	Round[1] I	II	III	IV
Calories	A	1906	1560	1752	1708
	B	2262	1757	2156	1862
Protein, gm	A	53	44	48	55
	B	59	49	59	68
Fat, gm	A	15	15	14	13
	B	25	21	19	21
Carbohydrate, gm	A	382	302	349	334
	B	437	334	427	340
Calcium, mg	A	239	84	86	107
	B	243	181	223	128
Phosphorus, mg	A	953	782	734	917
	B	1033	737	960	851
Iron, mg	A	9.0	6.4	5.6	6.6
	B	7.7	7.1	12.5	6.1
Vitamin A, I.U.	A	4414	582	1392	1802
	B	1337	1939	1197	884
Thiamine, mg	A	0.86	0.63	0.59	0.63
	B	0.92	0.57	0.72	0.57
Riboflavin, mg	A	0.61	0.27	0.34	0.24
	B	0.43	0.24	0.27	0.25
Niacin, mg	A	13.2	11.1	9.2	11.8
	B	14.1	9.2	11.7	11.2
Ascorbic acid, mg	A	48	19	21	18
	B	15	45	21	15

1. For dates of Rounds, see Table 7, p. 58.

higher calorie intake in these periods. In general, the level of calories, phosphorus and thiamine and to some extent the protein varied with the rice consumption. The greater consumption of fish when fish ponds were drained during Round IV, accounted for the relatively higher protein content of the diets of both groups at this time, even though calorie intake was not at its peak. During this period, animal foods provided 45 and 53% of the total protein intake of Groups A and B respectively, whereas for the year as a whole, 37 and 40% of the protein intake of these groups was of animal origin.

The relatively high vitamin A and C intakes of families in Group A, during Round I as compared to other periods, was associated with a higher consumption of green leafy vegetables, and the use of sweet potatoes in quantity by one family. During Round II, families in Group A had few green vegetables, and their average intake of vitamin A was very low. The use of papaya, obtained as a gift, by one family in Group B during Round II raised the average ascorbic acid intake for this group substantially. Better average intakes, by one or both groups, of vitamin A, thiamine, riboflavin and calcium during the first Round, were not such as to provide liberal body stores to be called upon when food supplies of these nutrients were low.

SOME RECOMMENDATIONS FOR IMPROVEMENT OF DIET AND NUTRITURE AMONG RESIDENTS OF BANG CHAN

Attempts to improve nutritional status in Bang Chan should be directed both toward increasing the supply and intake of certain nutrients and toward improvement of sanitary conditions so that intestinal infestation, diarrhea and other related illnesses will not lead to needless loss or increased requirement of nutrients.

Solution of the related problems of disposal of human excreta and provision of a year-round safe water supply are in the province of the sanitary engineer. Intestinal parasitism was common, but little can be done through treatment of individuals so long as the water supply is contaminated. Rain water was preferred for drinking, so provision of adequate and sanitary storage for rain water, coupled with sterilization of water from ponds and canals when rain water is not available, would do much to ensure safe drinking water. The custom of giving mother and infant boiled water only, during the post-partum rest period, provides a starting point for extending use of boiled water to other ages and conditions.

and conditions. An improved stove[1], by making more efficient use of fuel, would reduce one obstacle to boiling drinking water. The alternative, chemical treatment, might be regarded as "medicine," and people might be more willing to spend money for this than for firewood. Water supply and latrine facilities at the school and wat should be such as to set a good example. Since links between sanitation and health have not been established in the minds of the villagers, no proposed solutions are apt to be effective without a strenuous and continued educational campaign.

Since the nutrient content of many foods used in Bang Chan has not been ascertained, the responsible Thai government personnel should as soon as possible seek to analyze those more commonly used, in particular fish, fermented fish, shrimp paste, fish paste and fishsoy, both commercial and home-made products, edible green leaves and flowers. Discovery, among the many varieties of fish used, of some which are good sources of vitamin A, would be particularly useful. Of the calculated vitamin A values in diets for the two groups of households studied 90% or more of the vitamin A value was from vegetable sources, therefore in the precursor form. Among foods of animal origin which were used, eggs were the only food known to contain appreciable amounts of vitamin A. With more, and more complete, analyses of Thai foods, some of unusual nutritive value would probably be discovered. Also, information on composition of coconut milk should permit reasonably accurate calculation if the weight of coconut meat and the resulting product are known. Use of figures now available in food value tables, for coconut milks as prepared in Bang Chan, would lead to gross overestimate of caloric value and fat content of diets.

In using present knowledge to improve nutrient intake, emphasis should be placed on changes which would improve the everyday diet for all members of the family. We would start with familiar foods and methods of preparation, stressing the types of food which should be produced and used in increasing amounts. Advice of specialists in agriculture at nearby Kasetsart University should be sought in making choices appropriate to the location, among vegetables which would enhance the nutrient content of the diet, particularly in vitamin A value and riboflavin. Since garden area is often limited, vine vegetables which can be trellised may be useful. In introducing innovations, we would, if possible, build on procedures known to be acceptable to some respected persons in the community.

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1. The "Hyderabad Smokeless Chula" would be useful in Bang Chan. In Smokeless Kitchens for the Millions, S. P. Raju (1953) includes designs for models with one to three cooking holes and hot water pot (The Christian Literature Society, P. O. Box 501, Park Town, Madras, India).

000 First steps toward a better diet are suggested by the best dietary practices observed. Although the calculated intake of no family on any survey day approximated or exceeded the estimated allowances for all nutrients, sharp contrasts were evident in individual records. Two sample calculations in Appendix C (pp. 121-122) represent one of the better and one of the poorer records obtained. The food for Household 12, on Jan. 14, 1954 consisted chiefly of polished rice, fish, and non-leafy vegetable, with seasonings. In contrast, on July 23, 1953, Household 16 used home-milled rice, and about 60 gm. per person of swamp cabbage, with other vegetables and fish. These choices enhanced the potential nutritive value of the diet markedly without increasing its cash cost. Family labor was involved, however, in gathering greens and milling rice.

000 Since rice is the chief solid food for all ages, improving this major item will be considered first. An important step would be to teach the people to cook rice with just enough water so that all would be absorbed. The Thai government has sought to encourage this. So long as the practice of cooking rice in excess water persists, much of its vitamin and mineral content will be discarded, and efforts to improve the nutrient content of rice will be largely nullified. Some rice water could be used as a beverage, and for cooking certain vegetables which are commonly served with a thickened sauce. This would be preferable to discarding the rice water, but encouraging its use must be considered as an alternative to cooking rice without excess water, since the two practices are mutually exclusive.

Use of under-milled and processed rice, and of the rice polishings, has the advantage that a large part of the original B-complex content is conserved, whereas vitamins for enrichment are at present imported, and are apt to be for years to come. Since home milling persisted to some extent in Bang Chan, it might be encouraged, in some families. One highly respected headman continued to mill rice at home, hence the "prestige value" of white rice may not be so important in Bang Chan as it is among city Thai, who sometimes regard undermilled rice as "prisoner's food." The time and effort involved in home milling, however, may deter those who have given it up from returning to it; and since deepening the main canal has made the mill accessible to more families the year round, a program based on the assumption that commercial milling of rice will increase is probably more realistic than an attempt to encourage the return to home milling where it has been abandoned.

256 At present, no processed rice is made in Thailand. A plan to buy and install a Malekizing plant to process rice for the Royal Thai Navy was announced in 1953, but the plan has not materialized. Enriched rice has been sold by the Thai Rice Company for some years, but the best grades only,

256 90 to 100% unbroken grains, are used. To benefit rice farmers, enrichment should either be done at the nearby mills, or premix sold locally, and farmers taught to mix it with
[146] their own rice. Because the premix used and marketed by the Thai Rice Company contains riboflavin as well as thiamine, niacin and iron, the treated grains can be readily distin-
000 guished from ordinary rice. Enrichment at the mill would be convenient, but would probably entail some government supervision and would not automatically ensure a better nutrient intake unless people learned the value of the conspicuous yellow grains. From this standpoint, separate purchase of premix might have advantage, at least in the initial stages of the program.

As far as we know, use of rice polishings in preparing "with-rice" dishes has not been explored in Thailand. Incorporation of rice polishings into a variety of soups and other "with-rice" dishes which would be acceptable to the Thai palate should not be difficult for the Thai home economist interested in experimental cookery. Nutrients usually lost in milling could thus be returned to the human diet. If adopted this procedure could be effective even in families that cling to the customary method of cooking rice in excess water. One old lady with beriberi, whose doctor had prescribed rice polishings, said she found them tasty. Information on the health value of rice polishings would probably be received more favorably if homemakers were shown acceptable ways of using them. A watery extract of the polishings might be used as a stop-gap preventive of thiamine deficiency while the slow process of changing food habits is going on. Such an extract could be used as a strengthening medicine for women during pregnancy and lactation, for infants and young children, and for those doing heavy field work, i.e. for vulnerable
[159] groups. The "second class doctors" at Minburi, the priests who practice healing, other traditional practitioners and midwives, because of their basic desire to help, would provide natural centers of information for this purpose.

Efforts being made by Thai government agencies to encourage eating more "with-rice" and less rice should be continued. A Thai co-worker suggested that "an educational program enjoining less peppery forms of with-rice would have the effect of encouraging consumption of a larger proportion
[262] of with-rice" (Sharp et al. 1953, p. 278). Various food items including those with a hot taste, were sometimes said to be bad for children, pregnant women, sick persons, etc., but seldom was any food mentioned as being good to eat under these circumstances. The concept that hot tasting foods are not healthful might be coupled with the idea that more generous amounts of mild dishes, especially those including green and
[242] yellow vegetables, should be used instead. The most widely used vegetables in Bang Chan were the wild swamp cabbage, and (2)phag (2)ka-(2)cheed, both leafy aquatic plants. Planting more (2)phag (2)ka-(2)cheed, and liberal use of both of these plants while they are available should be encouraged.

000 Growing other kinds of green and yellow vegetables should be fostered. Although vitamin A value and riboflavin content appear to be critical, in choosing vegetables to be stressed, specialists in agriculture should consider greens [262] with high calcium and low oxalic acid content also. A variety of edible leaves of trees were used by a few families; some used sweet basil as a vegetable rather than just a seasoning; pumpkin and sweet potato were familiar, but less often used than would be desirable. More green or yellow vegetables which mature when canals are low and aquatic plants no longer available, would be especially good. If increased production by most households[1] is not practicable, a few of the more successful gardeners might be persuaded to produce vegetables and fruits which would help to bridge the gap between rainy seasons. Mushrooms, which can be grown readily, would provide a good source of ribo- [264] flavin when leafy vegetables are in short supply. The boom-and-bust experiance in mushroom culture (See Appendix A, pp. 101-102) might, however, make its revival as a source of healthful food for home use more difficult than if the villagers did not think of mushrooms as a cash crop for which the market failed.

Eating more fruit would help to tide over the dry 262 season. Fruits were commonly used as snacks, not at meal- [264] time, hence snacks of fruit should be encouraged for adults as well as children. Bananas grew in all gardens and were available the year round. The (4)nam (4)waa variety, which was used in ceremonies, and considered safe for all, should 000 be stressed. More families could grow pineapple, which is [777] relished both raw and in curries. Mango and papaya, fruits of outstanding value for both vitamin A and ascorbic acid, would be excellent, but the idea that growing papayas is "unlucky" must be taken into account. If a few of the more thoughtful and forward-looking farmers could be persuaded to start papaya trees, even though they were not willing to plant them near the house, the practice might spread in time.

146 On the average, the Bang Chan diet did not seem to be [164] very deficient in protein, but distribution is not proportional to need, and protein deficiency may be in part responsible for periods of weight loss, or failure to gain, so 000 common among infants and children. The presence of other [136] essential nutrients in animal foods is important also. If, the local supply of fish is indeed diminishing, efforts to [228] increase it through pond culture should be continued. Abandonment of tilapia culture in Bang Chan, after about one-third of the families had tried it, (Appendix A, p. 101) suggests that not enough of the right kind of help was given

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1. Tenant farmers may not be permitted to enlarge gardens by mounding at the expense of rice fields.

concerning its culture and use. Tilapia culture was learned largely by trial and error, and was considered primarily as a source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

More home consumption of eggs would be desirable, but their ready sale and acceptability for barter may present an obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

Milk, as canned, dried or malted milk preparations, was considered an appropriate gift for the priests, who are forbidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to include milk among them. People gladly bought food for the priests and would probably accept on the authority of the head priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headmen were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

The importance of merit making and the relatively large cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

000improvement, (1)ngaan sponsored by them might serve to acquaint a large group with a new practice. Suppose, for example, that addition of premix to rice, and cooking rice without excess water were being promoted. If one of the respected priest-practitioners could be persuaded to introduce these practices at his homage-to-the-teacher rite and give them some publicity, this might help to create a favorable attitude toward the suggested change.

Every change will require continuing education, and a variety of approaches should be used, some of which have been [874]mentioned. If the elementary school teachers were persuaded of the importance of a good diet and improvement in sanitation, and had a sound understanding of the desired changes in practice, they could influence both the oncoming generation, and their neighbors through teaching and example. Continued practical health education for school children should ultimately bear fruit. The value of eating more green leafy vegetables should be taught, and the children could learn about leafy greens available in the village, but not widely used at present. Good foods to bring to school for lunch might be stressed. Hard cooked eggs have already been mentioned. If convenience as well as health value were stressed, this might lead in time to increased consumption of eggs by growing children, and ultimately by adults as well. If a simple school lunch program were organized, either on a cooperative basis or subsidized, the inclusion of peanuts would help to increase both the protein and the thiamine content of the children's diets. Though unfamiliar to many of the children, lightly roasted peanuts were enjoyed as a treat offered at the end of the medical inspection. If teachers could influence vendors to prepare and sell more of the snacks which would be desirable additions to the children's food, this would be a gain. Fruit could be stressed for school lunch. At any time of year, a banana a day for each child would probably be possible, and bananas should be emphasized even though their nutritive value is not so outstanding as that of many other fruits. Values of other fruit in season should be taught. The school garden could be used to demonstrate how to grow some of the more nutritious vegetables. Awards for those with the best home gardens could be used to stimulate improvement. Similarly, recognition for improvement in home sanitation might be useful.

In adult discussion groups, both men and women should learn about good food and health practices. The slack period between transplanting and harvest, when people can get about easily by boat, would be the best time for such meet-[212]ings. Since many adults in Bang Chan were illiterate or did not read with ease, very simple teaching material is needed. Association between good food and health must be built up gradually. Appeal to economic and other motives may be used [211]where such motives reinforce the desired ends. The extension method of adult education, just in its beginnings in Thailand,

000 offers a means of teaching local leaders who in turn could [871] teach neighborhood groups.

Where alternative solutions are being considered, a well designed experimental program would help to decide which would be more acceptable. Teachers and advanced home economic students at nearby Kasetsart University might plan and execute such an experiment on a small scale. Thus, after learning in the laboratory how to include rice polishings in some common "with-rice" dishes, this might be taught to people in one village. In another, addition of premix to milled rice at home, and cooking rice without excess water, could be taught. In both, the health values of undermilled rice could be stressed and the need to keep or to restore these if white rice is used. A followup should be made to see how many have tried, and how many have adopted the proposed change. Experience in pilot projects under the Thailand-UNESCO Fundamental Education Project (TUFEC) should provide clues as to methods likely to be successful. In Bang Chan, where frank deficiency disease is uncommon, improvements in health and nutriture may not seem spectacular. Improving nutrition, which implies changing attitudes, food habits, agricultural and sanitary practices, must be seen as a long term goal, requiring continuing education.

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APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children. . . . . The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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1. In reproducing these notes, slight changes have been made such as substitution of descriptive terms for personal names which appeared in the original.

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takes it down the steps to the fish pond, where she swishes the basket around to wash the fish, and rinses her hands at the same time.

There are some hazards to the food--chickens trying to get at the edible part of fish while the niece cleans it (she leaves the scales, etc. for them to eat); cat and kittens in the kitchen, having to be driven away from the grated coconut and coconut milk, and getting an occasional unweighed nip. Whether we start to weigh food for the evening meal or a.m. meal, some cooked foods are apt to be used, either left over from a previous meal, or cooked in advance. This a.m., for example, buffalo meat, already cooked (but not weighed before cooking) was used, and (3)khii-(2)leg leaves, which SS weighed last night. These latter were cooked last night, to reduce bitterness, then put into curry today.

Description of Food Preparation Area in a Relatively Poor Household

Wednesday, May 27, 1953

Arrived about 5:45 a.m. While other food was being prepared, the 11-year old son came in with a package of salted white radish and a small milk tin with some coconut oil which had just been bought. This is the house which we found flooded when they sent for us to see the baby last fall. The roof seems to be well thatched. The floor is not wet after last night's downpour. The bed platform, in one corner, is about 8 x 10 feet. The baby's cradle hangs above it. In the opposite corner is a shelf where utensils are kept. Some food, in paper bags, is in a basket hung from the roof. Fresh fish is kept in a jar of water until needed. The stove is on a small mound of earth, and further elevated on a small box (just big enough for the stove) filled with earth.

We sit on a mat, spread on the mud floor, with the scales, plastic bowls and waxed paper ready for weighing food. The children lie on a mat nearby. In the house is a fresh mound of earth, a small straw bin with rice, and various pieces of equipment.

Notes on Meal Service

In a Relatively Prosperous Household

Friday, May 22, 1953

Before breakfast is served, the six-year old girl comes with a piece of jack fruit. SS weighs it and tells her to bring back what she does not eat. Later she comes with hands full of stones (14 of them). She has eaten this much as a "snack" before the regular meal. The grandmother finishes the piece (7 stones) and gives the rind to SS to weigh.

At breakfast the family sits in a circle on the kitchen floor. Each person except the baby has his own bowl of rice before him. In the center of the circle, within reach of all, are four small dishes of "with-rice" which has been prepared for breakfast: sour curry of buffalo meat, curry of (3)khii-(2)leg leaves, bean sprouts and one small fried fish. The mother takes a very small bit of fish on a spoon with rice, and feeds baby. During breakfast baby has 6 bites of rice with fish, nine small spoonfuls of rice with sour curry. The mother herself eats one bite of fish. She takes four spoonfuls of sour curry on plate with rice. This is shared with baby. Mother and baby eat mainly rice, fish and sour curry of buffalo meat, whereas grandmother and the six-year old girl have curry of (3)khii-(2)leg leaves and bean sprouts with their rice.

In a Relatively Poor Household

Wednesday, May 27, 1953

While the mother finishes the meal preparation, the seven-year old girl feeds the baby, first rice with some chopped egg, then rice with the "water" from the egg. The mother remarks that she cannot cook unless someone looks after the baby.

Technique of eating -- A tray with the "with-rice" is set out, also a bowl with water, for rinsing the hand, and a basin or bowl with drinking water. There are spoons in the "with-rice," but these seem to be used for taking some of the juice, which may be eaten directly or put on the individual's bowl of rice. Solid pieces are taken from the serving dish by hand, and mixed with some of the rice, which is then picked up in the right hand. Occasionally the person eating will rinse his hand with water. When finished, each person rinses his bowl (using either water from the bowl nearby, or from the general supply -- in this case the canal). Dishes are turned upside down on the platform near the stove, to dry.

Equipment Used For Food Preparation

252 41 [251] Equipment used for food preparation by 11 families participating in the dietary study: clay stove; pots and covers of clay, light weight aluminum, and enameled iron; frying pans, curved, of sheet iron, with home-made wooden handle on one side, or metal handles on opposite sides (shallow clay pans were also used for frying); basins, pails, chopping boards; grater for coconut: a metal, toothed instrument mounted on one end of a low wooden stool (often called a "wooden rabbit" because the seat of the stool might be shaped like a rabbit); mortar of pottery or stone; wooden pestle; fiber strainers usually with rigid handles, to hold them in place on top of a pot; a large-bladed all-purpose knife; in some households, one or more smaller knives; metal turner, with home-made wooden handle; spoons, with bowls of coconut shell, gourd or wood; tin cans for dipping, measuring rice, etc.; fiber trays used for winnowing rice, for drying food, storing dried chilies, onions, etc.; metal tray for serving food to priests, and for household use; baskets for storing food; (5)faa-(1)chii, or fiber cover, to keep flies and insects off cooked food; large earthenware water jars.

[84] Other items less often used, and owned by relatively few families in Bang Chan, included: steamer; a perforated clay pot or metal pan with cover, designed to fit tightly into another pot in which water was boiled; large wooden mortar, made of a hollowed tree trunk; spring-type egg beater (a strong spiral spring attached to a stick); scale; glass water jars.

Equipment Used in Serving Food and Eating

264 412 415 The equipment for serving and eating food might include: flat bottomed bowls with a deep edge, similar to Western-style soup plates, used as individual rice bowls; plates; small bowls for "with-rice" dishes; sauce dishes with stand, for chili sauce; enameled iron or china spoons (Chinese type) used for serving moist foods; forks, used by some families on special occasions;[1] teapot and cups; large rice bowl for ceremonial use (silver or aluminum); large brass spoon with serpent-tail handle, for serving rice; drinking glasses; tiered lunch pail; canteen; thermos bottle.

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1. A relatively poor family (Sharp et al. 1953, p. 223) had one pair of fork and spoon for eating.

Examples of Notes on Food Eaten by Individuals

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264 Household 16 July 23, 1953

Family members observed at meal-time: All, as they ate breakfast at various times.

Notes re kind and amount of food eaten:

Breakfast: Girl aged 12 and boy aged 7 start eating at 7:20 a.m. Each one has one dish of rice and stew of swamp cabbage and salt fish for breakfast. They are through eating at 7:40 a.m.

9:10-9:30 a.m. Father eats two dishes of rice with stew and mother does also.

10:10-10:20 a.m. Son, 18 yrs. old, returns home and eats two dishes of rice mixed with stew.

10:40-11:00 a.m. Sons aged 25 and 20 have breakfast. The older one eats two dishes of rice but the younger one eats three.

11:30 a.m. Daughter aged 22 has two dishes of rice and stew. She is through eating at 11:45 a.m.

Household 67 May 26, 1953

Family members observed at meal-time: Mother and children.

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262 Notes re kind and amount of food eaten:

Dinner: Girl aged 7 seems to be fond of fish but dislikes vegetables. Boy aged 11 likes to eat the vegetables from the curry. Each one eats two dishes of rice mixed with small amount of hot curry (5:02-5:17 p.m.)

[859] One year old baby is fed by his older sister, eating two spoonfuls of rice mixed with boiled coconut milk. Whenever he refuses to eat, his mother nurses him.

5:40-5:55 p.m. Mother eats 3 dishes of rice with 2 dishes of hot curry, containing a small amount of fish.

Father begins eating at dark so we can't see him.

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Examples of Diet Records Submitted by School Children

Date	Breakfast	Lunch	Dinner	Snack
	Diet Record[1] of 10-year Old Girl: Diet Class I[2]			
May 19, '53	Sour curry of (2)phag (2)ka-(2)cheed Curry of swamp cabbage Boiled vegetables Fried mushrooms Roasted pilot fish Chili sauce		Cooked fish (sour) (2)phag (2)ka-(2)cheed Chili sauce	Star gooseberry Jack fruit seeds Fruit of egg tree Sweet made of flour, sugar, coconut milk Sweet made of flour, sugar, sugar palm
July 7, '53	Curry of (2)phag (2)ka-(2)cheed Boiled swamp cabbage	Boiled fish Boiled fermented fish	Boiled egg Roasted fish	(1)lam-(1)jaj (Fruit of Euphoria longana) Jack fruit seeds Sweet made of flour and sugar
Sept. 13, '53	Cooked climbing perch and other fish (sour)	Fried towel gourd with pork Fried serpenthead	Boiled climbing perch and silurus	Sweet made of flour, sugar and coconut milk Hog plum
Oct. 29, '53	Sour curry of katurai flowers with (2)phag (2)ka-(2)cheed Fried pork with swamp cabbage	Hot curry of serpenthead (2)phag (2)ka-(2)cheed Chili sauce	Sour curry of lotus stalks	Jack fruit seeds Fried banana Jambean

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Examples of Diet Records Submitted by School Children (cont.)

Date	Breakfast	Lunch	Dinner	Snack
Nov. 25, '53	Curry of lotus stalks Fried salted fish (2)phag (2)ka-(2)cheed Chili sauce	Curry of swamp cabbage Fried salted fish	Roasted salted fish Curry of (2)phag (2)ka-(2)cheed	Orange Fried banana Sweet made of flour, sugar, coconut and corn Sweet made of flour, sugar, egg and coconut
Jan. 30, '54	Sour curry of (2)phag (2)ka-(2)cheed with katurai flowers	Sour curry of green papaya	Fried sweetened fish	Jack fruit seeds Rice flour chips Sweet made of flour, sugar, coconut, corn
June 4, '54	Fried fermented fish Curry of egg plant Cooked salted pork	Fried egg Salted crabs	Curry of pineapple Curry of chicken Curry of bamboo shoots	Star gooseberry Ice Sweet made of flour, sugar and coconut milk Sweet made of flour, sugar and coconut
	Diet Record of 12-year Old Girl: Diet Class III			
Feb. 14, '53	Hot curry of fish Fried dried meat with sugar		Sour curry of swamp cabbage	Sweet made of rice, banana and coconut milk
July 7, '53	Curry of chicken		Curry of white gourd	Longan

Z: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

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Examples of Diet Records Submitted by School Children (cont.)

Date	Breakfast	Lunch	Dinner	Snack
Sept. 13, '53	Curry of (3)khii-(2)leg		Curry of chicken	Fried sweet potato Star gooseberry Hog plum
Oct. -- '53	Sour curry of green papaya Fried swamp cabbage		Hot curry of fish	Guava Sweet made of dried beans and sugar
Nov. 28, '53	Fried Chinese noodles Boiled vegetables Chili sauce		Fried fish Boiled vegetables Chili sauce	Fried banana Fried Chinese noodles Sweet made of rice, banana and cocomut milk
Jan. 30, '54	Beef curry		Sour curry of swamp cabbage	Chinese cake Jujube Sweet made of flour, sugar, coconut and corn Sweet made of dried beans and sugar

1. "With-rice" dishes only are listed for breakfast, lunch and dinner.

2. Adapted from Thorangkul (1957).

Notes on Tilapia Culture in Bang Chan

228 654 In 1952, the Thai government, at the suggestion of FAO, began to encourage tilapia culture. Fingerlings and some information on tilapia culture could be obtained from the Minburi district office, where a demonstration pond was maintained. Early in 1953, we learned from the records of the district officer that three persons in Bang Chan, two of them hamlet headmen, had obtained tilapia from this source. In 1953 the commune chief called a meeting in the village and explained the importance of tilapia raising. In May 1955 when Ralis conducted a survey in Bang Chan (Goldsen and Ralis, 1957), tilapia raising had been tried in nearly a third (31%) of the households, but was considered by 2/3 of the respondents to pay little.

The authors comment:

> From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months.

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From the comments just quoted, tilapia culture appears to have been undertaken for the anticipated cash return. No information was obtained by Ralis concerning the extent to which the villagers used tilapia to increase their supply of fish for home use. In the summer of 1957 members of the research group who visited Bang Chan found that no one was raising tilapia; they were neither a source of food nor of cash. Some indication was obtained that their flavor and texture were not agreeable. Clearly the attempt to introduce a rapidly growing but unfamiliar variety of fish failed in Bang Chan. *An understanding of the reasons for this failure* might help to prevent other costly failures in future.

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Notes on Mushroom Culture in Bang Chan

177 244 Goldsen and Ralis (1957) commented as follows:

> Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per

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244 cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

243 At the height of the boom, the demand for rice straw
244 swept many of the fields clean of the stubble usually left
234 there after harvest, thereby decreasing food for the roaming
197 buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralis (1957) were 1) the cash outlay required was small, 2) returns were realized quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralis made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

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Food for Homage-to-the-Teacher Rite Performed by a Buddhist Priest Who Was a Traditional Practitioner

Item	Amount	Cost in Baht	Item	Amount	Cost in Baht
Cereals and Legume Seeds:			Fish and Meat (cont.):		
Rice noodles		10.	Dried fish	6	gift
Soybeans & fermented vegetables	25 kg.	12.	Roasted fish	3 kg.	gift
			Shrimp paste	2 kg.	18.
Mung beans	10 lit.	25.	Lobsters		15.
Cassava flour		2.25	Lobsters (for soup)		7.50
Sugar and dessert:			Pig's skin (for soup)		10.
			Beef[1]	15 kg.	150.
Palm sugar	1 pail	67.	Ingredients for Mussel-man curry[1]		27.
Cane sugar	14 kg.	85.			
(2)Kha-(5)nom (3)tuaj-(1)foo	500 cups	35.	Boiled chickens[2]	2	22.
			Pig's head[2]	4 heads	222.
Fish and Meat:			Pork[2]	4 kg.	40.
Fish ((1)plaa (2)myk) for soup		6.			
Silurus and serpenthead	60 kg.	gift			

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[975] Food for Homage-to-the-Teacher Rite (cont.)

Item	Amount	Cost in Baht
Fruit:		
Bananas ((3)kluaj (4)nam-(4)waa)	5 bun.	from father
Chico[2]		5.
Coconut	150	180.
Coconut (young, to make dessert)	30	30.
Job's tears	1 lit.	3.
Plums, yellow[2]		5.
Pomelos[2]		6.
Rose apples[2]		2.
Tamarind		7.50
Tomato sauce		8.
Young palm fruit[4]	7 bun.	3.
Vegetables (non leafy):		
Bamboo shoots, cooked	1 pail	28.
[272] Cucumber		--.3
[273] Egg plants		--.3
[276] Garlic	5 kg.	26.50
Gourd, white		1.
Onion, fragrant[5]		6.
Onion[5]	4 kg.	4.
Onion, welsh[5]		--.3
Mushrooms		3.
Radish, white		--.3
[354] **Vegetables (leafy green and yellow):**		
Cabbages		--.3
Chinese kale		--.3
Chili, green		7.50
Vegetables (leafy green & yellow) cont.:		
Lettuce		--.3
Parsley		--.3
Pumpkin	3 fruits	12.
Sweet basil leaves		1.
Sweet potatoes	6 kg.	6.
(3)Tang-(5)oo		--.3
Seasonings etc.:		
Vinegar	1 bottle	1.
Fishsoy	1 jar	10.
(2)Ka-(1)chaaj	2½ kg.	12.50
Sodium glutamate		5.
Pepper		14.
Agar	400 gms.	36.
Miscellaneous:		
Cola beverage	72 bottles	72.6
Liquor	16 bottles	80.6
Ice		30.6
Cigarettes	2 pkgs.	--.6
Tobacco	1 heap	--.6
Betel pepper		9.
Fresh areca nut		10.
Dried areca nut		8.
Dried palm leaves	1 big bundle	2.
Firewood		50.
	Total	1577.75

[354]
2. *For Muslem guests.*
2. Food items placed on a tray and used in the ceremony proper.
3. Items so marked cost a total of 140 baht.
4. Not identified.
5. Several kinds of onions, both fresh and dried, are commonly used.
6. Prices not stated; estimate for liquor.

APPENDIX B

Table 16. Estimated Dietary Allowances for Residents of Bang Chan[1]

	Calories[2]	Protein[3]	Calcium	Iron	Vitamin A	Thiamine	Riboflavin	Niacin[4]	Ascorbic acid
		gm	gm	mg	I.U.	mg	mg	mg	mg
Adult man (52 Kg) Active	2500	60	0.5	8	2500	1.2	1.0	12	25
Adult woman (47.3 Kg) Active	1900	55	0.5	10	2500	1.0	1.0	10	25
Pregnant (latter half)	2300	80	0.8	18	4000	1.2	1.5	15	25
Lactating	2900	85	1.0	15	4000	1.5	2.0	15	30
Adolescents									
Boys 15-19 years	3000	80	1.0	12	4000	1.5	1.5	15	30
13-14 "	2500	70	1.0	12	3000	1.2	1.2	12	25
11-12 "	2000	60	0.75	10	2500	1.0	1.0	10	25
Girls 13-17 "	2500	70	1.0	12	3000	1.2	1.2	12	30
11-12 "	2200	65	0.75	10	2500	1.0	1.2	10	25
Children 9-10 "	1700	60	0.75	8	2500	0.7	1.0	7	25
7-8 "	1600	60	0.75	7	2500	0.6	1.0	6	20
5-6 "	1400	50	0.5	6	2000	0.6	1.0	6	20
3-4 "	1200	40	0.5	6	2000	0.5	1.0	5	18
1-2 "	900	35	0.5	5	1500	0.4	1.0	4	15
under 1 year	80/kg	3/kg	0.5						

1. This table was modified from Dietary Allowances Under Tropical Conditions (Nicholls, 1951, p. 315)

2. Adjustment of calories was made for adult man and adult woman, taking age, body size, climate and activity into account (Food and Nutrition Board, 1953. pp. 3-7 and FAO Committee on Calorie Requirements, 1950, p. 22). 400 calories extra were allowed for late (obvious) pregnancy and 1000 calories extra for lactation. Nicholl's estimates have been accepted for children and adolescents.

3. Protein allowances for sedentary man and woman were chosen for adults.

4. Allowance for niacin is 10 x thiamine allowance except that 15 mg rather than 12 mg was used for pregnancy.

2: Hauck et al. D,K-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

Table 17. Estimated Dietary Allowances for Persons in Two Groups of Households, Participating in the Dietary Study, Bang Chan, 1953-54

Age Group[1]	Number	Average Age	Calories	Protein	Calcium	Iron	Vitamin A	B_1	Riboflavin	Niacin	Ascorbic Acid
				gm.	gm	mg	I.U.	mg	mg	mg	mg
Group A											
Men											
60+	1	63	2000	60	0.5	8	2500	1.0	1.0	10	25
50-59	2	51	4380	120	1.0	16	5000	2.2	2.0	22	50
40-49	1	41	2315	60	0.5	8	2500	1.2	1.0	12	25
30-39	2	35	4750	120	1.0	16	5000	2.4	2.0	24	50
25-29	-										
20-24	2	22	5070	120	1.0	16	5000	2.4	2.0	24	50
Women											
70+											
60-69	1	60	1570	55	0.5	10	2500	1.0	1.0	10	25
50-59	-										
40-49	2	46	3420	110	1.0	20	5000	2.0	2.0	20	50
30-39	1	34	1805	55	0.5	10	2500	1.0	1.0	10	25
	2		5610	170	2.0	30	8000	3.0	4.0	30	60
20-29	1	20	1945	55	0.5	10	2500	1.0	1.0	10	25
Boys											
15-19	1	15	3000	80	1.0	12	4000	1.5	1.5	15	30
13-14	-										
11-12	2	11.5	4000	120	1.5	20	5000	2.0	2.0	20	50
Girls											
13-17	1	13	2500	70	1.0	12	3000	1.2	1.2	12	30
11-12	1	12	2200	65	0.75	10	2500	1.0	1.2	10	25
Children											
9-10	4	10	6800	240	3.0	32	10000	2.8	4.0	28	100
7-8	3	8	4800	180	2.25	21	7500	1.8	3.0	18	60
5-6	2	5.5	2800	100	1.0	12	4000	1.2	2.0	12	50
3-4	1	3	1200	40	0.5	6	2000	0.5	1.0	5	18
1-2	1	1	900	35	0.5	5	1500	0.4	1.0	4	15

[1] Hauck et al. S.E.-6 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

Table 17. (continued)

Age Group[1]	Number	Average Age	Calories	Protein	Calcium	Iron	Vitamin A	B_1	Riboflavin	Niacin	Ascorbic Acid
				gm	gm	mg	I.U.	mg	mg	mg	mg
Group A											
Under 1 yr.	1[3]	1 mo.	720	27	0.5						
Total	32		61585	1882	20.5	274	80000	29.6	33.9	295	753
Round III[4]			61985	1907	20.8	282	81500	25.8	34.4	300	753
Round IV[4]			62585	1912	21.0	279	81500	30.1	34.9	300	758
Group B											
Men											
60+	1	64	2000	60	0.5	8	2500	1.0	1.0	10	25
50-59	1	53	2125	60	0.5	8	2500	1.1	1.0	11	25
40-49	3	46	6750	180	1.5	24	7500	3.3	3.0	33	75
30-39	1	39	2315	60	0.5	8	2500	1.2	1.0	12	25
25-29	1	25	2500	60	0.5	8	2500	1.2	1.0	12	25
20-24	3	21	7650	180	1.5	24	7500	3.6	3.0	36	75
Women											
70+	2	80+	2760	110	1.0	20	5000	2.0	2.0	20	50
60-69	-										
50-59	1	59	1570	55	0.5	10	2500	1.0	1.0	10	25
40-49	1	46	1710	55	0.5	10	2500	1.0	1.0	10	25
30-39	2	36	3610	110	1.0	20	5000	2.0	2.0	20	50
	1[2]		2805	85	1.0	15	4000	1.5	2.0	15	30
20-29	1	22	1930	55	0.5	10	2500	1.0	1.0	10	25

1. Based on age at beginning of the study.
2. Two nursing women (no. 932 and 905), age 30-39.
3. One additional infant in group, during Round IV.
4. One 20-year old woman (no. 525) was obviously pregnant in Round III and nursing mother in Round IV of the dietary survey.

Table 17. (continued)

Age Group[1]	Number	Average Age	Calories	Protein	Calcium	Iron	Vitamin A	B_1	Riboflavin	Niacin	Ascorbic Acid
				Group B							
				gm	gm	mg	I.U.	mg	mg	mg	mg
Boys											
15-19	2	15	6000	160	2.0	24	8000	3.0	3.0	30	60
13-14	2	13	5000	140	2.0	24	6000	2.4	2.4	24	60
11-12	1	12	2000	60	0.75	10	2500	1.0	1.0	10	25
Girls											
13-17	2	15.5	5000	140	2.0	24	6000	2.4	2.4	24	60
11-12	-										
Children											
9-10	3	10	5100	180	2.25	24	7500	2.1	3.0	21	75
7-8	3	8	4800	180	2.25	21	7500	1.8	3.0	18	60
5-6	2	6	2800	100	1.0	12	4000	1.2	2.0	12	40
3-4	2	4	2400	80	1.0	12	4000	1.0	2.0	10	36
1-2	1	2	900	35	0.5	5	1500	0.4	1.0	4	15
Under 1 yr.	1[3]	1 mo.	240	5	0.5						
Total	37		71965	2154	23.75	321	93500	35.2	38.8	352	876
Round III[4]			72365	2179	24.05	329	95000	35.4	39.3	357	376
Round IV[4]			72965	2184	24.25	326	95000	35.7	39.8	357	881

1. Based on age at beginning of the study.
2. One nursing woman (no. 752), age 30-39.
3. One additional infant in group, during Round IV.
4. One 38-year old woman in Group B (no. 732) was obviously pregnant in Round III and was a nursing mother in Round IV of the dietary survey.

Table 18. Average per Capita Dietary Allowances for Persons in Two Groups of Households Participating in the Dietary Study, by Round and for the Year, Bang Chan, 1953-54

	Calories[1]	Protein	Calcium	Iron	Vitamin A	Thiamine	Riboflavin	Niacin	Ascorbic Acid
		gm	gm	mg	I.U.	mg	mg	mg	mg
Group A									
Round I	1925	58.8	0.64	8.6	2500	0.93	1.06	9.2	24
Round II	1925	58.8	0.64	8.6	2500	0.93	1.06	9.2	24
Round III[2]	1937	59.6	0.65	8.8	2544	0.93	1.08	9.3	24
Round IV[2]	1956	59.7	0.66	8.7	2544	0.94	1.09	9.3	24
Average per capita	1936	59.2	0.65	8.7	2522	0.93	1.07	9.3	24
Group B									
Round I	1945	58.2	0.64	8.7	2527	0.95	1.05	9.5	24
Round II	1945	58.2	0.64	8.7	2527	0.95	1.05	9.5	24
Round III[2]	1956	58.9	0.65	8.9	2568	0.96	1.06	9.6	24
Round IV[2]	1972	59.0	0.66	8.8	2568	0.96	1.08	9.6	24
Average per capita	1955	58.6	0.65	8.8	2548	0.96	1.06	9.6	24

1. Adults were considered to be "active." The estimates therefore represent values intermediate between those appropriate for heavy farm work, during planting and harvesting, and the relative inactivity of the intervening periods.

2. One 24-year old woman in Group A and one 38-year old woman in Group B were obviously pregnant in Round III, and they were both nursing mothers in Round IV of the dietary studies. Young infants were not counted separately in Round IV, as they were receiving mothers milk only.

2: Hauck et al. D.E-5 (1953-1954) 1958 AO7 Central Thai AO7 Bang Chan

APPENDIX C

Guides Prepared for the Observer Who Carried Out the Dietary Study

Preliminary Visit to Participating Households

Households selected for dietary study are to be visited in advance, acquainted with the procedure which we wish to follow, and asked for their cooperation.

The following points should be emphasized:

1) Meals should be prepared as usual both in amount and kind. Workers wish to know how much food and what kind, the family eats.

2) Each item of food which enters into the meal preparation will be weighed before cooking.

3) Each prepared food (as cooked rice, fried fish, curry, etc.) will be weighed when the preparation is finished.

4) Amounts of prepared food given to priests, fed to animals or left over, must be weighed, so that the amount of food actually eaten by the family can be calculated.

5) As often as possible survey members would like to be present during the meal, but will not accept food from the household.

6) Each member of the family will be asked to report to the survey worker what is eaten between meals. If the snack is eaten at home, it should be brought to the survey worker first, to be weighed. If the snack is eaten away from home, individuals are asked to tell the survey worker as clearly as possible what was eaten, and how much.

Preliminary information to be obtained at this interview:

1) Usual number of meals taken by the family at this season.

2) Usual time of meals.

3) Time when food preparation is started in the morning, and when evening meal is over.

The family should be told that the survey workers will come sometime during the next two weeks. They should not be told which day, as that might lead them to make some changes in their usual diets, either consciously or unconsciously.

The schedule of visits should be such that each day of the Buddhist "week" will be appropriately represented, i.e. the day before the holy day, the Buddhist holy day, and the 5 or 6 days which follow. Days of special festivals should not be included in the dietary survey, although the investigators should attend many of these, and record observations on the foods served.

Dietary Survey Proper: General Procedures, with Alternative Suggestions

Twenty-four hour period. - Each visit should cover a 24-hour period. After preliminary experience, a good plan seems to be to go in the early afternoon, in time to see the preparation for the evening meal, and to return early the next day, remaining until the 24-hour period is up. This plan has several advantages over making one's first appearance before breakfast:

1) The homemaker may be introduced to the procedure at a time when she is less hurried than she is apt to be in the morning, when she must have food ready for the priests at a fairly definite time.

2) Scales and other equipment may be left overnight, so that these need not be carried before dawn, along with food and water for the survey worker.

3) The risk that food preparation will be started before the worker comes is less if the homemaker expects the survey worker before breakfast.

4) If the worker's visit is anticipated, someone at the house will restrain the dog if necessary.

5) For the more remote households, arrangements can probably be made to stay overnight at the home, or nearby, without previous notification as to the exact date of one's visit.

Because the observer may leave in the afternoon before children return from school, she should ask about snacks eaten away from home on the first afternoon, so that record will be obtained of such snacks eaten on one day, though not necessarily during the same 24-hour period as the other meals recorded.

Number of Visits. - Aim to visit each of the 11 families once each 3 months, i.e. 4 times in the year. This means once during the cool season, once during the dry season, and twice during the rainy season, i.e. early and late. From May 25, 1953 to the end of April 1954 there are 49 weeks. In a schedule calling for one survey day each week, this would allow 5 weeks for unforeseen circumstances which might interfere,

114 or for planning time off because of holidays, celebrations,
124 etc.
125

Scheduling of Visits. - Plan to see the families in rotation, going to those in groups A and B on alternate weeks, so that seasonal variation in food supply will not be a major difference between the two groups. The survey worker must have in mind another nearby home, however, which might be visited if the original plan cannot be carried out on a given day.

The survey worker should not give advance notice of the exact day when she plans to come, unless the householder has specifically requested this. Even when notice is requested, it need not be long in advance, i.e. one could stop by in the morning and ask if it would be all right to come back in the afternoon to watch supper preparation.

Directions for Use of Schedule 8 on Which Data Obtained During the Dietary Survey are to be Recorded.

Most of the items in this schedule may be filled in from census information or by direct observation by the survey worker. The worker will need to enquire re item E. the makeup of the food consumption unit, and J 4, the cost of raw foods purchased. The survey worker should try to observe other items during the day, and fill in by inquiry, if necessary, at the end of the day. Note whether information was obtained by observation (ob) or inquiry (q).

A. Hamlet and house number should be written in from the census information, and should correspond to that on schedule 3 for the same household.

B. Each Household to be visited for dietary survey will be given a key number in advance. This number should be inserted here.

C. Head of household (from census information).

D. Religion. - Some dietary practices are associated with religion, therefore indicate whether the household is Buddhist or Islam by checking the appropriate space.

E. Composition of food consumption unit: List here all persons whose food is prepared in the kitchen which the observer is visiting. Note that all persons living in one household (i.e. at the same house number) may not belong to one food consumption unit.

F. Source and treatment of water. - Find out, by observation if possible, from what source or sources water is obtained for drinking and food preparation, at this season. Note

whether or not water is boiled or treated otherwise before use.

G. Garbage disposal. - While making the dietary survey, the observer should note what is done with garbage. Is edible waste given animals? Is garbage disposal carried out in such a way that it will not attract flies, etc.?

H. Protection of food against contamination. - The observer should note what means are used by the householder to protect both staple and perishable foods from contamination by insects and animals. If the householder's practices are not consistent, the observer should note this, either on the schedule, or in her note book. In the latter case, the schedule should be plainly marked "see notes."

I. Family member observed at meal time. - We have been unable to think of any plan for weighing foods consumed by individual members of the family without disturbing the customary eating procedures. The observer may be able, however, to get some idea as to how food is distributed in the family, by observing one person at a time, and recording her estimate of the individual food intake.

The person chosen for observation should be one of the family members who would be most vulnerable to an inadequate food supply, for example a pregnant or lactating woman, a young baby, a growing child or an old person. The observer should fix her attention on the person to be observed, throughout the meal, and should record as well as possible the amounts eaten of each type of food. Record amounts taken onto the plate, amounts left on the plate at the end of the meal, number of bites or spoonfuls of each item eaten a) directly from the serving dishes and b) after the food is put on the plate. Check your estimates of amount eaten by the person observed with reference to the total prepared for and consumed by the family.

From observations of this sort we hope to get information on questions such as the following:

1. When a child is said to eat all adult food, does this mean that the kinds of "with-rice" and the proportions of rice to "with-rice" are the same for him as for adults?

2. If a pregnant or lactating woman says she eats as usual except for the hot tastes, does this mean a) that she omits or decreases intake of peppery foods and eats no more than usual of other foods or b) that she omits or decreases intake of peppery foods and eats more rice and/or less highly seasoned "with-rice" items? In the case of a child, note carefully any remarks made by adults urging him to eat more of, or suggesting that he eat less of a given item.

114 J. Food preparation and consumption
125

In the schedule, each column has a descriptive heading and a number. On the sheet used for calculating "adjusted consumption," the numbers alone are used.

1. Menu. Record title of meal as "breakfast" or "dinner" and time served. List all foods served at each meal, including leftover foods from the previous day. If foods left over from an earlier meal on the same day re used, note this fact, since weight of raw food, noted when the food was prepared can be used in calculation.

Raw ingredients

2. Kind. Note here the name of each ingredient, and any description needed, i.e. fat or lean pork, hen or duck egg, etc. Since rice is served at each meal the terms "home milled" and polished are listed here. Cross out the inappropriate one.

3. A.P. (as purchased) weight. Record here the weight of the food as it is purchased, or as it comes from the storehouse, garden or canal. If several food items are used in preparation of one dish, bracket these together.

4. Cost. For foods which have been purchased, record cost of the amount used. For example, if 3 fish were purchased for 1 baht, but one only was prepared at this time, record 33 stg. as the cost. If the food was produced at home, grew wild, or was received as a gift, note this.

5. Inedible refuse. Note weight of inedible refuse which is discarded during preparation. If the inedible portion is included in the cooked dish, weigh it later and record the weight in this column.

6. E. P. (edible portion). Add together all weights of inedible refuse for a given item to get the total for item 5. Subtract 5 from 3 to get this figure.

Note on weighing raw food: So far as possible, weigh raw food and inedible refuse on waxed paper (weight negligible) or in standard utensils (enamel plate, plastic bowl, etc.) the weights of which are known. Record: weight of A.P. food on utensil minus weight of utensil equals weight of food. For example, if rice is weighed in a plastic bowl weighing 90 g., and the total weight is 870 g., 870-90 = 780 (g. rice). The observer is less apt to make mistakes if she uses the same containers repeatedly, than if containers used are provided by the household, and vary widely in weight. The balances provided for weighing food are 3 kg./10 g. and 1 kg./4 g. Small amounts of food should always be weighed on the 1 kg. scale, since it is more sensitive than

114 the 3 kg. scale. If a number of items are used in small
125 amounts, weights may be approximated more closely if the items are placed one after another, on a piece of waxed paper, noting each time the added weight causes the indicator to move. Thus the red or green pepper alone might not weigh enough to affect the indicator, but these together with other green or leafy materials used (as lemon grass, coriander leaves and sweet basil) might weigh 8 grams. In a marginal diet, the contributions of such items to the nutritive value of the diet should not be overlooked.

Cooked foods. - For cooked foods, which must often be weighed in a container provided by the family, columns are provided for weight of dish (7), of dish plus food (8) and of food (9). For example, if rice is to be cooked in an aluminum kettle, weigh the empty kettle and record this weight in column 7. When the rice is done, and ready to serve, weigh kettle plus cooked rice, and record this in column 8. Subtract 7 from 8 and get the weight of food, to be recorded in column 9.

Use of cooked food

10. If food is given away, weigh dish and food before and after the food is offered, to get weight of food given away. Record the weights before and after and the difference, in column 10. Specify whether the recipient is priest, neighbor, relative etc. If inedible portion is included, note this and weigh it if possible.

11. Fed to stock. If inedible portion is given, note this and weigh it if possible. Specify if fluid only is given, or if part of the complete dish.

12. Edible waste. Specify if this is fluid only or a representative part of the complete dish.

13. Left over. Specify if this is fluid only or a representative part of the complete dish. Note if inedible portion is included and weigh it if possible. If you must leave in the evening before all family members have eaten, explain that you wish to weigh all left over food, and arrange to have it kept in separate dishes so that you can weigh it in the morning.

14. Food eaten. Weigh the pot or serving dish before and after the meal. At the end of the meal, weigh inedible portions left on plates or in the pot, and correct for those to get the weight of cooked food actually eaten.

15. Persons eating. Record here the number of persons in the consumption unit (item E) minus the number absent from this meal (x), plus the number of guests (y). Thus if there are 6 members of the family, one of whom is away, write 6 - 1 x + 5. Similarly if there are 6 members of the family,

plus a guest, write 6 + 1 y = 7. If one member of this family is away but a guest is present, write 6 - 1 x + 1 y = 6. In calculating, if the number of persons eating a given meal differs from the usual number in the household, the amount of a given food eaten is multiplied by a factor representing the number of persons in the household/number of persons present. Thus if a guest shares the meal in a household consisting of 6 persons, all of whom are present, the weight of each food eaten should be multiplied by 6/7 to get the "adjusted consumption," for which nutritive value is to be calculated. Similarly, if 5 only of the 6 members of the household eat a given meal at home, the weight of each food eaten should be multiplied by 6/5 to get the "adjusted consumption."

16. Methods of preparation. Describe the method of preparation clearly enough so that one who was not present could visualize it. Specify if soaking or cooking water is discarded. Note cooking time and appearance of cooked product when these give a clue as to probable nutritive value. Thus greens which are added at the last, cooked only a short time so that they retain their color, may be expected to retain a maximum amount of their vitamin C. Note type of equipment used.

K. Snacks. Record snacks eaten between meals on the separate sheet provided. Ask persons who eat snacks at home to bring them to you first, to be weighed. Question each member of the family about foods eaten away from home during the day, and record the kind of snack, description, and weight. (Estimated weights should be put in parenthesis, to distinguish them from observed weights.) If the snack was purchased, record the cost. Under "person eating" note the name of the family member who ate each snack.

From these data we hope to get an idea as to the nature and probable nutritive value of snacks, and whether these are eaten by all or most members of the family, or by certain ones only, as by the school children at recess.

SCHEDULE FOR DIETARY STUDIES

125 Cornell University Thailand Project 1952-53 Schedule 8
Date.....

A. Hamlet..... House No..... B. Household No.....

C. Head of Household a)..... b)..... D. Buddhist..... Islam.....

E. Food consumption unit. List here the names of persons who usually eat food prepared in the kitchen where observations are being made:

1)..... 5)..... 9).....

2)..... 6).....10).....

3)..... 7).....11).....

4)..... 8).....12).....

F. At this season what kind of water is used for each of the following purposes, and what treatment, if any, is given to it?*

USE	SOURCE			TREATMENT			
	Rain	Canal	Fish-pond	None	Alum	Boil-ing	Other (what)
1. Drinking, adults							
2. Drinking, children							
3. Washing vegetables							
4. Cooking							
5. Washing dishes							

G. How is garbage disposed of? (check)
1. Buried..... 4. Thrown elsewhere.....
2. Burned..... 5. Fed to animals.....
3. Thrown into canal..... 6. Other.....

* Indicate whether answer is obtained by query (q) or observation (obs.)

125 H. Does the householder attempt to protect food against contamination by insects, animals etc? Note means used.

Means used	Type of food	
	1) Dry rice and other nonperishable foods	2) Perishable foods & left-over cooked foods
1. Container covered:		
a) Solid cover		
b) Fiber cover		
2. Food safe:		
a) Screened		
b) Ant-proof legs		
3. Other		
4. None		

I. Family member observed at meal-time . . . . . .
Notes re kind and amount of food eaten by this person:

Food Preparation and Consumption — Sept. 25, 1953 — Household No. 21

Menu 1	Raw Ingredients: Kind 2	Wt. A.P. 3	Cost 4 Bt.	Cost 4 Stg.	Ined. Ref. 5	E.P. 6	Cooked Foods: Dish 7	Dish + Food 8	Food 9
Meal Time 4:30 a.m.		2180-800 = 1380					800	2990	2190
Cooked rice	Polished						120	1280	1160
							190	850	660
									4010T[1]
(1) Bauaun stew	(leftover)						430	915	465
(2) Sa-(5)noo stew	Coconut meat (to make milk)	700-180 = 520		50		520)			
	Dried chilies	24		15		24)			
	Onion	8		4		8)			
	Galangal (HG)[2]	8				8)			
	Garlic	4		2		4)			
	Lemongrass (HG)	12				12)	430	1390	940
	Bergamot rind (G)[2]	4				4)	130	312	182
	Salt	30				30)	130	300	170
	Serpenthead (C)[2]	320-120=200				200)	130	260	130
	Shrimp paste	6		3		6)			1422T
	(2)Sa-(5)noo flowers (G)	550			580-520 = 60	640-150 = 490)			
	Coconut milk					1220-450 = 770)			
	Palm sugar	240-200= 40		24		40)			
Cooked rice	(leftover)						520	800	280
Fried duck egg	1 Duck egg	76			21	240-185 = 55			
	Coconut oil	16		8		16			
	Onion	4		2		4			
	Fishsoy	10		5		10	180	260	80

1. T equals total weight.
2. HG, G and C stand for home grown, gathered and caught, respectively.

125 252 262 [illegible]

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

Use of Cooked Foods						
Given away 10	Fed to Stock 11	Ed. Waste 12	Left Over 13	Eaten 14	Persons Eating 15	Method of Preparation
Cooked rice 850-190= 660 (to 3 priests)			0	3350	4	Rice, 4:30 a.m. She washes rice two times and lights the fire. Then she puts rice pot on fire at 4:35. Rice water is drained off at 5:00. Rice pot is put on fire again from 5:15 to 5:25.
			(1)Beusun stew (leftover) 0	465		(1)Beusun stew is reheated from 5:00 to 5:15 a.m.
(2)Sa-(5)noo stew 312-130=182 300-130=170 260-130=130 482r (to 3 priests)			0	940		(2)Sa-(5)noo stew, 5:20 a.m. Dried chillies (after soaking in water for a while), onion, garlic, galangal, lemongrass, bergamot rind, and salt all pounded together. 5:25 She crushes coconut meat with water five times over colander. Shrimp paste is mixed with (4)nam (4)phrig at 5:40. The pot of coconut milk is put on fire at 5:42. (4)Nam (4)phrig is mixed with boiled coconut milk at 5:55. Fish is put into the pot and water from crushed tamarind at 6:00, (2)sa-(5)noo flowers at 6:05. The pot is put down at 6:12 a.m.
			Cooked rice (leftover) 0	280		
			Fried duck egg 0	80		Fried duck egg. The pan is put on fire at 6:15 a.m. Duck egg is mixed with pieces of onion and fishsoy. Cocomut oil is put into the pan at 6:20. Stirred egg is fried from 6:20 to 6:25.

2: Hanks et al. D.E-8 (1952-1954) 1958 AOT Central Thai AOT Bang Chan

E. Hanks et al. D.E.S (1953-1954) 1958 AG7 Central Thai AG7 Bang Chan

E. Snacks

Person eating 1	Time 2	Kind and description 3	Weight (or approx. wt.) A.P. 4	Ined. ref. 5	E.P. 6	Cost 7 Bt.	Stg.
			g.	g.	g.		
June 4/53							
Girl, 8 yrs.	12:00m	She ate a half fruit of pineapple at home. It was bought from the selling boat.	(375)	(195)	(180)		20
June 5/53							
Girl, 8 yrs. Boy, 10 yrs. Girl, 13 yrs.	All day	7:40 - The pot of truffles (gathered from the fields) is put on fire. It is boiled with water and salt. Truffles: 525-72 = 453 gm. Salt: 35 gm. It is finished at 8:28.	453				
Boy, 10 yrs.	8:46	He eats boiled banana (NS)	48				
Girl, 13 yrs.	Early a.m.	She drinks coffee which is bought from the store near the Wat.					30
Father	10:13	He drinks one glass of milk which is bought from the store near Wat.					50

NPS 0663 4442 [128]

Form for Calculating Raw Weights of Foods Eaten

Dietary Survey, Bang Chan — Household No. 12 — Date Jan. 14, 1954

Amounts of foods prepared and eaten — No. persons in household 1

Meal - menu	Raw ingredients				Cooked food	Use of cooked foods					Adjustments-raw wt.		
1	2[1]	3	5	6	9	10	11	12	13	14	For amt. eaten	15	For No. people
4:00 p.m.													
Cooked rice	Polished	610			1640				500	1140		3	
Baked egg plants	3 egg plants	370		370	240				0	240			
Fish "salad"	Lemongrass (HG)[2]	16		16									
	Holy basil (HG)	54	20	34	115				0	115			
	1 fish (cooked)	52	12	40									
	Lime (1/2 fruit)	30	12	18									
Cooked rice	(Leftover)				250				0	250			
6:55 a.m.													
Cooked rice	Polished	950			2390				800	1590		3	
Roasted fish	2 fish	112			96				0	96			
Cooked rice	(Leftover)				500				0	500			
Chili sauce	Bird pepper (HG)	12		12									
	Shrimp paste	10		10									
	Garlic	8		8	45				20	25			
	Palm sugar	10		10									
	Lime	12	4	8									

1. For identification of column numbers, see the original schedule, pp. 118-119 and pp. 113-114, 121
2. HG stands for home grown.

Dietary Study, Bang Chan - Nutritive Value of Total Foods Eaten in 24 Hours — Household No. 16 — Date: July 23, 1953 — Persons Eating: 2 2 1 2 2 2

Dietary Study, Bang Chan - Nutritive Value[1] of Total Foods Eaten in 24 Hours — Household No. 12 — Date: Jan. 14, 1954 — Persons Eating:

Raw Ingredient	Adj. cons.	Calories	Protein gm.	Fat gm.	Carb. gm.	Ca mg.	P mg.	Fe mg.	Vit. A I.U.	B_1 mg.	Ribo. mg.	Niacin mg.	Vit. C mg.
Rice, polished	1335	4806	91	9	1053	80	1869	10.7	(0)	1.60	0.40	20.0	(0)
Egg plant	370	89	4	1	20	56	137	1.5	111	0.15	0.19	2.2	19
Pat fish	152	275	28	18	0	56	321	1.5	0	0.09	0.06	6.1	0
Lemongrass	36												
Holy basil	24	23	2	0	4	19	2	0.7	3024	-	0.55	-	1
Lime	22	8	0	0	3	9	5	0.1	0	(0.01)	0	0	6
Bird pepper	7	2	0	0	0	1	-	0.1	402	0	0	0	13
Shrimp paste	6	6	1	0	0				0	0	0.01	0.3	
Palm sugar	6	21	0	0	5	4	2	0.6	0			0.1	
Garlic	4	4	0	0	1	2	6	0	0	0.01	0	0	1
Total		5234	126	28	1086	227	2342	15.2	3537	1.86	1.21	28.7	40
Average/cap.		1745	42	9	362	76	781	5.1	1179	0.62	0.40	9.6	13

1. ( ) means imputed value; 0 means none or insignificant amount; - means no values available, but probably contains measurable amount; blank space means no information found.

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146
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Foods for Which Values Were Obtained from Miscellaneous Sources, or Imputed by the Authors

Name of Food	Source or Basis for Imputed Values
Cereals	
Rice, glutinous, black	Values for glutinous rice
Animal Foods	
Fermented fish	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche, Ca value from Knudson (1955).
Shrimp paste	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche.
Fishsoy	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche.
Field rats	Values from Chatfield et al. for mammals, dressed.
Fruits	
(2)Ma-(1)dan, fruit	Leung et al. Unspecified fruits, tropical areas.
Manila tamarind	Leung et al. Unspecified fruits, tropical areas.
Rambai	Willimott
Thai nutmeg	Values for persimmon
Vegetables	
(1) Bausun	Values for eggplant
Bergamot rind	Aykroyd et al., values for lime peel.
Celery leaves, Chinese	Values for celery leaves and stalks, Chinese.
Coral	Leung et al., values for dark green leaves
Cucumber	Watt et al., for figures for Fe and Vitamin A in cucumber with skin.

Galangal	Leung et al., values for ginger root.
(1)Jeuan	Leung et al., values for dark green leaves.
(3)Khii-(2)leg	Leung et al., values for dark green leaves.
(4)Khlyb	Leung et al., values for dark green leaves.
Lotus stalk	Leung et al., values for lotus root.
(2)Ma-(1)dan leaves	Leung et al., values for dark green leaves.
(4)Ma-(5)khya (2)khaj (2)taw	Values for eggplant.
Morinda	Leung et al., values for dark green leaves.
(2)Phag (2)ka-(2)chaed	Leung et al., values for dark green leaves.
Sweet potato	Chatfield, values for vitamin A in pale variety.

Foods for Which Nutritive Values Were Not Calculated and the Total Amounts Eaten by Two Groups of Households Throughout the Survey

Name of food	Amounts Eaten	
	Group A	Group B
	g	g
Bergamot Leaves	5	15
(2)Ka-(1)chaaj	15	71
(2)Kha-(1)lepuaum flowers	25	0
Lemongrass	135	154
(2)Sa-(5)noo flowers	216	1078

862 List of Foods[1] Included in Each Food Group

I. Rice and other cereals

Popcorn
Rice flour
Rice, glutinous
Rice, glutinous, black
Rice, home-milled
Rice, noodles
Rice, polished
Wheat bread

II. Fish and other animal foods

Beef
Chicken
Crab, salted field
Eel
Eggs, duck
Eggs, hen
Fish, canned
Fish, dried salted
Fish, fermented
Fish, fresh
Fishsoy
Frogs
Milk
Oysters, dried
Pork
Rats, field
Shrimp paste
Water buffalo

III. Green and leafy vegetables

Beans, string
"Bergamot" leaves (Citrus hystrix)[2]
Chilies, fresh, green and red (Capsicum annuum)
Chilies, small, or bird-pepper (Capsicum frutescens)
Chinese celery (Brassica pekinensis)
Coral (Erythrina fusca)
(2)Kha-(1)causun leaves (Telosma cordata)
(3)Khii-(2)leg (Cassia siamea)
(4)Khlyb (see footnote p. 30.)
Leeks
Lemongrass (Cymbopogon citratus)[2]
Lettuce, head
(4)Ma-(1)dan leaves (Garcinia schomburgkiana)
Morinda, (1)jaunu (Morinda citrifolia)
Onion leaves
(2)Phag (2)ka-(2)chaed (Neptunia prostrata)
(2)Sa-(1)daw (Melia indica)
(2)Sa-(5)noo, leaves and flowers (Sesbania roxburghii)[2]
Swamp cabbage, (2)phag (3)bung
Sweet basil (Ocimum basilicum)

IV. Other vegetables

(1)Causun - a member of the Araceae (arum family) perhaps a species of Alocasia)
Bamboo shoots
Bean, mung
Bean, sprouts
Calabash
Cassava
Chili, dried
Cucumber
Egg plants
Garlic
Gourd, bitter (Momordica charantia)
Gourd, bottle (Lagenaria leucantha)
(2)Kha-(1)causun flowers (Telosma cordata)[2]
Leeks, flowers
Lotus stems (Nelumbo nucifera)
Mushrooms, straw
Onion, mature or bulbs
(2)Phag (2)tob (Eichhornia crassipes)
Peanuts
Radish, white
Radish, salted
Sweet potato (pale yellow)

262 Other vegetables (continued)

Taro
Turmeric, white
Water chestnut, Chinese or black truffle (Eleocharis dulcis)
West Indian pea tree, (1)Khaeae flowers, (Sesbania grandiflora)

V. Fruits

Coconut and its products
Coconut meat
Coconut sport
Coconut milk
Coconut cream

Fruits other than coconut

Banana, (3)kluaj (4)nam-(4)waa
Guava (Psidium guajava)
Hog plum (a species of spondias)
Jack fruit (Artocarpus heterophyllus)
Jujube (Zizyphus jujuba)
(2)Ka-(4)tauaun (Sandoricum indicum)
Limes
Lotus seeds (Nelumbo nucifera)
(4)Ma-(1)dan fruit (Garcinia schomburgkiana)
Mango
Manila tamarind (Pithecellobium dulce)
Muskmelon
Olive
Orange, sour
Orange, sweet
Papaya
Pineapple
Rambai, (4)ma-(1)faj (Baccaurea sapida)
Rambutan (Nephelium lappaceum)
Star gooseberry (Cicca acida)
(2)Ta-(1)koo (a species of Diospyros)
Tamarind (Tamarindus indicus)
Thai nutmeg (a species of Diospyros)
Watermelon

VI. Fats and oils

Coconut oil
Pig's skin
Pork fat

VII. Sugar

Palm sugar
Sugarcane

VIII. Miscellaneous and spices

Agar
Bergamot, rind
Cardamom
Cinnamon
Coriander seeds
Fennel
Galangal (Alpinia officinarum)
Ginger (Zingibor officinale)
Holy basil (Ocimum sanctum)
(2)Ka-(1)chaaj (Boesenbergia pandurata)[2]
Nutmeg
Pepper, black
Salt
Vinegar

[104]

1. English names, where known, are given first. Thai terms are given where no common English name was known. Both Thai terms and scientific names are given for plants which may be unfamiliar to many Western readers.

2. Foods for which no nutritive values were found nor imputed.

NOTES ON THE PREPARATION AND NUTRITIVE VALUE OF COCONUT MILK AND COCONUT CREAM

The term coconut cream ((5)hua (2)ka-(4)thi), as it was used in Thailand, referred to the product which was made by squeezing grated coconut with little or no addition of water. Coconut milk ((4)naam (2)ka-(4)thi) was made by squeezing grated coconut repeatedly with water. Coconut cream might be made first, and the residue extracted one or more additional times to obtain coconut milk. The terms coconut milk and coconut cream apparently are not used consistently. Losee (1952) commented on this when he described the preparation of coconut cream in Samoa, and said that it was sometimes called coconut milk. Miller et al. (1936), in describing the preparation of coconut milk said "If a thick coconut milk to serve over puddings, taro leaves, etc. is desired, 1/2 to 3/4 cup of coconut water or boiling water should be poured over 3 cups of grated coconut. . . . If the milk is to be used in curry sauce for chicken, eggs, shrimps, or in cornstarch pudding, a larger quantity of water (1 to 2 cups of water to 3 cups of grated coconut) may be used."

In carrying out the dietary study, the observer weighed the grated coconut meat, the residue and the final products, coconut milk or cream, or both. She did not weigh the water as it was added in successive portions, but the amount of added water could be calculated.

The ratio of coconut milk to meat varied considerably, but on the average, households in Group A obtained coconut milk which weighed more than eight times as much as the coconut meat from which it was made. Households in Group B obtained less than 2½ times as much milk by weight as coconut meat. The number of extractions made varied from 2 to 6, with a mode of 3. Obviously, the products made by Groups A and B, although both called coconut milk, had markably different percentage composition, and neither was similar to "coconut milk" for which values could be found. These values were as follows:

Authors	Location	Coconut milk grams per 100 gm. E. P. Pro.	Fat	Carbo.
Bocobo et al.	Philippine Islands	3.6	33.2	38.4
Food and Drug Division	Thailand	3.52	34.75	1.52
Miller et al.	Hawaii	4.0	27.0	18.9[1]

[1] Personal communication

128 In calculating values to be used in our estimates of
146 nutrient content of diets in Bang Chan, we made two assump-
262 tions: 1) that the "expressed coconut milk" described by Miller et al. was similar to coconut cream as made in Bang Chan, and 2) that coconut milk as made in Bang Chan differed from coconut cream primarily by dilution. When coconut milk was made by successive extractions after coconut cream had been prepared, the combined weights of cream and milk were taken to represent the yield of coconut milk from the weight of meat used.

The ratio of coconut cream to coconut meat was approximately the same, 0.30 for households in Group A and 0.33 for those in Group B, but Group A used more water in making coconut milk than Group B. By calculation, we obtained the following figures for the percentage of protein, fat and carbohydrate in coconut milk as made in the two groups of households.

Estimated Composition of Coconut Milk as Made in Two Groups of Households, Bang Chan

	Grams per 100 gm. E. P.		
	Protein	Fat	Carbo.
Group A	0.15	1.0	0.7
Group B	0.5	3.6	2.4

The need for a guide for calculating composition of various coconut milks, based on actual analysis of the products as made at home is apparent. Since coconut milk was used almost daily in Bang Chan, use of the figures which we found in the literature would have introduced a major error into our calculations. Using figures from the table designed for use in Thailand (Food and Drug Division, Bangkok, 1953), the average per capita caloric intake per day, from this source for the families studied would have been over 300 calories, as compared to about 45 calories, using the figures calculated on the basis of observed procedures in the village.

/Pp. 130-139 contain no data on Bang Chan and the Central Thai and were not processed for the AO7 Central Thai file./

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
Bang Chan

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MATERNAL AND CHILD HEALTH

IN A SIAMESE RICE VILLAGE: NUTRITIONAL ASPECTS

Studies in Bang Chan, 1952-1954

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3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
Bang Chan

MATERNAL AND CHILD HEALTH IN A SIAMESE RICE VILLAGE: NUTRITIONAL ASPECTS

Studies in Bang Chan, 1952-1954

by

Hazel M. Hauck

With the assistance of Anusith Rajatasilpin
Sapha Indrasud, Saovanee Sudasneh, Silvia
de la Paz and Barbara J. Smith

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[Title page]
[p iii]

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
Bang Chan

FOREWORD

In this Data Paper, Professor Hauck and her associates continue their analysis and reporting of the field research into conditions of health, sanitation, nutritional status, and diet carried out in Thailand during 1952, 1953, and 1954. Research operations were concentrated among the 300 households of the village of Bang Chan, whose population of about 1,700 was made up primarily of rice farming families. This community lies in the central plain of Thailand some twenty road miles northeast of the capital, Bangkok, whose proximity provides major and continuing stimuli to cultural change. Investigation of the processes involved in changing cultural behavior in rural Thailand is the primary objective of this and other field research conducted under the auspices of the Cornell Thailand Project.

Reference to earlier reports by Professor Hauck and her associates and to other materials providing general background information for this study will be found in the bibliography included in this interim report. Dr. Hauck, who is Professor of Food and Nutrition in the New York State College of Home Economics, Cornell University, designed and supervised the research on basic problems of health in Bang Chan reported on in this and in the other studies cited. Of the other contributors to this present report, Dr. Asmith, who has been working in the Medical School of Tulane University, is associated with the School of Public Health in Bangkok, and Dr. Saovanee, having completed her doctoral work in nutrition at Harvard University, has returned to Thailand to join the faculty in home economics at Kasetsart University. The Cornell Thailand Project is much indebted to these scholars and to other Thai and American collaborators who have contributed so much to the studies of Bang Chan.

Lauriston Sharp, Director
Cornell Thailand Project

Ithaca, New York
November, 1959

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114 122 For the period of her field study, 1953-55, the author received an award for advanced research from the United States Educational (Fulbright) Foundation in Thailand.

The author wishes to express her gratitude for the assistance of her Thai co-workers: Dr. Anuwith Rajatanavin and Miss Sapha Indrasud, whose services were provided by the Food and Drug Administration, Bangkok, Thailand, through the courtesy of its director, Dr. Tong H. Chutima; and Miss Saovanee Sudsaneh, who served as field worker with the Cornell Thailand Project during 1953-54.

84 In connection with their graduate study at Cornell, Sylvia de la Pan summarized the observations on feeding practices of children from birth to two years, and Barbara J. Smith summarized data obtained on growth in height and weight of infants and small children in Bang Chan.

123 The author is particularly grateful for the interest and friendliness of the parents, especially the mothers of Bang Chan. They patiently answered our questions at each visit and reassured the small children who seldom saw strangers and who were unused to being weighed and measured. Without their generous cooperation this study would not have been possible.

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SUMMARY

129 Information on health, care, and diet of mothers and small
125 children in Bang Chan, Thailand, was obtained primarily by interview, although some direct observations were made. In general, three areas of inquiry were included in this study: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project.

In all, 66 mothers of young children were interviewed. Information on diet during pregnancy, postpartum, and lactation was obtained from women who were either in the stage under discussion or had only recently passed through it.

The description of child feeding practices is based on records obtained concerning 57 children from birth to two years of age, a majority of whom were visited from 5 to 7 times.

Information on growth in height and weight is based on observations made on 71 children, most of whom were weighed and measured 6 or 7 times. Observations were made for 30 of these children both before and after weaning.

843 During pregnancy most women in Bang Chan continued to eat as usual. A few expressed cravings for certain foods, and a minority thought some kinds of food should not be eaten during pregnancy.

846 During the postpartum rest period most women ate a very restricted diet. Rice and fish, with salt, were the foods considered by all informants to be appropriate for this period.

853 As a rule, diet during lactation, after the mother resumed her usual work, was the customary family diet. A minority of informants mentioned foods which should not be eaten by a nursing mother.

164 Evidence of the need to improve diets in this region was
176 provided by the occasional occurrence of beriberi or the history of beriberi among mothers as well as by medical inspection and family dietary studies.

853 Breast feeding was the rule in Bang Chan. For a majority of infants observed, breast feeding was continued into the second year, and some were breast fed for more than two years. Few received animal milk after weaning.

A small, rather flavorless banana was given to young babies, 853
sometimes before they were put to the breast. This type of banana and soupy rice were the only supplementary foods given before 6 months of age. Protein-rich foods, chiefly fish and egg, were generally introduced in small amounts during the second half of the first year. Few infants were given vegetables before one year of age, and even then none had them daily. At two years of age, some children had not yet been given green vegetables. Late introduction of vegetables into the child's diet may be due to the fact that vegetables were often prepared as hot curries which were considered unsuitable for young children.

A child was usually allowed foods commonly eaten by adults by the time he was weaned, although a few informants specified that the child could have anything but "hot tasting" foods, i.e. foods containing chili. A minority of informants mentioned other foods as not good for younger babies.

Except for dietary restrictions while the mother was lying 846
by the fire, postpartum, no well established dietary taboos 853
connected with the feeding of mothers or babies were encountered. 262
The concept that a good choice of food is important to the health of both mother and child seemed to be entirely lacking.

Many of the young children in Bang Chan failed to gain, or 145
even lost, weight in the intervals between observations. Almost all infants appeared to gain steadily up to 6 months of age, but stationary weight or weight loss for periods of from 1 to 7 months was observed in most children at some time. These periods were noted more frequently among children from 2 to 3 years old than among younger ones. Such experiences were not more common after weaning than at other times, but the cause or causes of growth failure could not be determined from the information available.

Some approaches to improvement in the diet of Thai mothers 252
and children are suggested. Improvement in the diets of mothers and small children would probably parallel any improvement in the general family dietary, since food is prepared at one time for all members of the family.

INTRODUCTION

121 In the study of food habits and health in Bang Chan, Thailand, mothers and small children were the focus of special attention. We were interested in these groups not only for their own sake, but because in an area where frank deficiency disease was not common, inadequacies in the diet might be reflected in the condition of these vulnerable groups to a greater extent than in the general population. Food habits in this rice producing village have been described (Hauck, Sudsaneh, and Hanks, 1958; Hauck and Hanks, 1959) and information has been presented on nutrient intakes of 11 families (Hauck, Sudsaneh, and Hanks, 1958; Hauck and Sudsaneh, 1959).

128 In the present paper, general procedures are described first, followed by sections on 1) health and care of mothers and 2) of infants, 3) diet of mothers during pregnancy, post-partum, and lactation, 4) feeding of infants and small children, and 5) growth in height and weight of infants and small children in Bang Chan.

PROCEDURES

124 Some of the information presented herein was obtained by direct observation, but much of it resulted from interviews, usually with the mother. One of our first tasks, therefore, was to develop appropriate schedules for such interviews.

Schedules for Interviews.

During the early weeks of getting acquainted in the community, we had preliminary unstructured interviews with a number of pregnant women and mothers of young babies. Frequently the child's father, a grandparent, or other family member would be present. Informants were encouraged to discuss infant feeding, common customs associated with childbirth, and other subjects
125 of interest to the research group. From the information so obtained and from conversations with workers at the Mother and Child Health Center in Bangkok, two schedules were drawn up. In general, both schedules included three areas of inquiry: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project. In this category some items were included because of their interest from the standpoint of an anthropological study rather than because of any assumed relation to nutrition or health.

One schedule was designed to obtain information about the mother before and after the birth of a given child (Appendix p. 53) and the other for information pertinent to the nutrition and health of the child from birth onward (Appendix p. 56). Clinical history and food intake were included on both schedules. Spaces were allowed to record height and weight of infants and young children at each visit. Questions about cultural customs were included on both schedules, but most such information is reported elsewhere (Hanks, 1959). Descriptions of procedures used in the interviews and observations are included in the Appendix (p. 58). 125

Subjects.

At the beginning of the study we located as many households as possible in which there were pregnant women or young babies. The question, "What families in Bang Chan have young babies or are expecting babies?", was asked of the headman of each hamlet, of groups in a village store, and of families where we visited. We were able to follow up most of the leads obtained in this way. If possible the mother was visited sometime before the baby was born; soon after the birth (i.e. within a few days); and then when the infant was 1 month of age, 3 months of age, and at 3-month intervals thereafter. If the first interview occurred after the baby was born, the mother was asked about her diet during the pregnancy, the occurrences at the infant's birth, and his food intake up to the time of the first interview. 124 125

In all, 66 mothers of young children were interviewed. The first interview with 17 mothers was held during pregnancy; 34 others had infants less than one year old when first seen, and for 15 the youngest child was over one year of age. For various reasons, such as death of the infant, removal from the village, or failure to find mother and infant at home, complete records were not obtained in all instances. Moreover, after some experience we limited questions concerning pregnancy and postpartum care to women interviewed at those times or to women whose infants were under one year of age. The descriptions of diet during pregnancy, postpartum, and lactation are based on interviews with from 30 to 50 informants.

In order to obtain more information, particularly about infants going through the weaning period, older babies in the same households, or in the neighborhood of the households with young infants, were weighed and measured and their food intakes recorded. For these additional children the 3-month interval was usually followed, but they were not necessarily visited at the ages of 6, 9, 12 months, etc.

The description of child feeding practices is based on records concerning 57 children from birth to two years of age, a majority of whom were visited from 5 to 7 times.

124 125 Information on growth in height and weight is based on observations of 71 children, most of whom were weighed and measured 6 or 7 times. For 30 of these children, observations were made both before and after weaning.

HEALTH AND GENERAL CARE OF MOTHERS

145 Information obtained on menstrual history of girls and women in Bang Chan has been reported previously (Hauck, 1956). The median and modal reported age at menarche was 15 years with a range from 13 to 19 years.

163 Most married women in Bang Chan had children, and of 438 pregnancies reported by 84 mothers, over 90 per cent resulted in live births (Hauck, 1956).

843 164 Clinical History and Complaints During Pregnancy.

Most of the women interviewed reported no history of disease which might affect, or be affected by, nutritional status.

Four women had a history of beriberi; 3, a history of malaria; and one had active tuberculosis of which she later died. In relation to the current pregnancy, 6 women had minor complaints such as nausea in early pregnancy, faintness, and leg cramps. The physician considered these as probably physiological. Of the 4 women with more serious complaints, one who said she had pain in the abdomen and legs and difficulty in walking had manifest beriberi when seen a few days after delivery.

844 846 125 Delivery and Care of Mothers After Childbirth.

Information was obtained from 49 mothers concerning delivery and care after childbirth. For 43 of these women, ages reported were as follows:

Reported Age (years)	Number of Mothers
20 or under	7
21-25	11
26-30	12
31-35	6
36-40	6
over 41	1

The mothers interviewed had borne from 1 to 12 children. For 8 of them, this was the first child; but 25, a majority,

had 2 to 4 children. In each case, the information obtained related to the most recent delivery. 846 844 125

Delivery. - In Bang Chan delivery usually took place at home. Four of the mothers we interviewed went to the home of a relative or relative-in-law. In two of these instances the relative was also the midwife; in the others the mother was apparently seeking a place where she could be more satisfactorily looked after than at home. 844 [102] [759]

Three women went to the Health Center at Minburi, about 3 miles from the center of the Bang Chan community, to have their babies. Two of these mothers expected to be delivered at home but were taken to the Health Center when labor proved long. All 3 returned home either on the day of delivery or the next day and lay by the fire. Two others, both school teachers, told us in advance that they expected or hoped to go to the Health Center, but when labor began they were unable to do so because their babies came so quickly. Aside from the 3 who went to the Minburi Health Center, only one of those interviewed went outside the community to have her baby. Informants usually considered the delivery uncomplicated; although, as noted, some labors were long. 844 743

Traditional midwives, who were not professionally trained but had learned from other traditional midwives before them, attended most of the mothers. One woman who was alone delivered the baby herself, one said she had no midwife but did not specify other help, and 2 had the help of women who did not ordinarily practice midwifery. The 3 women who were delivered at the Health Center had professionally trained help. Obstetrics as practiced in Bang Chan has been described by Hanks (1959). 844 759

Care of Mother During Postpartum Rest Period. - Traditional behavior during the postpartum rest period has been described by Hanks (1959). 846

Lying by the fire. - The ancient custom of (2)juu (1)faj[1] (literally to be by the fire) after childbirth was still observed by most women in Bang Chan. The chief difference between the practice as we observed it and as it was described in the Bangkok Calendar[2] for 1865 was in the length of the period. In former times this was as much as a month after the birth of the first child, with shorter periods for successive

1. See Appendix, p. 51 for glossary of Thai terms.

2. The unsigned article entitled "Siamese Obstetrics" was presumably written by the Rev. Dan Beach Bradley, M.D., a Protestant missionary who compiled the Calendar.

846 births, until with the seventh child it might be dispensed with altogether without harm. In Bang Chan women who observed (2)juu (1)faj rested for an odd number of days, from 5 to 15 in this series. Seven or 9 days was most common. An odd number of days was considered good; an even number, bad. A wood fire was customary, although in 2 instances a charcoal brazier was used. One woman lay near a charcoal brazier and used a hot ashes chamber[1] also. With one exception (a non-Thai), even those who did not lie by the fire, but who used the hot ashes chamber, rested an odd number of days.

846 372 The traditional ideas on which the custom of lying by the fire was based were described in the Bangkok Calendar (Bradley, 1865):

> "The Siamese theory in regard to the part, which external and internal fire plays in the functions of life and health, is made to work powerfully in these circumstances. It teaches that there is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in the circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child."

The author, however, attributed deficiency in milk production to the practice of lying by the fire:

846 853
> "Now it is very remarkable that these last sequences, which are guarded against at so much expense of ease and comfort by the custom, are postively and directly brought about by following it. The mothers have but little milk for their babes during the month, and that of a poor quality. Consequently the attendant nurses have to feed them from the hour of their birth with honey, rice-water, and the pulp of soft bananas. This is their almost entire living for the first two or three days, and a large portion of it during the first month."

846 Of the 5 women we interviewed who did not lie by the fire, 3 used a hot ashes chamber regularly throughout the postpartum rest period, one used it occasionally, and one used both the hot ashes chamber and a hot water bottle. This latter woman

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1. A small metal box in which sticks of fuel were burned. The box was wrapped in cloth and placed on the mother's abdomen.

had lived outside the village and returned to the home of her mother, a traditional midwife, for delivery. Eight other women who were delivered by the same midwife observed (2)juu (1)faj. Two of these 5 women who, by using a hot ashes chamber, ventured to take a step away from the tradional practice were non-Thai (Chinese and Mon). Another, a woman aged 40, was having her 12th child. When we interviewed this woman during pregnancy she said she expected to lie by the fire, but when we visited her after the baby was born she was using a hot ashes chamber. The wife of one of the school teachers, who had observed the traditional (2)juu (1)faj with her first 5 children, said she found "the new way" more convenient; but by using it she had incurred the displeasure of some of the older women, especially her grandmother. 846

Activity and bathing. - Activity appeared to be rather limited during the postpartum period, but the respondents said they could move about to get some things for themselves, to eliminate, etc. We saw women sit up on the plank which served as bed to nurse the baby, change the cloths under it, and help to weigh and measure it (i.e. to assist us). Because of the warmth of the fire, and to avoid the smoke, the women turned from side to side frequently.

Bathing was customary during the postpartum rest period. For the first three days this was one of the midwife's responsibilities in care of the mother (Hanks, 1959). [315] [759]

Medications. - The 46 women who told us about medications used after childbirth had a total of 63 medicines; i.e., many used more than one kind. With one exception these were taken internally, and all preparations taken internally were mixed with alcoholic liquor (28% alcohol). Of the medications used, only one was prescribed from the Health Center, 4 were home remedies, and the remainder commercial preparations.[1] Two popular brands, snake brand and (1)jaa (1)dauaung, accounted for 60 per cent of the total. 846 278

Milk stimulation. - As already noted, lying by the fire was thought to be favorable to milk secretion. One woman commented that, since she was not a good milk producer, she must lie by the fire more than 7 days. Six women spoke of the hot water which they drank during the postpartum rest period as good for milk production. A large majority of the women mentioned taking (1)kaeaeng (1)liang, a broth made with dried 853

1. According to the label, some of these were supposed to be useful for menstrual and other complaints, as well as for childbirth. Some were even recommended for treatment of various disorders in men as well as women.

853 fish and vegetables, when asked if they did anything to stimulate milk secretion. Other preparations, each mentioned once or twice, were cobra curry, fried (3)kuj (1)chaaj flower, pork soup with (3)kuj (1)chaaj leaves, dried peas and peppers cooked in palm sugar syrup. Some of the medications used were reputed to stimulate milk flow. Three women spoke of peacock brand medicine and one of a Chinese medicine in this connection. With respect to the Chinese medicine, another informant said she took it "to remove the serum which interferes with milk secretion." One midwife put herbs on her daughter's breast and expressed and discarded the "early milk" which was considered bad for the baby. No association appeared to be made between putting the baby to the breast and stimulation of milk flow.

846 312 Drinking water. - Information concerning sources of drinking water used by the mothers was obtained from 46 mothers of young babies. Of these, 20 used canal water, 23 rain water, and 3 used either one. In general, there was a relation between season and source of water used. Most of the mothers whose babies were born between March and October drank rain water, whereas from November to February a majority drank canal water. Some families had enough water jars to preserve rain water for much of the dry season, whereas others had few or no jars and, therefore, could save only small amounts of rain water on a day-to-day basis. In all instances, the water, whatever its source, was boiled for the mother during the postpartum rest period. Forty-six women said they drank the water hot; one said it was warm. One popular traditional midwife said, however, that if the mother had her baby in the hospital, use of boiled water for drinking and bathing was not necessary.

CONDITION AND CARE OF BABIES AT BIRTH AND IN EARLY INFANCY

125 All information to be reported concerning condition and care of babies at birth and in early infancy relates to infants who were under one year of age when first visited. Thirty infants were seen when they were under 3 months of age.

Condition at Birth.

164 165 The condition of the baby at birth was generally described as satisfactory. One infant who died on the third day, before we saw the mother, was said to have cyanosis, failed to cry at birth, and needed to be "helped" for about one-half hour afterward. Three infants had congenital defects: umbilical hernia, inguinal hernia on the right side, and hemangioma on the right groin.

One infant had congenital stridor when seen by the physician[1] at 2 months, but the difficulty in breathing had disappeared spontaneously before the baby was next visited at 3 1/2 months of age. 164

Illness in Early Infancy.

One infant that died on the fifth day was seen when one day old, at which time neither mother nor physician made any adverse comment on its condition. The mother, who was not living with her husband, returned to her work outside the village a week after delivery, and we were unable to talk with her again. So far as we could learn from neighbors, this infant had none of the symptoms concerning which we routinely inquired; namely, convulsions, vomiting, diarrhea, or fever. 165

A third infant in this series died when he was nearly 2 months old. At 13 days of age, when first seen, this infant had white patches on his tongue which were diagnosed as monilíasis. When the physician saw the child again at 6 weeks of age he made no adverse comments on its condition. Emotional reaction to the infant's death was such that we were unable to get a clear description of events which led up to it from either parents or neighbors.[2]

Three infants had skin infections when seen within a few days after birth. The physician commented that skin was more susceptible to infection when moist than dry and that the babies had become very warm. The weather was hot, and babies were bundled up and/or were near the fire. He gave directions for keeping the skin clean and dusting with sulfa powder. 164

No deaths from tetanus occurred in this series, although infantile tetanus was prominent among causes of death of infants under one month old (Hauck, 1956). 165 164

Medicine Given to Babies During the First Few Days of Life.

On this point, information was obtained concerning 36 of 40 babies seen before they were 6 months old. Thirty of these were given medicine, sometimes more than one kind. Most of the 854 278

1. A physician was present at all interviews with pregnant women and mothers with very young infants. [124]

2. Although the mother had children by a previous marriage, this was the first child of this union, born after the parents had lived together for 9 years. The mother was 41 years old.

854 278 medications were taken internally, sometimes being painted on the tongue with a feather; but two preparations were applied over the abdomen. Some of the medications were described as "stomach medicine" or "to prevent flatulence." Five different kinds of proprietary medicine were given to 18 infants. In 13 instances, the medicine given was clearly homemade and included as major ingredients items such as flattery fruit, (3)luug (1)yauau; cobra oil; horseshoe crab; and buffalo skin. The nature of the medicine, whether homemade or proprietary, was not clear in 8 instances. Usually medicine for infants was mixed with honey, but in 2 cases, alcoholic liquor was used as it customarily was for the mother.

Six newborn infants in this series were given no medicine. One of these was born at the Health Center. One of the other 2 infants delivered at the Health Center was given homemade medicine later, and no information was obtained on the third. Eye prophylaxis[1] was probably routine at the Health Center, as, in 2 of the 3 cases delivered there, informants knew that drops had been put in the infant's eyes. Traditional midwives, however, did nothing of this sort.

Water for Drinking and Bathing.

853 312 For the newborn infant as well as for the mother, water for drinking and bathing was boiled and was usually used while hot, often being kept warm in a vacuum bottle. Either rain water or canal water might be used depending on what was available at a given season. The water was dribbled from an adult's fingers into the infant's mouth. When the mother was no longer lying by the fire, boiled water was not considered essential for the infant. Nevertheless, over half the infants seen from this time up to 3 months of age were being given boiled water to drink. After 6 months of age this was rare.

853 855 312 In one instance, during the time when a younger sibling received boiled canal water, a 21-month old child was given boiled water also. At the time of a later visit both of these children were drinking unboiled canal water. In another case an orphaned boy's formula was made up with boiled water, although

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[744] [751] [731] 1. Vaccination for smallpox was the only modern preventive treatment which we knew to be used in Bang Chan in the absence of an epidemic. Since a severe epidemic of smallpox with many deaths ten years previously, health officers came to the Bang Chan elementary school once a year to vaccinate children, and other residents of the community could be vaccinated at this time. Four of the young children whom we visited periodically were vaccinated, at 4 months, 8 months, 1 and 2 years of age, respectively.

he was given untreated canal water to drink. One young mother gave boiled water to her 15-month old infant for a few days when the baby had diarrhea though on questioning she said no one had told her to do this. (The fact that boiled water was used for newborn infants and their mothers may have suggested the procedure to her.) Among the infants who received boiled water for a longer time than most, 4 were children of school teachers. 853 855 312

Early Feeding Practices.

Breast feeding was usual in Bang [illegible], but most babies were not put to the breast until the second or third day or even later (Table 1). 853

Table 1. INITIATION OF BREAST FEEDING BY THE MOTHER FOR 38 INFANTS IN BANG CHAN.

Post natal day	Number of infants
1	1
2	11
3	22
4	2
5	2

As previously noted, no association was apparently made between putting the baby to the breast and establishing the milk flow.

In this series, 9 infants were nursed by a relative or neighbor one or more times before the mother's milk supply was established. Five of these infants had breast milk on the first day, 2 on the second, and 2 on the third. Choice of a woman who was a good milk producer to give the infant its first milk feeding was considered auspicious. The procedure was primarily of ritual significance.

Three infants were given cow's milk (diluted, condensed, or dried milk) before being put to the breast.

About half the infants received no food other than boiled water and milk while the mother lay by the fire. Honey was given with boiled water to about one-third of the infants, and about one-fourth had crushed banana, sometimes in addition to honey. When given, these foods were started before breast feeding was established. Either raw or baked, a small, rather flavorless variety of banana, (3)kluaj (4)nam-(4)waa, was used. We observed a grandmother dipping her fingers into a bowl of water, then crushing a bit of banana between them and poking this into the infant's mouth. The infant was given as much as he would take, usually about half of a banana at one time. Banana might be fed from one to three times per day.

Exposure of Infants to Sunlight.

854 Even during the rainy season sunshine was usually abundant in Bang Chan, but taking a baby out of doors at an early age was generally thought to involve some risk. Many houses had low or wide eaves, and an infant was usually kept in a cradle in the house where sunlight could not penetrate. When old enough to hold up its head while sitting astride an older person's hip, the infant might be carried about the compound by parents or older siblings. As the question was worded ("When did you take the baby outside the house?" or "At what age did you take the baby with you when you went out for pleasure?") the answer did not mean that the baby was taken out with any degree of regularity at the specified age. Most of the babies in this series had been taken outdoors by the time they were 3 months old, but 4 were a year or older when first exposed to [144] sunshine. Nevertheless, the physician found no evidence of rickets among the infants he examined.

One informant, a school teacher's wife, said she thought that taking the baby into the sunshine was not harmful; in fact she believed it made the baby stronger than usual. She thought, however, that too much exposure to sunshine might "bring cold into the baby" and she spoke of the beret as a protection against this.[1] In Bang Chan, an otherwise naked infant might wear a beret when being taken out of doors.

MATERNAL DIET

Diet During Pregnancy.

843 Of 31 mothers who furnished some information on diet during 262 pregnancy, 17 were pregnant when interviewed, and the remainder [125] had young infants, in most cases under 3 months of age. Eighteen of the interviews were based on schedule 4 (Appendix p. 53) and provided fairly detailed information on the kinds of foods eaten. Other informants gave more general information, such as foods craved or disliked.

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[171] 1. Wellin (1956) mentioned the small woolen cap made or bought by mothers in the Valley of Ica, Peru, for the infant to wear. The cap was put on soon after birth and was worn, off and on, for many months. The function of the cap was to prevent the entrance of cold via the fontanel, which was defined as a particularly vulnerable point of entry. Wellin noted that all infants he saw in maternity wards in the Valley of Ica wore woolen caps.

In general, the diet during pregnancy seemed to be about the same as at other times. Rice cooked in the usual way (see glossary, Appendix p. 51) and fish of some kind formed the basis of the diet. A majority had green vegetables[1] either daily or frequently. Foods which seemed to be generally acceptable, although they were eaten less often, included vegetables other than green ones, pork, bananas, coconut, other fruit, fresh beef, and egg. 843 262

Eight women spoke of foods which they craved during pregnancy. Fruit in general, or specific fruits such as oranges, pomelo, guava, rambutan, and mangosteen, were most often mentioned. One woman said she craved Chinese noodles, and one, chilies.

When asked whether they disliked any foods during pregnancy, 5 women mentioned fish or the odor of fish, but in 2 instances the objection was limited to early pregnancy when the informants experienced some nausea. Three said they disliked vegetables, and one, hot tasting foods.

Four informants said that hot tasting foods (i.e. foods containing chili peppers) were bad for a pregnant woman; one considered dried and salted fish harmful "because of their fishy odor." One informant thought eggs were bad for a woman during pregnancy. Eggs were, however, the only food mentioned by anyone in Bang Chan as being good for pregnant women. The informant, a woman school teacher, said she ate them often anyway, hence did not alter her intake during pregnancy.

Diet During the Postpartum Rest Period.

Of the 42 mothers from whom we obtained information about the food they ate during the postpartum rest period, only 2 said they ate as usual. One of these said she believed that if a mother ate small amounts of many different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time. This woman worked outside the community and may not have acquired her belief about eating a variety of foods within the village. In any event, since her child died at five days of age, one would not expect this mother's eating behavior to have a liberalizing effect on the custom in 846 262

1. Most of the pregnant women were interviewed toward the end of the rainy season when swamp cabbage and (2)phag (2)ka-(2)chaed, the most popular leafy vegetables, were available. From our subsequent experience with the family dietary survey, one would expect that when canals were low, green vegetables would be eaten infrequently by pregnant women as well as by other members of the family.

846 Bang Chan. The only other woman in this series who did not
262 restrict her diet postpartum was the wife of a school teacher. She said that women were supposed to eat rice with salt or salt fish at this time but that she ate all kinds of food.

As a rule, a woman's diet was considerably curtailed during the postpartum rest period. Rice and fish were apparently the only foods considered safe by all of the mothers interviewed. About half ate fish, but over half of these ate salted fish only, and about one-fourth ate fresh fish only. The only other food eaten by half or more of the mothers was banana of the (4)nam-(4)wan variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeaeng (1)liang, a broth made with dried fish and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some.

When asked what foods they considered good for a woman who had recently borne a child no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the postpartum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

[329] Fear of illness from eating incompatible foods after childbirth was rather strongly expressed by many informants, even by some who knew of Chinese customs which were different from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home were not forbidden at the government Health and Maternity Center at Minburi.

Diet During Lactation.

853 The term "diet during lactation" as used here refers to
262 foods eaten when the mother had resumed her usual work following the postpartum rest period. The majority of nursing infants were under a year old when the records were obtained. All of the mothers ate rice everyday cooked in the usual way, and almost all had fresh, dried, or salted fish. About two-thirds had vegetables of some kind daily, but 6 women reported that vegetables of any kind were eaten only occasionally. Coconut, which as coconut milk is the basis for many curries, was used often. One nursing mother ate bananas daily, and about two-thirds of these women had bananas either occasionally or frequently. Only five women mentioned eating other fruits.

Three reported eating eggs daily,[1] and about two-thirds of the women had them either occasionally or frequently. Animal foods other than fish or eggs were eaten infrequently by most nursing women. 853 262

Our questions about ideas concerning foods during lactation did not uncover any firmly established traditional behavior. No food was considered harmful by a majority of informants. In response to the question as to foods which should not be eaten during lactation, however, 12 kinds of food and 4 attributes of food (sour, hot tasting, raw, fermented) were mentioned 27 times. Jackfruit, the item which occurred most frequently, was mentioned 8 times, corn, 3 times, swamp cabbage and pork, twice each; other items such as legumes, beef, poultry, egg, pineapple, and chico, once only. When asked if they disliked any foods at this time 4 women mentioned a dislike for vegetables. One mother said that cooked foods (in contrast to raw ones) were good for a lactating woman. Our question about foods craved during lactation brought little response.

To sum up, the mother's diet during pregnancy and lactation often approximated the usual diet in Bang Chan. A few women said they craved certain foods during pregnancy and some mentioned foods disliked at that time. A number of food items and attributes of food were considered by some informants to be undesirable during pregnancy and lactation, but no item was mentioned so frequently as to be considered tabooed. During the postpartum rest period, however, a greatly restricted diet was common. Mothers apparently had no idea of special dietary needs during pregnancy or lactation. 443 853 262 [144]

FEEDING PRACTICES FROM BIRTH TO TWO YEARS OF AGE

This description of feeding practices is based on 256 interviews concerning 57 infants and small children. The majority of them were visited from 5 to 7 times each. Since, insofar as possible, we saw the babies at 3-month intervals, changes in feeding practices will be described by 3-month periods or multiples thereof. If each visit to a child is considered as unity, the 8 age groups from birth to two years included from 17 to 41 children each with 6 of the age groups including more than 30 individuals. Thus the data obtained may be assumed to provide a reasonable picture of baby feeding practices in Bang Chan, 1952-54, and of significant deviations therefrom. 125 953

1. This does not mean that the mother ate a whole egg at one meal. Frequently one or two eggs might be used to prepare food for the entire family.

Breast Feeding.

853 184 As previously noted breast feeding was the rule. One child in this series, whose mother died when he was 5 days old, was never breast fed but was given canned or dried milk[1] diluted with boiled water. Another infant, whose mother died of tuberculosis when the child was a year old, was weaned at 5 months because of the mother's illness. A few breast fed infants were given cow's milk preparations at times. A child whose mother was a vender had cow's milk daily during the mother's absence; in another instance, cow's milk was given a baby when the mother was at work in a distant field. Whenever practicable, however, mothers apparently returned to the house to nurse the baby or had it brought to the field to be fed. One woman teacher who had a baby during the school year returned to her nearby home at recess to nurse the infant. Two mothers said they gave their infants some cow's milk because they thought their own milk supply was not adequate. One of these was the vender previously mentioned.

Supplementary Feeding of Infants.

853 Infant feeding during the mother's postpartum rest period has already been described (p. 12). After (2)juu (1)faj no mention was made of giving honey in water to babies, but up to about one month of age the only other change in practice which occurred was that two or three mothers started to mix a little rice with the crushed or baked banana which had been started previously. As during the mother's rest period, however, a minority of infants were being given banana, i.e. most of them had nothing except water in addition to mother's milk.

By 3 months of age about half of the infants were being given banana, (3)kluaj (4)nam-(4)wa, and mixing rice with it was more common. A few infants were being given rice as such. In most instances, for infants up to 6 months of age, rice was cooked with extra water and mashed, (3)khaav (2)piag, a preparation which was considered baby food. Rice water with sugar was added to the soupy rice for one infant less than 3 months old

[2]1. No fresh milk of any kind was available in Bang Chan. Water buffaloes were ordinarily not bred in the village and use of buffalo milk was unheard of. Among the light refreshments which could be bought at village stores, however, were coffee with condensed milk and diluted canned milk. Storekeepers stocked imported canned and dried milk including some brands designed for infant feeding. Directions for use were not in Thai, however, and the preparations actually fed to infants were often diluted more than recommended.

but additions of rice water, coconut milk, and salt[1] were more common from 3 to 6 months. A few infants less than 6 months old were given rice from the family pot cooked in the usual manner.[2] No other foods were introduced before 6 months of age.

A majority of infants from 6 to 8 1/2 months[3] of age were given ordinary rice, although for some, excess water was not drained off and special mashed soupy rice was still given to others. Fishsoy, (4)nam (1)plaa, might be added for both salt and flavor. Several mothers said that when the baby had teeth he could begin to eat ordinary rice. At this time also the infant was given some other items which were considered as adult food (Table 2).[4] A few were fed protein-rich foods, i.e. fresh, dried, or salted fish, egg, meat, or poultry, between the sixth and ninth months. One child in this age group was given banana other than (3)kluaj (4)nam-(4)wa (kind not specified), and four infants had fruit other than banana frequently or occasionally. Orange, mango, guava, roseapple, and rambutan were mentioned according to season. Some kinds of (2)kha-(5)nom, which included purchased crackers, biscuits, or cookies as well as some sweet items which we would call desserts,[4] were given also, at least occasionally, to many babies over 6 months of age.

Among infants from 9 to 11 1/2 months of age increasing use of protein-rich foods, primarily fish and egg, was noted. Fruits other than the small (4)nam-(4)wa banana and (2)kha-(5)nom were also given to more infants. A few were given vegetables before one year of age, but none had them daily (Table 3).

Diet During the Second Year of Life.

For most of these babies breast feeding was continued into the second year. By this time almost all were given ordinary rice, and more than half had fish daily with fresh fish being fed more often than dried or salted fish. A few babies between

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1. In Thailand rice is not salted during cooking.

2. See (3)khaaw (5)suaj, glossary p. 51.

3. The nearest half month marked the dividing point between age groups. Thus an infant 8 months 20 days old would be considered as 8 1/2 months old and one 8 months 23 days old would be considered as 9 months old.

4. Neither such (2)kha-(5)nom nor fruit were included in the usual family meals, but school children often bought them as snacks to eat at noon recess (Hauck et al., 1958; Hauck and Hanks, 1959).

853 Table 2. Food Intake Other Than Milk of 32 Infants From 6 to 8 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk				
			Rice	Bananas	Other Fruit	Fish	Egg, Meat or Poultry	(2)Kha-(5)nom
1	0							
10	1		9					1
10	2		10	10				
4	3		4	4			3	1
3	4		3	2		3	2	2
1	5		1	1	1	1		1
3	6		3	3	3	3	3	3
Total		D[2]	29	9		3	4	2
32		F	1	6	1	1	3	3
		O		5	3	3	1	3

1. The nearest half month marked the dividing point between age groups. Thus an infant 8 months 20 days old would be considered as 8 1/2 months old and one 8 months 23 days old would be considered as 9 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

[262] 12 and 14 1/2 months of age were given egg daily, and almost all had egg either frequently or occasionally. About half the babies of this age were fed poultry or meat occasionally, but neither of these items was common in the family diets observed in Bang Chan (Hauck et al., 1958; Hauck and Hanks, 1959). At this age only 1 of 41 babies was given green vegetables daily, and less than one-third of them had vegetables of any kind even occasionally (Table 4). A

853 262 As the children grew older they had vegetables more frequently, so that between 15 and 20 1/2 months of age almost half of the children ate vegetables at least occasionally (Tables 5 - 8). B A few two-year old children had never had green vegetables; for many, even at this age or older, vegetables of any kind were occasional rather than frequent items of diet.

[271] Of the 23 children between 21 and 24 1/2 months of age for whom we had records, 5 were still being breast fed, and one (the orphaned child) continued to receive imported cow's milk diluted with boiled water. All drank untreated canal or rain water according to the available supply. All were fed rice cooked in the usual manner, but one still had soupy undrained rice at times.

A [see p. 20 - Analysis] B [see p. 21-22 - Analysis]

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Table 3. Food Intake Other Than Milk and Rice of 39 Infants From 9 to 11 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk and Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
2	0						
3	1				1		2
5	2			2	4		4
12	3		11	6	11		8
13	4		13	12	13	1	13
4	5		4	4	4	4	4
Total 39		D[2]	16	7	5		7
		F	9	7	13	2	10
		O	3	10	15	3	14

1. The nearest half month marked the dividing point between age groups. Thus an infant 11 months 20 days old would be considered as 11 1/2 months old and one 11 months 23 days old would be considered as 12 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

Table 4. Food Intake Other Than Milk and Rice of 39 Babies[1] From 12 to 14 1/2 months Old.[2]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk and Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
2	2			1	1		2
9	3		9	5	8		5
21	4		21	20	19	4	20
7	5		7	7	7	7	7
Total 39		D[3]	24	4	5	1	14
		F	12	19	19	2	12
		O	1	10	11	8	8

1. Two additional babies in this age group were still on an all milk diet.

2. See Footnote 1, Table 3.

3. See Footnote 2, Table 3.

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Table 5. Food Intake Other Than Rice of 11 Weanling Babies From 15 to 17 1/2 months Old.[1]

No. of Infants	No. of Food Items	Number of Infants Fed Food Items Other Than Rice				
		Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
1	2	1	1			
6	4	6	6	6		6
4	5	4	4	4	4	4
Total	D[2]	10	2	3	1	3
11	F		5	7		2
	O	1	4		3	5

1. The nearest half month marked the dividing point between age groups. Thus an infant 17 months 20 days old would be considered as 17 1/2 months old and one 17 months 23 days old would be considered as 18 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

Table 6. Food Intake Other Than Milk and Rice of 30 Babies 15 to 17 1/2 months Old.[1]

No. of Infants	No. of Food Items	Number of Infants Fed Food Items Other Than Milk and Rice				
		Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
1	1	1				
1	2	1				1
3	3	3	3	1		2
12	4	12	12	12	1	11
13	5	13	13	13	13	13
Total	D[2]	23	2	2	1	10
30	F	4	11	16	2	9
	O	3	15	8	11	8

1. See Footnote 1, Table 5.

2. See Footnote 2, Table 5.

Table 7. Food Intake Other Than Rice of 14 Weanling Babies From 18 to 20 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Rice			
		Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
2	3	2		2		2
4	4	4	3	4	1	4
8	5	8	8	8	8	8
Total 14	D[2]	11	2	1	2	8
	F	3	6	8	1	5
	O		3	5	6	1

1. The nearest half month marked the dividing point between age groups. Thus an infant 20 months 20 days old would be considered as 20 1/2 months old and one 20 months 23 days old would be considered as 21 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

Table 8. Food Intake Other Than Milk and Rice of 18 Babies From 18 to 20 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk and Rice			
		Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
3	3	3	2	1		3
9	4	9	9	9		9
6	5	6	6	6	6	6
Total 18	D[2]	14	1	3		7
	F	3	11	5		7
	O	1	5	8	6	4

1. See Footnote 1, Table 7.

2. See Footnote 2, Table 7.

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Table 9. Food Intake Other Than Rice of 17 Weanling Babies From 21 to 24 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
6	4		6	6	6	1	5
11	5		11	11	11	11	11
Total		D[2]	16	1	2	3	7
17		F	1	8	6	1	3
		O		8	9	8	6

1. The nearest half month marked the dividing point between age groups. Thus an infant 24 months 20 days old would be considered as 24 1/2 months old and one 24 months 23 days old would be considered as 25 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

Table 10. Food Intake Other Than Milk and Rice of 6 Babies From 21 to 24 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk and Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
6	6		6	6	6	6	6
Total		D[2]	5				3
6		F	1	4	3		2
		O		2	3	6	1

1. See Footnote 1, Table 9.

2. See Footnote 2, Table 9.

Fish, fresh, dried, or salted, depending on the family fare, was a regular part of their diet (Tables 9, 10).[1] One had egg daily, and 10, frequently; but for more than half of them egg, as well as meat or poultry, was an occasional item of diet. All were fed (2)kha-(5)nom, and almost half had something in this class of foods daily. Only three had green or other vegetables daily and 5 never ate them. Bananas of the (4)nam-(4)waa variety were eaten by all, but only one had banana daily while more than half had them only occasionally. Four were sometimes given bananas other than (4)nam-(4)waa, the variety which was considered safe for infants and invalids. Two had never had other fruit, but most children of this age were occasionally given other seasonal fruit. The variety of foods other than milk given to these children did not appear to depend on whether or not they had been weaned (Tables 5 - 10).

Weaning.

Some of the children in this series had been weaned before our observations were started, and 19 had not been weaned when last visited. For 30 children the period of observation included weaning (Table 11), and in most cases enough records were obtained so that the effect, if any, of weaning on the weight curve could be ascertained.

Table 11. Age at Weaning for 37 Babies and Number for Whom Weight Records Before and After Weaning were Obtained, Bang Chan, 1952-54.

Approximate Age At Weaning	Number of Babies	
	Total	Weighed Before And After Weaning
(months)[1]		
5	1	0
9	1	1
11	1	1
12	8	4
13 - 14	5	5
16 - 17	2	2
18 - 19	8	7
20 - 22	7	6
25	2	2
28	1	1
36	1	1
Total	37	30

1. Because of the method of choosing children for study, the majority of those observed were under two years of age. We have no basis for judging what proportion of children in Bang Chan were breast fed beyond two years of age.

862 In Bang Chan infants less than a year old were seldom weaned. Of 3 such cases we encountered, the mother of one was ill with tuberculosis, and the other two mothers were again pregnant. Common answers to the question, "When should a baby be weaned?", were: "When it is a year old", or "At 1 1/2 years", or "When the mother is pregnant again." Mothers commonly nursed one infant until 3 to 7 months pregnant with the next. More than half of the children who were nursed longer than 18 months had no younger sibling during the period of this study.

Of 32 mothers who described the weaning procedure, 13 painted the nipples with boraphed or other bitter substance (lime or aloe), but an equal number said they did nothing. Six mothers gave other food instead of breast milk. In 4 cases cow's milk[1] was given; in one, bananas and (2)kha-(5)nom; and in one instance the food substitute was not specified.

Weaning in Bang Chan usually meant the end of milk feeding, but 5 babies in this series were given cow's milk feedings after weaning. These included the infant who was weaned at 5 months because of the mother's illness and two others who were weaned because of a pregnancy. The child who had been given cow's milk when the mother was away vending continued to have cow's milk at night, after weaning.

Beliefs About Foods for Babies.

853 855 262 Foods "Good For" Or "Not Good For" Babies. - In addition to asking what foods were given the baby, we asked mothers (or other informants) what foods they considered "good for" or "not good for" the baby. Informants were not prompted by asking about specific foods. The most usual answer was that the informant did not know or did not consider any food either especially suitable or unsuitable. Only 6 informants mentioned foods considered good for the baby (Table 12).[1] One of these named 3 such foods: egg, fish, and vegetables.

A larger number of informants reported that one or more foods were not good for a baby, but in a majority of instances (30 of 50 replies) the informant did not mention any food in this category. In all, 15 foods and 2 characteristics of foods

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1. No fresh milk of any kind was available in Bang Chan. Water buffaloes were ordinarily not bred in the village, and use of buffalo milk was unheard of. Among the light refreshments which could be bought at village stores, however, were coffee with condensed milk and diluted canned milk. Storekeepers stocked imported canned and dried milk including some brands designed for infant feeding. Directions for use were not in Thai, however, and the preparations actually fed to infants were often diluted more than recommended.

1 [see p. 26 - Analyst]

("hot tasting" and "hard") were mentioned 39 times (Table 13) with jackfruit and chico being mentioned in connection with the same baby at both 6 and 9 months of age.

Table 12. Foods Considered Good for Babies.

Food	Number of Informants	Age of Baby at Time of Inquiry (months)
Rice	3	3, 15, 36
Egg	2	6, 15
Fish	2	15, 16
Vegetables	1	15

There was no indication that any food was considered harmful by most mothers. Although the list of foods considered not good for babies was considerably longer than the list of foods considered good for them, the item which occurred most frequently, jackfruit, was mentioned by only 6 informants. Eggs, vegetables, and fish were considered by some as good for the baby and by others as harmful (Tables 12 and 13).

Table 13. Foods Considered Not Good for Babies.

Food	Number of Informants	Age of Baby at Time of Inquiry (months)
Jackfruit	6	5, 6 and 9[1], 11, 18, 21, 22
"Hot tasting" foods	6	12, 14, 15, 24, 24, 27
Chico	4	6 and 9[1], 11, 21, 22
Egg	3	7, 11, 27
Sugar	3	9, 11, 12
Banana (ordinary "fragrant" type)	2	21, 22
Hard things	2	6, 10
Glutinous rice	2	9, 11
Fish	1	9
Fresh fish	1	15
Vegetables	1	6
Mango	1	6
Raw banana	1	6
Corn	1	18
Guava	1	18
Orange	1	15
"Ice"[2]	1	36

1. Mentioned for same child at both 6 and 9 months.

2. Either a frozen syrup or syrup over shaved ice.

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843 Reasons were seldom advanced for considering certain foods unsuitable for mothers or children. During pregnancy the hot-tasting foods, i.e. those made with chili, were said by one
262 informant to injure the baby's complexion. When asked at what
855 age a child could have adult food, mothers might say at one or
953 two years but often specified, without giving a reason, that they could have anything but the "hot-tasting" foods (foods seasoned with chili). Two mothers said the child could have "hot tastes" at one year, whereas one said not until the child was 3 years old. A majority did not specifically mention hot tasting foods either to include or to exclude them.

853 A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby 1 or 2 months old ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana", (3)kluaj (5)hauaum[1], caused constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

753 The belief that eggs would cause dental caries and should
262 therefore be omitted from children's diets was expressed by the
853 mother in a poorly nourished family of low economic status.
855

862 Opinions varied as to when children could be given "adult food". This was often, but not always, the age considered appropriate for weaning. As the question was worded it apparently implied that the child "could eat food as prepared for adults in the family" and did not necessarily exclude breast feeding, since children who "could have adult food" might still be nursing. The age at which a child could have adult food was sometimes related to stage of maturity as "when he can sit", "when he has teeth", or "when he can say (1)plaa (fish)".

262 Traditional and Modern Concepts of Rice Versus "With-Rice" in the Diet. - Rice is not only the basis of the adult diet in Thailand, but it has traditionally been regarded as the strength giving food par excellence. A portion of Chutima's (1939) description of the "old system" of diet follows:

> "Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal.

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1. The type of banana most familiar to people in the U.S.A.

Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply." 262

Note that not only has rice been considered much more important as food than "with-rice"[1], but that the diet was more limited for children and young women than for men. The Food and Drug Division of the Ministry of Public Health in Thailand has been trying to encourage people to eat more "with-rice" and less rice. The few comments we heard in relation to rice versus "with-rice" illustrate both the old and the new ideas. One informant stated that only rice can make children fat and that the "hot tasting" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish and was weak. He refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk[2], expressed the opinion that the ancient belief was based on thrift. He said that thrifty people did not want to spend much on a baby, therefore, they said that if a child ate too much "with-rice" he would be potbellied but thin in the upper part of the body and that eating eggs would cause dental caries. This grandfather said that he believed the truth to be just the opposite, but that good things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice", one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (a fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

Summary of Infant Feeding Practices in Bang Chan with Some Suggestions for Improvement.

To sum up the information obtained on baby feeding in Bang Chan, breast feeding was the rule. Some babies were nursed for two years or longer although about two-thirds of those we observed through the weaning period had been weaned by 18 or 19 months of age. Aside from honey which was given with medicine or hot water to newborn babies for a few days only, crushed banana of the (4)nam-(4)waa variety was usually the earliest dietary supplement. By 3 months of age about half the infants were being given banana, sometimes crushed with rice. Between 853 [862]

1. In Thai the general term meaning "to eat" is translated literally "to eat rice." Food items are divided into two classes: rice and "with-rice." [92]

2. See Footnote, page 25.

853 3 and 6 months soupy rice was a common addition to the infant's diet, and after the first teeth appeared many had rice from the family pot. Between 6 and 9 months, also, fish was given regularly to many babies and egg at least occasionally. Crackers, cookies, and various items designated as (2)kha-(5)nom were frequent additions at this age.

863 855 262 Seasonal fruit such as mango and orange was given to some infants from 6 months on, but most children had fruits other than the (4)nam-(4)waa banana infrequently even at two years of age. As the feeding of rice increased, banana was given less often, so that for the 2-year old child even banana was eaten only occasionally. A minority of babies were fed vegetables by one year of age, and some had not begun to eat them by two years. Only about half the children from 2 to 4 1/2 years old had vegetables frequently.

Avoidance of hot tastes, rather than reluctance to give vegetables, may have been responsible for late introduction of vegetables into the diet of many children. In Bang Chan vege- [252] tables were often combined with other foods, as in curries. They were usually added toward the end of the cooking time after the mixture had been seasoned. Vegetables from such a "hot dish" would not be offered to a small child unless the parents considered him old enough to eat "hot-tasting" foods. Among the mild "with-rice" dishes were vegetables panned with a small amount of fat and seasonings other than chili, as well as vegetables cooked in coconut milk or in water (Hauck et al., 1958; Hauck and Hanks, 1959). In this connection the suggestion of a Thai co-worker that one might encourage eating more vegetables by discouraging the use of "hot" dishes seems promising, since a larger amount of mild than of "hot" "with-rice" food is eaten at one time. To promote more frequent, and earlier, feeding of vegetables to babies, one would need to encourage either more frequent preparation of mild "with-rice" dishes containing vegetables or special preparations of vegetables for the baby. The latter is rather impractical when foods are cooked one at a time over the same fire as in Bang Chan.

[252] [243] Perhaps one reason why most infants in Bang Chan had fish daily after 6 or 7 months of age is that in making curries fish was often cooked in a little fat or coconut milk before seasonings were added. Thus, a little fish could then be set aside for the baby before chili and other spices went into the pot. (Note, also, that rice and fish were the foods considered safe to eat 121 during (2)juu (1)faj by all mothers interviewed). Changes in 262 food preparation suggested for improvement of the family diet in general (Hauck, 1958) could automatically help to improve the feeding of young children who are gradually introduced to adult foods. At the same time, a better family diet would probably help to improve the quality and quantity of mother's milk, since during lactation mothers tended to eat as usual. In deciding whether the more effective approach would be through teaching

better nutrition for all family members or whether to concentrate on the feeding of children or other vulnerable groups, the values of the society should be considered. The importance of a suitable variety of food for health needs to be taught to adults as well as children in Bang Chan. The concept that good choice of food is important in pregnancy and lactation and for the health and growth of children seemed to be entirely absent. Since few believed certain foods to be harmful at these times, however, teaching how to choose foods for health should be easier in Bang Chan than it is in areas where positive taboos are common. 124 262

Behavior different from the traditional one may sometimes lead the way to changed practices among those who observe or hear about it. For this reason, in certain instances an informant who had ventured to deviate from the traditional practice has been identified in this record. Thus, we noted that in a number of ways the women school teachers and the wife of a man teacher deviated from the traditional behavior in Bang Chan. For example, a school teacher's wife used the hot ashes chamber after her fifth child rather than lying by the fire. She was one of two women informants who "ate all kinds of food" at this time when most women in the community restricted their diets very markedly. She did not consider taking the baby out into the sunshine harmful; indeed, she believed it would make the child stronger. This same mother was 1 of 4 in our series who had taken the baby to be vaccinated against smallpox. She and three women school teachers were among those who continued to give their babies boiled water to drink much longer than was customary in Bang Chan. The one person who suggested a specific food (eggs) as being good for a woman to eat during pregnancy was a school teacher. The two women who planned to go to the Minburi Health Center for delivery were school teachers. For lack of time after labor began they did not carry out their plans; but the fact that they intended to do, by choice, what was usually the last resort when labor proved long or difficult, may be significant. 121 183 178

Along with these departures from traditional ways and acceptance of some "modern" practices, the same persons might cling to other sorts of traditional behavior. The wife of a school teacher for example, though she thought that taking the baby into the sunshine might be favorable rather than harmful, said that if the baby were to be out very long she would cover its head with a beret to avoid bringing "cold" into the baby. This same mother took her child to the Minburi Health Center for treatment for a skin infection, but when the condition did not clear up immediately after modern therapy was begun, she took the child to a traditional doctor who prepared a decoction of herbs with which she treated the baby. 341 278

The behavior of respected persons, such as some of the school teachers, should be influential in helping to bring about

desirable changes in Bang Chan. An important point, however, is that leaders should understand, insofar as possible, the reasons behind the "modern" ways and not accept them merely because they are considered modern. Without adequate understanding traditional behavior which has served a useful purpose in protecting the people's health might be abandoned, or a half-understood "modern" way substituted to their hazard. For example, a popular traditional midwife said she knew that water was not boiled for mothers and babies in the hospitals in Bangkok, and the wife of a school teacher said she did not think use of boiled water was really necessary during (2)juu (1)faj. Traditionally, heat has been considered beneficial at this time. If this idea were extended to include an understanding of the value of boiling water to destroy harmful microorganisms and parasites, the traditional practice might be confirmed and even extended for the protection of other family members. If a sanitary water supply eventually becomes available in Bang Chan[1], precautions required to keep it so might be thought of as analogous to boiling of water; or chemical purification might be understood by the peasant as a modern way of conferring on water the virtues which boiling conferred when the "old way" was followed. Improvement in health and nutrition in Bang Chan must, of course, be seen as a long-time goal dependent on continuing education.

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[312] 1. In 1952-54 there were no wells in the area, and the problem of planning for a sanitary water supply when the plain is flooded for a part of each year is not an easy one.

GROWTH IN HEIGHT AND WEIGHT OF INFANTS AND YOUNG CHILDREN

Evidence on growth in height and weight of Thai is scant. So far as we have been able to learn, all available studies have been cross-sectional. We, therefore, undertook, in the limited time available, to make longitudinal studies of growth of infants and small children and elementary school children in Bang Chan. Observations on the latter were summarized by Thorangkul (1957) and those of infants and small children, by Smith (1958).

In general Thai children of elementary school age are shorter and weigh less than Western children of the same age. Heights of children in the Bang Chan elementary school were, on the average, less than mean heights for Thai children given by Dr. Yong Chutima (1939), and they were much below mean heights at various ages from charts (class II) in use at the Department of School Hygiene, Bangkok. Mean heights of adult men and women in Bang Chan were slightly below those recorded by other observers who have measured groups of Thai men and women (Hauck, 1956). Without further study one cannot say whether the short stature of Thai as compared to Western peoples is due to inheritance, environment, or both. Nor do we know why school age children and adults in the rice producing village of Bang Chan were, on the average, somewhat shorter than their counterparts in Bangkok only 20 miles away.

Thorangkul (1957) found that although children 7 to 14 years of age increased in height in successive 3-month intervals, a large proportion of them failed to gain weight or even lost at times and that such failure to gain occurred in more children during the dry season than during the wet season. The reason for this was not apparent from our observations. Two possible explanations are: 1) use of untreated canal water may lead to heavier infestation with intestinal parasites in the dry season and 2) leafy vegetables are almost lacking, and other vegetables are in short supply at this time. One would expect the temporary shortage of vegetables to be reflected in growth failure only when the diet is borderline in respect to some nutrients as it appears to be in Bang Chan (Hauck et al., 1958; Hauck and Sudsaneh, 1959). Either of the possible causes suggested might affect the nutritional state of other family members as well as elementary school children. All those drinking canal water and eating "adult foods" could be affected directly, whereas infants who are still largely breast fed might be affected indirectly through the quantity and quality of mother's milk available to them.

In this section observations on the growth in height and weight of infants and small children in Bang Chan are presented.

Table 14. Ages of Infants and Young Children at First and Last Measurements[1], Bang Chan, Thailand, 1952-54.

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Age at First Measurement	Age at Last Measurement	Number of Children		
		Total	Boys	Girls
months	months			
under 1[2]	13-18	16	5	11
1-3	16-21	12	8	4
4-5	20-22	5	4	1
7-9	23-27	4	2	2
11-12	22-28	6	4	2
13-18	29-35[3]	6	0	6
19-24	36-40	10	3	7
25-29	40-45	5	3	2
31-35	42-51	4	4	0
36-43	53-60	3	3	0
		71	36	35

1. In addition to these listed nine children were measured once or twice but were not followed longer.

2. Weights and recumbent lengths for infants under 1 month are not included in this report because of varying ages from one day onward, at which the initial observations were made.

3. Except for one child who was measured over a relatively short period.

Methods.

All measurements of infants and children were made by one or more members of the research group. Equipment and procedures are described in the Appendix (p. 58). 124

In all, observations were made on 80 babies. For some of these, however, only one or two measurements were obtained. Such records were inadequate for most purposes of this study. Fairly complete sets of measurements were obtained for 71 babies through a total of 449 visits (Table 14). Since our aim was to obtain as much information as possible about babies from birth onward, the larger numbers of children were in the lower age ranges. 125

Nine babies were measured once or twice but were not followed longer because of removal from the village, inability of a mentally subnormal mother to cooperate, death (2 cases), and in one instance, reluctance to cooperate on the part of the mother of an illegitimate baby.

The investigation covered a period of 18 months, and 9 visits were made at intervals of about 3 months, thus, most of the children were measured 6 or 7 times (Table 15).

Table 15. Number of Times Children Were Weighed and Measured, Bang Chan, Thailand, 1952-54.

Number of Measurements	Number of Children
3[1]	3
4	2
5[1]	6
6[2]	21
7	36
8	3

1. An additional measurement of weight but not of height was made on one child.

2. An additional measurement of weight but not height was made on two children.

Sometimes mother and baby were not at home when the scheduled visit was made. If the household was remote from headquarters it might not be possible to return soon without neglecting other equally urgent work. In other cases the child was visited and the food intake recorded, but the child was unwilling to allow himself to be measured; occasionally the child was

A [see p. 33 - Analysis]

asleep, and the mother was reluctant to wake him. Thus, for some children only three or four measurements were obtained.

The measurements of height and weight of each child were tabulated by age in months at observation.[1] A child was considered to be the age at his last month's birthday unless he was within 7 days of the next month's birthday. For example, a child who was measured at 2 months 25 days was considered to be 3 months of age, whereas a child who was measured at 2 months 20 days was considered to be 2 months old at the time of measuring.

Results.

Growth in Height and Weight Compared to Children Attending Well Baby Clinics. - The mean, median, and range of height and weight of children measured at 1 month, 3 months, 6 months, 9 months of age, and so on, were determined (Tables 16 and 17). These figures include data obtained for all children who were measured at any of the selected ages but not weights and measures made at intervening ages. No marked difference was noted between mean and median values for height and weight. At almost all ages the mean and median values for height and weight of boys were greater than those for girls.

For comparison with these observations, only two reports on height and weight of Thai infants have come to our notice. Both of these dealt with infants and young children attending well baby clinics in Bangkok.

Over a period of 5 years, Dr. Montri Mongcolsamai (1939) collected data on height and weight of infants and children who came to the Well Baby Clinic at the Siriraj Hospital. These were described as normal children free from disease and ranging in age from 1 day to 6 years. Most of the children were Thai, most were from Bangkok, and most had been born in the Siriraj Hospital. In all, 2664 children were observed; 3006 measurements of height and 3570 measurements of weight were obtained.

Dr. Montri (1939) grouped the data according to age and sex, reporting mean values for height and weight of children under 1 year of age at monthly intervals and of children over 1 year of age at intervals of 6 months. For example, weights of all male infants who were 1 month old but younger than 2 months were averaged, also, weights of all male children who were 1 year old but younger than 1 1/2 years were averaged. Average weights and lengths of newborn infants and of infants under 1 month of age were included.

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1. The height and weight of each child at each observation were reported by Smith (1958).

[see p. 36-37 - Analyst]

Table 16. Mean, Median, and Range of Heights and Weights of Male Infants and Young Children Who Were Measured at Selected Ages, Bang Chan, Thailand, 1952-54.

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Age	No.	Height			Weight		
		Mean	Med.	Range	Mean	Med.	Range
		cm.	cm.	cm.	kg.	kg.	kg.
1 mo.	5	54.9	54.5	54.0-57.5	3.3	4.5	3.8- 5.25
3 mo.	9	59.4	59.5	49.5-64.5	6.1	5.5	5.0- 8.35
6 mo.	10[1]	64.8	65.8	60.0-69.0	7.2	7.0	6.0- 8.5
9 mo.	10	68.2	68.3	65.0-73.0	7.6	7.5	6.9- 8.5
1 yr.	11	70.9	70.5	65.0-77.0	8.2	8.0	7.0-11.0
1 yr. 3 mo.	12	73.3	74.0	70.0-76.0	8.6	8.5	8.0- 9.75
1 yr. 6 mo.	9	76.7	76.5	74.0-80.0	9.3	9.0	8.0-10.5
1 yr. 9 mo.	6	79.0	80.3	73.5-81.0	9.7	9.8	7.5-11.0
2 yr.	6	79.1	80.3	74.5-82.5	10.1	10.5	8.0-11.5
2 yr. 3 mo.	5	81.3	82.0	76.0-85.0	11.2	12.0	8.5-13.5
2 yr. 6 mo.	3	84.0	83.5	80.5-88.0	10.7	11.0	10.0-11.0
2 yr. 9 mo.	3	86.2	85.5	84.0-89.0	11.2	11.5	10.0-12.0
3 yr.	7	87.9	87.5	85.0-92.0	12.0	12.0	10.5-13.5
3 yr. 3 mo.	6	88.0	87.8	85.0-92.5	12.0	11.8	11.0-13.75
3 yr. 6 mo.	7	89.8	89.5	87.0-95.0	12.5	12.5	11.0-14.5
3 yr. 9 mo.	4	92.3	92.5	90.0-94.0	12.9	13.0	12.0-13.5
4 yr.	3	94.0	94.5	91.5-96.0	14.2	14.5	13.0-15.0
4 yr. 3 mo.	4	95.9	95.5	93.5-99.0	14.8	15.0	13.0-16.0

1. An additional child was weighed but height was not measured.

145 Table 17. Mean, Median, and Range of Heights and Weights of Female Infants and Young Children Who Were Measured at Selected Ages, Bang Chan, Thailand, 1952-54.

Age	No.	Height			Weight		
		Mean	Med.	Range	Mean	Med.	Range
		cm.	cm.	cm.	kg.	kg.	kg.
1 mo.	9	53.1	52.0	49.0-59.0	3.9	3.75	3.35- 4.45
3 mo.	10	59.1	59.3	54.0-64.5	5.7	5.4	4.45- 7.0
6 mo.	9	62.8	62.5	57.5-69.0	6.6	6.5	4.8 - 8.0
9 mo.	11	65.3	64.5	58.0-73.0	7.0	7.0	5.35- 8.5
1 yr.	12	69.5	68.7	63.0-76.0	8.0	7.8	6.0 -11.0
1 yr. 3 mo.	11	72.1	71.0	68.0-80.5	8.2	7.5	7.0 -10.5
1 yr. 6 mo.	11	72.6	72.5	67.5-83.0	8.2	8.5	4.5 -11.0
1 yr. 9 mo.	7	77.6	75.0	74.0-86.5	9.7	9.0	8.0 -12.0
2 yr.	9	79.2	79.5	73.0-85.0	9.9	9.5	7.5 -13.0
2 yr. 3 mo.	8	78.4	78.3	74.0-82.5	9.3	9.5	7.5 -10.5
2 yr. 6 mo.	6	80.7	81.3	76.0-84.0	10.0	10.0	9.0 -11.0
2 yr. 9 mo.	6	83.4	83.0	78.5-88.0	11.3	11.8	9.7 -12.0
3 yr.	6	88.1	88.0	84.5-92.0	11.8	11.8	10.0 -14.0
3 yr. 3 mo.	3	87.3	86.5	85.0-90.5	11.5	11.5	11.0 -12.0
3 yr. 6 mo.	2	87.5	87.5	86.5-88.5	12.0	12.0	11.0 -13.0
3 yr. 9 mo.	1	87.5			14.0		

In some age groups fairly large numbers of children were observed and in other groups relatively few. None of the groups up to 4 1/2 years of age with whom the children in this series could be compared included fewer than 30 individuals. The numbers of boys and girls measured at each age were about the same. 145 125 141

Dr. Amara Chandrapanond (1957) reported the mean heights and weights of 20 babies who were weighed and measured at monthly intervals over a period of a year. She did not report values for boys and girls separately, but, in general, at each age these fell between those for males and females as reported by Dr. Mostri (1939). 145 141

In figure 1[1] the median heights of boys and girls in Bang Chan together with the number of individuals who were measured at 3, 6, 9, 12, 15, 18, or 21 months are shown in comparison to the height curves constructed from values reported by Dr. Mostri (1939). Corresponding median weights are shown in figure 2.[2] Although the groups are small, the tendency for both height and weight of young children in Bang Chan to be below that of children attending a well baby clinic in Bangkok is clear.

One should note, however, that Dr. Mostri characterized the children he observed as "free from disease", whereas some of the children of Bang Chan had colds, skin infections, or other minor disorders which might have affected their weights. Such disorders are very common, and we do not know whether or not they disqualified children attending the Well Baby Clinic from inclusion in the series for which heights and weights were reported. [164]

Graphs of height-age and weight-age were plotted for each child in this study and for small groups of children who were observed regularly over a year or so at the same ages. [128]

Most of the children increased in height in a fairly regular fashion, the slopes of their height curves being about the same as the curve drawn from Dr. Mostri's[1] values, although there were individual variations in this. The height curves of many more children of Bang Chan were below than were above the curve drawn to Dr. Mostri's values. Of the 35 girls measured, the height curves of 6 were above, 6 were about the same as, and 23 were below the curve drawn to Dr. Mostri's values for girls. Of the 36 boys measured, the height curves of 9 were

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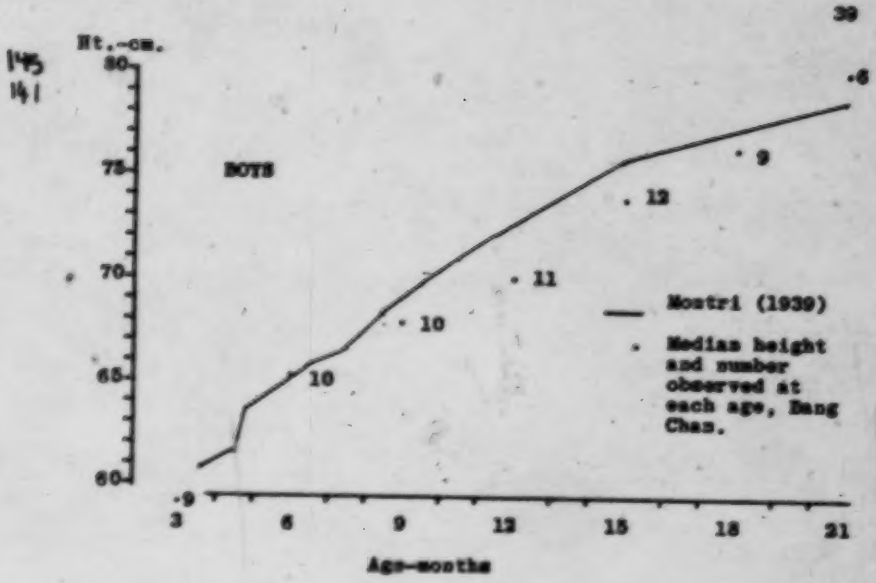
1. Mean values reported by Dr. Mostri were plotted at 1-month intervals for the first 11 months, then at the midpoint of the intervals he reported. For example, measurements reported for children 1 to 1 1/2 years of age were plotted at 1 year 3 months.

TEXT CONTINUED ON PAGE 41).

1 [see p. 39 - Analyst; 2 [see p. 40 - Analyst]

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
Bang Chan



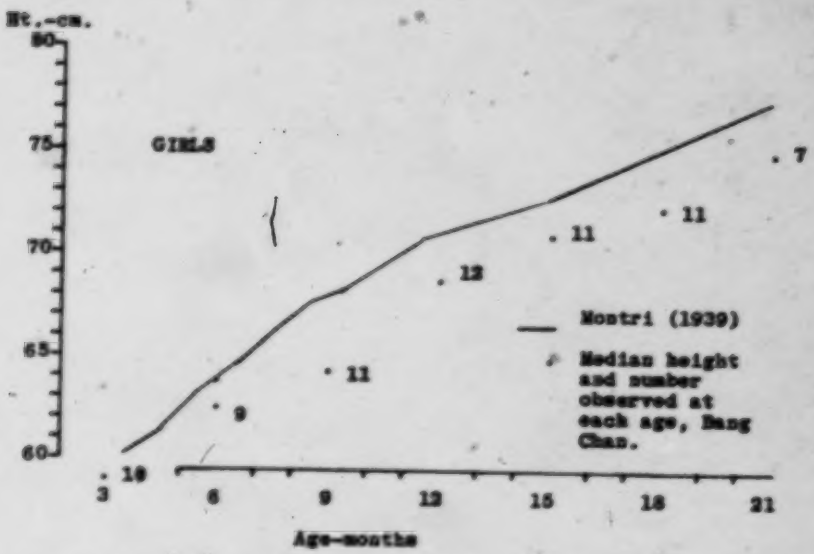


Figure 1. Median Heights of Children Under 3 Years of Age, Bang Chan, Compared to Mean for Children Attending Well Baby Clinic, Bangkok.

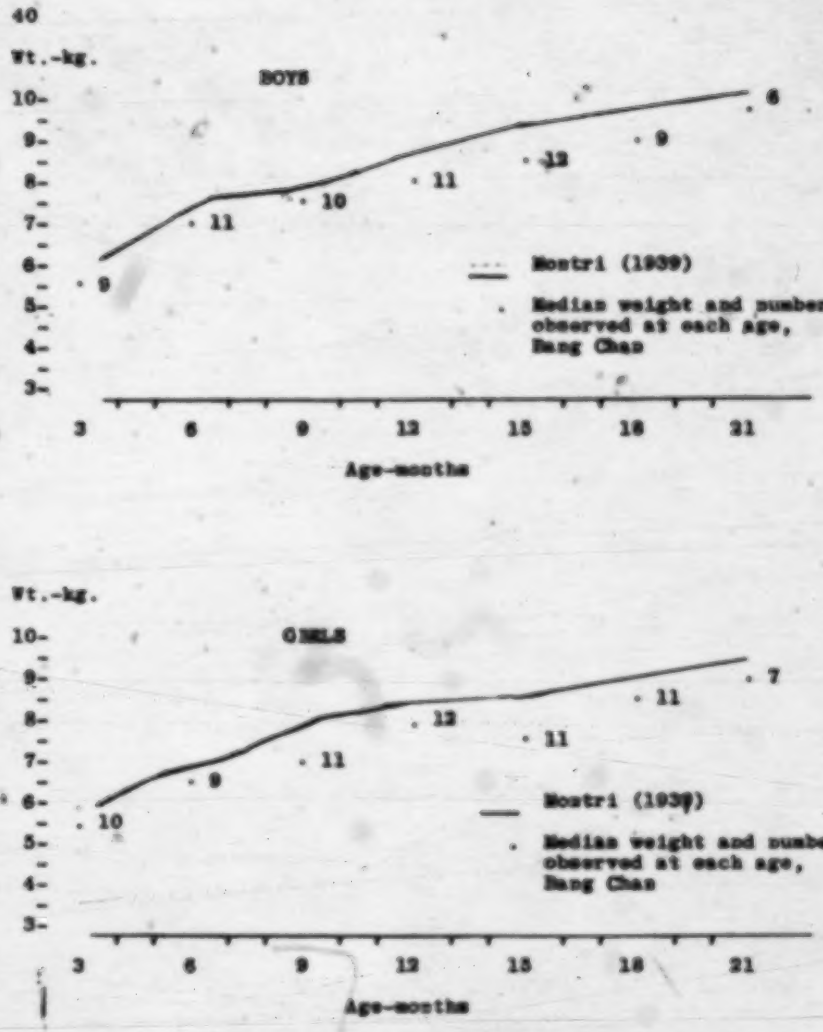


Figure 2. Median Weights of Children Under 2 Years of Age, Bang Chan, Compared With Mean for Children Attending Well Baby Clinic, Bangkok.

145 above, 12 were about the same as, and 15 were below the curve
141 drawn to Dr. Montri's values for boys.

[125] Mean heights and weights of groups of children who were observed regularly at 3-month intervals, at the same ages, were determined. The numbers in these groups were small because of difficulties encountered in collecting data precisely according to plan, but curves could be constructed for some such groups covering periods up to 12 months. These were compared to those based on Dr. Montri's values. The curves of mean height for such small groups were fairly smooth with slopes similar to but below the curve drawn to Dr. Montri's data.

For the younger groups of children in Bang Chan, curves for mean weights were generally below those drawn to Dr. Montri's values. Although the groups under 1 year of age were, on the average, about 1 week younger than the children observed by Dr. Montri, adjustment[1] did not eradicate the difference. Differences between mean weights for groups of children 15 months of age and older, in this series and in Dr. Montri's, were less consistent than for the younger children.

145 Many studies on weight of infants in the tropics indicate that weight gain during the first 6 months or so of life is comparable to that of infants in Europe and America. After 6 months of age, however, the weight curves become flattened (Jelliffe, 1955; Falkner et al., 1958). Both Dr. Montri (1939) and Dr. Amara (1957) noted this tendency in the weights of the Thai infants they studied. Dr. Montri (1939) compared the weights of the Thai children he observed with values reported for Japanese children. He found that up to 6 months of age Thai children weighed as much as Japanese children but that after this age they weighed less. Dr. Amara (1957) compared the weights of the infants she observed with those of American babies and found that after 4 months of age the Thai infants gained weight more slowly. Both of these observers expressed the opinion that Thai babies gained weight more slowly as they grew older because their diets were inadequate.

145 In general, Thai children are short and light as compared
141 to children in the U.S.A. In the Bang Chan group, for example, at 3 and 6 months the median weights for male infants approximated the 25th percentile of male infants as reported by Stuart and Stevenson (1950). At 9 months, however, the median weight was

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1. Dr. Montri calculated that boys 3 to 6 months old gained, on the average, 23 grams per day and that girls gained 22 grams per day; from 6 to 9 months the figures are 7.3 and 7.8; and from 9 to 12 months they are 7.4 and 7.6 grams, for boys and girls respectively. These values were calculated for a week and added to the mean weights of the children of Bang Chan to find out if the difference could be accounted for in this way.

about the same as the 3rd percentile of male infants in the U.S.A., and from one year on the values fall below the 3rd percentile. Norms for American children are inappropriate for use with Thai, but an increasing lag in growth such as we observed may be a matter for concern. 145 I 14

Weight Loss and Failure to Gain. - Many of the children in Bang Chan failed to gain or actually lost weight over periods of time. This occurred frequently between two weighings which were 1 to 4 months apart and occasionally when a child was reweighed after an interval of 6 months. In some children loss of weight or failure to gain extended over two weighing intervals. Such loss or failure to gain may be an important sign of malnutrition (Jelliffe, 1955). 145 [146]

Relation to age. - The ages at which the children experienced weight loss or failure to gain were determined by inspection of the weight-age graphs. As shown in Table 17, A period of loss of weight or stationary weight was noted for only one child below the age of 6 months. Between the ages of 6 and 12 months, a time when healthy infants usually continue to grow rapidly, such periods of weight loss or failure to gain for intervals of 1 to 5 months between weighings were observed in almost 40 per cent of the infants. Dr. Montri (1939) and Dr. Amara (1957) did not discuss the growth of individual infants, hence we do not know to what extent failure of some infants to gain weight may account for the depressed growth, on the average, which both of these observers reported for infants of this age.

During the second year of life children may be expected to gain weight less steadily, but more than 40 per cent of the children of this age in Bang Chan lost weight or failed to gain over intervals of 1 to 7 months.

After 2 years of age approximately one-half to two-thirds of the children weighed in a given 6-month period lost or failed to gain weight. Of 68 children who were weighed and measured over a period of a year or more, only 16 did not experience such loss or failure to gain between any two weighings. Most of these were in the youngest age group, only 3 were over 2 years old at the end of the study.

Possible reasons for failure to gain. - From the information available specific reasons cannot be given for the loss or failure to gain weight of so many of the young children of Bang Chan. Infection may have played a role, although we saw little evidence of severe infection and it was seldom mentioned. [164] Increased activity as children grow older might affect rate of gain at the toddler age. For safety very young children in Bang Chan were closely tended which meant that their activities were rather restricted. As they became older and learned to [855]

A [See p. 37 - Analyst]

keep out of danger, they had more freedom. At this time their caloric needs may have increased more rapidly than did their caloric intake. To the student of nutrition, inadequate intake of essential nutrients seems likely to be of importance when children fail to gain.

In some areas growth failure is common at weaning, but this did not seem to be a major factor in Bang Chan. Weaning before one year of age was uncommon (Table 11, p. 24), yet growth failure occurred in many infants between 6 and 12 months.

Observations on the weight gain of 30 children whom we weighed both before and after weaning are summarized in Table 18. Four children lost or did not gain weight between the weighing before weaning and the one afterward (code numbers 13, 23, 35, and 56), while 3 others, who had been weaned shortly before a weighing, did not gain between the next two weighings (code numbers 22, 33, and 37). Thus only 7 of 30 children lost or failed to gain weight at or near the time of weaning (Table 18, I).

Weight curves of 4 children could not be interpreted in relation to weaning. Two of these (code numbers 15 and 44) were weaned just before their last weighing; for two others (code numbers 18 and 51) the intervals between weighings were long (Table 18, II). Only 5 individuals gained at each successive observation (Table 18, III), whereas 18, a majority, failed to gain at some period other than at weaning (Table 18, III and individuals designated *).

Of 19 other children who had not been weaned by the time the study ended, 10 lost weight or failed to gain at some period during the study.[1]

Since Thorangkul (1957) noted a clear association with season of weight loss or failure to gain in Bang Chan school children, the weight records of infants and young children were inspected to see if such an association occurred at younger ages also. The number of children weighed during each month and the number who had lost weight or had failed to gain since the previous weighing were counted after omitting observations on children under 6 months of age, as well as those whose most recent weighing had been obtained more than 4 months previously. Little or no indication of relation of season to weight loss or failure to gain was apparent. At the weighings in April, July, August, and September, 1953, a smaller proportion of the children had lost weight or failed to gain; but this is not

1. Of the 22 other children in the study, 20 had been breast fed but were weaned before the study began, and 2 were receiving cow's milk because of death or illness of their mothers.

[TEXT CONTINUED ON PAGE 44]

[See p 44 - Analyst]

Table 18. Observations on Weight Gain for Thirty Children Weighed Before and After Weaning.

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Sex and Code No.	Age at Observations	Age at Weaning	No. of Weighings: Before Weaning	No. of Weighings: After Weaning	Comments on Weight
	months	months			
	I. INDIVIDUALS WHO LOST OR FAILED TO GAIN WEIGHT AT OR NEAR THE TIME OF WEANING.				
F 13	0-15	12/	6	1	L 12-15[1]
M 23	2-19	14	3	2	NG 13-16
M 35	4-21	17	5	2	L 15-18
*M 56	20-37	25/	3	4	L25-28; L 31-37
*M 22	2-18	15	6	1	L 9-12; NG 15-18
M 33	4-22	12	3	4	L 12-16
*M 37	9-25	19	4	3	L 9-10½; NG 20-22; L 22-25
	II. INDIVIDUALS WHOSE WEIGHT CURVES COULD NOT BE INTERPRETED IN RELATION TO WEANING.				
F 15	0-17	16	6	1	NG 14-17
M 18	0-18	12/	3	1	Not weighed between 5-18 months.
*F 44	16-29	28	5	1	L 16-17; NG 21-24; marked gain 27-29
F 51	18-35	18/	1	3	Not weighed 18-39
	III. INDIVIDUALS WHO GAINED AT EACH SUCCESSIVE OBSERVATION.				
F 10	0-16	9	4	2	
M 19	1-17	13	5	2	
M 30	3-19	14	5	2	
M 42	11-27	19	3	3	
M 45	11-28	20	3	2	

* Individuals other than those in group IV, who lost or failed to gain weight at some period other than at weaning.

Table 18, con't.

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Sex and Code No.	Age at Observations	Age at Weaning	No. of Weighings Before Weaning	No. of Weighings After Weaning	Comments on Weight
	months	months			
	IV. INDIVIDUALS WHO FAILED TO GAIN AT SOME PERIOD OTHER THAN AT WEANING.				
M 4	0-15	10	5	2	NG 6-9
M 12	0-15	12+	6	1	NG 9-12; weaned right after 6th measurement; gain thereafter.
M 28	3-18	13	5	2	NG 5-6½ and 9-12
M 29	5-20	14+	3	3	L 10-14
F 31	3-21	18+	6	1	NG 6-9; L 12-15
M 32	4-21	18+	6	1	L 9-11
F 39	9-27	22	5	2	L 9½-12; NG 24-27
M 41	11-27	20+	5	2	NG 12-17
M 43	11-28	22	4	2	NG 18-21
F 46	12-22	18	2	2	NG 12-16; L 19-22
F 48	15-30	19	2	4	L 21-25
M 53	19-36	20	1	6	L 28-31
F 61	24-40	36	4	2	NG 24-27; NG 37-40
M 64	25-42	25	1	4	Weaned immediately after first weighing; large gain between 25-30 months; NG 39-42

1. L = Loss NG = No Gain Figures represent age in months.

clear evidence of a seasonal effect. If weight gain in Thai infants is related to season, this could be better defined by weighing groups of children at monthly intervals and determining when or if changes in rate of gain occur.

Although our records were not made for the purpose of correlating food intake with weight gain, and no quantitative information was obtained on the diets of mothers and babies, we attempted to see if any obvious relation existed between the variety of food eaten by the mother or the child and the child's growth. For this purpose, case studies were made of 7 infants whose records from birth onward were fairly complete. The age at last observation was from about 14 to 18 months. Four of these children had gained at each weighing and weighed more at one year of age than the average infant observed by Dr. Montri (1939). Three were chosen because they had lost weight or failed to gain at some time during the period of observation and weighed less at one year of age than the average infant observed by Dr. Montri. Infants of both sexes were included in each group. No illnesses or abnormalities were recorded in the clinical histories of any of these babies or their mothers. No evidence was obtained from the qualitative food records as to why some infants gained consistently and at a fairly "normal" rate, whereas others gained relatively slowly and failed to gain or lost weight at times (Smith, 1958).

Quantitative food records might have provided evidence on this point but our observations were inadequate for this purpose. Such quantitative records should include estimations of the amount of mother's milk obtained by the infants, based on the baby's weight before and after nursing, as well as records of supplementary food given. Analysis of the mother's milk, particularly for the content of the water soluble vitamins which are influenced by the mother's diet, should also help to shed light on the cause or causes of the common failure to gain weight among older infants and small children in Bang Chan. No cases of beriberi occurred among the infants we observed, but in two instances siblings had died of infantile beriberi.

Evidence of protein malnutrition has not been commonly recognized in rice eating areas, but one must consider the possibility that these children may be in a state analagous to pre-kwashiorkor. Development of the clinically recognizable protein deficiency disease may be forestalled when the child learned to feed himself and eats more liberally of rice with some fish and egg. Of the 54 children with kwashiorkor observed by Metrasiri and Metrasiri (1955) in Bangkok, many were weaned earlier than was usual in Bang Chan. Most of them, however, had been breast fed, and 4 were still being breast fed when the disease was diagnosed.

145 In summary, although infants and children in Bang Chan
121 increased steadily in height, the rate of increase tended to be less than that of infants observed in a well baby clinic in Bangkok and much less than is usual for Western infants.
[146] Repeated periods of failure to gain in weight, or even weight loss, which we observed in infants and small children as well as in school children 7 to 14 years of age, may be evidence of unsatisfactory nutrition and might account in large part for the relatively small size of adults in this area. Extended longitudinal studies on growth of Thai children are needed, as are studies of food intake, intestinal parasitism, and other conditions which may lead to growth failure. Controlled therapeutic trials would help in recognizing the more serious of many problems of child health in this region.

[p. 48 is blank]

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APPENDIX

GLOSSARY OF THAI TERMS USED

104 The transcription used throughout this report is that described by Sharp et al. (1953), pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

(1)baur-(1)a-(4)phed. (Tinospora rumphii) The bitter juice of the stems may be applied to the nipples in weaning a child.

(1)jaa (1)dauaung. "Pickled medicine"; a medicine commonly taken after childbirth.

(2)juu (1)faj. Literally to be by the fire. During the postpartum period, Thai mothers in Bang Chan usually rested by a fire for an odd number of days.

(1)kaeaeng (1)liang. Literally a supporting curry; a soup made with dried fish and certain vegetables reputed to stimulate milk production.

(3)kluaj (5)hauaum. The "fragrant" banana; the banana commonly used in the U.S.A.

(3)kluaj (4)nam-(4)waa. A small, rather flavorless banana used as baby food, for ill persons, and for ritual purposes.

(2)kha-(5)nom. A general term referring to "sweets", biscuits, or crackers.

(3)khaaw (1)caan (4)naam. (3)khaaw (5)suaj to which hot water has been added.

(3)khaaw (2)piag. Rice cooked in extra water and mashed; considered to be baby food.

(3)khaaw (5)suaj. Literally beautiful rice; cooked in the usual manner. The rice was washed twice, boiled in a large volume of unsalted water until almost done, then drained, and the covered pot returned to a slow fire to finish cooking by steam.

(3)khaaw (3)tom. Rice cooked with more than the usual amount of water and left undrained.

(3)kuj (1)chaaj. A vegetable introduced by the Chinese; both leaves and flowers are used.

(3)luug (1)yaasu. Flattery fruit.

(4)nam (1)plaa. Fishsoy: a condiment made from fish and salt. 104

(1)plaa. Fish.

(1)plaa (1)thuu. A fish commonly purchased by residents of Bang Chan.

(2)phag (2)ka-(2)cheed. An aquatic plant (Neptunia prostrata).

125 SCHEDULE FOR INFORMATION CONCERNING MOTHERS IN BANG CHAN.[1]

Cornell University Thailand Project 1952-53 Schedule 4

No. for child
Date

1. Hamlet.....House No..... 2. Name 1).....

2).....3. Husband's Name 1)..... 2).....

4. Married.....years 5. Present pregnancy..... months

6. Pregnancy, illness during:

7. Objective signs of deficiency:

8. History of:
a. Malaria..... c. Tuberculosis.....
b. Beriberi..... d. Other disease.....

Post partum interview, date.....

9. Delivery:
a. Date..... c. Type.....
b. Where..... d. Confined by.....

10. (2)juu (1)faj:
a. No.....Yes..... e. Hot ashes chamber.....
b. Days rest..... f. Other.....
Kind: c. Fire.....
d. Hot water bottle..... g. Activity.....
h. Bathing.....

11. Medicine used by mother:
a.....
b. With liquor: Yes.....No.....

12. Water: a. Rain..... d. Boiled..... f. Hot.....
b. Canal..... e. Raw..... g. Cold.....
c. Fish pond.....

13. Milk stimulation: How.....

14. Colostrum:..... 15. Complaints:.....

16. Objective signs of deficiency:.....

1. Information obtained from pregnant women and those with infants under one year of age.

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Schedule 4 contd.

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FOOD HABITS OF MOTHER Date	Pregnancy A				Postpartum B				Lactation C			
	D	F	O	N	D	F	O	N	D	F	O	N
17. Rice a.(3)khaaw (5)suai[1]												
b.(3)khaaw (1)caan (4)naam[1]												
c.(3)khaaw (3)tom[1]												
18. Fish a. Fresh												
b. Dried												
c. Salted												
19. Egg												
20. Poultry												
21. Meat a. Pork												
b. Dry beef												
c. Fresh beef												
22. Vegetables a. Green												
b. Other												
23. Fruits a. Bananas												
b. Cocoanut												
c. Other												
24. Legumes a. Dry beans, peas												
b. Peanuts												
25. Other foods												

26. Foods craved			
27. Foods disliked			
28. Believed to be good for:			
29. Believed to be bad during:			
30. Relation to usual diet:			

D = Daily, F = Frequently, O = Occasionally, N = Never

Interview by.....
Informants.....

1. See Glossary of Thai Terms (p. 51).

125 Schedule 4 contd.

SUPPLEMENT TO SCHEDULE 4[1]

31. Age.....years

32. Menstruation: a. Regularity: Yes.....No.....
b. Duration:..... days
c. Interval:..... days
d. Menarche:..... years
e. Menopause:..... years

33. Children: a. Total.....
b. Alive..... Dead.....
c. Stillbirths.....
d. Other: (State which child, age, cause)
.....
.....
.....
.....
e. Miscarriages.....
Age: f. Oldest..... years
Youngest..... years

34. Position in series of the children in this family whose dietary histories were obtained:.....

1. This information was obtained from all adolescent girls and women examined in the random sample of village households, as well as from each mother who gave us fairly complete information concerning the dietary history of one or more children.

SCHEDULE FOR INFORMATION CONCERNING BABIES IN BANG CHAN.[1] 125

Cornell University Thailand Project 1952-53 Schedule 5

No. for child
Date

1. Hamlet.....House No..... 2. Name 1).....
2)..... 3. Sex M F 4. Birth date.....

5. Mother's name 1)..... 2)..... 6. Father's name 1)..... 2) .....

7. Complications of delivery.....

8. Condition at birth.....

9. Eye prophylaxis.....

10. Condition after birth:
a. Convulsions..... d. Fever.....
b. Vomiting..... e. Other.....
c. Diarrhea.....

11. Smallpox Vaccination:
a. Yes.....No.....
b. Age.....
c. Result.....

12. Physician's comments on first examination:

13. Early treatment of baby:
a. Medicine.....
b. Food and water.....
c. Put to breast: (Day and times)
1st.....2nd.....3rd.....
4th.....5th.....

14. Cradle, ventilated:
Yes.....No.....

15. Cultural customs:
a. Offered to spirit: Yes...No...
b. By.....
c. Items on tray.....
d. Head shaved.....
e. Age.....
f. By.....
g. Ceremony: Yes.....No.....

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1. Items 7 - 15 used for all infants under 1 year, items 16 - 36 for all children up to 3 years of age at first interview.

Schedule 5 contd.

125 FEEDING OF BABY

Date of Interview	A				B				C				D			
16. Age																
17. Length, cm.																
18. Weight, kg.																
Food	D	F	O	N	D	F	O	N	D	F	O	N	D	F	O	N
19. Mother's milk																
20. Cow's Milk[1]																
21. Water a. Boiled																
b. Rain																
c. Canal																
22. Rice a.(3)khaaw (3)tom[2]																
b.(3)khaaw (2)piag[2]																
c.(3)khaaw (5)suai[2]																
23. Banana a.(4)nam-(4)waa[2]																
b. Other																
c. Crushed																
d. Baked																
e. With Rice																
24. Vegetable a.Green																
b.Other																
25. Fish a.Fresh																
b.Dried																
c.Salted																
26. Egg																
27. Poultry																
28. Meat																
29. Other fruit																
30. (2)Kha-(5)nom																
31. Exposure to sunlight																
32. Good for baby																
33. Not good for baby																
34. Teaching baby to eat																
35. Weaning procedure																
36. Age at which baby eats adult food																

37.Circumcision
38.Age

D = Daily, F = Frequently, O = Occasionally, N = Never

Interviewed by .....
Informants.....

1. Write in brand and notes on type of milk
2. See Glossary of Thai Terms (p. 51)

GUIDES FOR THE INTERVIEWER AND DESCRIPTION OF ITEMS IN SCHEDULES

125
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General Guides for Interviewer.

Schedule 4 was designed so that one form might be used to record all relevant information concerning the mother before and after the birth of a given child.

Schedule 5 was designed so that one form might be used to record all available relevant information concerning each child's history from birth onward.

At the initial interview the informant should be asked first about the situation at that time. For example, if the mother has a baby 6 months old, she should be asked about the child's food intake at that time, then what he was fed at an earlier age, for example 1 or 2 months, and finally the questions relating to the baby's birth and first few days of life. Similarly, the mother should be asked first to tell about her own present diet (in this case recorded under Food Habits during Lactation on Schedule 4) then concerning her care and diet at delivery and in the early postpartum period, and finally information concerning her health and food habits during the pregnancy which resulted in this baby.

Ideally, one would have the first interview during pregnancy and follow with records of interviews obtained periodically after the birth of the baby. To gain an idea of the present situation and practices in the village more rapidly, however, parents of infants under one year of age should be asked to furnish information about the infant's earlier history, including the mother's diet and condition prenatally.

The date of interview, in relation to the date of birth, indicates whether a given series of answers relate to the situation at the time of interview, or to an earlier situation, described from recall.

Schedules 4 and 5 relating to a given infant should be identified by the same Roman numeral, as I, in the upper right hand corner. Schedules 5, relating to other children under 3 years of age, from the same mother, should be identified as II, III, etc. An example follows showing information to be obtained at each of 3 interviews with the same mother when the first interview is held during pregnancy and she has two older children under 3 years of age.

EXAMPLE:

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	Mother Schedule 4	Baby Schedule 5, I	Child Schedule 5, II	Child Schedule 5, III
At First Interview:				
	6½ months pregnant	unborn	15 months	30 months
check items:	1-8 and 17-30A	———	1-6, 11-12 16-34A (35-39)[1]	1-6, 11-12 16-34A (35-38)[1]
At Second Interview: 3 mo. later				
	Post-partum	2 weeks	18 months	33 months
check items:	9-16, 17-30B	1-15, 16-33A	16-34B (35-38)[1]	16-34B (35-38)[1]
At Third Interview:				
	Mature lactation	4½ months	21 months	37 months
check items:	17-30C	16-34B (37-38)[1]	16-34C (35-38)[1]	No schedule. Weigh and measure only.

1. Use when appropriate.

Description of Items on Schedule 4.

Date. The date of first interview was entered on line 1. 125 124

1-3. Identification. Name of woman, name of husband, and their residence.

4. Years of marriage. To avoid embarrassement in cases where there had been no legal ceremony, the question was phrased to mean "How long have you had a house?"[1]

5. Present pregnancy. The woman's own estimate of the duration of the present pregnancy in months.

6. Pregnancy, illness during. The physician asked questions,[1] recorded description of symptoms, and commented on nature of illness.

7. Objective signs of deficiency. If the woman's complaints suggested dietary deficiency, the physician examined the patient for objective signs such as absence of knee jerk, changes in hair, skin, eyes, lips, tongue, gums, etc. and recorded his findings or dictated them to the recorder.

8. History of malaria, beriberi, tuberculosis and other disease. The physician asked questions which would lead the patient to describe past illnesses. Advanced symptoms of the diseases listed are sufficiently marked and characteristic to permit the patient to describe them so that the physician would recognize them with reasonable certainty. Furthermore they have a direct bearing on the nutritional history. Under "other disease" such items as chronic diarrhea and symptoms of diabetes were entered.

Postpartum interview, date. If the first interview was obtained during pregnancy, this date was different from the one above. If the first interview was after the birth of the child, this date was the same as the one above. From this date and the date of delivery, one can tell whether the information obtained was recent or recalled, and if recalled, from what time in the past.

9. Delivery.

a. Date. If the delivery was very recent the recorder could ascertain the day of birth (as last Friday) and record it at once according to the western calendar. Otherwise, the date according to the Thai calendar was recorded, and this was later translated.

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1. The investigator decided on an appropriate way to phrase each question and used the same words consistently.

125
124 b. Where. This was designated as "home", "Mother's home", "midwife's home", etc.

c. Type. Anything unusual about the delivery was noted; otherwise it was considered normal.

d. Confined by. If a local midwife attended the mother, the midwife's name was given here. If a nurse, midwife, or physician from outside the village attended the mother, this fact was noted.

10. (2)Juu (1)faj.

a., c., d., e., f. The custom of having the mother rest for a number of days in front of a fire is an old one in Thailand. If the mother was visited while she was still resting, the wood fire, if used, was in evidence. If not, the mother was asked if she was using a hot water bottle, hot ashes chamber, or other heating device. From experience one infers that those who do not actually have a wood fire but who used a hot water bottle or hot ashes chamber may reply either "no" or "yes" to the question apparently depending on their attitude toward the practice. If they considered it a good custom, but inconvenient, or if they were hesitant to break with tradition, they might regard the hot ashes chamber or hot water bottle as a modern form of (2)juu (1)faj and therefore reply "yes". If, however, the mother considered the practice of (2)juu (1)faj old fashioned, she might reply "no", yet be using a hot ashes chamber.

b. Days rest. The number of days of comparative rest was recorded. If the mother observed (2)juu (1)faj, this was the same as the days (2)juu (1)faj.

g. Activity. This item was included because of some concern on the part of the instructor in midwifery at the Maternal and Child Health Center in Bangkok because some mothers were relatively inactive, lying on a board before the fire for a number of days. If the mother sat up, went to the latrine, or got off her bed to get things for herself, this item was checked.

h. Bathing. Some mothers did not bathe but had their bodies rubbed with tumeric. This item, suggested by the midwife at the Maternal and Child Health Center in Bangkok, was included to see whether or not there was any general feeling that the mother should not be bathed.

11. Medicine. In our preliminary interviews we learned that mothers often took medicine after childbirth and that frequently this was mixed with liquor. This item was included to learn which medicines were most commonly used and the extent of the practice of taking medicine with liquor at this time.

12. Water. Contaminated water is a possible source of disease in Bang Chan. This item was included because we learned from preliminary interviews that during the (2)juu (1)faj period special precautions might be taken with respect to the source, treatment, and temperature of water consumed by the mother and baby.

13. Milk stimulation. How. In our early interviews we encountered several cases in which we were told that the child was not put to the breast because the mother had no milk. Medicine, local applications to the breast, and certain foods reputed to stimulate milk flow were all used. We wished to know what, if anything, was done with the idea of milk stimulation specifically in mind. 125 124

14. Colostrum. In our early interviews we encountered some cases in which the first mammary secretion was considered unsuitable for the child. It was expressed and discarded. Any ideas as to whether or not colostrum was good for the baby were entered here.

15. Complaints. The physician asked "How, how do you feel?".

16. Objective signs of deficiency. Same as item 7, except that this question related to the post partum period.

Food Habits. The date of interview was entered in the appropriate space, A, B, and/or C. These dates might all be different if the first interview occurred during pregnancy, or they might be all the same if the interview were held during lactation and information concerning food habits during pregnancy and postpartum obtained by recall. Items 17-28 included the categories of food which were noted in the dietary records obtained in 1948-49 (Sharp et al.,1953), grouped roughly according to nutritive value. Frequency with which a given type of food was eaten was indicated by checks in columns labeled: D (daily), F (frequently, i.e. not every day, but at least every week), O (occasionally, i.e. at relatively long intervals) and N (never). Items in these latter categories might be so placed because they must be purchased and were relatively expensive, or because the individual did not like the food. In the latter case, the recorder wrote in D for "dislike" following the item. Note that item 27, Foods disliked, refers to aversion to a given type of food at this period but not always.

17. Rice. See Glossary, p. 51, for description of these preparations.

18. Fish.
a. Fresh
b. Dried
c. Salted
These three categories were included since in preliminary interviews we found that at some times one form might be used to the exclusion of the others; also, salted fish is used in very small amounts. Thus if salted fish only were used during (2)jun (1)faj, this category would be checked. If, however, fish was eaten daily but the fish might be sometimes fresh, sometimes dried, or sometimes salted, the appropriate categories were bracketed together under the appropriate column and one check mark entered.

125 19. Egg.
124 20. Poultry.

Most farmers in Bang Chan raised poultry, but in many households most of the eggs produced were sold. We wished to know whether these foods, though a cash crop, were used by mothers.

21. Meat
a. Pork. Few farmers in Bang Chan raised hogs. Pork, if eaten, was generally purchased.
b. Beef, dry.
c. Beef, fresh

In Bang Chan "beef" usually meant water buffalo meat. If an animal died, some of the meat might be consumed fresh and the rest dried for future use.

22. Vegetables.
a. Green. In this category were included the green leafy vegetables such as swamp cabbage but not items such as green egg plant which although green on the outside are not rich in carotene.
b. Other. All vegetables other than the green leafy ones were included in this category.

23. Fruit.
a. Bananas. Since they were grown by all farmers in Bang Chan, were placed in a separate category.
b. Coconut. Was used frequently in the form of coconut milk and coconut cream in food preparation. Since coconut was one of the chief sources of fat in this area, it was put in a separate category.
c. Other. If other fruit was eaten daily or frequently, the kind of fruit was entered under the appropriate column.

24. Legumes.
a. Dry beans, peas.
b. Peanuts.

Although, according to the records obtained in 1948-49 (Sharp et al., 1953) dry legumes were seldom used in Bang Chan, increased use of legumes had been suggested as a means of increasing both protein and thiamine in the Thai diet. We had also observed dry beans of several varieties for sale in the village, and we wished to get some idea as to the extent to which they were used.

25. Other foods. The most frequently mentioned "other foods" were sweets. 125 124

The interviewer usually began by asking "what foods do you eat?" or "During pregnancy what did you eat?". After the informant had replied, he would ask about specific food categories not mentioned by the informant to be sure they had not been forgotten, then would sum up the information before going on to the next question.

26. Foods craved.

27. Foods disliked.

28. Foods believed to be good for.

29. Foods believed to be bad during.

Items 26-29 were included to get information on beliefs and reactions toward specific types of food during pregnancy, the postpartum period, or lactation. Such ideas might either favor or hinder the introduction of any changes in diet which might be considered desirable.

30. Relation to usual diet. The interviewer asked how the diet at this time compared to the mother's usual diet.[1] The reply was usually entered as "same" or "restricted." If "restricted", items listed under 29 "believed to be bad during" indicated changes from the usual.

Initials of the interviewer and recorder were entered under the appropriate column (as pregnancy, postpartum) and the name(s) of the principal informant(s) entered below.

At the conclusion of the interview the recorder rechecked the schedule to see that all appropriate spaces had been filled. To indicate that a question was asked or an examination made but the answer or results were negative, a zero was entered. Thus if the mother said she had not been ill during pregnancy, a zero was entered after item 6. If the physician examined for objective signs of deficiency but found none, a zero was entered after item 7 (for pregnancy) or after item 16 (postpartum).

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1. The investigator decided on an appropriate way to phrase each question and used the same words consistently.

125
124 Description of Items on Schedule 5.

1-6. Identification. (Same as for schedule 4).

7. Complications of delivery. The physician asked "Was it easy to deliver?"[1]

8. Condition at birth. "How about the condition of the baby after delivery?"[1]

9. Eye prophylaxis. "Were drops put in his eyes early?"[1]

10. Condition after birth.

a. Convulsions. "Did the baby have convulsions soon after delivery?"[1]
b. Vomiting.
c. Diarrhea.
d. Fever.
e. Other.

Symptoms, especially those associated with or which might lead to nutritional disorders in young infants, were listed so that answers might usually be recorded by a check mark, if the symptom was present, or a zero, if absent. Small spaces were left for writing in comments, if necessary, as well as a space for occurrence of other symptoms in the infant.

11. Smallpox vaccination.
a. "Has the baby been vaccinated?"[1]
b. "What was the age of vaccination?"[1]
c. "Was it successful?"[1]

12. Physician's comments on first examination. If the interview was held within a few days after birth, the physician's comments on the condition of the baby were written here. In practice, comments were recorded only when the baby appeared to depart from the normal in some significant way.

13. Early treatment of baby.
a. Medicine. If the new born baby was given medicine, either purchased or prepared at home or by the midwife, the nature of the medicine was noted.
b. Food and water. Here the recorder noted the kind of food, if any, which was offered before lactation was established; also the source and treatment of water given as "boiled rain water", "boiled canal water", etc.
c. Put to breast. (day and times). The physician asked when the mother began to breast-feed her infant. If she

1. The investigator decided on an appropriate way to phrase each question and used the same words consistently.

said this was on the 3rd, 4th, or 5th day after the baby was born and that she did not let him suck at all until she had milk, a check in the appropriate blank was used to answer the question. If, however, the baby was put to the breast before the milk flow was established, the number of times this was done was entered in the appropriate space. Thus, a mother might put the baby to the breast once on the second day and frequently on the 3rd or 4th days. 125 124

14. Cradle, ventilated. A number of different types of cradles are found in Bang Chan, i.e. those woven of fiber, those made of wood with slatted sides, those with a wooden frame and string side, and those of cloth. If the cradle was in evidence the recorder checked yes or no according to whether or not it allowed fairly good circulation of air about the baby.

15. Cultural customs.

a. Offered to spirit. The custom of offering the baby to the spirits was noted during the 1948-49 study. This item was included to find out how common this practice was in Bang Chan.

b. By. The name, or relationship, of person offering the child to the spirit was noted here.

c. Items on tray. If the child was offered to the spirits, it was customarily put into a winnowing tray together with various items which were supposed to influence its progress and well-being in later life. For example a pencil, exercise book, needle and thread (for a girl) were frequently placed on the tray. The tapered bamboo used by the midwife to cut the cord, and the clod of earth or the rhizome on which the cord was laid at the time of cutting, were also put on the tray.

If the interview was carried out at the time when the baby was on the tray, interviewers noted and recorded items actually on the tray with the baby. If the interview was carried out at a later date, the interviewers asked what was placed on the tray. Should the informant fail to mention any of the common items used, the interviewer asked about these specifically, i.e. "Did you put a pencil on the tray?", "an exercise book?" to be sure that the informant had not forgotten to mention the item. Comments of interest made by informants with respect to this custom were recorded here if there was space; otherwise they were noted in the interviewer's notebook.

d. Head shaved. This was usually done at about one month of age. Concerning infants this age or older the interviewer asked about the head shaving (which might be obvious). If the head had been shaved, the age at which this was done, by whom, and whether or not there was any attendant ceremony were recorded.

On the lower half of schedule 5 were spaces for recording 4 interviews (A, B, C, and D) concerning the child's feeding, together with information on age, length, and weight on the date of each interview.

125 16. Age. Age was obtained from the birth date (item 4)
124 and was figured by a member of the team according to the western system.

17. Length or height in cm. Height was measured on a locally made wooden measuring device hinged so as to fold (4 sections, each 50 centimeters long) and provided with a sliding set square. Divisions on the scale were burned into the wood. An infant was measured by putting the device on the floor and placing the baby on it. The knees were pressed down so that the backs of the knees were in contact with the scale. One of the research group then placed a flat-surfaced object such as a book perpendicular to the scale against the soles of the feet, while another brought the set square in contact with the infant's head. The readings at both feet and head were recorded and one was subtracted from the other to determine the length of the baby.

Measurements of babies are less exact than for older children, since babies often squirm and struggle during the measuring procedure.

18. Weight. Babies were usually weighed on a scale with a capacity of 15 kilograms in 50 gram divisions. The baby was placed on a pillow or cloth on the platform of the scale and the weight recorded. The pillow or cloth and any garments which had been on the baby were then weighed and this weight recorded. The second weight was subtracted from the first to obtain the weight of the baby.

During the dry season, when boat travel was not possible and visits to the households had to be made on foot, only a bathroom scale was carried. An infant was weighed in the arms of an adult, and the weight of the adult subtracted from the total. Divisions on this scale represented one-half kilogram, but values could be interpolated to one-fourth kilogram. No very young infants had to be weighed on this less exact scale.

The weight of the babies and young children can be considered as approximate only. No attempt could be made to weigh the baby just before a feeding or just after excretions had occurred as could be done with older children. The observed weight of an infant or young child at any given time is affected by variations in these conditions. Nevertheless, the recorded figures gave a reasonable idea of the size of Bang Chan infants at various ages, and the rate of growth of an individual child.

Food eaten by the child was recorded by checking the appropriate column, D (daily), F (frequently, i.e. not every day, but at least every week), O (occasionally, i.e. at

relatively long intervals) and N (never). If the informant volunteered that a given food was never eaten or only occasionally eaten because the child disliked or refused it, this information was noted. 125 124

19. Mother's milk.

20. Cow's milk. If cow's milk was being fed to the baby, the brand and type of milk (as Bear brand condensed, Bear brand dried, etc.) was written in the space allotted to the interview together with a check indicating frequency of use.

21. Water.
a. Boiled. If the baby was given boiled water daily or sometimes, the appropriate column D, F, or O was checked. If raw water was used, this item was checked N (never).
b. Rain.
c. Canal. Items b and c indicated the source of the water which might be used either raw or boiled as noted under a.

22. Rice. See glossary, p. 51, for description of these preparations.

23. Banana.
a. Since (3)kluaj (4)nam-(4)wa is a type of banana frequently used for baby feeding this was named specifically.
b. Other. The name of any other types of bananas used was entered in the appropriate column, with a check indicating frequency. Thus, if on second interview the interviewer learned the (3)kluaj (5)hauaum were given occasionally, "hauaum" was written in the B column opposite "other" and a check entered under "O".
c. Crushed.
d. Baked.
e. With Rice. Items 23, c, d, and e represented ways in which bananas were frequently prepared for infant feeding. If the interviewer learned that other methods were used, these were described separately in the field notes with a marginal footnote on schedule 5 to call attention to this.

24. Vegetables.
a. Green. In this category were included the green leafy vegetables such as swamp cabbage but not items such as green egg plant which, though green on the outside, are not rich in carotene.
b. Other. All vegetables other than the green leafy ones were included in this category.

25. Fish.
a. Fresh.
b. Dried.
c. Salted.

125 124 These three categories were included since in preliminary interviews we found that one form might be considered appropriate and another inappropriate for a child of a given age. Thus, if fresh fish were given daily or frequently but dried or salted fish were never given the child, this could be recorded. If, however, the child were given any type of fish which was prepared for the family, the appropriate categories are bracketed under the column in which the interview was being recorded and a check entered to indicate frequency.

26. Egg.

27. Poultry.

Most farmers in Bang Chan raised poultry but in some cases most of the eggs produced were sold. We wished to know whether these foods, though a cash crop, were used in baby feeding.

28. Meat. If meat was fed to the baby, the type, as pork, dry beef, fresh beef, was indicated under the appropriate column.

29. Other fruit. Two spaces were left for fruit so that if fruits other than bananas were given to the baby with any degree of frequency, the name(s) of the fruit(s) might be entered.

30. (2)kha-(5)nom. This term, used rather generally for sweets, crackers, etc.,was included as a category since we learned in our preliminary interviews that some parents gave (2)kha-(5)nom to children at a fairly early age. Two spaces were allowed so that the names of (2)kha-(5)nom commonly given to a child might be entered.

31. Exposure to sunlight. Several considerations led to inclusion of this item.

a. The teacher of midwifery at the Maternal and Child Health Center in Bangkok told us that some Thai mothers whom she had observed tended to put the child in direct sunlight facing the sun. She believed this to be bad for the baby's eyes and also to cause the baby to perspire overmuch. Mothers might then wipe perspiration off the baby with soiled cloths. She believed this to be a factor in the skin infec - tions seen in babies.

b. The reported high incidence of bow legs among children in the Bang Chan primary school and elsewhere in Thailand, which Dr. Yong (1939) attributed to unsuitable diet for infants and small children and to the practice of encouraging babies to stand and walk prematurely, might also be related to inadequacy of vitamin D. In Bang Chan, many houses had low hanging eaves which permitted little access to sunshine unless the baby was taken outside the house.

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32. Foods good for baby.

33. Foods not good for baby.

Items 32 and 33 were included to get information on beliefs and reactions toward specific types of food during infancy and early childhood. Such ideas might either favor or hinder the introduction of any changes in diet which might be considered desirable.

34. Teaching baby to eat. Techniques used in introducing new foods into the child's diet were entered here or reference made to more complete writeup in the interviewer's notes.

35. Weaning procedure. When a young child (under 3 years old) had been weaned, the informant was asked how the weaning was accomplished. Age at weaning was also entered here.

36. Age at which baby eats adult food. This was interpreted to mean that the child eats all types of food which adults in the family eat.

37 and 38. Circumcision. This question was later found to be inappropriate for this age group. In Bang Chan, Moslem boys were circumcised at about 11 years of age.

Initials of interviewer and recorder were entered in the appropriate place on the line marked "interviewed by", and the name(s) of the principal informant(s) entered below.

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[P.i]

THAI PEASANT PERSONALITY

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[p. iii]

Thai Peasant Personality

The Patterning of Interpersonal Behavior in the Village of Bang Chan

HERBERT P. PHILLIPS

UNIVERSITY OF CALIFORNIA PRESS
Berkeley and Los Angeles 1966

[Title Page]

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[P.V]

For Barbara, Katherine, and Elizabeth

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Preface

In a felicitous bit of phrasing, the psychologist Abraham Maslow (1954) characterized the research activities of American social scientists as either "problem centered" or "means centered" in their basic purposes. By the former he means studies that are concerned with describing and analyzing a problem that is important or interesting in its own right, and in which the question of *how* the study is conducted is self-evident, secondary, or unstated; by the latter he means studies concerned with illustrating the merit or validity of a particular research strategy or method, and in which the research findings themselves are subsidiary to the precision, elegance, or thoughtfulness of their formulation. Maslow's characterization applies with particular cogency to the writings of sociologists and psychologists. However, it is also relevant to anthropology, a field in which, on the one hand, authors continue to write splendid ethnographies without devoting more than a paragraph or two to how they collected their data, but in which, on the other hand, the editor of the *American Anthropologist* can introduce an article in his journal by saying (Spindler 1963: 1001): "The paper is intended as a solution of a procedural problem in data ordering, and nothing more, but one of the significant trends in modern anthropology is just this." [2]

In culture and personality studies there has in recent years been an attempt to break through this tendency toward intellectual separatism. Some of the most significant contributions to the field have in fact been dual research efforts. Thus, despite their titles and theoretical concerns, such studies as Wallace's *The Modal Personality Structure of the Tuscarora Indians*, Kaplan's *A Study of Rorschach Responses in Four Cultures*, Gladwin and Sarason's *Truk: Man in Paradise*, and Spindler's *Sociocultural and Psychological Processes in Menomini Acculturation* have given from one-third to one-half of their total volume to problems of research design and method.

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[2] The present study is written in terms of this emerging syncretic tradition. It is concerned with two different but closely related problems: the description and analysis of selected aspects of the psychological life of Central Plain Thai peasants, particularly aspects of the villagers' daily encounters with one another; and the presentation of an approach for dealing with some of the problems involved in designing and carrying out cross-cultural personality research. Although all the chapters deal with both issues, certain chapters emphasize one more than the other. Readers interested mainly in the description of Thai peasant personality are urged to go directly to chapters I, II, and the first part of III, V, and VI; those interested primarily in the theoretical and methodological framework of the study are referred to the Introduction and chapters III and IV.

This study is also a product of the recent anthropological trend toward team research. If the author had been a lone field researcher, working in a completely unknown community, he could never have undertaken the kind of specialized project reported here. As will be seen below, it was only because considerable ethnographic material was already in hand, providing the cultural framework so necessary for intelligent psychological analysis, that the research was at all feasible. It is left to the reader to determine whether this kind of study is simply an anthropological luxury or whether it adds a new dimension to traditional anthropological approaches.

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Acknowledgments

Sincere appreciation is extended first to the people of the village of Bang Chan for providing the information for this study and for affording me twenty-two of the most stimulating months of my life. Special thanks are due my Thai co-workers, Mr. Khamsing Srinawk, Miss Sumon Sudbhanthad, Miss Sucharit Iamamnuaj, Mr. Titaya Suwanajata, and Mr. Withun Layraman, without whose dedication and intelligence the field research would not have been possible. I am indebted to Drs. J. Marvin Brown, Margaret Stephan Dalton, Kamol Odd Janlekha, Robert B. Textor, and Mr. Robert Golden for their many different kinds of assistance while I was in Thailand. Mr. Sombhund Ruangvaidya and Miss Phongsri Liangphibun assisted me in translating the Sentence Completion materials from Thai into English, and I wish to thank them; however, the responsibility for the accuracy of these and other translations is mine. Others associated with the Cornell Research Center in Bangkok also deserve grateful acknowledgment.

I feel a very special sense of gratitude to my friend and colleague, Professor David A. Wilson, for his encouragement as well as for the many enjoyable hours we have spent together discussing aspects of Thai culture. I owe a similar debt to my other dear friends, Professor Lucien M. Hanks, Jr., Dr. Jane Richardson Hanks, Dr. Marjorie M. Burtt, and to my sister, Mrs. Harriet Lefley. Professors Michael Moerman, Hortense Powdermaker, Bernard Gallin, Charles Hughes, Bert Kaplan, Mrs. Barbara Schott Mainster, and Mr. Joseph Spielberg read and criticized portions of the work, for which I am also grateful. Mrs. Betty Messenger and Professor Eugene Hammel, both of whom know little about Thailand but a great deal about anthropology, suggested major revisions in the earlier version of the study, and my debt to them is considerable. Additional thanks are extended to Phyllis Killen and to Beppie Anne Duker for their editorial contributions.

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122 The Ford Foundation, through its Foreign Area Training Fellowship Program, provided the funds for the field research and some additional time for writing, and for these I am extremely grateful. I also wish to thank the Cornell Research Center in Bangkok and the Fels Foundation for providing funds toward special parts of the research.

000 The teachers who served on my graduate committee at Cornell University and who supervised the writing of the earlier version of this study were Professors Lauriston Sharp and Morris Edward Opler. My debt to them far exceeds the usual obligations owed to benevolent, if hard-headed, readers of a doctoral dissertation: it is primarily from them that I received much of the knowledge and inspiration that bear on my present professional interests. Others who contributed to my training and to whom I am warmly grateful are Professors Robert M. MacLeod, Robert J. Smith, William W. Lambert, and my undergraduate instructors, Professors Daniel J. Levinson, David M. Schneider, and the late Clyde Kluckhohn.

Acknowledgment is due Harper & Row, Publishers, for permission to quote several passages from essays in *Studying Personality Cross-Culturally*, Bert Kaplan, editor; to the Addison-Wesley Publishing Company for permission to quote from Alex Inkeles' and Daniel J. Levinson's "National Character: The Study of Modal Personality and Socio-Cultural Systems" in *Handbook of Social Psychology*, Volume II, Gardner Lindzey, editor; to The RAND Corporation and Stanford University Press for permission to quote from David A. Wilson's "Thailand and Marxism" in *Marxism in Southeast Asia*, Frank N. Trager, editor; to Routledge and Kegan Paul, Ltd. and to Beacon Press for permission to quote from Johan Huizinga's *Homo Ludens: A Study of the Play Element in Culture*; to the World Publishing Company for permission to quote from Clyde Kluckhohn's "Common Humanity and Diverse Cultures" in *The Human Meaning of the Social Sciences*, Daniel Lerner, editor; and to the editors of the *American Anthropologist* for permission to quote from several articles that have appeared in their journal over the years.

Finally, my appreciation is deepest to my wife, Barbara, for her contributions—practical, intellectual, and emotional—during every phase of this work.

Berkeley, California
August 1964

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Note on the Transliteration of Thai

Thai terms (excepting titles and proper names) have been transcribed according to the Haas phonetic system (Haas, *Thai Vocabulary*, 1955, and *The Thai System of Writing*, 1956. Washington D. C., American Council of Learned Societies). However, the five tonal markers have been omitted. 104

Briefly the system is as follows: voiced unaspirated stops are written *b*, *d*, and (only in final position) *g*; voiceless unaspirated stops are *p*, *t*, *c*, *k*, and *'*; voiceless aspirated stops are *ph*, *th*, *ch*, and *kh*; voiceless unaspirated spirants are *f*, *s*, and *h*; voiced semivowel sonorants are *w* and *j*; voiced nasal sonorants are *m*, *n*, and *ng*; the voiced lateral sonorant is *l*; and the voiced trill sonorant is *r*. The vowels are written thus: front unrounded, *i*, *ii*, *ia*, *e*, *ee*, *ɛ*, *ɛɛ*; central unrounded, *y*, *yy*, *ya*, *ə*, *əə*, *a*, *aa*; and back rounded, *u*, *uu*, *ua*, *o*, *oo*, *ɔ*, *ɔɔ*.

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Introduction

The purpose of this study is twofold: (1) to provide a basic description of 121
the dominant personality traits of the adult members of a Central Plain Thai community; and (2) to demonstrate a procedure for dealing with many of the methodological problems, theoretical and technical, that are encountered in cross-cultural personality research. The primary data are observational materials and the responses of 111 Bang Chan villagers to a Sentence Completion Test, a so-called "projective technique."

Several considerations have prompted this work, its planning, emphases, and aims.

In 1955, when I participated in the preparation of a sociological hand- 122
book on Thailand (Sharp *et al.* 1956), I had the task of writing a descrip- 114
tion of the "social values and personality patterns of the Thai," using as sources all available materials in the English language. These sources consisted largely of the writings of travelers, businessmen, and government servants who had worked in Thailand, the comments of introspective Thai, and some preliminary ethnographic studies (R. F. Benedict 1946, Embree 1950, Sharp *et al.* 1953, deYoung 1955, Kaufman 1955, and unpublished field notes of the Cornell Thailand project). It quickly became apparent that these documents—written originally for purposes quite removed from those of psychological analysis—could provide little more than cursory impressions or intriguing clues to the psychological functioning of the Thai, and that a focused, systematic study of Thai personality was a problem for future research. The account that finally emerged from my review of the literature was hardly more than a vocabulary for describing some of the stereotyped forms of Thai social interaction: politeness, the maintenance of a stoical mien in stressful situations, the love of fun, and the like. Although worthy of note, such a lexicon obviously did not represent a thorough or intensive portrayal of Siamese personality. It was 121
with the aim of redressing this situation, therefore, that in the winter of 1956 I undertook a twenty-two-month field research project, a major portion of which is presented in this monograph. Since the research concerns

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121 only the members of the village of Bang Chan, its descriptive universe is limited to this sample of the relatively homogeneous peasant population of Thailand's Central Plain.

A fundamental problem of cross-cultural personality research, however, is the question of precisely what to study and how to study it. Culture-personality studies are now universally acknowledged to be a legitimate part of the anthropological endeavor, but it should be remembered that the first research in this area, Mead's *Coming of Age in Samoa* (1928), is less than four decades old.[1] Forty years is not a long period in the development of a field of study, and much of the research during these years has necessarily been given to experimentation and the pursuit of randomly emerging problems. There is as yet no widely accepted "universal personality pattern," equivalent to the "universal culture pattern" in anthropology proper, to organize and guide psychological studies in non-Western cultures and, by specifying invariant points of reference, to expedite the overriding aim of such research: the determination of the range and variation of human personality. Too, despite the fashionableness of the field, there have in fact been comparatively few research projects that have focused *primarily* on the delineation of personality. With a few notable exceptions (DuBois 1944, Leighton and Kluckhohn 1947, Wallace 1952, Gladwin and Sarason 1953, Kaplan 1954, Hallowell 1955*a*, Spindler 1955*a*, Spiro 1958, and isolated life histories) the majority of psychological studies by anthropologists—and most of the personality research in the non-Western world has been done by anthropologists, not psychologists—have been peripheral to the field worker's major concern, ethnographic description, with the result that much of our personality material to date is scanty or ill-collected. Finally, as Inkeles and Levinson have pointed out (1954), the vast majority of personality-in-culture studies have been based not upon descriptions of individual human beings, the loci of personality, but upon descriptions of the institutions by which they were reared or the

[1] Questions of origins are of course always debatable. By stretching the concept of personality, one might make a case for Myers' and Rivers' work on the Torres Straits Expedition, 1898, or for Kroeber's three Gros Ventre biographies (1908) being the first culture-personality studies. During the teens and early and mid-twenties, Radin's Winnebago biographies (1913 and 1926), Elsie Clews Parsons' anthology (1922), Malinowski's work (1927), and Sapir's theoretical papers (1924 and 1927), although not in themselves culture-personality studies, certainly helped create a felicitous intellectual climate for Mead's research and for Benedict's *Psychological Types in the Cultures of the Southwest*, published the same year. In his synoptic review, Kluckhohn (1944) credits the Mead–Benedict–Sapir triumvirate with providing the groundwork for culture-personality studies in 1928. On the other hand, LaBarre (1958: 279) says: "Culture-personality studies essentially began in the 1930's at Yale University, when Edward Sapir and John Dollard began the first seminar on 'Culture and Personality.'" Milton Singer in his more recent historical review (1961) points to both events as marking the beginnings of the field.

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collective cultural products they have created: myths, folktales, religious conceptions and practices. In these instances, personality has been conceived of as either a hypothetical construct linking two sets of cultural institutions (child training methods and adult collective products) or the seat of unconscious processes for the handling of anxiety (created primarily by the child training methods and unconsciously expressed in the adult collective products). Although there is considerable cogency in this last approach (Kardiner 1939 and 1945, Erikson 1950: 98–160, Whiting and Child 1953, Whiting 1961), I would suggest that limiting the meaning of personality to a mechanism for handling anxiety represents a somewhat narrow conception of its functions and attributes. Several scholars (Opler 1936 and 1938, Hallowell 1941, Kluckhohn 1943*a*, Spiro 1952, among others) have ignored the issue of child rearing and have focused on the psycho-cultural functions of the collective products—both as sources and outlets for the anxieties as well as the realistic problems of adult life. These studies have been concerned not so much with portraying personality as with bringing psychological perspective and insight to the interpretation of ethnographic materials. |2.|

These comments are made not in criticism of past research, but rather to note that there are still few firmly established conventions for precisely how a cross-cultural personality study should or can be conducted. Much personality data in the past has *had* to be scanty, simply because the careful collection of ethnographic facts—a fundamental prerequisite to the interpretation of psychological data—is in itself so time-consuming.

Given this lack of a clear methodological mandate, I formulated the following general strategy for the study of the personality characteristics of Siamese villagers.

First, it was decided to concentrate on the description and analysis of the typical dispositions, feelings, conflicts, character traits, and psychological defenses of individual adult informants viewed within the setting of Thai peasant culture. This meant that the point of departure would be a series of psychological states and processes characteristic of individuals rather than a series of cultural institutions which might or might not reflect such states. It was clear, however, that this approach would be practicable only if substantial ethnographic data on the villagers were in hand to provide both general background information and the local cultural meanings necessary for interpreting the personality data. The issue of local cultural meanings will be amplified in a later section; for the present it is sufficient to note that I proceeded from the premise that a study concerned *primarily* with the portrayal of personality would be effective to the extent to which, on the one hand, it rested on solid ethnographic data and, on the other, freed the researcher from devoting his time and energy to collecting

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121 such data. Fortunately, the conditions for putting this plan into effect were present in the Thai situation, where extensive ethnographic studies had [122] already been conducted in Bang Chan by Sharp and his colleagues (Sharp *et al.* 1953, Janlekha 1955, L. M. Hanks 1959a–c, J. R. Hanks 1959, Textor 1960). To a large degree, the design and phrasing of my project was predicated on the prior existence of these materials.

Second, it was assumed that the states and processes referred to by the concept of personality are among the most complex of phenomena, with as many dimensions and attributes as there are to the concept of culture. This "primitive assumption" was made of course not to acknowledge an obvious truth, but to affirm the necessity that research designs for the study of personality in non-Western societies explicitly exhibit a recognition of the complexity of the task. I would suggest, for example, that collecting a set of Rorschach or TAT protocols during the last hurried weeks of one's field work—not an atypical practice (see Nadel 1955, Spindler 1955*b*, and Hallowell 1955*c*)—and then assuming that the personality portion of one's field work has been "done" is like collecting a list of kinship terms and assuming that all the complex emotional, economic, and juridical elements of actual kinship relationships have been covered. Although most anthropologists recognize the limited intellectual reference of kinship terms (Kroeber 1909 and 1952: 172, Opler 1937 and 1955: 190, Murdock 1949: 113–183, Edmonson 1957, Wallace and Atkins 1960), relatively few have taken an equally circumspect attitude toward the meaning of projective test materials, at least insofar as they have represented themselves to readers. The point is not that TAT protocols or kinship terms are unimportant, but rather that they should be seen as forming only a portion of a complex, cumulative research process, each stage of which should be carefully executed and aimed at dealing with a specific descriptive task. If personality is as involved and multi-dimensional as we all tacitly assume it to be, we should be willing to work with research designs that are equally involved and multi-dimensional.

121 *128 It was with the above in mind that I worked out a five-stage cumulative research program, the first two stages of which are represented by the data and interpretations in the present volume. The main body of this book has been limited to the two initial stages principally to permit a more complete exploration of the issues involved while at the same time keeping the report to a manageable size. The complete design is outlined below solely to provide the broader theoretical and methodological setting of the present study and to indicate its precise limits.

The first stage (chaps. II and VI) is perhaps descriptively the most

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interesting, but methodologically the most vulnerable. It involves sketching a naturalistic portrayal of the villagers' dominant personality traits on the basis of their overt behavior, and the patterning of these traits in their interpersonal contacts. Basically this entails trying to arrive at several generalizations about the villagers' characteristic types of response, drawing from several areas of cultural life—kinship, religion, gossip-group behavior, and so forth—and ignoring for the most part detailed situational considerations, deviations, and differences of age, sex, and status. The purpose of such a description is not to provide a precise picture of psychological modes and variations, which is a task in and of itself (stage two), but to sketch in broad strokes for the Western reader some of the manifestations of Thai character which are strikingly different from our own and are important elements in their pattern of expectancies. The emphasis here is on the psychological dimensions of interaction and on those traits which are possible, expectable, and—most important—inimitably Thai, not on those traits which are most frequent in a statistical sense. "Interaction" and "interpersonal contacts" are discussed mainly as attributes of the personalities of individual villagers rather than as attributes of the sociocultural system in which these individuals exist.

It must be emphasized that since the first approach is based on a spectator's observations of overt behavior, it cannot be expected to provide information about how, from a subjective viewpoint, villagers perceive their own behavior and feelings (particularly in psychologically loaded situations), what sentiments they feel but do not express, how they deal with such sentiments psychodynamically, what their unconscious defense mechanisms and private fantasies are (as contrasted to codified beliefs, which in some cases may be institutionalized fantasies); this type of information, commonly assigned to "deeper levels" of personality, is best dealt with in subsequent sections of the research. The major aim of the first section is to provide a general psychological map upon which finer points can later be traced.

The second stage (chaps. IV—VI), involving the use of the Sentence Completion Technique, is concerned with delineating in a statistical sense the subjectively held dispositions of the villagers in various areas of psychological concern: aggression, dependency, achievement, and the like. These dispositions refer not to a series of characteristics consistently shared by any distinguishable segments of the Bang Chan population but rather to the modal and variant characteristics held by villagers in different psychological situations. Since villagers who have similar dispositions in an aggression situation, for example, may have different ones in an achievement situation, it is expected that the frequencies of modes and variants, and their

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121 *128 representative memberships, can change from area to area. Our modal and variant types therefore represent not a composite but a profile of the villagers' psychological tendencies.

This second stage of the research differs in intent from the first on several counts.

First, in contrast to the earlier emphasis on what the observer sees as the villagers' most typical behavior, the second section focuses on how villagers themselves perceive situations, or pychologically relevant states, and how best to deal with them. The statements of the Sentence Completion Technique describe a series of relatively unstructured but highly realistic situations and states—*"When I realize other people do not like me, I feel . . ."*; *"When he was asked if he wanted to become boss, he . . ."* —to which informants are asked to respond, and in so doing reveal their own needs, wishes, and experiences. It must be emphasized that the completions thus provided do not necessarily represent a description of how informants would in fact behave "when they realize other people do not like them," but do portray their predispositions to react in the manner indicated. The analytic meaning of the response is explored fully in chapter V, but for the present it suffices to note that a basic aim of this section of the research is to present in a systematic way the villagers' internal views and definitions of psychologically significant experiences.

Another aim of this section, of a different order from that above, is to shed some light on a problem that has been the subject of considerable interest, and also considerable obfuscation, from the very beginning of culture-personality studies: the question of a culturally modal personality. (Some representative studies or theoretical statements on this problem are: R. F. Benedict 1934, Belo 1935, LaBarre 1945, Gorer 1948, Mead 1951 and 1953; some representative criticisms, Lindesmith and Strauss 1950, Farber 1950 and 1951, Hart 1954, Piddington 1957; some representative analyses, Wallace 1952, Kaplan 1954 and 1957, Inkeles and Levinson 1954, and Farber 1955.) I am convinced that one of the major sources of difficulty surrounding the use of the concept of modal personality—or its overinflated version, "national character"—has been the tendency on the part of some field workers to confound inadvertently the culturally interesting or different with the culturally typical. Researchers have been so intent on communicating to readers the unusual nature of the characteristics of the people they have been studying—those characteristics they encountered most personally and directly in the field—that they have often reported unusual characteristics that occurred with *sufficient* frequency to be impressive as actually occurring *most* frequently. I would suggest that it is precisely this kind of confusion that prompted the criticisms (Malinowski 1936 and Thurnwald 1940) of Mead's descriptions (1935) of the

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psychological transmutability of the sexes among the Arapesh, Mundugumur, and Tschambuli, and to a lesser extent those directed against R. F. Benedict's (1934) and Thompson's (1945) views of Pueblo Indian character by Goldfrank (1945), Eggan (1943), and Titiev (1944 and 1946). The issue here is not that traits occurring most frequently are ultimately any more reliable than interesting ones occurring sufficiently frequently or even rarely—these latter are perhaps the best evidence for the variegated and innovative richness of human personality—but simply that the two should not be confused when presenting descriptions of modal personality.

Setting aside for the moment the substantive differences between an "external" (stage one) and "internal" (stage two) approach to personality, it seems clear that the most sensible way for a researcher to proceed to make statements about modal personality—the most frequently occurring personality characteristics in a group—is not by naturalistic portrayal, but by presenting to several members of the group a series of standardized stimuli, the responses to which are then examined for modes and variants and the degree of modality and variation actually expressive of the group. At first glance, naturalistic portrayal may seem the more desirable approach to modal personality, but empirically it entails serious methodological difficulties. A researcher who employed such an approach with reasonable precision would have to (1) record literally everything that occurred around him in order to insure a complete set of observations upon which to base his determinations of modality; (2) identify in these data equivalent social situations for all individuals observed, which, given all the relevant factors present that must be permuted, would vastly reduce his total number of cases; and (3) attempt to tease out modal and variant psychological responses to these situations while working with a very small sample indeed. Moreover, there would always be certain areas of psychological functioning—in Bang Chan, for example, direct aggression between adults, undisguised adult sexual behavior—which would be either closed to him or radically altered *because* of his presence. Unhappily, it is often these very areas in which he may be most interested.[2] With a method such as the

[2] I know of no case in the anthropological literature in which a study of adult modal personality in the terms just outlined has ever been seriously attempted—undoubtedly for the reasons specified. Roberts' study (1951) of three Navaho households may seem stylistically similar but actually deals with a totally different problem. It may be noted that the anthropologist who has argued most vigorously for a naturalistic observation approach to personality—Jules Henry (1955, 1958, and Mensh and Henry 1953)—has at all times confined his illustrations to observations of children or children with adults, never adults with adults. The major and unexplicated reason for this limitation is the fact that the behavior of relatively unsocialized children is of an entirely different order from that of adults: it is more spontaneous, motoric, uninhibited, and less verbal than adults' behavior, so much of which is guided by social role requirements. Stated in another way: a Bang Chan child would

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With a method such as the
121 Sentence Completion Technique, however, the researcher obtains data
125 that are the product of all individuals responding to the same stimuli, describing the same situations (although in the nature of the technique, hypothetical ones—and this is precisely what permits the handling of topics that may be taboo), and interviewed under generally the same conditions.

128 Another major aim of this section is to illustrate the usefulness of the Sentence Completion Method for the cross-cultural study of personality. The specific advantages of the technique are elaborated upon later, but the point to be emphasized here is the necessity for phrasing *any* study of personality (or a principal part of it) in a non-Western culture in terms of a technique that will yield comparable data from *any other* culture. I am firmly convinced that only by using a method that can be easily adapted and freely translated from culture to culture can we begin to deal in earnest with the underlying theoretical justification of all culture-personality studies: the determination of the range and variation of human personality. As Spiro (1955: 257) has so persuasively argued:

> one of our main interests is to discover the extent to which culture influences personality; and for this purpose I believe that the Rorschach (*or any other culture-free unstructured stimulus*) is of crucial significance, for it provides us with a yardstick against which genuine personality variables, in contrast to patterned-response variables can be measured. This proposition requires some explanation. A culture, psychologically viewed, consists of a configuration of stimulus situations and the customary responses to these situations which have been learned by the members of a given society. Hence, in demonstrating, as we have successfully done, that emotional and behavioral differences are to be found within different sociocultural contexts we have not demonstrated the existence of personality differences at all. We have merely shown that different stimuli evoke different responses. What we must demonstrate, if we are to show personality differences, is that peoples reared in different sociocultural contexts respond differently to the *same* stimulus. We must, in short, be able to observe the responses of different peoples to a stimulus that is identical for all of them. . . . If under

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have few qualms about kicking another youngster in the presence of an observer, but a Bang Chan husband would think twice before beating his wife in this setting. Similarly, a mother might make love to her child in the presence of an observer, but never to her husband.

Henry himself recognizes the difficulties of using a naturalistic approach with adults (personal communication 1958), a conclusion shared by other researchers who have attempted naturalistic observation in psychological field work (personal communication from William Lambert with regard to the Whiting–Child–Lambert cross-cultural studies in socialization). Boggs (1956) provides an excellent illustration of the use of naturalistic observation with children. The work of Barker and his colleagues (Barker and Wright 1951, Barker 1963) represents the most sophisticated application of naturalistic observation to the *description* of behavior (although not necessarily personality), but again the focus is on children.

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these circumstances we find differences in response, we can be fairly confident that we have a true measure of personality differences and not a measure of how well these people have learned their respective cultures [first italics added]. 121

In my view, the Rorschach, not being a language-mediated instrument, is descriptively and analytically limited to too narrow a sector of psychological functioning (primarily to perceptual processes). It was therefore not used in my own research. However, the major condition of Spiro's argument is admirably fulfilled by our Sentence Completion Technique, the statements of which—covering a broad spectrum of psychological experiences—were expressly designed for, and are capable of, use not only in Thai peasant culture but in several other cultures of the world. 12.

The next two basic stages of the research are intended eventually to provide analytic depth and descriptive detail to the earlier formulations. The third stage, involving the use of the Thematic Apperception Test—eleven of the original Murray–Morgan "American" cards which were redrawn to suit Thai conditions—is concerned with portraying the fantasies and unconscious sentiments of the villagers to the extent to which they are willing or capable of articulating material which reveals such sentiments. This last point is important. I used the TAT in Bang Chan on the premise that this technique would elicit the type of data it is theoretically designed to elicit; that is, when informants are presented with highly ambiguous pictures and asked to make up stories describing what is occurring in the pictures, they will project through these stories their own unconscious sentiments and preoccupations. The rationale here is that since the stories and the pictures which stimulate them are so highly fanciful, with no realistic consequences or constraints, informants will give free rein to their imaginations and reveal those concerns that are not usually expressed in the more inhibiting and realistic circumstances of ordinary life; and being fantasies, the stories represent projections of unconscious materials. It is this fanciful element that differentiates the TAT data analytically from the considerably more realistic SCT materials.

To a large extent, these theoretical expectations were fulfilled in the informants' responses to the TAT. The villagers' inordinate preoccupation with aggression and social conflict in the stories, for example, was almost the antithesis of what one would predict from observations of overt behavior, but made considerable sense to an investigator who always found it hard to believe that their marked non-aggressiveness at the behavioral level did not betray something quite different at more latent levels.

Despite successes of this sort with the TAT, there were several instances when informants did not seem to articulate analytically useful material. This was either because some pictures held little psychological significance for them (and this happened, I might add, with cards that

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were expected to be among the most stimulating) or, more important, because the informants' stories were getting psychologically too close to home: the "unconscious sentiments" they were supposedly projecting onto the figures in the cards were becoming uncomfortably conscious and knowingly self-descriptive.

Thus informants would often get their story "heroes" into emotionally difficult or painful situations, and as if recognizing what they had done—"I will reveal this much, but not more"—would resist elaborating, working through, or even resolving the fanciful but personally distressing situations they had created.

I mention these difficulties primarily to emphasize that despite the usefulness of an instrument like the TAT for evoking the unconscious feelings of informants—and doing so more efficiently than other techniques heretofore devised—the extent to which such feelings will in fact be articulated depends largely on the informants' emerging awareness of their feelings, or lack of same, a characteristic which may well vary from culture to culture. In assessing TAT responses or any other fantasy materials, therefore, it is well to remember that the obtained data may eventually tell us just as much about the process of accepting and rejecting unconscious feelings as it will about the content of "unconscious" feelings as such.

The fourth section of the research consists of several detailed life histories. The major aim here is to provide in the most naturalistic terms possible what it means to feel and think like a Thai peasant. Except for highly general, open-ended questions ("Thinking back on your life, what are the most important things that ever happened to you?"; "What kind of childhood did you lead?") and occasional probes, the data are completely the product of the villagers' own assumptions, trains of thought, and emphases.

Having collected and worked with all the foregoing data, I would suggest that the life histories are clearly the most descriptively rich and psychologically revealing, especially when coupled with individual analyses of the projective test materials. However, being life histories, they are also highly idiosyncratic—perhaps an inevitable concomitant of their richness. It is precisely for this reason that the analyses of life histories were (and should be) undertaken toward the latter part of a research program, after a basic picture of psychological modality and variation, as well as a general description of villagers' unconscious processes and preoccupations, has first been provided. It is only in such a context that their representative character,[3] as well as their substantive significance, can be intelligently

[3] I am referring here to *psychological* representativeness, not to the more familiar problem of *social* representativeness—age, sex, occupational roles—that has been bruited about in the literature (Lindesmith and Strauss 1950, Mead 1953 and 1955,

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determined. So frequently the provocative, interesting, or delightfully human life histories found in the anthropological literature (Dyk 1938 and Tirabutana 1958 come immediately to mind) are so simply because they are the products of the more imaginative, articulate, and introspective members of the culture in question. The issue of course is not that a biography elicited from an articulate individual is to be considered ultimately any more or less valuable than one obtained from a more "typical" member of the culture—Kluckhohn's "Mr. Moustache" (1945) is ample evidence of what an articulate interpreter can do with the life history of a relatively inarticulate informant—but rather that it be accurately seen against a background of the psychological responses of the members of the community as a whole.[4]

The final stage of the research program is perhaps the most complex. Following the outlines of a recommendation originally made by Inkeles and Levinson (1954) and Inkeles (1959), it aims at presenting a systematic analysis of the *relationship* between the personality tendencies of the villagers, as determined through the foregoing materials on the one hand, and the functional requirements of Thai peasant society, as determined through ethnographic data, on the other.

An analysis of this type rests on at least three premises: (1) that there is just as likely to be a lack of congruence between the psychological capacities and proclivities of a group of people and the psychological demands that are made upon them by their own social institutions (demands that must be met if the institutions are to be maintained effectively) as there is likely to be a close fit, and that a crucial, empirical task of any culture-personality study is to detail the specific areas of congruence and noncongruence; (2) that human beings can bear considerable psychological strain—precisely how much we really do not know—and still function effectively, maintaining both their prevailing personality patterns and

Mandelbaum 1953, among others). The issue is the extent to which the psychological tendencies of life history informants—their readiness to respond and modes of response in various situations, their assumptions and unconscious premises—are typical of other villagers.

[4] I am reminded here of my own ambivalent reaction to a comment once made by a villager who, intrigued by the fact that I was collecting life histories, said: "I have heard about those people who are telling you their life stories. You're smart—getting interesting ones like them. Some of those people can really *phuud keŋ*." To *phuud keŋ* means to "speak well," but more particularly to speak cleverly, fluently, deceptively, convincingly, or beautifully (in an aesthetic sense). Actually, there were numerous individuals in Bang Chan who, in local terms, could speak considerably more *keŋ* than the life history informants. However, as the villager's remark suggests, the ability to be "keŋ-ful" in one's speech is something to which Bang Chaners give considerable attention, often to the extent of seriously modifying the intellectual content of their speech, and is one more factor that must be dealt with in assessing the content of a biographical document.

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121 *129 established social structure, albeit in a state of stressful equilibrium; (3) that too much strain will eventually lead to major changes either in their personality patterns or social structure or both, in either a social-psychologically integrative or malintegrative way.[8] Some preliminary illustrations of this approach can be found in Phillips (1963).

I have gone into considerable detail in the above discussion in order to indicate the broader context of the present volume and also to illustrate the necessity for thinking in terms of a multiple-stage research program, each part of which concentrates on a circumscribed descriptive issue. The point is that each stage of the design has *of necessity* its intrinsic strengths and limitations. At the very outset of this book it was noted that the purpose of this study is "to provide a *basic* description of the dominant personality traits" of the villagers. It is hoped that it will indeed provide that—by which is meant a portrayal of the villagers' most distinctive personality traits as expressed in overt behavior and an account of their subjectively held dispositions as revealed in responses made to a series of hypothetical but realistic situations. In the latter instance, special attention is given to the issue of psychological modality and variation as well as to the larger problem of cross-cultural comparability. However, the presentation will neither deal in any detail with fantasies, unconscious sentiments, or psychodynamic processes, nor will it have the descriptive—and idiosyncratic—richness that can be found in life history documents. The emphasis throughout is on the personality characteristics of the members of the community as a whole.

121 A final word should be said about the theoretical model which underlies the entire effort. The basic organizing principle of a study of this kind is that human beings can be most effectively described in terms of their *typical*, *characteristic*, or *stable* psychological responses. These terms refer not to the superficiality or depth of such responses (which may be con-

[8] This last premise is mentioned for purposes of formal completeness, not as a practical predictive principle. We have as yet little idea of the amount of psychological strain individuals can endure before making changes in their personalities or social environments, although in a loose *post hoc* way we have often been able to specify in individual cases the conditions which lead to such changes. Also, we obviously have no way of foretelling whether changes resulting from personality-institutional strains will lead to integrative social psychological responses (Manus culture during the past twenty-five years; the abolition of the taboo system in Hawaii in 1819); or simply to more intense strains, the most extreme examples being revolution (Burma during the early and mid-1950's, the Congo) or cultural malaise (many Melanesian and American Indian tribes). The crucial issue here may well be the time factor: how short- or long-lived these responses prove to be, or whether they are instrumental or conclusive. The Hawaiian abolition of taboo, for example, was inconsequential relative to what occurred five months later after the first missionaries arrived; but the recent chaos in the Congo may in time prove to be only a minor episode in the establishment of the nation.

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scious or unconscious), but to their *constancy*. Thus when we speak of a "polite," "fun-loving" people—or a "narcissistic," "self-accepting" people—we mean that there is great likelihood that these persons will respond or will be predisposed to respond in the manner indicated, especially in novel or ambiguous situations. Indeed, ambiguous situations provide the best evidence for how typical the responses actually are, a point that should be kept in mind later with regard to the Sentence Completion data. 121

It is recognized of course that this model cannot possibly account for all human behavior and feelings. Even the most polite people will have their moments of boorishness, and the most narcissistic their moments of selflessness. Also, responses that occur relatively infrequently, or under very special circumstances, may often prove to be among the most psychologically revealing. Yet the psychological tendencies of human beings are remarkably constant. People do act repeatedly in similar and often almost identical ways, and it is primarily this attribute of psychological predictability that brings order both to their lives and to our analyses.

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I

The Village of Bang Chan

Geographical and Cultural Setting

T
133 The heartland of Siam is the Mɛɛnaam or Caw Phrajaa Valley, a vast
361 alluvial plain stretching out for some 250 miles north of the Gulf of
161 Thailand and the capital city of Bangkok, where approximately 40 percent
137 of the nation's 26.3 million persons (1960) live.[1] This Central region is
563 distinguished geographically, and to a lesser extent culturally, from the three other major areas of Thailand: the North, a forested mountain area dominated by Chiengmai, Thailand's second largest city, and in whose outer reaches live many of the tribal peoples of Siam; the Northeast, a broad plateau region which is the largest and economically poorest area of the country; and the South, or Peninsular Thailand, a jungle and mountain area where the heaviest concentration of Thai Malay–Moslems live.

e
13 The community of Bang Chan is located some 31 kilometers northeast
487 of Bangkok on what is essentially a flat, seemingly endless rice field, broken
361 occasionally by tall Asiatic pines, strings of houses along canals, or clumps
[491] of trees shielding some isolated homesteads. A person seeing Bang Chan for the first time is struck particularly by the intense green of the landscape and, once off the macadam road that connects the village to Bangkok and to the market town of Minburi four kilometers to the east, the stillness of the setting, even along the thickly populated main canal where voices are muffled by the heavy foliage surrounding each house. Often in the early hours of the afternoon the only sound that one can hear in Bang Chan is the dip of the paddles of boats moving up the canal or the barking of dogs.

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[114] [1] There is no general agreement on the precise boundaries of the Mɛɛnaam Valley. Zimmerman (1931), Andrews (1935), Blanchard *et al.* (1958), and most Thai government documents use the term synonymously with "Central region," which would include the provinces east and southeast of Bangkok to the Cambodia frontier, west to the Burma border, and north of the Gulf of Thailand. Credner (1935) and deYoung (1955) on the other hand limit the term to only that portion of the Central region which falls north of Bangkok, equivalent to what Pendleton (1962) calls the "Bangkok Plain." Our population figure refers to the former usage.

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Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

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whole, depends in large part on one's frame of reference.[2] In the most general terms, the people of Bang Chan are like almost all ethnic Thai peasants (excepting on some counts Thai Moslems and some of the economically disenfranchised people of the Northeast) in that they have a keen sense of membership in the nation-state with a deep loyalty to the Crown, speak the Thai language, are Therevada Buddhists, are outwardly highly deferential to the authority of the Central government, and have a conception of the good life that stresses fun, physical comfort and security, intellectual simplicity and practicality, and a moral (as contrasted with a natural) ordering of the universe. Too, like the vast majority of their rural compatriots,[3] they are engaged in the production of rice, an activity which to them is not only an economic operation (Ingram 1955, Janlekha 1955) but almost a way of life, being bound up with their social structure, dietary habits, religious practices, and even their philosophical (J. R. Hanks 1961) and aesthetic conceptions.

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[2] For readers unfamiliar with Thailand, the nation-state, it should be noted that the country is predominantly rural; 84 percent of the total national labor force is in agriculture and there are only ten towns with populations of 20,000 people or more, in which 6 percent of the national population (1947 census) live. Although Bangkok has a population of approximately 1,200,000, the second largest city, Chiengmai, has only 60,000 (1957 estimate).

The nation also has a high degree of ethnic homogeneity, 82 percent of the population considering themselves native Thai (1957 estimate). The largest ethnic minority group is the overseas Chinese, comprising 11.3 percent of the population (1953 estimate, from Skinner 1957), the balance being Malays, Cambodians, and Indians; the so-called tribal groups number in toto only about 150,000 people.

The religious composition of the country is 94.1 percent Buddhist, 3.9 percent Moslem, 0.5 percent Christian, and 1.5 percent "others," many of whom are tribal animists. Thai Buddhism is of the Southern (Therevada, Hinayana, or "Lesser Vehicle") variety and as practiced by most Thai, has syncretized within it many Brahmanic and traditional Southeast Asian animistic elements (see the chapter on "Religion" in Sharp *et al.* 1956, and Textor 1969). The largest minority religion, Islam, is practiced by ethnic Malay living in the four southernmost provinces of Thailand, as well as by some ethnic Thai—many of them descendants of former Malay slaves or war prisoners—scattered through the areas north and east of Bangkok, including Bang Chan, where they comprise 9.8 percent of the local population. Relationships between Buddhists and Moslems, at least in Bang Chan, are quite amicable and except for ideal prohibitions against intermarriage and occasional offhand remarks such as "Moslem women are loose" or "Moslems kill animals," there is little overt hostility between the two groups. Certainly few Bang Chaners ever distinguish between their Buddhist and Moslem neighbors when arranging a work group, selecting a drinking partner, or even compiling a guest list for a son's ordination. .

[3] Janlekha (in Sharp *et al.* 1953: 110) indicates that 55 percent of the total national labor force is involved solely in the cultivation of rice—which occupies approximately 90 percent of the total cultivated land area—and as many as 92 percent of all agricultural households are rice households. The 55 percent figure excludes all those people who are involved in the transportation, milling, storing, and distribution of rice. Eighty-five percent of the population of Bang Chan (1953) are rice farmers.

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In addition to these widespread national patterns, Bang Chan has certain characteristics that seem relatively distinctive of villages of the Central Plain. Not of least importance is the demographic arrangement of the community: either isolated homesteads surrounded by rice fields and connected to larger canals by small tributaries or groups of households strung out along both sides of the canals. The former pattern is more commonplace and historically more recent, and is the result of an expanding population trying to live on a land that has been so committed to the commercialized cultivation of rice that the only available house sites are on the fields themselves. This "typical Central Plain" pattern contrasts with the "cluster" type villages found in the North and Northeast (deYoung 1955) where houses are integrated into compact communities around which are located the rice fields. Although it is difficult to draw precise relationships between demographic arrangements and psychological characteristics, it is noteworthy that the isolated locale of so many Bang Chan households is not out of keeping with the independent and individualistic propensities of the villagers. As one villager expressed it, "If people live far away from each other, there will not be any trouble."

Related to the above pattern and characteristic of other communities of the Central region (cf. Kaufman 1960) is the absence among village residents of any strong sense of identification with the needs of their community as a whole. Except for religious activities and the reciprocal work groups organized for rice transplanting and harvesting—the rewards for which are directly personal—the villagers simply are not predisposed to participate in communal projects. Thus, activities which require large-scale coöperation or organization to be effective—clearing or deepening canals, repairing the unusable road that leads from the main highway to the school, building a playground for the school—are either not carried out or are effected only with extreme difficulty. Although a few villagers recognize these as defects of social organization, it is clear that the majority find it easier to live with them than to try to change the basic institutional framework that sustains them; maintaining their own freedom of action is simply more important, and more culturally "natural," to the villagers than getting involved in public service projects. Again, this pattern seems to contrast with that found in the villages of the North (deYoung 1955) where individuals regularly contribute labor to their communities by repairing village streets and maintaining irrigation systems, even when such efforts require coöperation between adjacent villages.

The inability of Bang Chaners to organize coöperative projects is undoubtedly abetted by the formal governmental structure of the village which, although perhaps more of an administrative nightmare than is normally found elsewhere in the Central Plain, is in its organizational

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essentials not atypical of the region. Instead of villages being organized administratively on the basis of natural social groupings and demarcations—that is, social centers and groups with which people feel a primary identification, in Bang Chan's case the local Buddhist monastery and government primary school—so that governmental and social units are isomorphic, they are gerrymandered into highly arbitrary administrative units. Thus the village of Bang Chan is comprised of seven *muubaan* or hamlets, at the head of which are seven hamlet headmen; these hamlets are located in two different *tambon*, or communes (four in one commune, three in the other) headed by two commune headmen, neither of whom lives in Bang Chan; the two communes are located in two different districts headed by two different district officers and their staffs; the two districts fortunately are in a single province, Phranakhoon, the same administrative unit in which the metropolis of Bangkok is located. Yet the people who reside in these varying hamlets located in different communes and districts all perceive themselves as living in the single village of Bang Chan. The fundamental organizational problem here is that since the sources and lines of governmental authority do not follow the lines of the natural Bang Chan community, jurisdictional conflicts and confusions arise to threaten the effectiveness of those community-wide programs that occasionally may be initiated. For example, during a diphtheria immunization campaign in the village (Hanks and Hanks 1955), the public health officer from one of the district offices was reluctant to immunize all the children of Bang Chan on the grounds that some of them came from hamlets outside his district's jurisdiction; he yielded, as the Hankses note, only when a perceptive villager pointed out that if germs knew no boundaries why should he?

Not all villages of the Central region have such real or potential administrative difficulties. (And Bang Chan does not have them too frequently either, principally because the government does not initiate too many community service programs.) However, the basic organizational principle which admits them—that houses are grouped together as administrative "villages" on the basis of conceptual neatness rather than socially functional criteria—is a common feature of the administrative structure of the Central Plain.

The foregoing account describes some basic culture patterns which Bang Chan shares with other villages of either the region or the nation. In addition to these broader patterns, Bang Chan has certain traits which inevitably refer to local village conditions and contingencies. For example, the most active and viable social unit in Bang Chan beyond the familial level is the order of Buddhist monks associated with the monastery. It is the only organization within the village that has been successful in mobilizing community activity (Sharp *et al.* 1953), although much of this activity has

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been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad, national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.[4] As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

[4] It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

4:Phillips E-4,5 (1956-1957) 1966
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423 184 from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

369 177 A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital [494] does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey [484] conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise 369 177 167 of regular wages, lighter work, and the bright lights of the city, leave Bang Chan with the hope that they will never have to return, although of course [464] many do. The Goldsen-Ralis survey reveals that 26 percent of their respondents had lived in Bangkok for a year or more, although for most this [701] was in fulfillment of military service.

369 177 181 Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

369 177 The frequent transit between Bang Chan and Bangkok,[8] however,

[8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring [809] [204] [671]

4:Phillips E-4,5 (1956-1957) 1966
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continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959b: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family;

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home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[4] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively cooperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*luang*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

[4] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost a Buddhist monastery where one may make merit and only secondarily *the* Bang Chan Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends because they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of *all households*); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

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121 remotely extended families, or with what L. M. Hanks [1959c] calls the
594 multi-local extended family, about which there is more below.)

591 The variations of the nuclear family, obviously excepting the monkhood,
594 arise primarily out of the large proportion of recently married couples who find it more expedient to continue living with one set of parents while accumulating funds for setting up their own independent households. In the case of one-person families, the variation arises when individuals are unable to live with their kin, are deserted by them, or have none. All the one-person families tend to be poor and are comprised largely of elderly people. In arrangements of the former type, there is a slight (five to three) tendency to matrilocality over patrilocality, and despite the intention of all concerned that the arrangements remain impermanent, there is considerable variability as to how long they are maintained. Analyzing a sample of 96 Bang Chan families, Janlekha found that although 30 percent came into being as nuclear families immediately after marriage, the balance underwent a period of residence with parents ranging from one to twenty years, the average being four years, with 16 percent never moving from the parents' home at all. Most cases of what Janlekha calls "limited extended families" result from a stem family inheritance pattern, although some entail elderly parents breaking up their households and moving in with the family of one of their mature children.

In addition to these basic variations, more accurately labeled "alternatives," there are several other variations of the nuclear family that occur with sufficient frequency to be noticed and at the same time are considered not at all unusual by the villagers themselves. Their significance for us is that they reveal what appears to be an almost nonchalant willingness or acquiescence on the part of the villagers to make modifications and adjustments in their living arrangements whenever necessary. Underlying this seems to be a fundamental assumption that the question of who lives with whom simply is not one of overriding importance: as long as individuals can live together without discord, act in terms of the household's established patterns of superordination and subordination, contribute labor or money to the family larder commensurate with their ages, and not inconvenience each other, they will be welcomed into the household; if unable or unwilling to fulfill such elementary obligations, they may take their leave, even if they are in fact full-fledged members of the nuclear family.

This rather flexible, or what the late John Embree would have called (1950) "loosely structured," approach to family organization is expressed in both centripetal and centrifugal ways.

596 Consonant with the fact that in all but the poorest Bang Chan families there is almost always enough rice to feed another mouth, it is common in

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the village to find dependent relatives—siblings, cousins, nephews, nieces— who, unable to make a go of it elsewhere, are accepted into a relative's family, sometimes to the extent of eventually taking over the headship of the family. Sometimes, on the initiative and invitation of an elderly or lonely relative, an entire nuclear family will be asked to take over or share a household. Children of poor or "inconvenienced" families (where a new child is born before the first is weaned, where there are too many children for the mother to handle comfortably, where a youngster is simply being "troublesome") are adopted or "borrowed" by other villagers for varying periods of time. This is done preferably by relatives, sometimes by neighbors, and often, in the case of boys, by the monastery, where the children become hand-servants to the monks and are supposed to absorb, by a kind of osmotic process, righteous ways of behaving. (Of my three male life history informants, two were given over to relatives at the ages of two, the third at the age of eight; one spent his childhood with four different families, another with five families; one describes his adolescence as "wandering from place to place." The psychological implications of such displacement should not be underestimated.) On occasion, two independent nuclear families—almost always connected by some kinship tie—will join together for convenience to share cooking facilities, in which case they effectively become a single extended family. And in some cases, although rare, one will encounter adult children living in independent households but handing over their income to a parent, living in still another home, who disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a husband to be away for four or five months at a time earning money in Bangkok, or during the dry season on a vegetable farm, returning home to visit his wife and children whenever opportunity permits, with or without funds. The wife may still maintain their household, but often returns to live with her own parents.[1] In a similar vein, although obviously more extreme, it is not unusual to find families in Bang Chan which have simply "disintegrated," as the villagers say. Much depends here on the circumstances of family members. Bang Chaners usually reserve the term "disintegrated" for families that no longer have the economic wherewithal or justification for staying together as functioning units. In these instances, family members simply go their separate ways, if possible back to their families of orientation or to other relatives, husbands perhaps into the monkhood, and the children to whomever will take them. Most frequently, "disintegration" is characteristic of very poor families, and in the minds of

[1] This pattern may be related to the old *corvée* labor pattern when able-bodied village men were away from their families for extended periods of time.

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596 182 586 [578] [576] the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

586 595 Precise figures on the divorce or separation rate in Bang Chan are unknown, primarily because many marriages as well as divorces are never registered on the government rolls; also, many separations seem to follow an on-again-off-again pattern; the sanctioned occurrence of polygyny (only eight known cases out of the 296 families) and even polyandry (two known cases) complicates the problem even further. However, the fact that *four months* after I had designated a sample of thirty families from which to [581] select informants, six of those families, or 20 percent of the sample population, had dissolved would strongly suggest that Bang Chan families are not particularly stable.

593 586 183 The causes of family fission in these specific cases are unknown, but what is impressive is the apparent ease with which it takes place and the equanimity with which people seem to accept it. Other informants, reporting their own experiences or observations, discuss family breakups as if they were among the more normal events of the workaday world and completely understandable. They seem to be of no greater emotional import—in the sense of eliciting recognizable feelings of distress—than losing a good price on the sale of a piece of land or on the sale of some rice. In fact, the latter kinds of situations are considerably more likely to evoke expressions of hurt or exasperation. One repeatedly encounters in Bang Chan instances on the following order: a family breaks up simply because the husband has an inclination to work for a particular person whom he likes; a wife ("she is a touchy woman") runs away every time she has a minor disagreement with her husband (minor even by village standards, for example, "Should I buy my lottery tickets from Mr. X or Mr. Y?"; "Should we invite seven monks or ten monks to officiate at this ceremony?"). The point here is that these explanations—and the low tolerance for discord, the importance to a person of a boss or job over a spouse, the desire to be footloose, which they imply—are to the villagers completely reasonable justifications for the dissolution of family units.

174 594 596 Many of the family relationships referred to above as "centripetal" in nature are clearly related to or derived from patterns of social organization characteristic of an earlier Bang Chan. Although most evidence indicates that even in the years immediately following the settlement of the village in

4:Phillips E-4,5 (1956-1957) 1966
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the 1880's, the nuclear family was the primary social unit,[9] it is equally clear that extended family relations played a highly significant role—considerably more so than they do today—in the total life of the community. The precise nature of that role resists easy terminological formulation. In his reconstruction of the history of Bang Chan, L. M. Hanks (1959c) speaks of two types of "extended families" typical of early Bang Chan, one organized along lineal lines toward a single parent, and the other based on an alliance of siblings. In both cases, members of these groups assisted each other "by working in the fields, sharing food and equipment, helping with chores and celebrating special occasions together," and effectively formed what Hanks calls "extended family hamlets." These larger family units, however, were based on personal compatability, or in the case of the lineally oriented family, on the wealth and leadership of a particularly dynamic individual. They were never based on compelling structural characteristics such as corporate ownership of land or homes. Since many of the individual nuclear families were poor and trying to live off a land that was essentially a frontier, it made sense that they should join together or attach themselves to a wealthier, more powerful individual, and that the primary criterion for association should be the kinship tie with its built-in sentiments of affiliation, familiarity, and trust. However, since the basis of association here was at all times an economic-functional one—it was *reciprocal* and *mutual* benefits that brought people together, not an overriding ethic of familial solidarity—it might perhaps be better to think of such families as associations of "kindred" in the technical sense rather than

[9] Since almost all Thai history, by Thai or foreigners, is primarily a court history and concerned with activities of the kingdom at large or activities at the seat of power (where, of course, most of the literati, writers and readers, lived) there is little documentation on the history of the peasant family or any changes it might have gone through. Phya Anuman Rajadhon's profoundly knowledgeable, but highly idealized, essays on "ancient customs" of Thailand (Radjadhon ["Sathien Koset"] 1957 and Rajadhon 1954, 1958) contain references vaguely suggestive of an extended family system among peasants: "the house a groom built always had to be in the home compound of his father-in-law," for example, the time and effort demanded by house-building suggesting a high degree of permanency, the compound implying extended family unity. But the data are too meager and uneven to form the basis of anything more than speculation. On the other hand, comparative distributional data on other Thai-speaking peasants (P. K. Benedict 1943, Seidenfaden 1958); the great emphasis in traditional law, going back to the decrees of Rama Tibodi I in the mid-fourteenth century, on the absence of family responsibility in the commission of individual crime (Lingat 1936 and 1952); and the background commentary in Thailand's great multi-authored love epic of the late eighteenth–early nineteenth century, *Khun Chang and Khun Phaen*, all suggest that the peasant family has remained remarkably stable through the centuries as a nucleated, independently functioning unit linked to other families in the community by loose ties of kinship. The fact that family names did not come into use in Thailand until 1916, and then only by royal decree, further suggests that the extended family was never the major kinship unit.

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"extended families." The aim of all Bang Chan families even then was to attain a position in which they would be free from such obligations or would have other families dependent upon them.

In the intervening years the influx of new families into Bang Chan, the increased self-sufficiency of the individual nuclear families and, most important, the increased acceptance of commercial values, have served to break down kindred groups so that today few kinsmen work their fields together and even fewer share their food or equipment with one another, beyond what has been noted above. Perhaps the only remaining *universally* practiced function of the old kindred groups is the celebration of ceremonials involving members of the family, particularly cremations and ordinations, the cost and merit of which are shared among the participants, depending upon their wealth. Very often people do not want to borrow from or lend money or equipment to kinsmen precisely because the intrusion of the kinship tie makes the collection of such debts doubly awkward ("relatives take twice as long in repaying money; I do not want to lend anything to them"). However, the old forms have not been completely obliterated and when necessity requires or personal convenience moves an individual to look to others, the traditions of extended kinship, as indicated earlier, may be invoked.

For purposes of conceptual convenience, two types of kindred may be specified: the kind referred to above which involves kinsmen living in the village and to which Kaufman (1960) gives the name "spatially extended family"; and the type descriptive of relatives living outside Bang Chan, dispersed throughout other villages and provinces or in Bangkok, and called by Kaufman "the remotely extended family" and by L. M. Hanks (1959c) "the multi-local extended family." These terms are of course generic labels descriptive of actual or potential relationships between individuals, not of specifically delimited groups. Sometimes Bang Chaners attempt to extend the definition of the latter type of relationship to individuals who have never heard of them, but who may be in a position to help their son obtain a job in the city or get him admitted into a vocational school. Hanks has shown how the multi-local extended family has to a limited extent in recent years rejuvenated extended kinship ties by becoming the major institutional mechanism through which villagers leave Bang Chan to seek their fortunes elsewhere. (This last phrase is not merely a figure of speech; many young Bang Chan men have what could be called almost a Dick Whittington view about leaving Bang Chan for Bangkok.) A cousin who undertakes to serve as a villager's liaison to a city job or who offers him a place to stay usually does so willingly, for it creates obligations which may be called upon later if need be.

The above description of variations and extensions has been presented

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in some detail not only to indicate the complex reality of Bang Chan family organization, but to convey—it is hoped with some measure of success by my prolonged, but obviously incomplete, qualifications—some sense of the amorphous nature of village kinship structure. Actually, I feel that any attempt to bring descriptive order to Bang Chan kinship does violence, in the very process of ordering, to the reality of what is being described. This is said neither out of a sense of inadequacy nor apology, but simply to underscore the fact that kinship relationships in Bang Chan are considerably more unpredictable, inconsistent, and chaotic than our descriptive modes typically admit, and that any coherent discussion of them must unavoidably involve an element of reification.[9] Our categories above are by no means inaccurate in indicating functioning kinship units, but they communicate little of the fluidity and tenuousness characteristic of such units. Individuals of all ages recurringly move in and out of families; families splinter, in full or in part, sometimes permanently, but more frequently to be formed again with the same or new members. What is perhaps most distinctive of this flux is the sense of uncertainty that surrounds it—a state that is easily tolerated by the villagers. Often during the course of field work we would enter a home looking for a particular informant only to be told that he had left for Bangkok or for another

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[9] L. M. Hanks (1959b: 1) has made a similar observation with regard to Thai social structure in general: "The Thai social scene at its most orderly moment seems to flaunt conventional Western requirements for organization and to travel always on the brink of social chaos. Every inclination of the student would give it more regularity. . . ." However, in seeking to account for such instability, Hanks points to such historical circumstances as the freeing of the slaves in 1905, reorganization of the government, the expansion of the population on the new land frontier, the new market economy, and the new ideas and gadgets introduced from the West. One might add the presence of Buddhism and its emphasis on change and impermanence as another contributing factor. I would agree that these social upheavals and the presence of the philosophy represented by the "Wheel of Law" have contributed to the instability of Thai social life, but there is more to it than that, at least with regard to the family. Such explanations simply do not account for cases of a family breaking up because its members accuse each other of stealing lost equipment (why the alternative, "let us look for the lost equipment," is so rarely raised is unknown); or of a father sending his eight- and six-year-old sons to live at the monastery and with relatives because his new wife is annoyed by them; or of the case cited by Hanks of the person who was abandoned by his mother at the age of three months when she ran away out of anger at her husband for taking a second wife, and who later went to live with his grandfather "because he had no one to take care of the buffalo." The point of course is that the primary and immediate factors at work here are psychological ones: an intense narcissism; an assumption that all human beings, even children, are responsible for themselves; a tendency to respond to social discord by rupture rather than an attempt to work it through; in the first example cited, an expectation that others cannot be trusted. The factors that in turn determine these characteristics are of course considerably more difficult to identify, although biographical data (Phillips 1959) suggest that the seeds of such traits are implanted early in the life-cycle.

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596 village; for how long his wife or child did not know: "maybe he will be back next week or next month; it is not certain." In a similar vein, we would encounter a youngster serving at the monastery, a week later working as a chore boy in someone's home, and a few months later living in still another home. And most fascinating of all are those seemingly amicable and placid
596 578 families—and it should be remembered that Bang Chan is small enough, and in the daily round of life open and quiet enough, so that the slightest manifestation of family tension may easily become public knowledge—which suddenly split apart after a disagreement about something as inconsequential as a missing shirt. Here, the cause of fission is of course not the intrinsic importance of the missing item (although a white "city" shirt is expensive and does have symbolic significance), but rather the villagers' extraordinarily low tolerance for interpersonal conflict and the challenge to their pride: rather than permit the disagreement to mushroom into an emotionally expressive conflict, it is much easier to leave the field. Because the volatility of a dispute is what is often most feared, one rarely hears of any actual argument accompanying the disagreement; instead villagers say, "We had a few words and he left. That's all." [10]

None of the above is meant to imply that family fissions are typical, in a statistical sense, of Bang Chan or even less that discord is what causes them. (Our concern with discord was simply to illustrate that villagers feel so strongly about it that when it occurs, they will take the most extreme measure to avoid it.) However, together with the separations that result from economic opportunities, "arrangements of convenience," and the desire to be footloose, they do occur frequently enough to exist as potentialities in the life of every family; when they happen they are not completely unexpected.

596 +156 These points have been raised primarily because Bang Chan is in fact a rather placid community, and in discussing kinship it is easy to mistake placidity for inertia, especially when our typical categories of description almost assume the latter state to be the case. However, accompanying this placidity is a kind of quiet dynamic resulting from 1,771 individualists—polite, gentle, non-aggressive, but nevertheless individualists—pursuing their own purposes. These pursuits do not preclude family obligations, loyalties, and love—Bang Chaners repeatedly speak and act in terms of repaying the love that their parents have given them; of repaying them for

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[171] [10] The desire to avoid emotional climax here seems very similar to what Bateson (1949: 40) found among the Balinese where, when individuals quarrel, there is an attempt at a "formal recognition of the state of their mutual relationship, and possibly, in some sort, a pegging of their relationship at that state . . . this method of dealing with quarrels would correspond to the substitution of a plateau for a climax." In Bang Chan, the "plateau" is achieved by having nothing to do with one's antagonist.

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bringing them into the world; of helping siblings because of the kind things they have done; of loving children so that they will care for them when they are old [11]—but they do condition how and when such sentiments will be expressed. It is difficult to recall any instance of a Bang Chaner being caught in a situation of which *he was aware of* a conflict between satisfying his own desires and fulfilling his obligations to kin, so it is difficult to say which sentiment would ordinarily take precedence in his own mind; but to an observer, it would seem that the former would most likely have priority. (See Hanks and Phillips 1961 for evidence in support of this point.) [12] Actually, most villagers seem eminently successful in keeping the sentiments apart, which helps to account in part for the "centripetal" forms of kinship arrangement referred to earlier. Self-interest is of course not the same as selfishness, and when circumstances and inclinations permit, Bang Chaners can become among the most generous and hospitable of people (and in no sense paradoxically). Rarely have I seen, for example, people derive so much genuine pleasure from doing favors for others. In fact, these are among the first things that one notices about them: free agents helping others—but also ignoring them—when they see fit.

[11] This phrasing here in terms of *reciprocal benefits* is in the villagers' idiom, not mine.

[12] It is not insignificant that nowhere in Thai folklore does one find a recognition of possible conflict between the motives of self-interest and family obligation or of any moral lesson to be drawn from it; that is, there are no stories of a parent sacrificing himself for his children, or of children for their parents or, for that matter, of any moral value at all in self-sacrifice. On the other hand, one does find stories of individuals in conflict over which of two self-satisfying alternatives to select. In *Khun Chang and Khun Phaen*, for example, Wan Thong, the inconstant lover, could not make up her mind between love and wealth, and eventually was slain because of her indecision, the moral being that the person who cannot make up his mind deserves nothing.

On a more realistic level, one rarely finds anyone in Bang Chan being condemned for self-interest—the mother who abandons her children or the gallivanting husband—although one very frequently does encounter sympathy for those who suffer, the sympathy being elicited by the person or the fact of suffering, not the cause. The majority of Bang Chaners generally consider the motives of the self-interested party as the person's own business. This concern with sympathy (*sonsaan*) for those in difficulty, and simultaneous indifference to the source of their problem has deep roots in Buddhist doctrine and should not be glossed over.

To have compassion (*mettaa* and *karunaa*) is among the noblest of Buddhist virtues. It is at one time a kindly expression of concern with others and a recognition of—or coming to terms with—what is considered intrinsic to the human situation. "Life is suffering" is the first of Buddhism's Four Noble Truths. However, since such suffering is intrinsic, there is little to be gained by assigning blame for it. Equally important, villagers assume that a person who suffers may well have brought it upon himself. The other person, acting in his own natural self-interest, may have simply been an agent or catalyst. His motives are his own business because they will eventually contribute, for better or worse, to his own denouement. The dynamics of these attitudes are discussed in detail in the next chapter.

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As the reader might by now suspect, it is not easy to determine the basis of the unity of the family. However, of all the factors that keep people living together in amity and affection, two come to the fore: a sense of love, obligation, and respect that is derived from the simple fact of kinship, but which must be continuously confirmed by mutual benefits; and economic considerations.

The economic foundation of the family is significant not only because the family is in fact the sole economic and occupational unit in the community (with the exception of the monkhood and school) but because the villagers themselves think of the family in terms of its economic functions. People say that they marry for wealth or because of the productive capacities of their spouses;[13] spouses stay together because the economic costs of a split are too great; most important of all, people are keenly *aware* of their economic interdependence. Fathers say that they need children to work in the fields and care for the buffalos, that a family needs a mother so that its members will be fed, that siblings are useful because it is easy to borrow from them (although, as noted earlier, some are unhappy about the intrusion of the kinship tie into what they regard to be a commercial transaction). Many villagers extend this economic, transactional type of thinking to other aspects of the kinship relationship. Thus they say that "the purpose of marriage is to have a companion who will take care of you when you get sick," or very frequently that "my parents went to the trouble of bringing me up so they would have a person to make merit for them when they die." The emphasis here is on independent agents serving each other because it is mutually beneficial.

The love and affection that people feel for each other is of course grounded in the close associations that one finds in most nuclear families. However, the attitudes of respect that one sees are perhaps more distinctively Thai. Almost all the literature on Thailand refers, at one point or another, to the patterns of respect (*khwaamnabthyy*) existing between people, both within and without the family. These patterns are based, in the first instance, on the status inequalities that exist in almost all social

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[13] In responding to the unstructured Sentence Completion Test item, *"He (she) wants to get a wife (husband) who. . . ,"* for example, thirty-one of sixty informants indicated that they wanted a mate who "was a good worker," "earned a living," "was rich," or otherwise had high socio-economic status. Only two persons said that they wanted a spouse for reasons that could be reasonably defined as sentimental: one woman wanted a husband who "would be a good friend with whom she could discuss things," and a man said he wanted a wife whom "he loved." Other informants gave completions distributed among a variety of categories: "polite, well-mannered, handsome, kind, strong, and good" spouses; and six women wanted husbands who would be faithful.

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relationships: within the family, usually in terms of the relative ages of people; elsewhere, in terms of age, wealth, power, knowledge, religious or governmental role. Secondly, they are based on the assumption that every individual, regardless of his position in the hierarchy, deserves respect. The first is a respect associated with the proper performance of one's role; the second, a recognition of the essential dignity of every human being.

The role of these respect patterns cannot be emphasized enough. Benedict, in her study (1946) of Thai culture at a distance, referred to the learning of the *waj*, or gesture of obeisance, as "the first teaching the child receives." Although the *waj* is perhaps not the very first social act the child learns, I have seen infants no more than two weeks old being guided by the mother in raising the palms of their little hands to the forehead in expression of deference to superiors. The older infant who can do this on his own almost always receives acknowledgments of approval and delight from the adults in attendance. An older sibling really means it when he says of his relationship with his younger brothers, "when I ask them to do some kind of work, they go and do it. They never disobey, and when there is no disobedience, there is no hatred. . . . Formerly, whenever there was entertainment somewhere I took them with me. My younger siblings love me a lot. . . ." His position in the authority structure assumes the respect of those younger than he, and they willingly grant it for, among other things, he plays his role well as the kindly superior who takes them with him whenever there is entertainment. All the polite little linguistic forms (honorifics, expletives suggesting status and, most important, ordinary kinship terminology with its specification of relative age) as well as kinesthetic forms (lowering the body while passing a seated older person, holding the younger between one's legs and with arms around him in a position of protection) also serve to emphasize the respect that people grant one another because of their differential status. Perhaps the most revealing illustration of the strength of these patterns, at least the authority pattern, was provided by a two-year-old toddler who pointed to the stomach of his pregnant mother and said with pride, "My younger sibling is in there. When he is born he will be *my* responsibility." Little doubt that when the child is born he will give his older brother his due.

With regard to the other respect form, recognizing the dignity of every human being, more than once I have heard parents say that they disliked giving their child a certain medicine "because it offends the baby; he does not like it. It is better not to give it to him than to hurt his feelings." Although I do not doubt that in some instances the parents were annoyed more by the screams of the child than anything else, I am also convinced that for the most part they were respecting his basic individuality and right

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*156 858 to choose, even if in this case it was seemingly to his own detriment—he knows what is best for himself. Even the incompetent, helpless infant is an independent soul with his own will and right of determination, and his dignity must be respected.

858 828 It must be recognized of course that in the cosmology of Bang Chan the infant is anything but a conative *tabula rasa*. When he enters the world of human beings he brings with him not only a stock of individually accumulated merit (*bun*) and demerit (*baap*) from countless previous lives which will affect his being in this one, but also a host of other forces which predetermine his character: his *khwaan* (soul-stuff), *winjaan* (psychobiological motive power), *caj* (heart), and *nidsaj* or *?upanidsaj* (ingrained [14] character), among others. (J. R. Hanks 1959 has a brilliant exposition of the role of these elements.) In a very real sense the infant enters the world of humans as a developed, or partially developed, psychological being. Human influences, particularly virtue and "good habits," can be inculcated into him, but they are ultimately limited by these pre-natally determined 861 characteristics. Much of Bang Chan child rearing is actually a series of 155 perpetual compromises between (a) parents surrendering to what they think are the child's predetermined traits (and while this represents an extraordinary respect for his infantile individuality, it also leads in a developmental sense to much of the solipsism to which we have been referring throughout); (b) parents trying to come to terms with, or overcome, his preordained characteristics by inculcating good habits through example, coaxing, and whipping (the three modes of socialization, in order of priority, although villagers are more prone to talk about whippings than actually give them; most are too tenderhearted, and the rare whipping is almost always the result of sudden rage); and (c) leaving the child to his own devices. The third differs from the first in that it focuses on the parent's concerns rather than the child's and indicates indifference rather than respect. Thus, in contrast to the illustration above, one constantly sees children, generally under eight years of age, "annoying" conversing adults (primarily by making noises, although not necessarily to get the latter's attention) to which the parent responds with continuous but intermittent "tsk, tsks." The adult never raises the volume of his admonition, never gets increasingly disturbed, and eventually gives up while the children continue on their merry, noise-making way. The parent's lack of genuine concern and compulsion is not lost upon the child. Although events of this type are not overly noticeable in Bang Chan—precisely because they occur in such an easygoing and unremarkable way—they do take place repeatedly, and represent one of the principal interactional themes of the parent-child relationship. Children learn quickly that although parents will go through little ritualistic forms of controlling them,

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the parents often do not really care and children can pretty much get away with doing what they want.[14]

With regard to other expressions of the recognition of individual dignity, one rarely sees in Bang Chan any physical or even verbal coercion. (The rare use of whipping, noted above, is to punish transgression, not to implement action.) Other than in horseplay, children do not push each other around; in my twenty-two months in Thailand, I saw not one case of young children in a serious fight, despite the fact that I looked for it. Very rare indeed is the parent who uses force or the threat of force on his child; there is no Siamese equivalent to the American intimidation, "You had better do that or else. . . ." In general, Bang Chaners proceed on the simple assumption that if people, including children, do not do what you ask them, they have good—and more important, private—reasons for responding that way; there is no need for, or interest in, self-justification. The major means of inducing recalcitrants to conform to your wishes is to cajole, wheedle, and flatter them (see particularly the responses to the Sentence Completion items, *"The best way to treat a subordinate is . . ."*; *"The worst way to treat a subordinate is . . ."* in chapter V). A less conscious but more frequently practiced alternative is simply to withdraw support: the parent who turns his back on the child and walks out (particularly evident in our TAT stories),[15] the older sibling who refuses to take his younger ones with him when there is entertainment to be seen, and the like. It must be noted, however, that social disengagement, although frequently utilized, does not always work; often the individual who is left suspended merely accepts the fact and continues about his business. The major point to be recognized is that villagers do not use forms of direct, blatant coercion on others. If soft words or the withdrawal of love will not move them, then their decision, freely determined, must be respected.

Love and affection within the family appear primarily in two forms. Their most typical expression is shown through the gifts, favors, and services people do for each other. The degree of affection that individuals feel toward one another is in fact explicitly measured in these terms. Thus, a father says that of all his daughters, the one who has given him the greatest pleasure is "the one who sells things . . . When she gets money,

[14] In qualification, however, it must be noted that all Bang Chaners are extremely sensitive to social cues—partially as a consequence of having to balance off their individualistic propensities against the demands of the authority system—and here the children ignore their parents only because the latter have indicated by their very halfheartedness that they do not care. The children can, and do, quickly hop to it on the slightest indication of parental seriousness: a stern look, for example. My point, however, is that such looks are comparatively rare.

[15] In another paper, Hanks and Hanks (1963) make the same observation on the basis of behavioral materials.

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she gives it to me." In describing his relationship with his maternal grandparents, with whom he spent all but two of the first twelve years of his life, this same person says:

> My younger sister and I were born one year after the other. So mother gave me to grandmother to be weaned. I lived with her until I became a novice at the monastery at the age of twelve. I lived with grandmother, so I loved grandmother and grandfather more. I loved grandmother even more than my own mother and father. Wherever grandfather and grandmother went, I went too. Grandmother loved me: she always gave me sweets and toys. I had everything I wanted because I was the only young thing in the house. She loved me. She was going to give her property to me, land and gold, as much as she was going to give to her own children. But it was only a promise. I got the gold, but not the land, because when grandmother died, grandfather got a new wife. She was young. . . . I didn't quite like her. The young woman was too economical. . . . Sometimes she prevented grandfather from buying good things for me. When grandfather was going to buy gold or anything for me, she stopped him. She wanted him to buy for her more than for his grandchild.

This excerpt, taken from the biography of one of the life history informants and comprising almost the complete portrayal of the relationship between the informant and the individuals with whom he spent the crucial years of his childhood, is by no means atypical. The point is that of all the myriad elements in the relationship, or of all the loving characteristics that in his eyes the grandparents had, he chose to emphasize only the material gifts they had given him as the measure of their love. Other informants are no different: one man said he knew his father did not love him because when he died he left the family home to the Buddhist monastery; and a woman said she admired her father because "when he died there was property left. He was a good man: he did not abandon his children. He was worried about them." (Her other reason for *admiring* him was that "he was the person who brought me into the world.")

The other major form of familial love is evidenced in the camaraderie, warmth, and generosity that surrounds the family in planning and accomplishing the various tasks associated with rice farming. As indicated earlier, the cultivation and harvesting of rice is not only an economic operation in Bang Chan, but almost a way of life. When villagers must deal with the very real and complex problems of planting and bringing in the harvest, all the individualistic propensities, and even to an extent the authority patterns, with which they normally indulge themselves recede before the coöperative requirements of the task at hand. In a very real sense the functional requirements of the economic activity, particularly during

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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[18] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[18] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

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596 and not only in the abstract, symbolic sense. Non-kin are approached in the
602 hope that they eventually may be treated as kin; good government officials
*156 are unabashedly described as being like "good fathers"; the basic patterns of
[609] respect that are learned and practiced in the family are extended to relationships outside of it, although inevitably in more formal ways. There is no *rigid* psychological cleavage between the sentiments of kinship and the
596 sentiments about individuals outside of the family. Conversely the mere
602 fact of kinship does not assure that individuals will be given special
609 emotional treatment: often the love between friends is greater than the love
*156 between kin (see the case of "Dang," his father, and father's friends in
[592] Hanks and Phillips 1961, or the case cited earlier of the man who left his wife because of his fondness for an employer). Kinship represents to the villager relationships of warmth, familiarity, and conviviality, but also unpredictability and undependability. Such is the nature of most human contact in Bang Chan.

621 In this type of cultural situation, one does not find arising the type of
596 community power struggles or schisms apparently characteristic of many
[662] peasant communities (see Foster 1960–61). Bang Chan is indeed a placid community because no family has the organizational means or the quality of familial cohesiveness necessary to assume a dominant social, political, or
*[156] economic position. Individuals assume important positions and individuals disagree and squabble, but rarely families. In surveying the cultural landscape of Bang Chan, I often wondered whether the basic unit of anthropological and sociological, as well as psychological, analyses was perhaps not the individual rather than the family, monastery, school, or village itself.

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II

Naturalistic Observation of Thai Personality

This chapter is concerned primarily with presenting a picture of the villagers' distinctive and expectable psychological characteristics as expressed in overt behavior. By *distinctive* is meant those traits which are characteristically Thai (although the extent to which they are, strictly speaking, uniquely Thai is unknown) and by *expectable* is meant those traits which fall well within the range of what is culturally probable. Essentially my purpose is to describe those aspects of the villagers' personalities which play a visible role in their ordinary patterns of interpersonal behavior but which are generally unfamiliar to the Western reader. 128*

As indicated earlier, the discussion should not be interpreted to mean that the patterns portrayed necessarily represent those that occur most frequently: it may well be that modal personality characteristics are not the same as those which, because they are unfamiliar or unusual, impress the foreign observer; nor does it mean of course that Bang Chaners may not display several other traits which are characteristic of other peoples as well. The characteristics to be discussed, however, do occur with sufficient frequency to be recognized as normal elements in the psychological functioning and pattern of expectancies of all villagers. And in some cases, to be confirmed later at a different analytic level by the Sentence Completion data, they obviously are also modal characteristics (for example, the gentleness, affability, and politeness evident in most face-to-face relationships).

To provide a critical context for the main body of the discussion, I will first analyze what has been written in both Siamese and English on Thai personality; excepting three recent papers on the people of Bang Chan, there is no literature that focuses exclusively on *peasant* personality.

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An Analysis of the Literature

114 Despite the extraordinary sensitivity on the part of almost all Thai to the subtleties of human relationships and to human foibles and feelings, there is almost no literature in the Thai language that could reasonably be considered psychologically analytic or dispassionately self-examining. This applies not only to the few accounts of peasants but to descriptions of any other identifiable groups in the society. Precisely why this is the case is difficult to determine, although there seem to be at least two factors involved.

577 829 828 First, there exists for all Thai a relatively explicit and unquestioned set of standards of what is proper, desirable, or appropriate behavior. We will encounter some of these below, but the point to be noted here is that almost all native language commentaries on matters relating to personality are inevitably phrased in terms of these standards: the extent to which behavior conforms to them, the remedial steps which individuals should take to conform, or satirical slaps at those who fail to live up to standard. Essentially, Thai psychology, even that represented in the Great Tradition (and perhaps even more so than in the Little Tradition of the peasantry [Redfield 1955] which contains several areas of amoral indeterminacy in its non-Buddhistic aspects) takes the form of moral philosophy rather than disinterested, descriptive analysis.

[571] The second reason, related to the above, is the absence among the Thai literati [1] (those most likely to write about personality) of any strong need to

571 114 577 829 828 [1] Although this is not the place to go into a detailed discussion of Thai intellectual life and its effects on native psychological theory and the lack of an analytic literature, it might help to realize that Thai intellectual commentators are still principally a literati rather than an intelligentsia, in the sense that Redfield (1953: 42-44, and Redfield and Singer 1954), following Childe and Toynbee, explicitly used these terms; that is, they are (Redfield and Singer 1954) specialists who "collect, systematize and create out of the traditional material new arrangements and developments that are felt by the people to be outgrowths of the old. What is changed is a further statement of what was before. . . . The 'literati' who fashion a Great Tradition do not repudiate the values and outlook of their rural hinterland but systematize and elaborate them under technical specialization." An intelligentsia, on the other hand, is composed of heretics, dissenters, and marginal men who challenge, interrupt, or destroy the ancient traditions to bring forth totally new intellectual orientations. They are the "cosmopolitan" individuals who historically tend to arise only after the native civilization has come into prolonged contact with or is stimulated by foreign cultures and ideas.

175 571 577 828 829 This distinction is not only taxonomically useful, but in Thailand's case seems to fit with actual historical circumstances; that is, by applying related parts of Redfield's formulations, it is clear that Thailand went through the first great "orthogenetic" or "primary" transformation from a post-tribal folk society to an urban civilization at least seven hundred years ago with the founding of Sukothai in 1238, although the origins of this civilization (its writing system, art forms, codified legal

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challenge or go beyond ethical standards in trying to understand human psychological functioning. It is as if the moral life were the only facet (or comprehended all facets) of the total psychological makeup of individuals worth thinking about. This is coupled with an emphasis on the practical effects of overt behavior rather than a concern with probing those factors that lie behind behavior or which may have prompted it. Although he was writing in an entirely different context, Wilson's comments (1959a: 59-60 and 67) on Thai intellectual life are most apropos here:

> It is evident that in Buddhism the Thai intellectual has a *Weltanschauung* which is both satisfactory and comfortable. This faith in traditional religion has saved him from heart-rending introspection and self-criticism and has preserved for him a matter-of-fact approach to life. The Thai intellectual is above all pragmatic rather than speculative . . .
> . . . Most educated Thai are officials faced daily with the stubborn facts of life. They are not therefore given to flights of imagination. They fit comfortably into an established structure of social organization. They are not stimulated by idleness and failure to an examination of the

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system) go back even further to Khmer and ultimately Indian civilizations. Throughout these years, the intellectuals, as literati associated with the court (and often the court itself: some of Thailand's greatest poets and dramatists were kings) helped maintain, develop, and glorify this civilization, but not change it radically. Approximately one hundred years ago, with the accession of King Mongkut to the throne, Thailand began to undergo the "heterogenetic" or "secondary" urban transformation involving participation in an international civilization. This self-determined participation, however, has proceeded most selectively and slowly, being confined principally to the technical and formal sides of the governmental (Vella 1955, Wilson 1959b), administrative (Mosel 1957), and technological sectors of the culture. From a long-term historical point of view, this heterogenetic transformation is still probably only in its formative stage, for up to now the emphasis has been on reinterpreting Occidental ideas and practices so they could be integrated into the traditional style of life. All this of course has been aborted by the fact that, unlike all other countries of South and Southeast Asia, Thailand never lost its political autonomy, and thus never experienced either the stimulation or pain resulting from colonial status. In the more purely intellectual and ideological sectors, the heterogenetic transformation, with its concomitant disruption of indigenous cultural values, has hardly even begun to be felt. When Western intellectual formulations are known or used, they are consistently phrased in terms of their relevance to traditional values and modes of thought. Thailand is probably one of the few countries in the world where a leading Marxist intellectual can declare that one of the most influential persons in his life has been Dr. Frank Buchman of the Moral Re-Armament Movement because his writings have helped him to understand better his own Buddhist religion (personal communication from David A. Wilson, based on field interviews). In this type of intellectual environment, still oriented toward the synthesis and integration of the new into the old, it is not surprising to find a Western-trained Thai psychiatrist describe Sigmund Freud as a person "who did not have too much to say because he wrote only about sex." Perhaps the most fitting characterization of the values underlying the purposes of the Thai intellectual is provided by the motto of The Siam Society, the one major association in Thailand approximating a society of scholars, which is "Knowledge Produces Friendship."

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fundamentals of that structure or of the ultimate values upon which it is based. In a very real sense, the educated group is a class with a vested interest. Consequently it is conservative and pragmatic rather than radical and speculative . . .

The closest approximation to a psychological literature resulting from these fundamental intellectual orientations are religious and secular didactic essays, public school texts on morality, self-help or "peace of mind" tracts, and satirical or didactic fiction and poetry. (Mosel 1961 provides an excellent discussion of contemporary Thai poetry.)

Addressed to the reading public at large, these writings do not purport to be concerned with any particular group or class of Thai society: peasants, Bangkokians, Northeasterners, or others. Since they are for the most part written by the educated elite, however, they tend to reflect their authors' interests and standards. To what extent their standards differ from those held by peasants is difficult to determine with precision, although impressionistically it would seem that in psychological questions the educated elite give considerably more attention to the importance of social forms, the desirability of pleasing others, and also reveal a greater sense of compulsiveness, achievement, and social uneasiness than do peasants. Villagers simply seem more relaxed and self-accepting. However, these differences are very much a matter of degree. A Bang Chan child who learns about proper modes of behavior from *Sombad Khoon Phuu Dii*, discussed below, may not have the same compulsion nor experience the same pressures to implement his studies as does the child of the Ministry of Education official who wrote the text. However, he thoroughly understands the teachings, their relevance and importance; knowing them is part of being Thai. A few illustrations will provide some of the flavor of these writings.

One of Thailand's most famous men of letters is M. R. Khukrit Pramoj, a publisher, editor, author, lecturer, and recently, movie actor. Educated in England and a member of the royalty, he is known to most Westerners as a kind of Siamese equivalent of Henry R. Luce, but to most Thai (although to no more than a handful of Bang Chaners, the majority having never even heard his name) he is known for his all-around knowledge of human affairs. His most popular work is *Panhaa Pracamwan*, or *Problems of Everyday Life*, a multi-volumed set of dialogues based on a column he wrote for his own newspaper in which he answers questions from hypothetical individuals who have "written" for advice on problems of ordinary living. These problems concern such matters as how to handle one's jealousy, how to treat those below and above one in the hierarchy, and how to control one's feelings of spleen and anger.

The following excerpt from volume iv of these essays (1952: 337–339) is not only representative of Khukrit's thinking, but bespeaks a

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fairly typical Thai problem; it could just as easily be found in the rice fields of Bang Chan as in a Bangkok office building. What is perhaps most revealing is the phrasing of the problem and the very fact that it is considered one, *i.e.*, this is precisely the type of issue that would exercise many Thai.

An individual writes Khukrit describing his relationship with "Mr. Kaw" ("Mr. A"), a friend of eight years with whom he began working in an office a year ago. The person reports that Mr. Kaw is always fawning over their mutual boss, entertaining him, taking his meals with him, and getting up early in the morning and running to the office so that the boss will be aware of him. As a result of his activities, Kaw received both a promotion in status and a raise in pay:

> But I remain in my same position, although we have always worked together and have always been side by side: And when my friend received the better position, he said: "Do not worry. Be patient. I will help you for sure. You should have acted like me and entertained the boss. He will see you and take an interest in you." I answered him: "I entertained him formerly. That's enough. It is not seemly to have meals with the boss all the time. It would seem as if I were currying his favor to get a better job." My friend said: "Things are now good with me. He gave me a better position."
>
> . . . There is something wrong with my friend. He does not esteem his friends. He always makes himself seem more prominent and conspicuous than his friends. And if someone says something, he always says in front of everybody that it is wrong. I myself am not a child. I know what I am doing. But he has treated me like this many times. But I would not say anything because we are friends . . .

The letter writer then poses two questions for Khukrit: (1) "Should I continue to work with Mr. Kaw?" and (2) "If I continue to work with Mr. Kaw, I am afraid he will dominate me or insult me in public again. What shall I do?" Khukrit's reply to all of this is:

> The reason that Mr. Kaw has received a better position than you is because he knows how to please your superior. In this respect, you should not complain about him or blame him for everything, because it is natural to try to advance oneself. At the same time, you cannot blame your superior, for according to your story, Mr. Kaw is the person who always has his face in front of the boss. And it is natural for the boss to think of him first. Mr. Kaw's behavior perhaps shows his good-will. What you have said indicates that Mr. Kaw has the willingness to entertain the boss. He does not stay in bed but gets up and shows himself to the boss . . . So I think you should not break off with Mr. Kaw, because as far as I can see he still respects you as a friend, and has strongly promised to help you get a raise later. Mr. Kaw still has some

4:Phillips E-4,5 (1956-1957) 1966
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goodness: when he advanced in his job, he did not forget his friends. You still go out together and eat together as you used to.

Do not do anything that will give Mr. Kaw a chance to look down upon you. Anyway, you should show respect to him because of his position. You will also be considered a good friend. A person should honor his friend. I myself am always glad when my friends have gone further than I have. I always respect them according to their position. This will induce other people to respect our friends.

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Although the above is almost self-explanatory, a few points might be underscored: the attention that is given to the practical consequences of Kaw's actions rather than to his motives; the fact that overt behavior alone is the measure of the man; the necessity to honor a position rather than the person who holds it; and the pleasure that is derived from doing right by a social superior. The fear of being criticized in public is also prominent here, a fairly widespread anxiety related to the great desire to avoid any kind of face-to-face conflict. In fact, the entire letter is suggestive of this desire in that it makes so much sense to a Thai reader to find a person's feelings of displeasure with a friend expressed in a communication to a third party rather than openly and directly to the person himself. Khukrit, the author, simply turns this ready-made cultural expectation to his own literary advantage. Finally, the letter writer's willingness to take the most extreme position possible in dealing with Kaw—to break off the relationship entirely, if not to quit his job—is indicative both of the priority given to interpersonal relationships over all other considerations in the occupational situation and of the characteristic Thai response to leave the field when faced with a problem rather than attempt to work it out. (See Phillips 1960 and Hanks and Phillips 1961 for references to precisely the same kind of response with two individuals in totally different situations.)

Of a somewhat different order from the above is *Sombat Khong Phuu Dii*, or *Characteristics of a Good Person* (Ministry of Education 1959). 871 This is one of a series of pamphlets used in Thai public schools for 658 instruction in morality. Since the school system is operated by the central government, almost every Siamese child is familiar with it. The text is simply a listing of behavioral commandments, and like most listings of this kind is phrased almost completely in terms of prohibitions. Following are some of these dicta, selected at random from the first few pages of the 539 text:

1. Do not touch any person in a disrespectful way.
2. Do not try to act in the same way as your superior [meaning simply, "Know your place"].
3. Do not be concerned with your own comfort before the comfort of your superiors or women.

4:Phillips E-4,5 (1956-1957) 1966
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4. The good person is one who tries to behave in an honest way.
5. Do not shove anything at anybody or throw anything at anybody.
6. Do not make loud noises when people are working.
7. Do not spit or clear your phlegm or yawn in public.
8. Do not gobble your food or scatter things on your plate or chew loudly.
9. Do not sit or walk carelessly or abruptly against other people.
10. Do not touch or horse-play with people who are your close friends.
11. If you are a superior, wherever you go, you should look after the comfort of your inferior.

Again, although the list is almost self-explanatory, note should be taken of some cultural emphases that run through several of the items: the stress on behaving properly toward superordinates and subordinates; the emphasis upon motoric and emotional self-discipline, and conversely, the implicit fear of losing control over one's impulses (as indicated in the dictum against horseplay, even with one's friends); the general stress of respecting the inviolability of every person; and finally, the great emphasis on the importance of the body in human behavior and social relationships. Although this last point may not seem unusual, in that the dicta are addressed to children—with whom one would expect much concern over the body—it in fact represents an area about which all Thai regardless of age are sensitive. In general Siamese, considerably more than Occidentals, tend to be aware of physical bearing, beauty, and ugliness, as well as the use of the body as a communicative device. A person's physical appearance is an indication of his character, particularly his moral nature, and kinesthetic modes are explicitly used for conveying love, regard, and as suggested above, disrespect.[9]

It is worth reemphasizing that the above items are standards for, not descriptions of, behavior. The attention given to controlling body movements is simply to emphasize for the child that people will decide whether he is good or bad on the basis of the way he handles his body, and he must therefore exercise extreme care in its use. Items one, nine, and ten are not meant to imply anything fundamentally wrong with touching another. Most Thai, particularly members of the same sex, thoroughly enjoy expressing their mutual affection through bodily contact: by holding hands, grasping the leg or arm of the other, and in Bang Chan, sometimes by sleeping with one another. In the last instance, there is absolutely no sexual contact; often during the cold season the practice serves not only friendship ——— but the additional purpose of keeping the participants warm.

[9] Although it belongs to a different area of behavior, it is not insignificant that in classical Thai dance every body movement—the configuration of the hands, the position of the legs, eye movements—has a specific, conventionalized meaning. In the oldest, or *Khon*, version of the dance, the only means of communication other than that provided by masks are body movements.

4:Phillips E-4,5 (1956-1957) 1966
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but the additional purpose of keeping the participants warm. However, the items underscore the fact that touching carries important social connotations and the toucher should be cognizant of these, and beware of what he does; should he touch the wrong person in the wrong way, for example, a social superior to whom he should be expressing respect rather than camaraderie, he will be identified as ill-mannered or uncouth. The point throughout is that manners do count. They define, in a social if not in an ontological sense, the "good" or "bad" person. Also they typify, from an analytic point of view, something of the sensitivity, psychological care, and interpersonal jockeying that is expressed repeatedly in face-to-face relationships, the avowed purpose of which is to keep such relationships smooth and uncomplicated, but which characteristically results in a lack of spontaneity. (The major exception to such a lack of spontaneity occurs when humor is injected into the relationship.) This entire complex will be discussed in greater detail later in the chapter.

The English language psychological literature is not as rich a source of data as the above, but it is more analytically oriented and comprehensive in scope. However, with the exception of the papers on the people of Bang Chan and life history materials, it is similar to the literature in the native language in that for the most part it takes all Thailand as its province and fails to distinguish descriptively between members of any of the various sub-groups in the country. Given the original aims of the descriptions and the nature of their data, this is perhaps not an unpardonable flaw. Also, most of these reports are phrased in terms which suggest that, although the enumerated characteristics may not be attributed to *all* Siamese, they are part of the Thai system of interactive expectations: the personality traits of an upper-class urbanite and a landless Northeastern peasant obviously differ in many respects, as do those of a Bang Chan man and a Bang Chan woman as well as those of every individual Thai. All these people, however, share certain broadly defined expectations about how each is most likely to behave, at least toward one another; were it otherwise, they could not interact.

Despite its brevity, one of the more intriguing English language descriptions of Thai personality is the list of characteristics prepared by a Western-trained Thai psychologist for the Cornell Thailand Handbook (Sharp *et al.* 1956: 231). The account is intriguing simply because it is one of the few, if not the only, publicly offered descriptions by a native Siamese that goes beyond the usual practice of enumerating moral and ethical prescriptions:

> The psychologist commented that the Thai in general were hospitable people; that the tempo of their lives was slow; that they possessed con-

4:Phillips E-4,5 (1956-1957) 1966
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siderable equanimity; that many Thai actions had a basis in the Buddhist religion; that the Thai respected age; that the Thai, although capable of making rapid cultural adaptations at least on a superficial level, were basically conservative; that ritual and ceremony were important parts of Thai life; that the Thai were not steadfast; that they were extravagant; that they were bashful, introverted; that they were not socially minded, that is, they were not joiners; that the Thai approach to life's concerns was empirical rather than theoretical; that the Thai were indolent; that they were egoistic, self-centered; that they lacked persistence, "stick-to-it-iveness"; and that the Thai were a mild people, a non-violent people.

Although this inventory may appear to be simply a list of cultural stereotypes, it is basically in accord with what most sensitive observers have said or written about the Siamese in general. The only items requiring qualification perhaps, from the point of view of an outside observer, are the references to equanimity and bashfulness. Equanimity *is* very much of a cultural ideal, with a heritage deep in Buddhist doctrine, but it would seem more accurate, at least on the basis of the people of Bang Chan, to think of the typical Thai as possessing not a sense of quiet imperturbability but, on one hand, a posture of inner control and, on the other, a good deal of passivity and fatalism. Most Thai are much less prone to a tranquil acceptance of the world as it is than they are aware of their inability to do anything about it; the problem is to know how to face unusual circumstances (happy as well as unhappy) with composure, *despite* one's feelings. The reference to bashfulness would seem to merit qualification in that the social statuses of the persons involved as well as the purpose of their relationship are always decisive in determining how bashful or assertive a person will actually be. There is little doubt that a typical Thai will often choose not to act rather than seem pushy or place another person in an embarrassing position, but he is less likely to be concerned about these matters if he is the social superior or if the other individual has something he really wants. Although it often does take a summoning of courage to affirm themselves, Siamese can be unashamedly frank in their dealings. They are aided in this to an extent by an awareness that all human relationships involve something of a "contract" or an "exchange," and that it is not untoward to be frank with a person when both parties realize that each can expect something in return. Again, this whole complex will be amplified below.

Prajuab Tirabutana's autobiography, *The Simple One: The Story of a Siamese Girlhood* (1958), is of a totally different order from the above but deserves mention here because its spontaneously expressive data provides what is probably the most revealing Thai psychological document in the

4:Phillips E-4,5 (1956-1957) 1966
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English language. Since it is a life history, the essay is completely descriptive and nonanalytic; also, in her readiness to articulate her feelings and in her ethnic background, the author is not a typical Thai. However, as I noted in an earlier review of the biography, Miss Prajuab phrases her experiences in an idiom that clearly reveals their basically Thai source (Phillips 1960: 537). "She vividly discribes her delight in being pampered and coddled as a child, her warm relationships with older women but almost a total indifference to men, her running away from trouble rather than attempting to deal with it, and her pride in having a good memory—culturally, the most important measure of intellectual prowess." These and other events and responses described in the text are immediately recognizable as characteristic experiences in the life of a young, unmarried Thai woman. The principal value of the essay is its ingenuous presentation of what it is like to feel and think like a Thai.

The most famous culture-personality study on Thailand is Ruth Benedict's wartime "study at a distance," *Thai Culture and Behavior* (1946). The essay's fame is due partially to the stature of the author and to the relatively high degree of accuracy she achieved in her portrayal despite the fact that she had never worked in the country, had to depend on documents that were essentially unrelated to her purposes, and had to rely on upper-class Thai informants who, because of the war, were living in the United States. Written in the style of a "national character" study, the essay is essentially a psychological analysis of semi-ethnographic materials; that is, Benedict attempted to identify and analyze whatever aspects of the psychological functioning of the Thai she could discover *reflected* in their social institutions and cultural products. Thus she discussed the role of male dominance in Thailand in terms of its expression in Buddhist doctrine and practice, its appearance in folk tales and proverbs, and the like. Because of the nature of her data and technique, she could give scant attention to the functioning of individuals, and her report is in many parts somewhat idealized and overstated. Thus, in her discussions of "male dominance," Benedict failed to note—through no fault of her own—the controlling voice that women have in financial matters; the essential equality of the sexes in occupational activities (both may pull the plow, sew, work on road gangs, serve as midwives);* the fear on the part of many husbands that their wives will turn to other men if they are not sexually satisfied; and despite this, the widely held stereotype that whatever stability exists in the family is due to the steady, sensible, tightfisted female, not the wasteful, self-indulgent male.

* Perhaps the most impressive example of the equality of the sexes is found in the boat races which take place during festas, in which sturdy peasant maidens can be seen paddling furiously along with the men as members of the same crew. This is not a step to their feminine status, but a simple recognition of their competence.

4:Phillips E-4,5 (1956-1957) 1966
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male. The point of course is that Benedict's references to male dominance in Buddhist belief and in many fables are not incorrect; neither are they complete, however, and to base one's interpretations on them alone is inevitably to invite an imbalanced presentation. Despite these unavoidable limitations, Benedict's essay is clearly a landmark in Thai studies: it is the first serious attempt to penetrate aspects of Siamese character.

A frequently overlooked source of psychological materials is Reginald leMay's *Siamese Tales, Old and New* (1930). The tales themselves are often utilized (as, for example, by Benedict), but leMay's accompanying commentary tends to get slighted, perhaps because he gives the impression of being more concerned with admiring the stories than analyzing them. The fifteen stories are too complex and subtle to try to summarize here, but a few of leMay's reflections *are* worth noting. Most important, he emphasizes the essentially realistic and pragmatic nature of Siamese thinking as it emerges through the tales (pp. 10 and 163):

> As I hope is clear by now, the Siamese are realists. This is a very wicked world, and everyone is trying to get the better of you in some way or other. Your only means of protection is to be cleverer than your neighbor, and if you gain a reputation for being alert and keen in your business dealings, you will be looked up to and admired. There is little sympathy wasted on the dupe . . .
>
> . . . I myself have often asked my Siamese friends why in their stories the rascal so frequently comes out on top to the discomfiture of the hero . . . , and I am invariably met with the answer, "But isn't it very often true?"

Related to this is the Siamese sensitivity to the intentions of others, particularly to the possibility that others may want to do them in: "We look at others with our front eyes, but we see ourselves with those behind" (p. 129). I might add that the theme of the end justifying the means, whether the latter involves guile or more attractive procedures, is one that appears repeatedly in these stories; "good results" at all times validate the methods that are used to achieve them.

The summary of materials on Thai personality that I prepared for the Cornell Thailand Handbook (Sharp *et al.* 1956) is, as was noted earlier, essentially a lexicon descriptive of some of the conventionalized forms of Thai social interaction. The discussion focused simply on the description of these forms, with little attention given to the psychodynamics involved or to explanatory or causative factors which lay behind them. The presentation differed from earlier efforts in that it was woven around an exposition of the meaning of various Thai vocabulary items descriptive of attitudes and states for which there are no easy equivalents in English. Included here were concepts such as *kreeyaj* (the feeling and attitude of self-

4:Phillips E-4,5 (1956-1957) 1966
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114 57 192 effacement and humbleness, involving the desire to avoid intruding upon or embarrassing others, or causing others to extend or trouble themselves); *chəəj-chəəj* (a state and attitude with multiple forms: simply being quiet or silent, feeling strongly about a situation but expressing nothing, assuming an attitude of indifference or noninvolvement); *maj pen raj* (literally, "it does not matter" or "it is nothing," but a verbal device repeatedly used to shrug off and ignore all the little frustrations and difficulties that occur in daily life; the Thai government once tried, unsuccessfully, to forbid all government employees to use the phrase). These and several other items discussed in the presentation are immediately familiar to anyone who has worked in Thailand as terms which Thai use to describe their own behavior. In the sense that they are so familiar—having been selected from the most ordinary kind of daily discourse—their presentation could hardly be considered a novel contribution.

114 57 369 Robert B. Textor's *From Peasant to Pedicab Driver*,[4] as its title suggests, is not principally a psychological study. However, because the work is interlaced with numerous psychological observations and is the product of a seasoned observer of the Thai rural and urban scene, it merits a few words of comment. The bulk of the monograph is a discussion of the various health and social problems faced by the drivers of the manually-operated pedicabs that, until 1960, abounded in the streets of Bangkok. The majority of the 12,000 drivers were peasant migrants from Thailand's Northeastern provinces, economically the most depressed area of the country. The study, reflecting either Rousseauesque innocence or a misconception of Thai culture, portrays these men as humble rustics whose psychological life is being corrupted by the ways of the city. Textor argues, for example (p. 46), that the longer a pedicab driver stays in Bangkok, "the more calculating a personality he becomes," and the shrewder he becomes in manipulating other people in order to avoid his own work. In another place, he presents a chart which tells us, among other things, that there is less emphasis on "warm interpersonal relationships" in the city than in the peasant sub-culture from which the drivers came. One would hope that our anthropological knowledge of the differences and similarities between rural and urban life had gone beyond the replication of such traditional and simplistic Western idealism. Some of Textor's other observa-

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[113] [4] The study originally appeared as a chapter in a volume entitled *The Social Implications of Industrialisation and Urbanisation: Five Studies of Urban Populations of Recent Rural Origin in Cities of Southern Asia*, published by the UNESCO Research Centre on The Social Implications of Industrialisation in Southern Asia, Calcutta, 1955. The study cited here is a revised and expanded version of the earlier work, and appears under the title, *From Peasant to Pedicab Driver: A Social Study of Northeastern Thai Farmers Who Periodically Migrated to Bangkok and Became Pedicab Drivers*, Cultural Report Series No. 9, Yale University, Southeast Asia Studies, New Haven, Conn., 1961.

4:Phillips E-4,5 (1956-1957) 1966
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tions are more penetrating, but in these instances he works himself into the more serious problem of interpreting overt behavior without examining the meaning that it has for those who are experiencing it. Thus, in discussing pedicab drivers' relationships with the police, he asserts that the drivers need closer police supervision because they lack strong inner controls. He argues that when they get out of control, they "go all the way," and try to get away with as much as they possibly can, particularly with regard to traffic and license regulations. Textor's *description* of the overt behavior of pedicab drivers and police is accurate, but what is not shown in his *interpretation* is that for a Thai there are, in the relations between authority figures and subordinates, several *other* considerations that take precedence over the need to observe regulations: that authority figures should be benevolent and helpful, rather than demanding; that one tries to avoid placing others, especially subordinates, in embarrassing situations; that in most interpersonal situations, Thai have an extraordinarily high tolerance for deviation from the rules, regardless of the confusion that may ensue (as the most superficial observation of Bangkok traffic would demonstrate). Textor's recommendation in fact flies in the face of these more deeply-rooted norms and expectations. Despite these various shortcomings, Textor's study is an interesting and readable commentary on some of the social psychological dimensions of culture change in Thailand.

Together with Benedict's study, the papers by Hanks and Phillips (1961) and Phillips (1959) represent the few excursions made into the analysis, as contrasted simply with the description, of Thai personality. The article by Hanks and Phillips is a discussion of a portion of the life-history and projective test responses of a young Bang Chan man, focusing on the events leading up to his marriage, his motives for getting married, and the psychological complications that this event entailed. Emerging from the informant's account was evidence pointing to two related areas of psychic tension: (1) a conflict between the informant's desire for independence, based on the expectation of becoming master of his own household and establishment, and the necessity for him to make himself dependent on others, his social superiors, as the very means by which to achieve this end; and (2) a conflict between the desire for the security provided by these individuals and the fear of expressing his hostility toward them when they, involved with their own concerns and never completely independent themselves, are unable to fulfill his untoward demands. The informant resolved these predicaments simply by continuing his demands on others but ignoring any psychological obligations he had toward them. The behavioral implications of this resolution are summarized in the article's final paragraph (655-656):

> From this vantage point, the Thai personality stands more encapsulated, alone, and isolated than the Chinese. Thai resist strong affiliation

4:Phillips E-4,5 (1956-1957) 1966
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as do rejected lovers who fear suffering again. Without strong bonds, they develop no sense of guilt for those they injure and stand ultimately responsible only to themselves, individuals among individuals who differ mainly in the amount of influence they wield. Thus Dang [the informant] can make demands of others but feels little obligation toward them. As he left his father and uncle with scarcely a second thought, so others can leave him. Of course, as was indicated by Dang's projective test data, this form of individualism is not entirely without its psychic toll. But on the level of action and conscious decision, the moral for a Thai runs: invest not thy love in a shadow.

The piece by this writer (Phillips, 1959) is essentially an amplification of some of the findings of the above paper and a confirmation, in the life histories of two other informants, of their typicality. The paper was confined to an examination of the development and expression of the needs for dependence and independence in the lives of these villagers. Three major points emerged from the analysis. First, the most common expression of dependence was in the area of subsistence and economics, in the individual's desire to attach himself to others who would give him sustenance in return for services rendered. Over and over again, the informants viewed their relationships with other people, particularly kin, in terms of the others' economic value to themselves. However, this mode of dependence was not so much an overriding compulsion as it was a basic postulate about human relationships: the measure of another person's love was explicitly the degree to which in material terms he served the self. The second point, in contrast to the above, was that marriage was seen as the means by which a person could free himself from the obligations of economic dependence. This freedom has two aspects: freedom from the frustrations caused by others; and freedom to set oneself up as master of one's own household, thus reaping the psychological satisfactions—status, power, and prestige—of having others dependent on oneself. The third and perhaps most striking point concerned the fact that all these informants spent their childhoods being shuttled from one family to another. Although this experience may not have been culturally modal, it occurred with sufficient frequency to be a possibility for every Bang Chan child. It was further suggested that in part such experiences taught villagers at a very early age that they had to fend for themselves, and that the experiences served as psychological prototypes for the sense of fragility of social relationships that is so characteristic of village life.

In contrast to most of the literature cited above, the last two articles are based on data which are products of interviews heavily weighted toward the psychologically expressive. Two of the informants admitted that they told us things that they had never shared with anyone, and the agitation (a

4:Phillips E-4,5 (1956-1957) 1966
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non-histrionic agitation) [5] with which they reported some of their experiences suggested that this was indeed the case. I mention these considerations because the kind of material to come out of the interviews was perhaps not what one would expect from typically affable, easygoing Thai peasants. However, it must be recognized that the material focused only on the private sector of their lives, and indeed a very narrow area of this sector. Thus, although the articles may have been more analytic than previous efforts, they were also considerably more limited in scope.

C T 114

I have attempted above to describe and evaluate almost all the available literature on Thai personality. There are a few additional sources which might be cited (Ratanakorn 1955, Boesch 1956, Mosel 1957), but their major concerns seem so tangential to our present purposes that it would add little to discuss them. By way of summary, the following points should be noted. The Thai language psychological literature is for the most part an unself-conscious, non-analytic folk literature, and as such is a rich source of data rather than a source of ideas on Thai personality. Illustrations of the value of the literature as data were provided in the text. However, since these data are primarily the product of an urban literati it is difficult to determine precisely to what extent they are also descriptive of peasants, although many of the traits reported seem apposite. There are no psychologically oriented Thai language essays dealing exclusively with villagers. The English language literature tends to be more analytic and broad-ranging in its concerns. Excluding Tirabutana's autobiography, these efforts seem to fall into one of three categories: (1) itemizations of manifest traits with little attention given to the psychodynamics involved (Thai psychologist, Phillips in Cornell Thailand Handbook, Textor); (2) sensitive psychological reflections on incomplete or specialized ethnographic data (R. F. Benedict, leMay); and (3) analyses of a limited set of private psychological issues from a few informants. (Hanks and Phillips, Phillips).

Psychological Dimensions of Village Interaction

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Most personality portrayals proceed either by discussing how people behave in terms of a specific set of analytic issues, such as aggression,

[5] This is important simply because when opportunity permits—and the life-history situation is clearly such an opportunity—villagers love to tell a good story: full of histrionics, feigned exaggerations, and emotional flourishes. However, our informants were not given to theatrics during the interviews; on the contrary, they tended to tell their stories with an almost poignant seriousness. The fact that we were the first people ever to take such a direct, personal interest in them as individuals played a crucial role here. Being asked to reveal for the first time how they felt about their early lives, their families, and themselves was cause not only for pride but trust, and they often used the interviews as a way of unburdening themselves.

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4:Phillips E-4,5 (1956-1957) 1966
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*128 achievement, and dependency, or by discussing those traits which are significant in the daily round of life, irrespective of the analytic categories to which they refer. In this section we will emphasize the latter, more naturalistic approach. Its advantage is that it permits us to identify and develop certain issues which play a crucial role in the interactive world of the villagers, but which might otherwise go unnoticed should they not be represented by, or not quite fit, any of the predetermined categories. The Thai attitudes toward the body referred to earlier, for example, is an issue of extreme importance in their interpersonal relationships, but one that is actually given little explicit attention in most personality studies. This section is designed in part to deal with such problems, although inevitably there may be some overlap between the materials covered here and those discussed in later sections.

The Pleasures of Social Contact

*156 157 Of all the personality traits that come to the attention of the foreign observer there is perhaps none more compelling than the affability, gentleness, and good humor of the villagers. It is difficult to think of a people more consistently ready, *once contact has been made*, to treat others amicably and convivially than the peasants of Bang Chan. (The italics are necessary simply because the villagers are equally primed to ignore others.) However, this jovial cordiality is not an easy thing to conceptualize. In the earlier paper by Hanks and Phillips (1961) we spoke of these happy characteristics as "not so much the expressions of any basic lightheartedness as they are techniques for implementing the main precept of social interaction: 'Avoid face-to-face conflict!'" Although the villagers' good humor does serve this purpose, I would now suggest that it involves several additional dimensions and motives.

571 First, there is a whole complex of responses represented here. The tendency to keep situations and conversations jocular, amusing, and at times gently ribald, is perhaps the most relaxed expression of this attitude. It is most obvious in the behavior of village gossip groups and in the relationships between individuals who consider themselves acquaintances but not quite close friends. The essential ingredient of this mode of affability is that interaction should be a great deal of fun but of little social consequence. Of a different order, and more common, is the villagers' ubiquitous politeness. [574] [576] This takes a host of forms: the genial hospitality that is expressed toward a newcomer, usually in the form of "personal" questions serving both to identify the person and to make him feel that others are interested in him ("How old are you? Any children? How much did you pay for your shirt or your land? Why don't you have any children?"); the numerous linguistic

4:Phillips E-4,5 (1956-1957) 1966
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and postural forms expressive of respect cited earlier; the repeated hesitation to place others in embarrassing situations; the hesitation to tell others bad news so that "they will not feel sad" or will not have to dissemble (although more often the less delicate reason is the person's fear of embarrassing himself). Of a still different order is the uneasy affability that is expressed in the nervous giggling accompanying many face-to-face relationships and in the compulsive preoccupation with inconsequential or inoffensive topics while conversing with others. These responses appear to be either attempts to maintain minimal contact with others while jockeying to find out what they are really up to, or, in the negative sense, efforts to fulfill the minimum requirements of interaction while waiting (and hoping) for the contact to come to an end. And still different from all these is the affability associated with trying to make a good impression on others expressed in the constant concern with displaying good manners, with using pleasing or flattering words, with being a good host, and the like. Although this category is in many respects behaviorally similar to the "politeness" referred to above, it seems to differ from the latter motivationally in that it is concerned not with the state and comfort of others *per se*, but with ego's effect on others.

As described above in simple summary terms, these responses might appear quite ordinary and at certain times applicable to any group of human beings. However, what impresses the observer in Bang Chan is the insistence and constancy of their use. These are precisely the forms that the villagers choose in the vast majority of situations for expressing the degree and quality of contact that they feel toward others. That they are in fact social forms—stylized, often ritualized, modes of behaving—should not be overlooked. It is just this characteristic that engenders the theme underlying all the responses and which indeed sets the tone of most Thai interaction: that the relations between people should be friendly, genial, and correct, but need have little personal commitment or involvement. As will be seen below, it is this readiness to phrase most face-to-face contact in terms of social rituals while at the same time feeling little commitment to others that actually lies at the root of what has so often been called Thailand's "loosely structured social system."

Social Play

The first response mentioned above, the tendency to turn social situations into occasions for play, is probably one of the most common of all human tendencies (it is certainly one of the earliest), but one that strangely has received little attention in the psychological literature. The few writers who have expressed any interest in social play have tended to view it simply

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571 as a release mechanism from boredom or tension (Riesman and Bloomberg
154 1957, Roy 1959–1960), as a "healthy" escape from reality (Flugel 1954,
52 Bateson 1954), or as a normal and desirable regression to childhood pleasures (Freud 1905 and 1928). Running through all these observations is the obvious Western bias that play somehow is divorced from, or a reaction to, the harsh facts of social reality.[6] On reflection, however, it is clear there is no theoretical necessity, either maturational or social psychological, for play to be limited to cathartic functions, or for regarding it as a less realistic or less mature psychological state than that which causes boredom, tension, escape, or regression. In fact, one might logically argue that the conditions which create the latter states are less realistic and immature because they represent retreats to forms of infantile masochism. Such questions of course belong to the realm of interpretive debate. The essential point is that in the process of learning to adapt to the social psychological realities of one's culture there is no inherent, ontogenetic requirement (other than that imposed by the peculiarities of one's culture) for human beings to renounce their motivations for play. Simply stated, having fun need not be so much a retreat from or defense against adult reality and responsibility as it is something to be sought after for its own sake.

121 The fundamental analytic issue here may well be whether play is a
154 psychobiological "given" of the human animal, on the same order as
52 hunger, sex, and other precultural needs, or a learned, secondary cultural

[6] Of these various interpretations, the most broadly conceived and carefully argued is Freud's, where play activities are linked theoretically to the interrelationships of the id, ego, and superego and the aims of the "pleasure principle." However, even here Freud was caught up in the Western cultural bias that only children, those who have not yet had to come fully to terms with social reality, could easily "afford" the luxury of play. This same cultural bias often appears at a totally different interpretive level in the rather crass pronouncements of journalists and travelers who, in writing about the Thai, refer to the "child-like" behavior of these people who spend so much time, energy, and money in having fun.

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Radcliffe-Brown's famous essay on the "joking relationship" (1952) is of course a special sociological case of the "tension release" function of play. In a brief paper, Keesing (1960) lists some seven overlapping functions of play, but here too play is seen largely as divorced from "everyday 'reality' activities." Callois (1958) brings together valuable cross-cultural data in what is otherwise a classification of organized games.

Probably the most comprehensive study of play ever written is *Homo Ludens: A Study of the Play Element in Culture* (1938; English translation 1950) by the late cultural historian, Johan Huizinga. Although Huizinga is concerned mainly with structured play activities (games of skill, chance, guessing games) and with the relationships between play and ceremonials, one of his observations is worth noting: "Nature, so our reasoning mind tells us, could just as easily given her children all those useful functions of discharging superabundant energy, of relaxing after exertion, of training for the demands of life, of compensating for unfulfilled longings, etc., in the form of purely mechanical exercises and reactions. But no, she gave us play, with its tension, its mirth, and its fun. Now this last element, the *fun* of playing, resists all analysis, all logical interpretation. As a concept, it cannot be reduced to any other mental category. . . ."

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need. The problem is that we really do not know, although comparative data from primatology (Yerkes 1943, Kroeber 1948: 27–29 and 60–61) clearly suggest that play belongs to the former category. If this is indeed the case it would imply that play is subject to the same degree of cultural influence, channeling, and socialization as are hunger, sex, and aggression, but can no more be fully obliterated than can these needs. Assuming, for the sake of argument, that this reasoning is correct, then the compensatory "escape" and "regressive" functions attributed to play by the authors noted above would not be at all unreasonable: play might well come to serve as an escape from adult reality in the same way that food sometimes serves as an escape from sexual anxiety or sex from food anxiety (Holmberg 1950). However, the point is that these are not the primary or typical functions of these needs, but secondary and defensive ones; although significant, they hardly comprise the necessary conditions for their being. If this approach is valid, we would be considerably wiser in our present state of knowledge (the Protestant Ethic and its intellectual extensions notwithstanding) to direct our attention to identifying the varying forms of play from culture to culture rather than to dwell on its secondary, compensatory functions.

Whatever its ultimate motivational basis, there is no doubting either the spontaneity or ingenuousness with which Bang Chaners turn social situations into occasions for play. For the most part they seem prompted in these situations by the simple desire to have a good time rather than to affect others in a socially pointed way, that is, their humor is not typically aimed at being sarcastic, didactic, or even exhibitionistic, although the person who excels at being funny is quickly recognized as such and is to an extent admired.[7] There is, in the negative sense noted earlier, an element of interpersonal effect operating here: comedy is a technique which almost by definition reduces the potentiality for face-to-face conflict. However, the villagers' play seems aimed primarily at satisfying personalistic function: their *individual* needs for pleasure and amusement.

The forms that these play activities take are numerous.[8] Perhaps their

[7] In the more explicitly institutionalized forms of comedy—likay (folk dramatic shows) or newspaper and magazine cartoons—these aims do come into play and often assume extreme, sometimes even biting, proportions. However, this is the comparatively safe world of theatre and "literature." Among themselves, in the world of face-to-face contact, villagers are considerably more gentle (or less sophisticated) and do not focus explicitly on such purposes.

[8] We will be concerned primarily with the forms of play, not its content. For whatever reason, humor and comedy seem to be the last refuge of what is genuinely private in a culture. Intercultural translations may succeed in communicating the manifest content of another people's humor, but they so frequently miss its intent that the result is either perplexity or disappointment ("Yes, and what happens then?").

The dangers of trying to share humor interculturally were perhaps never brought home better than when I tried to get the villagers' reaction to a story that received

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most subtle expression is in the marvelous word games that the villagers play. What is striking about these games from an analytic viewpoint is not so much that they are funny, but that villagers are continually attentive to opportunities for playing them, and actively try to structure situations along such lines. In a sense, they are not "games" at all but verbal asides that emerge spontaneously from the discourse of everyday contact, and which serve to make such contacts enjoyable. One form of word play is particularly popular. For the lack of a better term, it could be called "silent stinky pinky."[9] Here two persons are chatting, and person A works into the conversation a statement that sounds completely innocuous. (A man, for example, says to a woman, *hen mii*, meaning "see the bear.") Person B, forever attentive, knows that words are deceptive: although A *said* one thing, he was really *thinking* of, and expects B to be *thinking* of, its rhymed phonemic inversion, which is vulgar or insulting. (Although the man said to her, *hen mii*, he was really thinking of *mee hii*, meaning "your vulva smells.") Person B picks up the cue and responds with a statement that sounds equally innocuous but which when mentally inverted is just as scatological. The game continues until one of the parties gives up, whereupon the conversation returns with laughter to its original concerns. It must be emphasized that although this game is phrased in terms of a verbal contest, its purpose is not to best the other person but to work out with him or her a dialogue entertaining to both.

Sometimes these games arise and die out so quickly that it is difficult even for other, nonparticipating Siamese to spot them. The particular example cited here is one that has become almost part of the folklore of conversational gambits. However, what delights many of the villagers is the unpredictability of these patterns. On one occasion, I unwittingly juxtaposed a few English phonemes that had two informants and my assistant literally rolling on the floor with laughter. We were talking about the

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wide currency in Bangkok newspapers during 1956. It seemed that a husband was waiting outside a brothel to escort his wife, one of the prostitutes, home. She was busy with a customer. The husband called to her, telling her to hurry. She called back, saying that she would be through shortly. A few minutes later, he called again, and once more she said that she would be coming along. Finally, the husband went in and shot both his wife and her customer "because I lost my patience." When I told this story to several villagers, I was the only one who chortled. Most of them either commented on the sadness of the story or said the husband was stupid for killing the family breadwinner.

[9] In American stinky-pinky, people try to guess the rhymed equivalents of abstract definitions. Thus, if person A says, "I am thinking of a 'cadaverous Marxist,'" person B might say, "a dead red." The Thai version differs from its American cousin in that it is not only unspoken but is not really a parlor game. The tonal, monosyllabic nature of the Thai language probably is an important preconditioning factor here. (See also Haas 1951 and 1957 for illustrations of other kinds of verbal play.)

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various kinds of ants living in Thailand and the United States. (Such are the topics that interest villagers.) The villagers wanted to know the English names for small red ants, normal black ones, and the large, rusty colored variety that are indigenous to the tropics. I named the first two with no difficulty. For the third, I said simply, "a giant ant." The assistant, turning to one of the informants, first gave the literal Thai equivalent of "giant," and then, as if this were the funniest thing he had heard that week, began to repeat, "giant, gi-ant, gi-ant." In a few seconds, they were all bursting with laughter.

Different, yet part of the same psychological constellation, is the whole complex of behaviors associated with the term, *sanuk*. *Sanuk* is usually translated into English simply as "fun." However, this translation conveys little of the motivational significance of the term. Essentially, *sanuk* is a quality inherent in all situations which are not only fun but also emotionally worthwhile. In fact, these two states are often thought of as reciprocals of one another. An activity that is novel, diverting, or that can be done comfortably, is *sanuk dii* (good fun); one that is tedious, overdemanding, that lacks the opportunity for frivolity, is not *sanuk* and should be avoided. Harvesting rice in cooperative work groups, attending a ceremonial, participating in an election (see Phillips 1958: 45–46), or even taking something as outlandish as a Sentence Completion Test are all *sanuk*. (The unifying elements of these diverse activities are either their novelty or the fact that they involve the presence of relatively large numbers of people but require no genuine interchange with them.) On the other hand, going into the army or working for a demanding superior are not *sanuk*.

The importance of *sanuk* is that it provides the villagers with a standard of value, a measure of how much they wish to commit themselves to a particular activity. The role of this standard should not be underestimated. Villagers who have taken a job in the city, often involving a time-bound daily routine or continuous, sustained attention to a task (work in a small factory, for example) frequently return to the village explaining that they quit "because it wasn't *sanuk*. How can you work on a job if there is never any time for fun?" Foreign employers, with their greater concern for the job than with the person who does it and with their annoying tendency to be *cuu cii* (compulsive, fussy, exacting) are a particular target for this indictment, although this is usually based on hearsay rather than personal experience. On the other hand, villagers will often take on free of charge a major job (for example, helping a neighbor build a house) precisely because it is *sanuk*. Although there are other considerations operating here—creating or repaying a personal obligation, doing a *bunkhuu* ("a goodness") for a neighbor—the "*sanuk*-ful" aspects of the task are always

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181 461 476 salient: the free food, drink, and chitchat at the end of a hard day's work; the fun of working together with several other individuals. Notice that in this kind of situation there is no overseer demanding the person's effort. His labor is freely given and may be freely withdrawn.

181 *156 571 In describing *sanuk* as a measure of how much villagers wish to commit themselves to a particular activity, I mean to communicate a point and not merely to turn a phrase. The word "commit," which appears often in this book, is used to convey the idea that cooperative, mutually expectable interaction as we know it in the West does not "simply take place" in Bang Chan. Rather, there is always the intervening factor of whether individuals want it to take place. Siamese are, first and foremost, free and independent souls. Much of the time they fulfill each other's expectations, but this is only because they want to, not because others expect it of them or because the situation demands it. It is the individual that is primary, not the social relationship. The strength of this principle is demonstrated by the fact that one is almost never surprised when one's expectations about another are not fulfilled. The assumption is: "If he did not do it, he must have had his own good reason."

181 194 *156 571 The potentialities for interpersonal frustration that are inherent in such a system are minimized largely by the hesitation on the part of individuals to build up strong expectations about people or events. In general, the Thai are a people who do not live at, and rarely reach, a high emotional pitch. Witness, for example, the specifications of "*sanuk*-ful activities," those which afford the greatest pleasure: they are novel, diverting, comfortable, and frivolous, but there is no Faustian intensity about these joys. They are all rather muted emotional experiences. The point here is simply that in this kind of psychological environment, people rarely permit themselves to become so committed to an activity or to another person that the frustration of that commitment will be overly disturbing to them. They proceed from a premise which says in effect: "Well, it is really not that important that he did not do what I expected of him. I will simply have to make do."

181 154 *156 There are a few aspects of the villagers' concern with *sanuk* that warrant underscoring. First, from an analytic point of view, *sanuk* seems to reflect an attempt on the part of the villagers to lead a psychologically integrated life, wherein the time and energy one gives to an activity is rewarded immediately and directly with pleasure. This low-keyed pleasure should be an inextricable part of the total situation in which one finds oneself (or more accurately, into which one places oneself), not something to be deferred until a later, "more appropriate" time when it becomes an isolated segment of experience. Essentially, *sanuk* should be—it not always is—a concurrent aspect of almost everything that one does. At the same time, however, these conditions are also the source of an inevitable paradox. Since "*sanuk*-ful" activities are, by definition, novel and diverting, and

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since even the most novel activities eventually become routine or stale, it is obviously impossible for all one's hours to be animated with *sanuk*. From a total time perspective, many of the villagers' activities are of course either "*sanuk*-fully" fallow or "*sanuk*-fully" short-lived. To a large extent, this paradox is resolved *subjectively* by the short-term time perspective of the villagers. This is the second major point to be noted about *sanuk*, that is, *sanuk* reflects a more generalized tendency on the part of the villagers to concern themselves with activities that require only brief time commitments or whose effects are immediately forthcoming. Bang Chaners are not an impatient people in an active, negative sense, but they do have difficulty in attending to tasks that demand from them a sense of compulsiveness or staying power. They will often drop demanding tasks right in the middle once they have recognized that the work is taking longer than originally expected. What is striking is that they will do this with apparently no sense of frustration over not having fulfilled their aims and with no regret over having wasted their time. It is as if their original purposes had simply become irrelevant, and they had gone on to other things. This is precisely the attitude, for example, surrounding the construction of the unusable road referred to earlier leading from the Minburi Highway to the Bang Chan school. After devoting considerable labor to building the high mound that would form the foundation of the road, villagers lost interest when they were unable to obtain funds for its surfacing. Since no one was ever interested in maintaining it, the road now lies in the middle of a rice field, rutted and pitted; much of the foundation has sunk back to the level of the adjacent fields. However, no villager has ever considered the road a fiasco or "folly"; it was just something done in the past and has since been forgotten. The road project might be revived in the future, but from the villagers' point of view that too is irrelevant. The point is that *sanuk*, with its emphasis on novelty and diversion, is expressive of this same underlying time orientation. In the villagers' way of thinking, no activity is really worth doing unless it has the potentiality for fun.

Another expression of the villagers' concern with play, related in some respects to what will be discussed in the next section, is their preoccupation with humorous topics of conversation. For the most part, they enjoy hearing and telling stories with a "banana peel" twist: of a husband who is caught by his wife sleeping with another woman; of an individual who, through his failure to take heed, is cheated out of his money. Such stories of course always concern other people, not those immediately present. Too, stories that combine whimsy and the supernatural—for example, of a "super-dog" that can find buried treasure or foretell the future—elicit laughter, although often with a tinge of apprehension that the stories may be true. However, what is most impressive about these and similar stories is the amount of time given to them.

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521 The sociological context of a story-telling is probably what is most
522 important here. Bang Chan is a community where other than cultivating
538 the single rice crop and attending to daily household chores and religious activities, the villagers realistically have little else to do but talk to each other. This is clearly not an inevitable attribute of the peasant condition, but it is true of Bang Chan where little attention is given to such creative leisure activities as craftsmanship, music, and art, and where there is little occupational specialization. In fact, probably more time is given to gossiping than to any other single waking activity except daydreaming. Bang Chaners talk of many things, serious as well as lighthearted: the price of rice, religion, gambling, the doings of "big people," family disputes, and the like. However, by far one of the largest segments of their total conversational repertoire is given over to "funny" stories. Of course, no story is ever exclusively humorous in nature; all communication is inherently multidimensional, and even the funniest story has a substantive, non-humorous message. However, if stories may be judged by their behavioral effects (laughter) irrespective of their intellectual content, then the function of a major part of Bang Chan gossip is amusement.[10]

538 The motivations for the selection of banana peel type stories are more
154 complex. In part, the choice seems prompted by a "there but for the grace of God go I . . . " mentality. As suggested earlier, Bang Chaners have a keenly developed sense of the possible: to them, this is a world where anything, not only the probable or the predictable, can happen. The banana peel story, with its emphasis on the painfully ludicrous and extreme, is a perfect representation of such an uncertain world. Its beauty is

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[10] During the early stage of field work, I attempted to do systematic naturalistic observations of these gossip groups. The purpose was simply to identify the kinds of topics uppermost in the villagers' minds and the modes of interaction that most frequently developed during the sessions; it was hoped that the latter information might be related to the psychological test materials of the discussants. As a precisely designed and executed project, the effort, however, was dropped after a short time. For one thing, it was too difficult for two observers to record the simultaneous verbal and kinesthetic interaction of several people without the aid of a self-powered tape recorder and with the added burden of having to strain the material through the translation process. The task was further complicated by the fact that the membership of these groups continually changed as people would leave and enter the conversations. Also the groups would often break down into smaller sub-groups. Most important was the sheer multidimensionality of the conversation: any one utterance could simultaneously be funny, aggressive, boastful, carry practical information, etc. However, enough information was culled from these early attempts and later less ambitious ones to prompt the statements presented here. It is this writer's observation that one of the reasons behind the success of so much of the "small group" research conducted in the United States is that the groups studied have been problem-solving or task-oriented, rather than simple gossip groups. The highly functional nature of the former has provided built-in constraints on the freedom of action permitted the discussants, and has made observational problems comparatively easier to deal with.

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that it is simply a "story," a description of the plight of other people, not the self. The story-teller or listener has the pleasure of a vicarious experience, but none of the pain of the real life situation. He can laugh over his good fortune in not being the person who was cheated out of his money or who was caught philandering by his wife. On the negative side, these stories also serve as a means by which the participants can express, through identification and projection, some of their own hostilities. The veil of humor provides in fact the ideal dress for hostility: one can be completely unabashed about expressing one's feelings (of wanting to steal, say, or wanting to humiliate), since what is expressed, in a form so exaggerated as to be acceptable, is simply the feeling and not the act itself. The hostility is made even more acceptable by the fact that it is projected onto the person in the story rather than referred to ego himself. In these terms, the telling of these stories probably does have something of the cathartic function cited earlier in the chapter: aggressions and hostilities that are otherwise kept under careful control are here permitted to emerge not only painlessly, but with a bit of relish. Finally, some of the laughter at these stories is probably also based on the feelings of embarrassment evoked in listeners. This is similar to the "there but for the grace of God . . ." motive but is different in that it is not based on personal identification with the person who suffers but rather on a diffuse feeling of discomfort over the expression of aggression—aggression toward anybody. There is embarrassment over things not being as they should be, over one's moral universe being temporarily out of joint. Also, the laughter is probably symptomatic of the listener's uneasiness as he becomes aware that the hostilities portrayed in the story are strikingly similar to those he himself harbors toward others. Embarrassed about his own aggressive impulses, he assuages them with laughter.

The motives for focusing on whimsical topics of conversation are less recondite and defensive than the above. Stories of the type describing "super-dogs" who find buried treasure are told because they are at the same time such outrageous and yet gentle distortions of reality. It is the juxtaposition of incongruous elements that is so appealing here. In ordinary Thai thought, for example, the dog is generally considered to be one of the most inconsequential and worthless of creatures. He is tolerated for his ability to warn of strangers and dispose of refuse, but nothing remotely approximating the feeling of "man's best friend" is associated with him. For such a lowly creature to be the sudden possessor of miraculous power is just too foolish. An elephant, monkey, or cobra perhaps, but not a dog.[11] Only "uncivilized" forest people would accept such a story. Yet, because the dog is such a familiar part of one's environment and also a living creature

[11] Doubt would exist for these creatures too, but because of their mythological and historical significance it would be somewhat tempered.

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538 231 ("Who knows what he was in earlier lives and what powers he brought with him into this one?"), there is enough reality about the tale to make people want to listen. Moreover, it is wish-fulfilling fantasy; people laugh because reality has been outraged, but with a lingering desire that it really could be.

522 538 The kinds of stories outlined above do not exhaust the villagers' stock of conversational humor. There are also tall stories without the supernatural touch, broad burlesques, "dirty" jokes,[10] and the countless epigrams that work their way into almost any conversation; the last are not so much topics of conversation as they are means of punctuating a point. However, enough has been said to indicate that in its cognitive stylization and social psychological purposes, Bang Chan humor is not too different from Western humor. It is rather the content, frequency, and evaluation of the humor that is so distinctive. That the content should be distinctive is of course self-evident, since all humor is rooted in the implicit and familiar premises of workaday, cultural life. In fact the very essence of a joke is seeing the culturally familiar in an entirely new light. This may help to explain, incidentally, why it is always so painfully self-defeating to try "to explain" the content of a joke: its entire effect is dependent on the listener's implicit

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522 831 538 081 [10] Sexual and scatological humor in Bang Chan pose some special problems. On the one hand, because villagers take such a matter-of-fact approach to sex, there are actually few jokes and stories that aim explicitly at being titillating or risqué. For most Bang Chaners, sex is something to be experienced and enjoyed in private, not snickered about barracks-style; there is no sense in talking about sex (although there may be in playing with tabooed words, especially if cleverly done). Also, villagers seem to lack any interest in lewdness for its own sake. Not only Bang Chan, but Thai culture in general, is striking for its relative absence of attempts to edify sex: there is nothing in Thai literature or art, for example, approximating the exaggerated bawdiness of Rabelais or the graphic sensuality of the kind of sculpture found at Khajuraho and Konarak in India.

On the other hand, sexual situations are very often used as vehicles for portraying the foibles and stupidities of people. Villagers particularly enjoy stories of individuals of either sex who devise ways for seducing the unsuspecting, or of individuals who manage to outwit their spouses while philandering with their lovers; the more complex their machinations, the more amusing the stories. However, it is the social psychological, not the sexual, dimensions of these tales that form the major bases of their appeal.

Finally, it should be noted that villagers tend to distinguish between what could be called "genital" and "anal" modes of humor. The latter type has considerably fewer taboos associated with it. Thus, whereas most villagers would avoid going into descriptive detail in reporting the physical aspects of a tale of sexual conquest, they would have few qualms about discussing (and often with acoustical detail) such things as people who pass air in public or who otherwise get themselves into compromising anal situations. (Interestingly, J. Marvin Brown in his linguistic work with Thai informants, often including female university students, reports in a personal communication that he encountered difficulty in obtaining the various Thai terms for sexual organs and acts, but that the terms for anal and excretory behavior were given with little hesitation.)

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recognition of the incongruity being portrayed; to have to explicate the way the familiar has been violated is to miss the whole point. Yet the very problem with which the anthropological investigator is characteristically faced is his unfamiliarity with the culturally implicit. His major intellectual task in fact is to make explicit that which is implicitly held by his informants. The only way to deal with this paradox is either to consider humor a special case of anthropological investigation, leave the content alone, and focus principally on forms and functions, or do a humorless exegesis and be prepared for disappointments. As indicated earlier, this writer greatly prefers the former alternative.

Why the frequency and value of the humor should be so different is difficult to say. That the villagers devote considerably more time to this mode of play and place considerably higher value on it than do most Occidentals is clear, especially from the pejorative comments of Westerners who are so disturbed by it. One possible reason may be the simple lack (compared to Occidentals) of time-consuming, functional tasks in the village; that is, given the villagers' definitions of things that have to be done during the cycle of daily activity, there is just more time available to them to be "frittered away" in amusing conversation. However, this negative explanation is at best only a partial solution since many people who have "little to do" manage to make busy work for themselves (in a diagnostic, not deprecating, sense); also, granted the fact that Bang Chaners have time to talk of many things, it does not explain why such a large portion of this time should be given over to humor. Another possible reason was indicated earlier: comedy provides an outlet for certain feelings that otherwise are denied direct expression or are a source of anxiety in the culture. The higher frequency of humor is a function of the degree of prohibition or anxiety, which in the case of some feelings—aggression, for example—is very high indeed. Since, as has probably been detected, much of the villagers' humor does revolve around aggressive situations, there is clearly some cogency to this approach. There is a third possible reason for the villagers' greater concern with humor. Humor, with its emphasis on the exaggerated, the incongruous, and unpredictable is, from a psychological point of view, essentially a form of new experience. In fact, it, and the real life situations to which it refers, are "invention" in the purest meaning of the terms: the breaking through of tried and established patterns of expectation. But people in different cultures look for their new experience, or express their inventiveness, in different ways. There is no inherent necessity (a consideration often overlooked by scholars concerned with culture change) for inventiveness to be expressed primarily through technological, economic, or sociological forms. It might well be, as Keesing has suggested (1960), that in many cultures the favoured modes for expressing the

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521 522 182 innovative impulses are recreative or aesthetic, either in content or form. Simply stated, the reason Bang Chaners may spend more time than Westerners in telling amusing stories to each other is because they feel they are gaining something new and worthwhile from the experience.

Politeness: A Social Cosmetic

57 It has been previously noted that the villagers' ubiquitous politeness appears in several different forms: sometimes it is associated with a genial interest in others or a concern over their welfare and comfort; at other times it is used as a means of handling one's anxiety over the intentions of others or one's uncertainty over the nature and purpose of the relationship; and at other times, it is used as a means of impressing others or getting in their good graces. The term "social cosmetic" is used here because it embraces at one time all these varying usages. A cosmetic not only makes one appear more attractive and conceals one's blemishes, real or imagined, but permits one to deal with others more easily and comfortably. The last consideration is in part a direct consequence of the first two, that is, a person who feels he is attractive to others will in all likelihood be more relaxed in his relationships with them. However, it is probably also a product of the conventionalized, relatively explicit interactional "frame" [10] that the very wearing of the cosmetic creates. The cosmetic indicates that regardless of his basic intentions, the person will conduct himself properly and agreeably; it defines the presence of and prompts conformity to certain behavioral rituals which simplify for the participants the kinds of behavior they may express. In a sense, the cosmetic of politeness represents one of the most "civilized" modes of social interaction: it is based on a fundamental concern with structuring one's behavior (again, irrespective of intentions) so as least to disturb others and thus permit them to act in socially easy, uncomplicated ways. Further, it stresses respect for the dignity and psychological integrity of others. The actual topic of conversation or non-verbal ritual that links the participating individuals together may be either meaningful or inconsequential, but that is essentially irrelevant when compared to the fact that the respect the participants feel for each other is being communicated. In

[10] This term is somewhat akin to what Goffman (1959: 22–24), in his attempt to analyze behavior in a dramaturgical framework, calls the "setting" or the "scenic aspects" of the interactional situation. However, Goffman's terms refer explicitly to the physical layout—the furniture, decor, and the like—of the behavioral situation rather than to the psychological "setting" that is created by the behavior of the participating individuals. On the other hand, his term, "personal front," refers exclusively to the attributes of individuals, rather than to the situational definitions that they create. The term "frame" used here refers to the psychological setting which is created by the behavior of individuals and which defines for all participants the nature of the situation.

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essence, much of the villagers' interaction is based on certain formal, rather than substantive, considerations,[16] the net effect of which is to minimize the impact that they might have upon each other but to maximize each person's sense of psychic independence and integrity.

Our phrasing here is principally in analytic not evaluative terms. However, it should be clear that from an evaluative point of view, there are both "positive" and "negative" consequences to the continuing use of this interactive mode. On the positive side, the villagers' politeness contributes to their extraordinary tolerance for nonconformity, personal deviance, failure, or the inability of individuals to live up to standards. In effect, the villagers seem to be saying that if another person is poor, weak, stupid, or naive, that is essentially his own business (or problem), not cause for ridicule or even amelioration. People are publicly accepted and respected for what they are, despite their shortcomings. The sense of psychological security that such treatment affords is clear: it means that no matter what an individual's status or personal qualities may be, he can generally expect to be treated well by others. The canons of courtesy require this. On the other hand, to have to be continually sensitive to one's effect on others is, from ego's point of view, not without its psychic costs. Thus, although politeness is aimed at keeping social relationships smooth and uncomplicated, it frequently results in a lack of spontaneity and in the inhibition of genuine feelings. A cosmetic is supposed to enhance one's natural qualities, but inevitably it also conceals them.

To what extent this concealment "troubles" the villagers is most difficult to determine. There clearly are circumstances in which certain negative consequences follow directly from such concealment. But whether villagers are generally unhappy because they cannot express what they feel is problematic. Their admiration for individuals who "speak their feelings from their hearts" is occasionally unmitigated; but far more frequently, they speak of the "kindness" and "good hearts" of those who hide their feelings "so as not to hurt others."[17]

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[16] All interaction is of course based on both formal and substantive considerations. The issue here is the relative emphasis given to one over the other, and how one may even be used as a substitute for the other when presenting the self.

[17] The case of Dang (Hanks and Phillips 1961) referred to earlier is an excellent example of the kinds of difficulty that may follow from the concealment of one's real sentiments. Dang's story is a somewhat plaintive tale: how, because of his anxiety about revealing his true feelings to his father, uncle, and aunt (his social superiors) he lost a house, some land, and married a girl he "did not quite want to." Yet at all times he maintained courteous relationships with all concerned. What is most significant about Dang's case, however, is the position of psychic isolation to which politeness brought him. Basically, Dang substituted in his relationships with his relatives the *form* of politeness for the more enduring *substance* of love, loyalty, and obligation. Rather than trust to the strength of such sentiments to help resolve his

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609 574 Of the various forms politeness takes, its most relaxed, least contrived form in the cordiality that villagers extend to newcomers. Strangers to Bang Chan are hardly swept off their feet, but once contact has been established, they are welcomed with a degree of attention far exceeding simple tolerance of their presence. People express a curious interest in them as individuals, as if somehow their presence were adding a new dimension to the lives of their hosts. In the case of many Bang Chaners, this is probably true: the lives of these villagers are sufficiently routine and insular that the appearance of a new face is identified also with the advent of a significant and new experience. Still other villagers approach the newcomer with an attitude that says in effect: "One should try to meet and know as many persons as possible. Who knows what good may come of it?" The implied meaning here is that the cursory contact may in time develop into a firm relationship of reciprocal rights and obligations, whereby person A could turn to B to borrow money, ask his help in finding a job, help sponsor his son's ordination, and vice versa. There is in this attitude a sense of gentle optimism combined with opportunism. And still other villagers, probably the majority, approach the newcomer with no self reference at all, but with the simple intention of trying to make him feel comfortable. Whatever the intention in each case, however, the dominant behavior exhibited to the newcomer is openness, amiability, and curiosity.

576 574 521 609 The actual expressions of conviviality are at all times simple and straightforward. They involve asking the person such questions as his age, place of birth, whether he is married, or whether he has yet served in the monkhood. (Notice the phrasing of this last question. The polite Thai form is never whether a person has been a monk or not, but rather whether he has already been a monk or not yet become one. The syntax of the interrogative form assumes the good intentions of the other person.) If the individual is identified as coming from a locale with special or distinguishing characteristics, the conversation will often involve humorous allusions to the place. For example, if he is from the North, there will most likely be joking references to the beautiful women of Chiengmai; if he is from the Northeast, to the funny accent of the people of that area. If the relative statuses of visitor and host can be quickly identified (based upon age, clothes, speech patterns, and occasionally surname), the conversation may turn to topics whose very purpose is to emphasize status considerations and thus make the participants more comfortable with one another. If they

*156 159 difficulties (ask his father to save the family land for him; tell the aunt he did not want to marry the girl she had chosen—which he could have done had he felt secure about his relatives' love for him), he politely said nothing. The net result of all of this, as indicated in the text, was a deep sense of personal inadequacy and resentment that loved ones cannot be depended on. Further, Dang had begun to treat others as he felt others had treated him.

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are social peers, the Bang Chaners would easily turn the conversation to a discussion of the technical aspects of rice farming or even gambling. The latter would likely be discussed with a social superior only after some acquaintance. On the other hand, if one were clearly the other's superior, the superior would probably talk not about the methods of rice farming but, more generally and benignly, inquire, "Is all going well with you? Is there any way I might help you?" He might even proffer some unsolicited advice or aid. The tone and theme of the conversation would be expressive largely of the superior's concern with the welfare of his new-found friend, which the latter would typically accept.

All this is usually accompanied by gentle laughter and careful attention to appropriate pronominal forms. The good host will also serve his guest rain water, and if possible, scented rain water. If opportunity and finances permit, he may even offer him a warm Coca-Cola. The youngster who will actually serve the refreshment will make sure that it is on a coaster and that his hands are in the proper ritual position when he offers the drink to the guest. Such are the ingredients from which potential friendships are made.

Although the particulars of the kind of politeness found among family and friends are different from the above, the forms are essentially the same. Villagers do not talk about the funny accents of the people who live next door to them, nor do they rush to serve scented water when a brother comes to call. But they do take pains to express respect for each other by using proper honorific and pronominal forms, by looking to the oldest competent family member for advice, by talking of subjects that are pleasant and amusing, but never threatening or embarrassing.

The avoidance of embarrassing topics—even when the airing of such topics may be crucially important or beneficial to one of the parties concerned—is one of the most pronounced facets of village social life. To a Westerner accustomed to outspokenness, the types of situations that villagers define as embarrassing and the lengths to which they will go to avoid them sometimes appear to border on the sado-masochistic. Detailed interviews with two women whose husbands had taken second wives, for example, indicate that although at the time they were deeply disturbed by their husbands' actions (primarily for economic reasons, secondarily for emotional-sexual ones) they never once even brought the subject up with their husbands. They explained that they were too ?aaj (embarrassed) to do so. In neither case was this embarrassment expressive of any feeling of inadequacy on their parts (the fear of hearing their husbands say, "I took a second wife because you are not adequate"). It was prompted rather by the desire to avoid an awkward and potentially rancorous confrontation. They did not want to put anybody on the spot. (Whether such a confrontation would actually lead to overt rancor is almost impossible to ascertain because

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181 it in fact so rarely takes place. In fact, the "hypotheses" of these women are
152 perfect manifestations of what, in the technical sense, is *anxiety* rather than
57 *fear* about what might occur.) The marital situations of both these women
156 have since been routinized so that they have come to accept the second wives as part of their normal domestic lives. However, the vehemence with which they report these incidents indicates that at the time they paid for their wish to avoid embarrassment with considerable psychic distress. In terms of the basic attitudes involved, these situations were not too unlike that which obtained for Dang: to avoid a potentially sticky social situation, politeness and complete silence were maintained.

Somewhat different order from the above are the numerous instances where "good friends" will avoid reporting to each other unhappy or distressing information although it is clearly to the other's advantage to have such information in order better to cope with the difficulty. In one case, a villager had been working for weeks on a land sale deal which would have netted him a broker's fee of two thousand *baht* (approximately one hundred dollars, a considerable sum in a community where the average annual family income [illegible] before expenses, only eighty-five hundred *baht*). A friend had meanwhile learned that another villager, with whom he was not at all close, had sweet-talked the customer into permitting him to handle the sale, much to the detriment of his own friend, the original broker. However, rather than warn the friend of what was happening, he simply said nothing. When asked to explain why he kept his silence, he said that he was just too *?aaj* to speak up. Although the consequences of "*?aaj*-ness" were in this case more extreme than usual, the situation itself was not. In another, less dramatic instance a villager mentioned to us that in coming across the rice fields that afternoon he had noticed that his neighbor's windmill had broken down. The belt connecting the windmill to the irrigating machine used in raising water into the fields had slipped from the drive shaft. However, despite the obvious importance of this fact to his neighbor—the planting of his rice seedlings was completely dependent on the noria raising a sufficient amount of water into the field at the right time—the friend failed to tell his neighbor what had happened. When asked why, he said that he was *?aaj* about making his friend unhappy.

181 What is important about the above illustrations is not so much their
152 typicality—one can cite instances where friends are considerably more
156 realistic and helpful—but rather the legitimacy of the rationalizations of the
[57?] inactive friends. All Bang Chaners can understand and accept the reluctance of a villager to be the person who actually triggers off another individual's discomfort. There is a genuine (albeit misplaced) sense of responsibility about not making another unhappy. What is important is the immediate, face-to-face situation. If a person must ultimately suffer, that is his own problem; but at least the friend can say, "I did not 'cause' it."

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Villagers also recognize the reluctance of an individual to become involved in another person's problems on the grounds of avoiding the accusation of *actually* having caused them. They say (but again, empirical instances of this type are very hard to find) that frequently the person with good intentions is turned on by the very friend he is trying to help, for example, "Since you know so much about the broken windmill perhaps you were the one who broke it!" Both these attitudes result from a rather overinflated view of one's importance to the friend, as if the friend would be more concerned with the agent of information than with the information itself. This is not so much a confusion of means and ends as a re-identification of them. Finally, some of the villagers' reluctance is probably also due to simple indifference or laziness regarding the plight of the friend.

Other expressions of the "?aaj-ness" complex are more clearly altruistic than the above. Villagers explain, for example, that the reason there is never any more than one candidate for the post of hamlet or commune headman, on the rare occasions when such elections are held, is to avoid embarrassing the individuals involved. The eventual headman would be embarrassed because the presence of a competitor would suggest doubt about his competence; the candidate who lost would be embarrassed by the very fact that he lost. To avoid hurt feelings, only one candidate is presented, voted on, and elected.

We have been talking above about politeness primarily in a negative sense, that is, about the lengths to which villagers will go to *avoid* disconforting others or upsetting peaceful relationships. This aspect was stressed because its expressions represent a somewhat unique form of patterned social interaction. However, the many positive forms of the villagers' politeness to friends and kin should not be minimized: their concern with choosing topics of conversation they think will interest or entertain others; their search for opportunities to flatter them, sometimes in pseudo-mocking fashion, but more often to make them feel good; their attention to providing others with a pleasing audience—being silent, attentive, and eager when others are declaiming on a favorite subject. Of course, many times the villagers are not listening, but they try to behave as if they were. The aim here is to make others feel that what they are saying is worthwhile. An important part of this is that one almost never directly challenges the veracity or logic of the speaker's statements. If disbelief is the only appropriate response, it should be done silently. Nothing except personal pain and interpersonal tension would be gained from a direct challenge. If one feels strongly enough about the issue, which is very rare,[14] the presentation of an *alternative* view would not be inappropriate. But one

[14] The rarity of strong feelings is due to the fact that so often the very purpose of such conversations is to convey politeness and nothing more. The actual topic of conversation is simply a medium of contact, not a matter to be seriously discussed.

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57 must be extremely careful not to phrase it as a direct refutation of the speaker. Again, there is present in this approach the Thai assumption that the most important aspect of a social relationship is the psychic comfort and welfare of the persons involved, not the truth or validity of the matter under discussion. The overriding ethic is that each person not only has a right to be heard, but should be made to feel comfortable as well.

57 152 +156 Related to the above, but distinctive enough to require a category of its own, is the form of politeness expressed in the villagers' nervous laughter and in their preoccupation with inconsequential topics of conversation. Laughter and smiling is such a universal attribute of Thai demeanor (an early volume on Siam by W. A. R. Wood was in fact entitled *Land of Smiles*) that it is not always easy to distinguish precisely between this particular form and other more relaxed expressions of lightheartedness. From the point of view of social intention—to be appealing and inoffensive to others—they are probably not distinguishable. What sets this form apart is mainly the situation in which it is found: a villager is apt to laugh nervously when talking about unhappy or unfortunate experiences. Likewise he will laugh or resort to inconsequential topics when trying to get something from another person or knowing that someone is trying to get something from him, in either case being unsure of how the other person will react; when meeting a person, often of higher status, for the first time and feeling compelled to relate to him, but not knowing quite how. Again, this mode of interaction is clearly not unique to Bang Chan. However, villagers resort to it so frequently, or define so many situations as the kind necessitating its use, that it emerges as one of the most salient modalities of Thai interaction. In a sense, the nervousness that is betrayed indicates some of the internal strain that villagers undergo in maintaining a constant front of politeness.

152 +156 828 It should be noted, however, that they are well aware of their uneasiness; they will often admit it to you in more relaxed moments. Also, other villagers in attendance can immediately spot it, and will tell you that the person was nervous. What is so characteristically nice about the villagers, however, is that they will almost never take advantage of a person's nervousness to score a point for themselves. Uneasiness is defined simply as a neutral personality trait, part of the way in which an individual presents himself and not a symptom of psychic weakness. In fact, from the point of view of influencing the purpose or direction of an interaction, it is usually ignored. What is socially important is that a person act nicely, not how he feels about the way he acts; the latter is his own business. It might further be noted that the recognition of one's own uneasiness, without at the same time feeling threatened by its exposure, is symptomatic of the villager's relatively strong ego structure. A Bang Chaner can maintain a certain

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front, know that it actually elicits and betrays his anxiety, but have such implicit trust in his own resources that he feels no need to alter his behavior. Simply stated: uneasiness when it occurs is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality.

The actual expressions of nervousness and inconsequential conversation vary considerably. Perhaps their most obvious (and justifiable) expression is when a villager, who wants to get something from another person, for example, a job, a loan, higher rent on land, is uncertain about the other's reaction and approaches him by hedging around the issue with giggles and light, irrelevant comments. This mode of behavior typically occurs when there is no history of reciprocal benefits between the parties or when a middleman cannot be used.[17] Although villagers themselves do not consider such comments "irrelevant" (probably because from a ritualistic point of view they are not), it is hard to define a detailed discussion of a person's buttons or belt buckle as anything but a kind of phatic communion. Sometimes conversations of this type will go on for twenty and thirty minutes, often branching off to include more topical interests such as the size of eggs or the calls of birds, before reaching the point. Frequently they never reach the point, since somewhere along the line the individual recognizes from the tone of the conversation that the other person is not in the proper mood to entertain his request; in this case, the individual will explain that he came simply "to chat." Sometimes the friend will begin to giggle uneasily (particularly if the protagonist's references to him contain an excess of flattery) as he becomes aware of the purpose of the conversation and wishes to evade facing the ultimate issue. Very often, even when the final request comes out, he can avoid it simply by giggling. Under such circumstances a giggle is crucially communicative: it is the person's polite substitute for "No," or "Let us bring this particular topic of conversation to an end." Giggling is a wonderfully effective way of carrying on a "conversation" (for those who can read its "vocabulary") because one can so readily convey his refusal, wariness, and even hostility while at all times maintaining the illusion of friendliness. It is precisely because the villagers' giggling frequently rests on such devious attitudes that it appears

[17] The *quid pro quo* basis of the former would permit a considerably more direct approach. It is not difficult to be frank with a person when both you and he realize that you are asking for an earlier obligation to be repaid or that you are creating a new one which may be called upon later when needed. Villagers are highly responsive to such obligations, often going to considerable effort and personal discomfort to meet them. A middleman, on the other hand, is used precisely to avoid the kind of delicate encounter described here. As a disinterested third party, he can be completely candid in his requests. However, for reasons of secrecy (usually when the request involves some potential competition or envy of other villagers, or perhaps some sharp-dealing) the use of a middleman may be inappropriate.

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to be somewhat nervous. Like the conversational topics mentioned above, its purpose is to maintain social contact, but at a minimal substantive level.

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Other uses of giggling are less consciously purposeful than the above. Perhaps the most frequent instance of this is when villagers are talking about or responding directly to an unfortunate situation: a flood destroying the rice crop, a friend or relative dying or being beaten up, a person committing suicide. Giggling under these circumstances seems to represent several related sentiments. On the one hand, it indicates a slight feeling of embarrassment over having discovered something or talked about something which would have been better left undiscovered and undiscussed. At the same time, it is an attempt to make light of the misfortune by suggesting that the speaker and those present should not be overly pained by what they are encountering. Giggling here serves very much the same kind of function as the phrase *maj pen raj* ("it is nothing") referred to earlier; it is a means of shrugging off and denying a feeling of distress. Finally, giggling often is also a kind of ironic commentary on the human situation—not in any abstract philosophical way, but in the sense that a tragedy is so often actually felt to be a comic exposure of human hopes and intentions. A little exchange between the writer and an elderly villager perhaps best illustrates this. During one of the two rainy seasons I spent in Thailand, the rains were especially heavy in the Central Plain and destroyed the rice crop of many Bang Chan farms. As might be expected, it was a topic of considerable discussion. Paddling down the canal one morning, we met a villager who was returning from inspecting his fields, and we stopped to chat. The discussion inevitably turned to the flood, and he told us, in a completely matter-of-fact way, that he had already lost about 50 percent of his crop. He then giggled nervously over what he had said, and followed it up with, "But that person over there has lost everything." His giggles then turned into laughter as he nodded his head in an attitude of pain. Months later, when things were considerably more comfortable for the villager (as it turned out, he had lost only about 5 percent of his crop) I recalled our meeting and asked him what he thought was so funny about the flood. He did not remember, but volunteered in a nice, didactic way: "When something like a flood happens, all you can do is laugh."

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Giggling is also a favored mode of dealing with the countless situations that arise in daily life that are perceived by the villagers as potentially, or imminently, embarrassing. Here giggling is a substitute for an explanation of one's actions, particularly those that are considered annoying to others. Villagers who have missed an *important* appointment (lesser ones are missed with few qualms) will tend to giggle when they finally meet the person and there is the slightest indication of the latter's displeasure.

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Giggling is very often used in the marketplace when an item must be bargained over. Similarly, a villager who wants to quit working for another will usually preface his request with some giggling, although equally often he will just leave—saying absolutely nothing—and will later send a middleman to collect his wages and make the severance official. The latter alternative is prompted by the desire to avoid *all* awkwardness.

The third major form of the villagers' politeness—that associated with making a good impression on others—has to a certain extent been covered by the materials already presented. Thus, in terms of the actual manifestations, there is really little difference between flattering another person, for example, because it will make him feel good, because it will make getting something out of him much easier, or because it will make one appear much more attractive in his eyes. However, it is clear that the motivations in these three cases are all quite different. It is for this reason that this last category has been introduced. When villagers meet another person whom they regard as significant (and this by no means includes all their contacts) they do put forth considerable effort to make a good impression on him. And being polite—courteous, helpful, flattering—is one of the most suitable means for achieving this effect.

Discussion of this interactive mode would perhaps not be necessary were villagers themselves not so keenly aware of it. Village children are continually and consciously taught, by word and deed, the necessity always to put their best foot forward (cf. the earlier illustrations in *Characteristics of a Good Person*). Bang Chaners assess themselves and others in terms of their capacity to make themselves appealing: both the "good" and the "competent" person is one who can make himself attractive by speaking softly, gently, and if possible, beautifully and cleverly. Often villagers take offense at an individual who refuses to do this because his very refusal suggests that he does not feel respect for others. Again, it should be emphasized that we are talking here about the form of behavior, not the substance or commitment behind it.

What the ultimate psychological roots of this behavior are is unclear. It is apparent—largely because of the great attention given to formal considerations such as manners, proper speech, and the like—that this concern is not prompted primarily by the desire to be loved by others. Love would require a more substantial medium. Gaining the respect and approval of others is clearly an important component of the attitude, but one wonders why a people otherwise so self-loving and self-accepting should need their self-esteem repeatedly validated by others. Perhaps the most important reason behind the villagers' concern with impressing others really has little to do with the others themselves, although obviously at the behavioral level it implicates them—that is, I would suggest that the major factor behind the

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villagers' concern is essentially self-referring in nature: it is both a manifestation and validation *to the self* that one is a fine, proper, and upstanding person; that to treat others well is to perform one's role as a civilized, meritorious person. This last term, "meritorious," was intentionally selected. It is meant to suggest that much of the villagers' politeness is consciously (although perhaps not explicitly) related to the notion of accumulating Buddhist merit, and that in being nice to others Bang Chaners are managing to fulfill, a little bit, what is to most of them the *raison d'être* of the human experience.

The Dynamics of Loose Structure

The foregoing discussion was concerned with the nature of some of the most frequently occurring forms of face-to-face contact in Bang Chan. It focused on manifestations of, and motives for, behavior when people *actually meet* and interact. However, human relationships involve considerably more than the forms and rituals of face-to-face interaction. They also include feelings, attitudes and behavior toward others once the interactive situation has been left behind; a readiness to become involved with others in the first instance; and a sense of social linkage, functional or sentimental, that ties people to one another over time. This last has reference to the system of rights, obligations, and responsibilities that form the substance of enduring relationships.

These latter considerations are perhaps the most difficult to talk about in Bang Chan because their most conspicuous expressions tend to be negative in nature: that is, empirically it often is considerably easier to point to cases where there are no enduring ties between individuals or where there is hesitation to become closely involved with others than it is to identify what links them together. There are a few relatively explicit means of linkage: the "dyadic contract" (to be discussed below), kinship ties, in many respects a special case of the dyadic contract; and on some occasions, certain cosmological considerations ("I owe him this because we were friends in earlier lives," "We love each other because we were born on the same day"). However, even these modes of linkage require continuous behavioral validation and are recognized as ultimately unreliable. A Bang Chaner who fails to fulfill his "contract" by refusing to return a favor would at very worst be considered selfish. Most villagers would not even bother to assess his actions, assuming that he must have had a good reason for them.

To a large extent, the descriptive problem encountered here is the result of certain methodological conventions. An investigator concerned with how human beings relate to each other inevitably, and not unreasonably,

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tries to identify the bases of their contact. Having once identified these, he then tends to assume that not only the bases but the relationships themselves are relatively constant and reliable.[10] The relationship between Bang Chan employer and employee is an excellent example of the problem. An investigator concerned with specifying the bases of their relationship could readily point to two factors; contractual (in the strict meaning of the term) and sentimental. The former involves the exchange of a sum of money for labor fulfilled. The latter involves an array of behaviors expressive of the employer's concern for his retainer: feeding him well, not making him work too hard, treating him like a younger sibling or "adopted" child, recognizing his birthday, or buying him small gifts if possible. Interestingly, the subordinate's obligations to his superior are considerably less explicit and social psychologically less demanding: he must simply respect and obey him. However, as accurate as these specifications are, they say nothing about the reliability of the relationship. It may be broken off over matters that have nothing to do with how well each is fulfilling his interactive responsibilities. The employee may become bored; he may have a sudden desire to take a trip or go to Bangkok; if he is from a distant village, he may suddenly become homesick and just as suddenly leave. As indicated earlier, he will frequently do this without saying a word to the employer; his absence is sufficient to indicate the termination of the relationship.

Very often the breakdown of the relationship is short-lived. I recall my exasperation during the early stages of field work when right in the middle of an important interview, my field assistant would tell me—with absolutely no forewarning—that he had to be in Bangkok in an hour and a half, and would have to leave now. When I suggested that the interview first be completed, the reply, the first time this happened, was "No, I promised a friend I would meet him at the movies, and I have to go now." When asked why he made a movie date during working hours, he answered: "Well, this was the only time my friend could go." The straightforwardness of his response indicated that it was both futile and dangerous (he might never return from the movies) to ask why the friend could not go alone, what the real reason was for his sudden departure, or why he did not tell me beforehand so I could have made different plans. Pursuing such queries would have served only to annoy my assistant, rather than hold him; and from his own point of view, they were really not my business. This kind of behavior was neither idiosyncratic to this individual nor limited to movies. Later on, when other assistants asked for intermissions, the explanations

[10] Certain relationships are of course explicitly recognized as inconstant and unreliable. The relationship between appliance owner and repairman in our society, for example, has come to have these special attributes—not without strain and exasperation, but as part of the reality of the relationship.

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571 123 466 given were equally oblique. Although I never really overcame my feeling of helplessness in dealing with such situations, I did manage over a period of time to communicate to those in my employ the appropriateness (at least regarding our own particular relationship) of giving me fair warning, e.g., "Europeans are different in this way."

571 Again, there is nothing extraordinary or unique about personal desires and inclinations intruding on the stability of an interpersonal relationship. However, what is unique to Bang Chan and Thai culture in general is the frequency of such intrusions, the extent to which they take precedence over the responsibilities of the established relationship, and perhaps most important, their general expectability. No Bang Chaner is ever taken aback when another does not fulfill his assumptions about how that other will behave. Note that these intrusions may have little effect on the face-to-face contacts existing between people. My assistant's declaration that he was going to the movies was presented in a most affable way and in the other examples cited, where people were left in the lurch, there need not have been any contact whatsoever between the parties involved.

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114 *156 191 Reference was made to these modes of relationship in the section on Bang Chan social organization and kinship. However, they received their first formal, and perhaps most elegant, formulation in a now famous article entitled "Thailand—A Loosely Structured Social System," by the late John F. Embree (1950). Embree's application of the notion of "loose structure" was mainly descriptive rather than analytic; it was used to summarize a wide variety of empirical materials. Thus (182): "The first characteristic of Thai culture to strike an observer from the West, or from Japan or Vietnam is the individualistic behavior of the people. The longer one resides in Thailand the more one is struck by the almost determined lack of regularity, discipline, and regimentation in Thai life. In contrast to Japan, Thailand lacks neatness and discipline; in contrast to Americans, the Thai lack respect for administrative regularity and have no industrial time sense." After providing an extensive series of examples—on the lack of binding filial piety, on the tendency to permit a thief to steal from a neighbor's house without raising an alarm or attempting to stop him, on the capacity to delay and double-talk those with whom one has business dealings, Embree concludes (184): "The point here once more is that . . . while obligations are recognized, they are not allowed to burden one unduly. Such as are sanctioned are observed freely by the individual—he acts of his own will, not as a result of social pressure."

*114 156 While Embree's formulation is by definition phrased in social structural terms, it inevitably directs our attention to an underlying motivational issue: the nature of the villagers' dispositions to conformity. Conformity to the expectations of others—whether such expectations are shared, comple-

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mentary, or emergent—is of course a basic requisite of all effective[10] social action. It is perfectly clear, as was demonstrated in the earlier discussion, that Bang Chaners are highly motivated to conform while in the direct presence of others. Often there is over-conformity when in such situations villagers become overly solicitous to what they think are the needs of others. However, the hallmark of Thai social relations is that there never is any certainty that such face-to-face contacts will take place, or if they do take place, that the conformity which exists during the direct encounter will be sustained once the contact has ended. The overriding inclination of the Bang Chaner is to separate the encounter itself from that which precedes or follows it; psychologically, they are independent and unrelated experiences. The typical Bang Chaner excels at the art of indicating agreement with people—responsiveness, cooperativeness, and compliance with their verbal requests and orders—and then once the situation has been concluded, doing precisely what he wants, often the exact opposite of that to which he had agreed.[11]

Ordinarily, this is not intended as a form of duplicity. Villagers are quite sincere (and probably correct) when they say: "People are much happier when you agree with them and tell them what they want to hear." Too, the behavior is explained in part by the fact that most villagers feel they can change their plans and intentions with impunity at the slightest provocation. Unfortunately, the other persons involved may not be informed of the change until it actually occurs. A Bang Chan employer who

[10] The term "effective" is inserted here to acknowledge that social action is just as likely to be characterized by ambiguity, confusion, and misunderstanding—the absence of clear expectations—and that in some cases (for example, greeting rituals) it is oriented mainly to *discovering* patterns of expectations. Further, insofar as such action occurs through time, it is never completely free of a minimum of both ambiguity and certainty: the ambiguity of not being able to anticipate what might next occur; the certainty of knowing that what does emerge has some relationship to what has gone before.

[11] Bang Chan and Thai culture in general evidently are not the only places in Southeast Asia where one finds these modes of response. Addressing himself to a rather different issue, Geertz (1956: 155), writing about the social attitudes of Javanese peasants, notes: "Now, as in the past, the central government and the *prijaji* [aristocratic, learned, upper class] outlook which justifies it sits uneasily in the general social context of Javanese peasant society, with much less actual control over the behavior of the villager than it would seem at first glance to have. Without the intricate ties between the rural and urban gentry one finds, for example, in China, or without the deeply rooted clearly defined, land-rights-linked social code of reciprocal obligations of feudal Europe, the *prijaji* has always found outward submission, exaggerated respect, and placating excuses easier to obtain from the *abangan* [traditionally oriented peasants] than actual obedience." This passage, of course, was concerned with the nature of the Javanese authority system rather than with more generalized patterns of interpersonal response. Whether Javanese respond in the same way to fellow villagers and to other social equals is unclear. However, the stylistic similarities between Thai and Javanese peasants are striking.

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571 walks out on his superior because he does not like the food he is served or a
[466] villager who agrees to lend a person money and then is not at home when the person calls for the loan can easily account for his actions by saying that circumstances had changed.

571 It must be noted, and this is crucial, that there is generally no animosity
628 felt toward the employer with the unpalatable food, toward the fleeting[a] employee, or toward the unreliable creditor. Villagers are thoroughly conditioned to the possibility of such events and accept them simply as part of the inauspicious nature of life. That they are in fact considered inauspicious rather than results of the willful or malevolent intentions of others is not accidental. Bang Chaners faced with a breakdown in the fulfillment of commitments can of course point to the individual who directly caused it. But there is no satisfaction to be gained from this. The person who broke his obligation must have had his own good reason, and beyond this, there were probably other factors, unknown to both parties, that caused the breakdown. For most Bang Chaners, all human intentions are forever set within a framework of cosmic, and particularly moral, unpredictabilities.[b] If things do not work out the way one expects, it is most likely due to the inauspiciousness of the time, place, and persons involved. The proper time
[787] is particularly important. It is precisely for these reasons that the more important events in a person's life—marriage, trying to win a lottery or a maiden's heart, taking an important trip—are so often preceded by ceremonial attempts to decide the cosmologically auspicious conditions for effecting the event. These involve consultations with monks, shamans, and other religious practitioners, and highly ritualized forms are followed to select the appropriate conditions. (See Textor 1960 and 1962 for systematic discussions of the various kinds of problems and practices associated with this complex.) The kind of occurrences discussed above are not of this order of significance, but they do partake of the same cognitive assumptions that lead to such highly institutionalized practices. Thus, whereas most Occidentals would point exclusively to the actions of the other person as being both the necessary and sufficient cause of the interactional breakdown, Bang Chaners, who have considerably less confidence in human capacities, would really not be sure. To them, human volition represents only one of several indeterminate and uncontrollable factors giving rise to events. Who knows what accident, change of heart, sudden windfall—particularly one occasioned by something done by one of the parties several lives earlier—might intervene to alter what had originally been planned and agreed upon?

[a] This is just the term that villagers, with their wonderful sense of hyperbole, apply to such cases. The original Thai word is *nii*.

[b] I am indebted to L. M. Hanks, Jr., for suggesting this line of thought.

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These assumptions about the indeterminate nature of the universe and human actions are so integral to the villagers' cognitive orientations that Bang Chaners often hesitate to make even the most elementary kinds of prediction. Thus, in asking a village lad how he felt about his older brother's forthcoming ordination, I was told, "I don't know." The tone of his reply indicated that he was not evading the question, so I pursued the matter further: "Well, do you feel happy about it? Do you wish you were being ordained together with him?" He answered: "The ordination is not for another three days. I do not know how I will feel at that time. But when that time comes I will know." In another case, I was going up the canal with a villager to attend a "Kathin" being held at the monastery. (A "Kathin" is a fiesta-like merit making ceremony sponsored by a person or group of persons from outside the village at which new robes are presented to the monastery monks. It involves the sponsors, their local hosts, and all villagers who wish to attend.) Although not necessarily an annual event, "Kathins" are held often enough at Monastery Bang Chan so that this villager, who was also a member of the monastery lay committee, was thoroughly familiar with every aspect of them. Simply to make conversation, I asked him: "What is the 'Kathin' going to be like today?" to which he replied, "I do not know. I have not been to the monastery yet today." Assuming that his past experience with "Kathins" provided him with some knowledge of the goings-on, I went on: "Well, do you think there will be many people?" His answer: "I do not know. You never know what a situation is like until you meet it. I have not met this one yet today."

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The point of these various illustrations is that they represent a psychological universe of uncertainty and unpredictability. And in this kind of universe—where one hesitates to build up sharply defined expectations and where one is forever aware of the mutability and frailty of the environment—it is not unusual that there should also be a high tolerance for interpersonal nonconformity. What the actual limits are, theoretical or empirical, to this tendency to nonconformity are uncertain. Much of the nonconformity is undoubtedly made possible, in the first instance, by the sociologically simple and relatively undifferentiated nature of Bang Chan society; that is, the actual number of functionally specific tasks and roles—those that require special competencies—are few, and any number of different individuals can perform them. Thus, when a Bang Chan employee walks out on his boss or when a wife walks out on her husband, their actions do not from a functional point of view disable the system. Since the requirements of the role of house servant or farmhand are characteristically simple and understood by all, the departing employee can usually be replaced by another individual. Similarly, since any adult—aunt, grandparents, older sibling—can and often does rear another's children, and

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571 *156 since there is always sufficient fish in the canal for an abandoned spouse to feed himself,[33] the departure of a wife or husband need not, from a functional point of view and the point of view of most villagers, work any great hardship on the individuals involved. This suggests that not all social systems are equally demanding in their functional requirements for people to conform. The importance of this point is taken up in the final chapter.

It is recognized, of course, that the sociological simplicity of Bang Chan represents a necessary, but not sufficient, condition for the nonconformity found in the community. There undoubtedly are many cultures which are functionally and sociologically less complex than Bang Chan but where culturally defined requirements for interpersonal conformity are considerably greater. I would suggest that the loosely structured nature of relationships in Bang Chan is due primarily to psychological and philosophical ("world view") factors and is *permitted* expression by the relatively undifferentiated social system. A more complex, highly differentiated social system, one whose functioning is completely dependent on the technical competencies of its members and on their meeting each other's expectations (a factory system, for example) obviously could not afford this luxury.

It might be noted that, in the example cited earlier regarding the movie-going field assistants, one of the reasons for my consternation (over and above my being an American) was the fact that these persons were highly trained individuals who could not be easily replaced. Their temporary departures were strain enough; had the departures been permanent, it would at that point have paralyzed the research. In this respect, their behavior was typically Thai, but the situation in which they found themselves was not.[34]

The ultimate psychological sources of the villagers' tendency toward loosely structured relationships are not easily determined. (The indeterminacy here is inevitable. It derives from the impossibility of ever being certain whether the loose relationships are actually consequences or causes of these other factors, or whether both are expressions of a single, under-

[562] [33] This is just what one informant, a female, said when her husband left her. The sociological simplicity of Bang Chan is also supported by the slight differentiation that villagers make between the adult roles of the two sexes. In contrast to all other known cultures, in Thailand both men and women may serve as midwives and do plowing. They both own and operate farms, inherit property equally, share equally in the property brought to a marriage and divide it equally in case of divorce. It is not uncommon to find men tending babies while women are off on a business deal; nor is it unusual, as indicated earlier, to see women paddling right along with men as crew members in a boat race. (See Sharp *et al.* 1953 for an amplification of this point.)

[34] In fact, this event is a perfect illustration in microcosm of what was referred to in the introduction, following Inkeles and Levinson, as "personality-institutional noncongruence."

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lying configuration.) However, from the point of view of their etiology in the individual, it is clear that the villagers' tendencies toward loose relationships are related to early childhood experiences. A second source is their philosophical notions concerning the nature of the individual. These notions are largely cultural derivatives of Buddhist doctrine, although at the behavioral level they function simply as unstated premises which guide and tacitly define behavior.[28]

Reference was made earlier to the basic assumptions governing the socialization of the Bang Chan child. When the child enters the world of human beings, he is already a partially formed and psychologically independent individual, with his own *ʔupanidsaj* (ingrained character) and *khwaan* (soul-stuff), not to mention his stock of accumulated merit and demerit from countless previous lives which predetermines his character. The effect of these definitions is not only to award to the child a sense of psychic individuality that is partially[28] independent of any social environment to which he is exposed, but to assign to him a fundamental sense of psychological equality. We are not speaking here of *social* equality. The

[28] From a strict analytic point of view, it would probably be best to consider Buddhist doctrine as an abstract, codified representation of these premises rather than consider the premises as explicit, logically coherent deductions from Buddhist doctrine. To be sure, many Bang Chaners often explain and justify their actions by pointing directly to Buddhist doctrine, sometimes applying its tenets correctly, and sometimes not. But for most, Buddhism is a diffuse, ubiquitous *Weltanschauung*, the precise effects and applications of which the villagers are typically unconscious. It would probably not be incorrect to think of most religious "traditions," particularly the "Great" codified ones, as functioning in this way.

[28] The term "partially" is inserted here to indicate that despite these ontological notions, few villagers, as J. R. Hanks (1959) points out, ever consider "any human child so marvelously endowed . . . from previous existences that training is unnecessary." The child's *ʔupanidsaj*, *khwaan*, merit and demerit, as well as his *winjaan* (psychological motive power), *caj* (heart), and *phroomlʔkhid* ("the lines of his destiny as established by Brahma") are all crucial predeterminants of his character. But few Bang Chaners ever think of a person's character as due solely to the uncontrolled emergence of these pre-natal forces. Rather, they represent the basic psychological raw material with which parents and other socializing agents must work, and set the limits of these agents' enculturating efforts. What is important is that the limits—the "degrees of freedom" permitted the parents—tend to be narrowly defined. Intensive probing of informants indicates that there is no general agreement on whether these cosmological forces are more or less influential than parental training in shaping a child, although they tend to be invoked more frequently as explanations of negative characteristics and of unusual happenings, positive as well as negative, in the lives of individuals. Also, villagers are inclined to think of them as the reasons behind *particular* characteristics and events, assigning to parental training a more diffuse influence in the development of the child. Thus, when asked why a particular individual grew up to be a *nagkleeng* (an aggressive, daring, sometimes bullying type of person) and how one of their fellow Bang Chaners had grown up to become an admiral in the Thai Navy, informants attributed the character and success of these individuals respectively to their *ʔupanidsaj* and *kam*. (*Kam*, the Thai derivative of *karma*, is the proportion of merit to demerit that a person may have at any particular moment in

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858 828 child is clearly a social inferior, and is due all the prerogatives of his position: he is to be dealt with gently, kindly, and benevolently, with sympathetic regard for his incompetence; correlatively, he must be taught to express deference and obedience to superiors. Rather, the equality awarded the child results from the recognition that in the workings of the cosmic scale it is impossible to ascertain what the child could once have been or eventually will become, and he, like any soul, is always *potentially* of the same value as any other person. It is precisely for this reason that most Bang Chaners, if they mention it at all, are only mildly pleased rather than particularly proud that one of their own grew up to become an admiral in the Thai Navy. It comes as no great surprise that such a thing can happen. To them, it is no more unusual than that the prime minister himself should be a person who was born and reared in a village. (By the same token, the peasant background of these two individuals creates no special sense of personal identification with them on the part of the villagers. They are perceived simply as two unique *individuals*, their peasant roots being viewed as only one of the literally countless factors that made them what they are today.)[27] To a large extent, the equality of the child derives from the premise that he is not so much a child as he is a human being who happens to be at a particular stage in his ontological

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time). When probed further and asked if their parents' training may have had any influence on these individuals, they replied "yes" and "maybe" in the case of the admiral, but disavowed all parental influence in the case of the *nagkleeng*. A few said that the *nagkleeng* became that way because of bad friends.

[115] One villager, phrasing his comment as a personal conjecture, volunteered that the notion of parents being the major influence on a child's character is a "modern" idea. Another informant, the wife of a school teacher and well versed in her husband's teaching training manual (prepared in Bangkok by Western-trained educators) argued that a person's character is dependent "mostly on the influence of the home and school." However, since on other occasions she complained to me that one of her sons "does not have an *?upanidsaj* for studying, and there is nothing a parent can do but let the child have his own way," it would suggest that her commitment to the pronouncements of her husband's mentors was not too well internalized.

To avoid confusion, it might be added that from a historical point of view only one of the above cosmological forces (*kam*) is strictly Buddhistic in origin. The others are either Brahmanic (*khwaam* and *phroomlí?khíd*) or traditionally Thai (*?upanidsaj*, *winjaan*, and *caj*). Of all the terms, *kam* and *?upanidsaj* are the ones most frequently referred to when discussing an individual's character.

[565] [571] [554] [27] It is precisely for this reason, as I indicated in an earlier writing on Thai social structure (see Sharp *et al.* 1956: 163) that Thai society "cannot be said to have a class system in the classical European sense of the term." People identify with others as individuals, not as representatives of social classes.

The very fact that individual peasant boys can climb the social ladder to attain some of the highest social positions of the land, without it even being considered particularly noteworthy, attests to the fundamental equalitarian nature of the ideas underlying the Thai social system despite the obvious emphasis given to status and hierarchy in individual face-to-face relationships.

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career. From an epistemological point of view, there is of course nothing strange about such an approach. What is perhaps somewhat unique, however, is that the villagers actually use it as the point of departure in their treatment of the child.

The practical consequences of these equalitarian notions are manifold. For one thing, with the child defined as a separate and equal soul, the relationship between parent and child takes on a highly instrumental flavor; that is, rather than expressing love toward the child as an end in itself or otherwise treating him in ways that require no further justification (it is assumed that love is characteristically an absolute sentiment, not a means to any other satisfaction) villagers explicitly see the relationship between parent and child in contractual terms. Thus villagers say that they "are going to the trouble" of bringing up their children and "doing good things for them" (just as their own parents "went to the trouble" of bringing them up and "doing good things" for them) so that they will have someone to care for them in their old age and make merit for them when they die. Similarly, they say they love their parents because they are indebted to them for bringing them into the world. The language of the "contract" is poignantly explicit: "When I think of my mother, I think of the debt I owe her for bringing me into the world and feeding me so I would survive"; "Parents who do not teach their children how to *waj* [exhibit respect to the parents] get nothing from them. I did many *bunkhuns* [good things requiring reciprocation] for my daughter, so now she gives me everything"; "When I was three my father gave me to my uncle who fed me and trained me, so I loved my uncle more" (cf. pp. 64–66, L. M. Hanks 1959c, and Phillips 1959 for further documentation of this point).

In and of themselves there is nothing strange about these "contractual" criteria. However, they do reflect a fundamental recognition of the independence of parent and child and of the fact that parent and child have the *option* of fulfilling each other's needs. More specifically, they are expressions of the assumption that there is nothing intrinsic to the parent-child relationship that requires the two persons to be linked together. The relationship clearly is not fortuitous, but neither is it absolute. It functions primarily for the instrumental and symbiotic satisfactions that its participants can gain from it.[28] Lacking the absolute elements of an ultimate

[28] In his paper on "Changes in Family Life" in Bang Chan (1959c) L. M. Hanks notes: "At birth a parent ceremonially formally accepts obligations to an unknown infant soul lightly bound to its body; to this point the new-born one without relation to its parent has been under the protection of a spirit mother. This phrasing contrasts sharply with the Occidental concept of 'flesh and blood.'" In another place in the manuscript, Hanks also comments: ". . . but every case [every kinship tie] is reducible, if one presses the question, to benefits of an older or richer or stronger for the

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relationship (*disinterested* appreciation or admiration of the other individual; loving the child or parent in his own right, rather than in terms of his effect on the self) [20] it has a strong undercurrent of unreliability. Since the maintenance of the relationship is always dependent on what the participants can gain from it, i.e., from the other person, and since the participants are essentially free to break the relationship once they feel that such rewards are not forthcoming, it is inevitable that there will be many instances when just that will happen. The crucial point is that there is nothing over and above the instrumental nature of the relationship to keep the individuals tied to one another. The only possible exception, an important one, is that which goes with the realization that by treating one's child or parent nicely, one is behaving in a moral way and is thus accumulating Buddhist merit; but even this purpose is avowedly self-referring in nature. In this regard, it might be noted that other than the marriage ceremony, which is ignored by half of Bang Chan newlyweds, there are no institutionalized attempts to sanctify the solidarity of the family, or for that matter the solidarity of almost any social group. That is, unlike China and the West, there is nothing in traditional Thai folk belief and ritual, or in the literature of the indigenous "Great Tradition," that alludes to the sacredness of the family as a social unit. All moral aphorisms concerning family relationships are phrased in terms of the dyadic relations between individuals, not in terms of affiliation with the family unit as such.

The looseness of the ties that result from the instrumental nature of the parent-child relationship are perhaps best revealed in the villagers' responses to the Sentence Completion stimuli, *"We want to give our child to him because . . .* (This is the English translation of the best Thai translation of the original English item, *"He wanted to give his child away because . . ."*). The reasons behind the use of this somewhat uniquely worded item are important. (The reader might imagine American responses to such a query.) The item was selected for inclusion in the SCT battery only after it became apparent that there might be a pattern to what

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services of a younger, poorer, or weaker. This includes parent and child, sibling and sibling, or husband and wife, and all kinship relations are reducible to these terms."

[20] The responses to the Sentence Completion stimuli, *"When I think of my mother, I think of . . ."* and *"When I think of my father, I think of . . ."* are particularly revealing on this point. The vast majority of the responses on both these stimuli are in terms of the parents' effect on the self rather than in terms of what the parents are in their own right. Careful checking of the cues indicates that there is nothing in their grammatical or semantic structure that would predispose informants to produce such completions, i.e., it is just as easy and feasible for informants to say ". . . how beautiful she is" or ". . . how clever she is" as it is for them to say ". . . the good things she has done for me." See chapter v for the actual responses.

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were at first a series of unrelated incidents—that is, the possible tenuousness of the links between parent and child first came to my attention with the occasional, but wholly unselfconscious, reports from informants on what to my Western ears seemed like rather turbulent childhoods: their frequent movement from family to family while they were still children and their own care, as adults, of friends' or relatives' children. (This suspicion was reinforced and partially verified later while recording life histories). Later it was noticed that, in sharp contrast to the West, villagers tend to be less concerned about the illness of children than the illness of adults; informants with whom this observation was discussed said either that they had not noticed or explained it by saying that since children recover so quickly from sickness there is less need to worry about them. Finally and perhaps most important, it became clear that the request of the villager who stopped me and asked me to take and rear her child was by no means idiosyncratic; the request was made on four separate occasions by different individuals, both within and without Bang Chan. The intent of these requests were difficult to ascertain. Since the requests tended to come up rather suddenly, in the presence of the child, and were always accompanied by laughter, they may well have been said in "jest" or as a threat to the child. On a few occasions the parent took pains to be sure the child understood what was being said, in which case the child responded with screaming. Also, Europeans have traditionally been used as bogey men in the disciplining of children. (I myself have occasionally been addressed as a malevolent spirit by youngsters.) On the other hand, because children of poor families have been known to be given to individuals of high status, and because Occidentals are automatically assigned such status, it is not altogether unlikely that the parent was sounding me out as a potential patron of the child.

The problem with all the above, however, is that it was unknown to what extent they represented typical or deviant attitudes and responses. The Sentence Completion item, *"We want to give our child to him because . . ."* was selected for use in the SCT administered to a larger, representative sample of villagers because, being an extreme phrasing of these attitudes, it might shed light on the villagers' general readiness to accept them as well as their justifications for them. Of the fifty-six informants who responded to the item, 79 percent accepted the premise and 21 percent rejected it, *i.e.*, "I do not want to give my child to anybody." Of the forty-five individuals who accepted the premise, nineteen said it was good for either the child or the parent, *i.e.*, "that person was good, and he wanted that person to teach his child to be good"; "I would get some money by giving it away"; "I could not stand the child anymore." And eighteen said it was justifiable, *i.e.*, "because of poverty"; "I did not have the means to rear the child."

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593 155 *156 [125] None of the above is meant to imply that 79 percent of the adults of Bang Chan would in fact give away their children. But the relatively high frequency of agreement they exhibited in admitting to such a possibility and the fact that as many as 65 percent agreed that it was either good or justifiable reveals something of the psychological environment within which the Bang Chan child is reared and where he learns his basic orientations toward other persons. The responses to this single stimulus must of course be seen in the context of the more naturalistic, behavioral materials presented earlier. The point of all these illustrations, however, is that they indicate there is nothing sacrosanct about any human tie in Bang Chan, even that which exists between parent and child. If necessity or personal predilection requires, then this tie too may be broken. What is perhaps most significant here, from a developmental point of view, is that the breaking of the tie always exists as a realistic potentiality in the life of the child. Reared in an environment where he learns that no human tie need be permanent or sustaining, the developing child inevitably takes on some of these same patterns of expectation in his own dealings with others. Thus the villager who abandons his spouse or the employee who with little warning leaves his employer are acting in terms of patterns the prototypes of which they either actually experienced as children or came to expect as part of the realities of interpersonal relations in Bang Chan.

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*779 156 The second major source of the villagers' loose relationships lacks the developmental reference of the above. To a certain extent it is not even social relational in nature, although our concern with it stems from its having crucial consequences to the social orientations of individuals. I am referring here to the Buddhist emphasis on the primacy of individual action and individual responsibility. Without going into a lengthy discussion of the subtleties of Buddhist doctrine, it is imperative to point out that the principal tenet of Hinayana Buddhism is the complete psychological freedom, isolation, and responsibility of every person. This is not the Occidental idea of "free will," but rather the notion that every person is a free agent, responsible only to and for himself, and that he inevitably reaps the fruits of his own conduct. Buddhist canonical literature is replete with references stressing the centrality of this doctrine. The last words of the Lord Buddha before he left this world to achieve the sublime state of *nibphaan* (nirvana) are said to have been: "Work out your own salvation with diligence." A frequently quoted passage of the *Dhamapada* reads: "By oneself is evil done; By oneself one suffers; By oneself evil is left undone; By oneself one is purified." The whole complex cosmology relating to the accumulation of merit and demerit is phrased in terms of the individual's lonely journey through cycles of interminable existences working out his own moral destiny. Who his progenitors were, what kind of environment he was born

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and reared in, what social advantages or disadvantages he was exposed to, are considered all secondary, and in some cases even insignificant, in influencing what he is and what he does. The life and career of Gautama himself is perfect testament to the essential irrelevance of these factors. (On the other hand, the attention given to these considerations in Western ontology is a perfect expression of our "sociological bias." In our system, even our original moral state is determined by what someone else—Adam and Eve—did.) In Therevada Buddhism, an individual's worldly and cosmological condition—the former essentially a temporary, special case of the latter—is for the most part self-generative, although because one never knows *when* the effects of one's *kam* may emerge it is also unpredictable.

These formulations translate and function on the level of workaday behavior in an extremely subtle manner. Every time a Bang Chaner is about to do something he does not ask himself whether it is in his own best moral interest. Similarly, every time he ignores another's expectations about how he will behave he does not justify his actions in terms of the Buddhist doctrine of enlightened self-interest. However, these formulations do impart a fundamental legitimacy to the pursuit of individualistic self-concern. More important, they establish—in a diffuse, unreflective, but nonetheless highly meaningful way—a definition of social reality that assumes the ultimate reference of every person's act is himself. In these terms, social relationships become defined as either artifacts of, or media for, the attainment of one's own ends. People need and use each other to satisfy their own purposes. (This is not to say that social relationships do not have many other functions. Our concern here is with the way *villagers* view the aims of their social relations.) What keeps the social system running relatively smoothly is the assumption that every person is acting on precisely the same bases, and the realization that one's own purposes are best served by acts of reciprocation. The basis of the system, however, is the continuous satisfaction of each participant's individual needs, for should such satisfactions not be forthcoming, there is always complete freedom and sanction to withdraw. Villagers typically define benefits gained from reciprocal acts to be materialistic (the food or gifts a parent gives a child or an employer gives an employee); psychological (the respect a subordinate awards to a superordinate or the security the latter provides the former); and spiritual (the merit parents gain when their son enters the monkhood, the merit being repayment for their having gone to the trouble of rearing him).

Translated into theoretical terms, Buddhist doctrine functions here in two ways. First, it represents a codification of certain *assumptions* about the nature of human responsibilities, an articulation of what Wallace (1961*b*: 94) calls "primitive predicates," or the frames of reference that provide the

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primitive categories into which people code their experience. From a psychodynamic point of view, the predicates do not *require* codification; people think and act in terms of "primitive" (tacit, axiomatic) categories many of which are never explicated in the propositions of their formal religious, ethnophilosophical, or mythological systems. Why certain categories are selected for codification and others are not is beyond the scope of this book. However, it is clear that a major function of Buddhist thought—like that of any articulate symbolic or ideological system—is to *objectify* and *clarify* some of the more important experiential assumptions of its adherents. This is the cognitive essence of all belief systems. As a belief system, Buddhist doctrine also takes on a special value of its own. This is in fact its second major function; that is, the tenets of Buddhism not only serve to objectify through philosophical elaboration that which is already accepted but also to act as standards in assessing the value, propriety, and significance of human actions. In this sense, Buddhism (again like any coherent ideological system) provides a corpus of knowledge for rationalizing and *sanctioning* certain types of behavior and for disapproving of others. The very belief system that codifies aspects of reality for its adherents assumes the normative function of reinforcing and promoting those activities that are in conformity with it. This is the motivational essence of all belief systems. Needless to say, we are speaking here of activities that are subjectively felt to be valuable and proper, irrespective of the social psychological dysfunctions that may follow from them. Thus, returning to our major theme, most villagers would agree that the Bang Chaner who without saying a word leaves his spouse in order to avoid an embarrassing or rancorous confrontation over some difficulty is behaving in a manner thoroughly consonant with "doing evil by himself; suffering by himself; leaving evil undone by himself; and becoming purified by himself." How the wife responds to his actions is her problem. Her *kam* may well have been the reason for this happening to her. (Note that I say ". . . for this happening to her," *not* ". . . for his doing this to her." This is the typical village way of perceiving such events. Again, the interactional dimension is secondary: it is what happens *to* individuals, not what happens *between* them, that counts.) How *explicitly* villagers would apply Buddhist doctrine to this particular situation is problematic. Applications of Buddhist thought usually emerge only after villagers have been asked to think actively about and articulate justifications for the actions of people. Their comments are typically *post hoc* explanations that appear only when there is a necessity either to understand or ethically evaluate an individual's actions.

The above discussion was concerned with detailing some of the sources and supports of the loosely structured relationships that are found in Bang

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Chan. However, there remains the crucial question of how villagers manage to develop the long-term relationships that they do have, for despite the inevitable unpredictability of all human contacts, most Bang Chaners do live together in family units for more or less sustained periods of time, fathers do save for years in order to give their sons respectable ordinations into the monkhood, relatives and friends who have not seen each other since childhood do assemble for the cremation of a late kinsman or mutual friend, and mature adults do continue to feel a profound sense of respect and obligation to individuals who were their teachers when they were youngsters. What are the bases and rewards for these enduring interpersonal commitments?

The immediate rewards for these commitments are, on the one hand, quite apparent. They involve such things as the simple, unrationalized kind of love found among any group of kin or close friends. In the case of the ordination and cremation, there is the reward of making merit, not only for the son and the departed soul, but for all those who sponsor and participate in the ceremonials. The satisfactions gained from increasing one's social prestige by putting on an ostentatious ceremonial are not to be overlooked either. At a more subtle level in the case of the respectful student, the reward is gained from knowing that one is behaving in a proper and courteous way toward one's *aacaan* (in its social psychological connotations, similar to the Indian term *guru*) and is thus upholding established normative patterns. The rewards of maintaining the rituals of the moral order are not to be glossed over for Bang Chaners, like most Siamese, are a deeply ethical people. This is not meant as an evaluation of their behavior or as a statement of their capacity to conform to their ethical prescriptions, but simply as a statement of their preoccupation with ethical concerns. The rewards of *feeling* (genuinely or self-deceptively) that one has behaved in an ethically and ritualistically prescribed way are among the most satisfying of sentiments, although as indicated in the discussion of "social cosmetics," villagers often use the rituals of ethical behavior as substitutes for more demanding interpersonal involvements. Indeed, the great emphasis given to the performance of ethical rituals (speaking in soft and gentle words, honoring one's mentors) helps perpetuate the loosely structured relationships found in the community in that conformity to these rituals is perceived by many as comprising the fulfillment of their interpersonal obligations. Beyond this they are free to pursue their own interests. To a large extent the ritualistic forms serve as a comforting psychological justification for the pursuit of individualistic concerns, *i.e.*, "But I otherwise treat others so nicely." [20] This is not the result of conscious

[20] In one of his more recent and typically penetrating works, Goffman (1963) coins the terms "Involvement Shields," "Main Involvements," and "Subordinate

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*156 psychological manipulation. The frequency with which villagers evaluate themselves and others in terms of the performance of these rituals and the high frequency of rituals in actual behavior attests to the seriousness which Bang Chaners attach to them. Their compensatory nature in no way detracts from their importance to the individual. In fact, the precise opposite seems to be the case. Bang Chaners are a highly ethical people irrespective of the social psychological functions such ethics may serve.

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Less apparent than the above immediate rewards for fulfilling interpersonal commitments but perhaps the very factor that is common to most of them is the sense of reciprocity that is at the basis of all enduring relationships in Bang Chan. Reference was made to the *quid pro quo* nature of Thai social relationships at several points in the text. However, the importance of this consideration cannot be fully appreciated without realizing that the functioning of the entire Thai social system is ultimately dependent on it. Individuals become involved with others and do things for them because they consciously expect others to respond in kind. This applies to the relationships existing between family members who live together *because* such an arrangement is most advantageous to each; to the father who gives his son an ordination *in order that* the latter will make merit for him and feel obligated to care for him when he becomes old; to the friends and relatives who make merit for the departed soul *because* of the good things he had done for them during his lifetime; to the adults who feel obligated to their childhood teacher *because* of the knowledge, and thus power, he imparted to them. It might well be, as Mauss (1954 [originally

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[114] [121] Involvements" to describe in theoretical terms what has been analyzed here empirically. The major point of Goffman's concepts, and of his entire book, is that human behavior is typically polyphasic (people act one way and simultaneously think or feel another); that there are types and degrees of involvement with people, situations, and self; that situational behavior typically entails patterns of "deception" as ways of implementing disinvolvement (or, as he says, as ways "to conceal improper involvement and to affect appropriate involvement"); and most important that such patterns of "deception" are culturally—and not as heretofore assumed, idiosyncratically—phrased. His definition of "Involvement Shields" (p. 41) is particularly apposite to the discussion above: ". . . we think of involvement shields as one means by which the individual can maintain the impression of proper involvement while he is actually delinquent in his situational obligations."

Dealing mostly with American culture, Goffman does not of course analyze ethical rituals as a particular kind of "Involvement Shield." Americans favor other, more culturally distinctive patterns of deception. Also, he uses the term "involvement" in the same way that I have been using the term "commitment." Unfortunately, neither Goffman nor I say very much about the conditions, cultural or psychological, which determine whether a person is fully ("properly and appropriately") involved or committed in any particular situation or is simply shielding himself. However, I would argue on theoretical grounds that the *decision* is almost always idiosyncratic, the *actual behavior* almost always cultural.

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1923–1924], translated by Cunnison) and Homans (1961) have argued, that human relationships everywhere are based on just such a consideration, usually concealed by ethically palatable amenities (such as in American culture, from which most of Homans' empirical materials come). However, what is so intriguing about the Thai case is that *quid pro quo* factors are forever in mind as justifications and explanations of why people relate to one another. Although villagers, because they are such polite people, rarely say to others, "I am helping you because I know the day will come when I need your help," or "Do this for me because you owe me a favor," they do use such arguments *to explain* the basis of their ties: "Of all my friends I love Lek the most because she has done me the most favors (*bunkhuns*)"; "The purpose of marriage is to have a companion who will take care of you when you get sick"; "Of all my daughters, the one who gives me the greatest pleasure is the one who sells things. . . . When she gets money she gives it to me"; "Friends are very useful because it means that you have people who will do you favors. And when they need help, you will take care of them. This is love." [21]

One of the finest discussions of the nature of reciprocal obligations appears in a recent paper by George M. Foster (1961) that deals not with a Thai community, but with the Mexican village of Tzintzuntzan. Foster outlines in his paper the notion of the "dyadic contract" which he presents as a model for the social structure of Tzintzuntzan. Or, more precisely: "Specifically, I suggest a model . . . to reconcile the institutionalized roles which can be recognized and described in the community with the underlying principle which gives the social system coherence." Foster's focus thus differs somewhat from our psychological emphasis. However, his abstract statement of the "dyadic contract" provides such an excellent summation of the major factor making for enduring social relationships in Bang Chan that it merits quoting in detail here. There are of course inevitable differences in cultural content between the two communities and the fact that

[21] Such explanations are not unique to Bang Chan. In his description of the Thai–Lue village of Ban Phaed in Northern Thailand, Moerman (1962) observes: "The society of Ban Phaed operates in terms of something got for every something given. This is not merely an analytic device which permits a predictive, if crass, view of any human society. It is the way in which villagers explain and evaluate their own behavior. Favor for favor, visit for visit, meal for meal, one should return what he receives. 'We help our kinsmen because they help us. If a kinsman however close didn't help me, I wouldn't help him.' 'We care for our children when they are young; they will care for us when we are old.' Actions which we would justify in terms of compassion, generosity, public-spirit, patriotism, pride in a job well done, the Lue villager speaks of in terms of reciprocal, short-term self-interest. Their actions are no more selfish than ours. Far from it. But the moral rhetoric of a Lue villager is different from our own. In politics, economics, family life, and religion it focuses on something got for something given."

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114 status differences and the looseness of social ties loom considerably in Bang
* 156 Chan probably makes for some other structural variations.[22] However, as
171 stated below, Foster's formulation applies almost perfectly to Bang Chan
571 (1173-1176):

> The model appears to account for the nature of interaction between people of the same socio-economic status, between people of different statuses, between fellow villagers, between villagers and outsiders, and perhaps between man and supernatural beings as well. Although my analysis deals only with Tzintzuntzan, I think the model will prove useful for other societies with similar structural features . . .
>
> Briefly it is hypothesized that every adult organizes his social contacts . . . by means of a special form of contractual relationship. These contracts are informal, or implicit, since they lack ritual or legal basis. [This is not completely true for Bang Chan. There is, for example, a special "Teachers' Day," sanctioned by the national government, set aside for honoring teachers, and thus providing ritualistic reinforcement to the contract.] They are not based on any idea of law, and they are unenforceable through authority; *they exist only at the pleasure of the contractants*. The contracts are dyadic in that they occur only between two people; three or more individuals are not brought together. The contracts are noncorporate, since social units such as villages, *barrios*, or extended families cannot truly be said to enter contractual relations with other families, although spouses often honor the obligations inherent in each other's contracts.
>
> The implicit dyadic contract is made between members of a family as close as siblings [and in Bang Chan, as close as husband and wife, and parents and children] . . . ; and it unites neighbors and friends. Contracts are found between social and economic equals within Tzintzuntzan or with similar people in other communities. And they are found between people (or beings) of different status and category, as on those few occasions when outside political leaders or economic patrons have ties with villagers and when a villager invokes the aid of the
[776] Virgin Mary or a saint. [In Bang Chan, a functional equivalent of the
[782] latter would be when villagers propitiate the *caw*, or Spirit Lord,
[778] who resides in the *San Phra Phuum*, or house of the Guardian Spirit
of the home. This is a replica of a house, about the size of a bird cage,
[782] located in every house lot in Bang Chan. The offering of rice and
flowers to the *caw* is explicitly a form of payment to him for the use

[22] A second paper on Tzintzuntzan (Foster 1963) indicates that there are some crucial motivational differences as well, viz., Bang Chaners enter into dyadic contracts with a much greater sense of freedom than do Tzintzuntzeños. Their attitude is both more cavalier and cold-blooded than the Mexican peasant who feels that if he is to exist, he has no choice but to enter into these contracts. The Bang Chaner is animated by a sense of personal advantage; the Tzintzuntzeño by a sense of passive participation in a system he cannot change.

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of the land upon which the human home is built. In effect, humans have temporarily "rented" the land from him.]

. . . [The] contract implies and is validated by reciprocal obligations . . . [In] its totality the system of complementary reciprocity validates, maintains, and gives substance to the implicit contractual networks. The symbolic meaning of exchanges (as contrasted to economic and other functions) is accepted without question by all villagers: as long as a person continues to give to and receive from a partner, he is assured that the particular relationship is in good order. *When an exchange pattern between two people terminates, it is overt evidence to both that the contract is d[illegible]*, regardless of the formal institutional ties or the religious validation which may, in theory, continue to bind the participants. [Italics added.]

In anthropological analysis it is customary first to seek and attempt to identify the factors which link human beings together rather than those which keep them apart. This is so much a part of our professional tradition—in effect, one of our "primitive predicates"—that we tend to gloss over the question of the extent to which people must have enduring interpersonal commitments. This question has not been pursued in precise detail in our discussion. However, the realities of Bang Chan social behavior are so weighted in the direction of atomistic and essentially non-relational considerations that any coherent discussion of them should be organized in approximately equivalent terms. It is for this reason that the bulk of our presentation has focused on the individualistic nature of the villagers and that the factors accounting for interpersonal linkage were left to the end. It is hoped that such an organization has accurately reflected the tone and quality of Bang Chan social life as it is encountered and felt by an outside observer trying to understand its meaning to those who experience it.

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III

Methodology in the Field

*128 The discussion until now has been concerned with describing and interpreting aspects of the villagers' psychological life with little mention made of how these materials or those which follow were actually obtained. Since [21] one of the larger aims of this study is methodological (to present a method for dealing with some of the problems involved in designing cross-cultural personality research) and since the balance of the presentation depends directly on technical procedures, it is necessary to examine the nature of the data collection process itself. I will focus on three aspects of the research process: (1) the human beings involved (the villagers, the anthropologist and his assistants, and their interrelations); (2) the development and use of the Sentence Completion Technique in the field, including a discussion of translation procedures; and (3) the selection and nature of the sample.

12 Most of the foregoing discussion was not the result of a pre-planned methodological effort. Since I was dealing with data that emerge naturalistically from life's daily round, it seemed reasonable to impose few *a priori* methodological constraints on the investigation. My method was simply to try to be sensitive to *repetitive* and *culturally different* modes of behavior manifested by the villagers. Knowledge of the available literature and general knowledge of Thai culture may have helped, particularly with regard to the interpretations that were made. However, because both the observations and interpretations were made by a human being, it is inevitable that several of the factors discussed below should enter into my deliberations.

Field Research As a Social Event

Despite the entry into anthropological field work of what Kroeber (1955*a*: 307) called the "social science" tradition, the field situation remains a fundamentally human one where the kinds of data obtained, the willingness to provide information or to hold back, the types of interpretations that are made are all influenced by the personalities of the parties involved and how they perceive and deal with one another. The data that appear in most field studies are in part distillations of these complex interpersonal and

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intrapsychic forces, tempered by the investigator's capacity to see through them. Exactly what role they play in the fashioning of the final research product can probably never be fully determined since informants may not know or will not tell you what they "think" of you; and they are likely to be even less aware of how their thoughts have influenced their responses. Similarly, despite his training in self-consciousness, the investigator never has complete command over all the factors that prompted him to pursue a particular course of action in the field or an interpretive bent during the write-up. The problem is further complicated because there are numerous things which occur in the field that have little to do with the research as such, but which often impinge upon it, for example, an informant becoming markedly more aggressive during an interview when he learns that you have just returned from seeing a villager whom he dislikes. (This kind of information when it is available is not without interest. But no field worker is so omniscient as to have such complete knowledge of the likes, dislikes, and psychodynamics of every informant and thereby comprehend every turn in his behavior.) Yet, despite these ultimate limitations, the investigator can try to make as explicit as possible those human factors that he perceives as influencing the nature of the research experience. We will proceed from the relatively obvious to the more subtle considerations that bear on the materials being presented.

Villagers' Attitudes Toward the Investigators

Perhaps the major factor conditioning the villagers' attitude toward the research was the fact that other Cornell University investigators had worked in the community prior to my arrival. This meant several things: that precedents had been set for asking villagers personal and impersonal questions; that friendly, but generally not intimate, relationships had been established with several key villagers, notably those recognized as informal community leaders; that the villagers had come to accept the presence of Europeans as a normal part of their lives; and that our presence was seen as essentially a good thing. Not only were the *farang* (the Thai term for Occidentals) a source of novelty with their strange interests and long noses, as well as a source of prestige (for having singled out Bang Chan as the community being studied by "American professors"), but they were also a source of considerable practical help. Earlier Cornell workers had given funds to the Bang Chan monastery and school, had helped obtain vaccine to prevent a diphtheria epidemic, and had contributed added income to a few families in the form of rent for the "Cornell office" or salaries for the boys serving as the research team's boatmen. Perhaps the most important contribution the members of the research team made to the community, as

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123 perceived by the Bang Chaners themselves, was to act as a source of advice and practical knowledge. The kinds of counsel villagers sought from the field workers varied considerably. Some wanted help in deciding whether it was more profitable to raise chickens or turkeys; another wanted us to obtain information for him on the laws governing land ownership. However, some of their requests simply could not be met, *i.e.*, "Tell me some of the modern, scientific ways to get a woman to fall in love with you"; "Can you get me one of those 'machines' that prevents children?"

Not all villagers of course viewed the Cornell activities in these terms; the vast majority in fact accepted our presence with no marked sense of involvement of any sort. The *farang* and their Thai associates were perceived by this majority group simply as people with their own interests whose presence might prove beneficial, and toward whom one should behave tolerantly and cooperatively. Interestingly enough, during all the time I worked in the community I encountered only two cases in which villagers actively expressed disapproval or annoyance at "Cornell." In one case, a villager was deeply affronted because he felt that a Thai research associate whom he knew in the village had snubbed him during a chance meeting in Bangkok. In the other case, involving my own research, a villager complained that we had wasted his time asking him to take the Sentence Completion Test: "The questions they asked me had no use at all. They did not ask about food, or making a living, or anything important. I have more important things to do with my time." There may have been other villagers whose feelings were not too unlike those of this individual. However, this was the only case that came to my attention of a villager actually articulating his displeasure toward the research, despite my active search for any indication of negative attitudes on the part of respondents. In this connection, it might be noted that of the 123 villagers who were approached to take the Sentence Completion Test, only two gave us outright refusals. One, the Chinese tailor, said he could not handle Thai well enough (he was right) and did not like to talk to people; the other, a girl of twenty, would out of embarrassment run out the rear door of her house every time she saw us paddling up to the front. The generally open and accepting attitude of other villagers toward my research requests, however, was very similar to that given to earlier researchers, and was undoubtedly conditioned by the precedents they had established.

Given the above considerations, my entry into the community did not elicit any kind of special response from the villagers. For most, I was simply another representative of "Cornell" who had come to study their "way of life"—a friendly, interesting, and harmless soul who, if the need arose, might be of some help. If and when I came to visit them, they would find out precisely what I came to study and what I was like. But they clearly

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were not waiting for my visits with any keen sense of anticipation. The 123
dominant attitude was one of conditional acceptance which could easily turn to active, amiable interest once a face-to-face encounter had been initiated. In general, they expected me to initiate the contact. This somewhat passive attitude was in part a result of the feelings of *kreeŋcaj* (humbleness and self-effacement) that they had toward social superiors, a role they automatically assigned to me. In part it was probably also a legacy from the role of respondent (a person who reacts, rather than initiates) that they had developed with earlier field workers and which had become part of their normal expectations toward Cornell personnel. There were of course villagers who from the very beginning actively sought me out and tried to develop special kinds of relationships. The person who tried to sell me the idea of building on his land a newer, more expensive "Cornell Office" was one such individual. Less business-minded was the villager who occasionally would stop by at the office to tell me not to see any informants that day: he knew of a special ritual being performed that he thought I would be interested to see instead. Still another villager approached me with the proposition that he knew more about what was happening in Bang Chan than anyone else and that I should not believe what people told me until I had checked with him; I was never able to discover what this person's motives were, other than to satisfy his own self-image.

Several relationships developed that had little to do with the services we could perform for each other or even with the research itself but which seemed based simply on the mutual regard we felt toward one another. This area of "friendship" is perhaps the most difficult to talk about because its limits were always set, in some latent and undefinable way, by the facts of cultural differences. No matter how relaxed and enjoyable a relationship might be, it was always colored by awareness of the possibility that the other person might not understand. Potential lack of understanding, however, was not always detrimental: sometimes it helped to underscore the fact that *despite* possible miscommunication, we could enjoy and respect each other. Here "friendship" was based in part on the willingness to appreciate each other's differences.

What qualities of the author these villagers considered attractive—over and above the social and service characteristics he shared with other Cornell people—can only be surmised. It is clear that despite the fact that for most purposes villagers lumped all Cornell personnel into the general category of *farang*, many Bang Chaners made sharp personal distinctions among us. My field assistant, partly for his own amusement and partly at my request, asked a number of villagers for their opinions of the different *farang*. Included among his informants were some of the same people toward whom I felt especially close. (It should be noted that these "close

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123 friends" never numbered more than eight or ten people, out of a total population of 1,771.) Although their opinions differed in detail and covered a considerable range, they seemed to agree that I had a *good heart*. One villager said that he knew I had a good heart because children like me, "and children are only attracted to people who have good hearts." On the other hand, another more critical person said that my personality was just like that of a child, "because he always shows his feelings. He does not know how to be cool." The contrasts the villagers saw between myself and other researchers were particularly instructive. Of another field worker, an informant said: "he is not a kind person like *Aacaan* Herb, but he knows how to treat people in the Thai way. *Aacaan* Herb does not know how. He laughs too loud and does not use flattering words. He does not help me as much as the other person either." Yet, in contrast, another villager said: "I like *Aacaan* Herb because he likes me. He tells funny stories. He is not like some of the other *farang* who leave as soon as they get information from you."

123 The ultimate importance of these personal assessments are not easily
124 determined. One villager perceptively noted, for example, that although
[115] the "boss" of the Cornell team was a "good person," it really did not make any difference whether he was good or bad "because he is the 'boss' and bosses have to be respected." Of more direct relevance to the research was
[125] the fact that those individuals whom I counted among my warmest friends were not necessarily my best informants; in fact, some became inordinately anxious and evasive while taking the Sentence Completion Test and TAT. On the other hand, some villagers whom I had never seen before responded to these tasks with obvious enthusiasm. Even the villager who complained about my having wasted his time was a good informant, in the sense of appearing stimulated by and genuinely involved in responding to the sentence cues. It is clear, however, that villagers who liked me were the most approachable of informants, and were more ready, at least initially, to acquiesce to interview requests. The crucial factor here may well be the difference between responding to the field worker versus responding to the research; that is, even though all the respondents were originally induced into being interviewed as a favor to me—and their willingness was in part a function of how much they liked me—such favors did not necessarily carry over to the substantive purposes of the interview: reacting to my queries in a concerned and committed way. Thus, some informants went through the entire interview experience carefully fulfilling the interpersonal "obligation" but all but ignoring its content; others were so stimulated by the content that their initial attitudes toward me, positive or negative, became largely irrelevant. The vast majority of informants of course fell between these two extremes; and in no case were either the interpersonal or substan-

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tive considerations completely ignored. In this regard, it must be remembered that for much of the research I was dealing with informants who were selected not for their readiness to give revealing information but for their social psychological representativeness as adult Bang Chaners. Under such conditions, it was inevitable that there should be people who cared little about me or my purposes, just as there should be people who felt the precise opposite. 123 124

One aspect of the villagers' attitudes deserves special mention. This concerns their perception of me as an *aacaan*, or "teacher." This perception had significant effects, both positive and negative, on their behavior during the interviews. On the positive side, many informants were genuinely flattered by being asked for information that would contribute to "knowledge." Precisely how their thoughts and opinions might contribute to "knowledge"—or as I sometimes told them, "science"—was not too clear in their minds. But the fact that I was a "teacher" who had crossed the seas and would spend months asking them questions clearly indicated the seriousness of my business. This definition had a marked influence on their whole orientation to the interviewing situation in that they generally approached it with an attitude of earnestness, and on occasion, even solemnity. In fact, my "rapport time" with informants was very often spent in trying to mitigate their expectations about the interview so that they would respond to the substantive questions in a relaxed and easy manner. Usually these efforts were successful and the interview proceeded as a well-balanced combination of seriousness and *sanug*. The most frequent comment of informants after the Sentence Completion interviews was, "It was much easier than I thought it would be." On the negative side, however, informants would sometimes use their solemn definition of the interview as a means of resisting participation in it. Their resistances would take the general form of pleading that they were only ignorant peasants who did not know much about anything; that if I wanted a "true" picture of the way peasants "think," I ought to see more intelligent informants; that their information would "spoil" my results, and the like. Again, I was usually able to allay such protestations by emphasizing the simplicity and "sanug-fulness" of the experience. However, sometimes informants took me literally and produced responses which were "simply" literal restatements of what I had asked them or which had no intelligible relationship to the questions. Once, when I stopped an interview to clarify my purposes, an informant asserted, "But I am giving you simple answers"; in another instance the informant smiled wryly and said, "But I told you I was not very intelligent." A few informants were genuinely interested in the interview but simply lacked the wherewithal to deal with the material. If asked, however, to make a judgment on whether the villagers' perception of me as

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123 a "serious-minded teacher" generally worked to the advantage or disadvan-
124 tage of the research, I would definitely answer, "the former."

114 Perhaps even more important than the villagers' attitudes toward the author were their attitudes toward the Thai field assistants who worked with me at various times. It was through the field assistant that many villagers had their actual contact with the research and through him (or her) that I obtained a large part of my data.[1] Because the role of field assistant requires such distinctive qualities—"competence" in a foreign language, willingness to work with peasants and an appreciation of them, a desire to learn the way "other people" live—it was not easy to obtain or retain individuals to work with in Bang Chan. In a country such as Thailand where the term "social science" was virtually unknown until a few years ago, the position of "research assistant" simply offers no occupational future. Consequently, I had six different assistants working for me at different times during almost two years in the field. Two of these individuals were with me for less than three weeks. (One left the rice fields of Bang Chan for a position at the Thai Embassy in Rome; the other just did not like peasants.) Two were extremely able female graduate students in Education who worked only on Sundays and holidays, primarily with the younger village women. Out of both loyalty to me and a genuine interest in, almost love for, the villagers, they stayed on until the research was completed. The fifth, my major assistant, took three months to find, but he remained with me for fourteen months. When he left to work in Burma ("because I have never been to Burma") his place was taken by a very competent and sophisticated assistant district officer whom I "borrowed" from the Ministry of Interior. This last chap saw me through the life histories. Although he was excellent in the highly personalized setting of the life history interviews, his polished urban manner would have been too overbearing for the majority of informants during the earlier, more sensitive stages of the research. While this coming and going of field assistants,

12 [1] During the early stages of field work I was completely dependent on my assistant-
114 translators, despite six months language training prior to leaving for the field. Later, I gained enough control over Thai to participate actively in the interviews. In order to minimize translation errors, however, it was decided to conduct and record all formal interviews (those involving the Sentence Completion Method, TAT, and life histories) completely in Thai, and translate later. The reasons for this are more fully discussed below. In effect, this meant training the assistant to carry the burden of the Sentence Completion interviews, the first large block of the research. By the time we reached the life histories, the interviews were taking the form of the informant replying directly to both myself and the assistant. All formal interviews were based on carefully prepared schedules, including even such matters as instructing on seating arrangements. Only a portion of the total data of course came from these formal interviews. All the preceding materials, for example, were based directly on my own observations, or on the small but crucial verbal events that occurred outside the interviews and which actually comprised the interactive substance of day-to-day life.

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particularly that of the one who went to Burma, had considerable effect on me and on the continuity of the research, it appeared to affect the villagers not at all. In their less predictable world, such movement was quite customary. 114

Because three of the assistants were with me for substantial periods of time, a few words should be said about them as individuals and their role in the community.

My principal assistant was an individual whose own life history, although not unusual for Thailand, describes one of the most important and least known psychological types emerging in the newly developing countries of the world today. Born and reared in a Northeastern village, he came to Bangkok in his bare feet at the age of sixteen to fulfill a childhood dream of becoming a newspaperman. (He once said to me that "if the first *farang* who came to Thailand in the sixteenth century had wanted to study a village, they would have had to pick a village just like the one in which I was born.") After working on a road construction gang during the day and going to school at night, he accumulated enough money to support himself and to enter Thammasart University. While working as a newspaperman, he became ill, had to leave Bangkok, and took a job as a forest ranger in the North, which gave him considerable free time for writing. It was while he was in the North that I heard about him, and asked him to come down and work with me. While working in Bang Chan, he was able to reëstablish some of his old Bangkok ties so that after my departure, he and a wealthier associate established a publishing company, one purpose of which was to have an outlet for their own writings. He has since published a volume of short stories, and has undertaken with his colleague and others a field survey of Thai peasant oral literature. His ultimate aspiration at the time was to start the first newspaper in the Northeast, one addressed especially to the interests of Northeastern peasants. When we first met he had just turned twenty-five. 114 159

Despite his worldly experience, his primary reference remains that of a peasant, albeit a well-educated one. I have seen him discussing the beauty of a field of fresh growing rice with a group of Bang Chaners exactly as if he were one of them. Similarly, his spontaneous use of peasant idioms, fictive kin terms, and body gestures were indistinguishable from those of almost any Bang Chaner. He "knew" precisely when to take a villager by the hand or to place his own hand upon the villager's leg as a sign of affection. Even his wisecracks to the girls were perfectly delivered: cute enough to raise a titter but never broad enough to be considered offensive. Although some of these actions were prompted by his desire to get on good terms with the villagers, most of them were quite spontaneous. 114

None of this of course was lost on a people as socially perceptive as the

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114 villagers of Bang Chan. Although in their eyes he probably never ceased being identified in some ways with the *farang*, he was defined primarily as "one of us." He helped reinforce this definition by referring to himself and the villagers as "we Thai" or "we Thai farmers," as contrasted with the *farang*. Often, not out of any enmity but simply because he had a ready foil, he would make fun of my *farang* ways for the benefit of the villagers. It was conduct like this, repeatedly expressed, that permitted him later to ask the villagers their opinions of the *farang* without raising any eyebrows. On the other hand, when the need arose, he readily assumed the role of the gentle, guiding, probing representative of the research who, in his efforts to get the villagers to participate, would appeal to everything from pride in country ("Don't you want the *farang* to know the true way we Thai people think") to the principle of reciprocity ("We do a favor for *Aacaan* Herb by helping him pass his examination, and he helps us by bringing us fame").

The two female graduate students who worked part-time were not as distinctive as their male counterpart, but in their own way, were equally as effective in the research. One was the daughter of a high-ranking Army Officer School teacher; the other was the daughter of a low-level bureaucrat. In their early twenties, they had been closest friends during college and graduate studies. To a certain extent, they were prototypes of the upper-middle-class, college educated Thai female.[2] Confident about their professional abilities and aware of how much they are needed, they are caught in the conflict of whether to participate in "worldly affairs" and thus become independent and admired social leaders, or to become wives and mothers, and thus live in the shadows of their husbands. Their problem, unlike the case in the United States, is that both alternatives are equally valued and equally available and that because the social need is so great, they can actually become leaders with not too much effort. The conflict is further aggravated by the fact that they come from the social class that emphasizes a double sexual standard. At the same time as they are expected to be assertive and competent in their jobs, they are also expected to be sweet, docile, and compliant females. They resolve this conflict to a large

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[2] The daughter of the lower-level bureaucrat had this status by virtue of her own accomplishment, not her father's. In fact, one of the most touching scenes I ever observed in Thailand was when the girl's entire family assembled at Don Muang Airport to see her off to the United States where she had won a graduate fellowship. She had become the hope and pride of her family. Her mother, in the traditional cropped hair style of the Thai female and her mouth stained with betel juice, was trying to stand on the pair of oversized high heels that she had bought especially for the occasion. Tears were flowing down her eyes, both in pride over her daughter and because she could hardly walk on her first pair of "modern" shoes. My male assistant, in his inimitable way, turned to me and whispered: "Khun Maese [the honored mother] wants to be just like her successful daughter."

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extent by becoming succoring females—taking care of the less fortunate, seeking opportunities where they can help others, and the like.

The relevance of these remarks to the work of the assistants in Bang Chan is that they represent the attitudes the girls brought into play in their relationships with the villagers. In the eyes of Bang Chaners, they were well-educated, high status city girls who combined the finest qualities of the Thai woman. They were not only clever because they carried clipboards and spoke two languages but they were "good" girls who used "sweet words" and proper terms of address and "brought us medicine when we were ill. They knew how to help farmers." In contrast to my own practice—which was to give villagers aspirin only if they explicitly asked for help, or if the problem was more serious to plead incompetence—their actions were entirely spontaneous. In the same way, villagers would often wonder why after working all week at the university, these girls would spend their Sundays and holidays in Bang Chan. The answer was not hard for them to find: "These girls have much progress. They want to help the nation and themselves. So they come here and work for *Aacaan* Herb. This will help them go to America. And then they will have more progress." Although this motive may have entered into the assistants' decisions, a more important reason was the simple pleasure they derived from listening to villagers bare their problems and preoccupations. By giving of their time and interest they were fulfilling their own best image of themselves.

A final word should be said about the various relationships existing among the assistants and myself. The relationships that developed among the assistants themselves was perhaps the ideal Thai adjustment to the unique situation in which these three young, unmarried people found themselves: they began to treat each other like brothers and sisters. Theirs was not a perfect sibling relationship—not even in the fictive sense, for they were keenly aware of their differences in background and of the desirability of keeping romantic considerations out of the relationship. However, their very differences in background helped form a bond of mutual respect.

Their attitudes toward the author were more complicated. Although in many ways they treated me too as a sibling, their attitudes were forever colored by the fact that I was a *farang*. On the positive side, this meant that they respected me for my technical training and knowledge, and for my obvious concern about learning as much as I could about the villagers. By the same token, however, they would frequently become annoyed by my inability to see things which in Thai terms were obvious, or by my insistence on probing matters that in their terms were either unanswerable or better left unexamined. Their attitudes toward me were not too different

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114 123 from those of the villagers, except that because our relationship was considerably more sustained and intellectually stimulating (they wanted to know about the village almost as much as I did), it was more intimate and unguarded. My closest friend in Thailand was not a villager but my male field assistant.

114 *Investigator's Attitudes Toward the Villagers*

121 Anthropological field work has been referred to variously as "a period of stepped-up socialization," "the ultimate test of the value and limitations of empathy," and more simply "the most rewarding part of the anthropological endeavor." It is all these things. However, perhaps its most distinctive characteristic is that it is a period of intensified self-control. It involves the willingness to suspend one's normal and familiar patterns of behavior in deference to patterns which are appropriate to the culture being studied, or at least not too incongruent, and which are aimed at one's overriding purpose in being there: to obtain data.[8] The rewards of field work are of course immediately apparent: to encounter directly a different arrangement of the human experience. But field work also involves the psychological price of being temporarily willing not "to be oneself." There are of course numerous instances within one's own culture when one does not behave like "oneself," but simply assumes the pose associated with one's role. What is distinctive of field work is the highly *sustained* quality of one's "acting"; the researcher must be *continuously* concerned with tailoring his actions to suit others' preferences. The problem is complicated further by the fact that in field work the preferences of others are usually only slightly known; in fact, the discovery of such preferences is part and parcel of the very process of field work. Thus, the researcher tends to be even more hesitant and concerned with keeping himself under rein. It should be noted that "not [123] being oneself" is not identical with "not being true to oneself." Indeed, the ideal adaptation to the psychic requirements of the field situation may be to feel any way one wants to *feel* toward one's informants, but to be sure to *act* properly toward them.

123 My overt behavior toward the villagers involved assuming something of a social pose, but a relatively straightforward and simple one. I attempted to present myself as an interested, uncritical, and mildly bewildered young

[8] I am not speaking here simply of functioning comfortably in an alien culture. Cultures differ radically in the degree of conformity to or deviance from prevailing patterns that is permitted individuals; and in this respect, Thai culture is extraordinarily tolerant of personal deviance. However, this is not the same as living in a foreign culture when one's *raison d'être* is to induce members of that culture to coöperate, provide information, and confide in oneself. Here it is incumbent upon the outsider to make some adjustments in his normal behavioral responses.

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man who wanted their help for the sake of "knowledge." I came to Thailand because a very wealthy American who manufactured automobiles (The Ford Foundation) had decided to make merit by giving money to universities as well as to monasteries and hospitals; I had applied for a fellowship, and he had given me the money.[4]

In my actual contacts with villagers, I tended to be much more docile and unassertive than is my wont, often to the extent of appearing diffident. Although in the relationships with my assistants I did not hesitate to express my opinions and evaluations of things—often in an excitable and seemingly aggressive way, which is one of my "natural" and extremely non-Thai modes of expression—I tried to keep my comments to villagers free of any evaluation. The only time I really let myself go was in laughter, which villagers liked but which they sometimes thought was undignified. To the countless little frustrations that occur in the field—spending an hour with an informant "making rapport" only to be told that he was too tired to take the TAT; seeing an informant get up at the high point of an interview, say "I must go," and simply leave—I responded either with giggling or stoicism, never anger. This latter posture was particularly difficult to maintain. When the owner of the "Cornell Office" asked me for three times the agreed upon cost of rent and board, I answered first by giggling and then by changing the subject, although neither was in any way representative of my genuine feelings. I later paid the original amount through a go-between, and nothing further was said.

Not all my behavior was oriented toward controlling such feelings, and not all of it was by any means intended as a disguise. In fact, the role of being an "interested, uncritical, and mildly bewildered young man" was not only the best way to present myself to the villagers from the point of view of effective research, but was often the way I felt. (The bewilderment was effective to the extent that it often elicited clarifications and specifications from informants who wanted to be sure I understood.) Similarly, my expressions of laughter were quite consistent with village patterns, and they could not easily be feigned. Perhaps one of the most enjoyable aspects of the pose was when I provided villagers with accurate and truthful answers to questions they might ask, but in an idiom that I thought would be most meaningful to them, *e.g.*, Henry Ford's merit-making activities.

[4] The source of my funds was of never-ending interest to the villagers. One Bang Chaner said he understood what the source of my funds was, but did not quite understand how I actually obtained them. "How does the money get into your wallet?" I explained that prior to my departure from the United States, I made arrangements with my benefactor's secretary to have the money deposited in a bank in Bangkok. And whenever I needed money, I would write a check and obtain the *baht* equivalent of the amount I had written. At this explanation, the villager broke out into a broad smile and said: "That's wonderful. It sounds just like Communism!"

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123 My attitude here was not patronizing, any more than was theirs when faced with a culturally complicated question from me. Such rephrasings were simply easy and "sanug-ful" ways of communicating our points.

An investigator's feelings toward the people whom he is studying, as distinguished from his overt behavior, are significant only to the extent that they might affect the nature and interpretation of his data. It is the writer's belief that except where indicated, my feelings toward the villagers did not influence my description of them in any significant way. However, because I am dealing here with rather subtle materials and because, irrespective of intentions, personal feelings can be insidious in their intrusion, a few words should be said about my sentiments toward the villagers.

My dominant feeling toward them was shaped by the intellectual challenge they presented me. There were things they did that I simply did not understand, that I struggled with for months, and only some of which
*[156] resulted in solutions coherent enough to be presented here. There were other things they did that I never managed to comprehend, but which I just came to respect as their way of functioning, *e.g.*, a villager stopping himself in the middle of a conversation and, without a *single* word of explanation, leaving. What was "incomprehensible" was not only that he did this, but that the other villagers in attendance accepted his behavior as thoroughly normal. When asked how they felt about his leave-taking, the answer was almost invariably, "*Chəəj-chəəj*" (cool, indifferent). When asked more precisely, "Well, weren't you surprised by his suddenness; that he just turned his back and left?", they answered, "No, he must have had somewhere to go." What was "challenging" here and in the literally hundreds of other events of the same order was that the act was contrary to one of my most fundamental *assumptions* about the nature of human contact: in this case, that there should be some cue indicating the imminent termination of the relationship. Perhaps there was a cue, but one so subtle as to be impossible for me to spot. However, it was events of this kind, occurring week after week, that made the research the intellectually exciting experience it was.

On the less cerebral level, my feelings toward the villagers were more ambivalent. On the negative side, I was annoyed by their unabashed self-seeking, their manipulation of each other as well as myself, their ambiguity, and the relative lack of trust that many of them had in others, even those who were supposedly closest to them. Much of this was explicable in terms of their life histories and, to a lesser extent, in terms of their poverty; nonetheless, they were realities which I as a human being (as distinguished from an anthropologist) reacted to subjectively. On the
*[156] positive side, I admired them for their easy acceptance of themselves, for their down-to-earth quality, for their tolerance of others, and for their use of social forms, which, although often lacking in depth, emphasized the

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dignity of each person. Particularly attractive were the older villagers who, having made their peace with life, would freely articulate their thoughts and feelings about themselves and their world. 123 [156]*

Again, the relevance of these personal, subjective considerations to the research results is problematic and I would hope inconsequential. They have been presented here because despite its avowed purpose, field work is always both a human experience and a research experience.

Fashioning an SCT For Bang Chan

In this section we shift our attention from the human and interpersonal dimensions of field work to the more technical area of the development and application of the Sentence Completion Technique in Bang Chan.[8] 125*

To begin, it is well to keep in mind a few important historical considerations. The Sentence Completion Technique (hereafter referred to as the SCT) comes out of an intellectual tradition whose premises and intellectual style the author is familiar with but does not necessarily share; that is, the SCT was developed and has been used almost exclusively in the context of the "testing and measurement" tradition of clinical and educational psychology. This was a tradition, beginning with the work of Galton during the latter part of the nineteenth century, that appropriately emphasized the precise and objective measurement of human capacities and traits but which, as it developed through the years, tended to make "the test"—a shorthand, simplistic, preferably quick and self-administered summary of the traits or persons being studied—an end in itself. The I.Q. test, with its single numerical summary of a person's mental capacities, is perhaps the ultimate expression of this tradition.

The individuals who developed and refined the SCT (originally Payne 1928 and Tendler 1930; in more recent years, Rotter 1951, Sacks and Levy 1952, Levy 1952, Holsopple and Miale 1954, Burwen, Campbell and Kidd 1956, Trites 1956, Zimmer 1956, Benton, Windler and Erdice 1957, and Rohde 1957) have all operated in terms of this intellectual orientation. Reading their work and other SCT literature reveals a recurrent concern with how the SCT should be administered and coded, with whether short items are better than longer ones, with what other tests and measures the instrument should be correlated, and the like. However, *nowhere* can one find a statement of why the test works (to my knowledge, the discussion in this book is the first to be addressed to this question) and no one, except Hanfmann and Getzels (1953) and Davids (1955) raises the crucial issue

[8] The basic *theory* behind the Sentence Completion Technique and the rationale for the analysis of the research *results* are presented in the next chapter. Our concern at this point is more empirical and focuses on the actual construction of the instrument for use in Bang Chan and on some of the problems and resolutions encountered in its application.

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When the final version of the instrument was ready for informants, there were thirteen general categories, although not all were of equal significance in the lives of the villagers, and were not equally productive of meaningful data. These thirteen categories were: 125*

Aggression: Causes and Reactions	Attitudes Toward Authority
Achievement-Failure	Dependency
Reactions to Crises	Self-Image
Dominant Drives and Aspirations	Anxiety: Causes and Ways of Handling
Kinship Relations	Orienting Toward Others
Psychological Isolation	Love, Sex, and Marriage
Notions of Good and Evil	

Because not all categories were equally revealing (the "Notions of Good and Evil" category, for example, was singularly unrevealing, perhaps because it is such a ritualized area of Bang Chan life) and because some categories can be merged with others (for example, "Reactions to Crises" fitting with "Anxiety") the final analyses will focus only on seven major categories.

The second and most time-consuming stage involved the assembling, ordering, and translation of the actual SCT items. In research of this type, there are always more questions to ask than there is time to ask them. My first draft of potential material, for example, included as many as 350 items. After considerable pruning, the number of questions was reduced to 144. However, 144 items were still far in excess of what our otherwise coöperative Bang Chaners would be asked to bear; ideally, no more than an hour should be spent on the formal portion of any interview, and for some "sanug-fully"-oriented villagers, even this was too long a stint. It was decided therefore to divide the 144 items into two schedules of 72 items each. Although the number of individuals responding to identical stimuli was consequently reduced, it provided broader coverage from all informants on each of the areas covered by the SCT, and increased the certainty of the interpretations and judgments. Because the items on the two forms are different in specific intent, they cannot be considered "reliability" checks of each other, in the strict meaning of the term. This would require the two forms to be precisely analogous.[6] However, because they cover

[6] Actually, any attempt to apply the notion of "split-half," "inter-item," or "inter-form" reliability to an open-ended technique such as the SCT creates more methodological problems than it solves. This is because even the slightest change in an item —for example, the difference between the articles "a" and "the"—can change the semantic and psychological value of the sentence fragment. Notice, for example, the difference between the following three items: *"He wants his son to be . . ."; "He wants his son to be a . . ."; "He wants his son to be the. . . ."*

From the point of view of methodological theory, a "test-retest" reliability check would probably be the more sensible form to apply in the case of the SCT, although

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* 125 different facets and dimensions of the *same* problem areas, they do serve as useful checks on one another at a more general level of interpretation. The assigning of specific items to Form A or Form B was largely arbitrary.

One of the most important and, as it turned out, intriguing tasks of the SCT construction involved the arrangement of the various items into an interview schedule.[7] I wanted the interview to be an interesting, non-threatening, and not overly difficult experience for informants. Thus, it was necessary to motivate them to "take" the interview, in the sense of

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this procedure too has its disadvantages. I tried to implement such a check in Bang Chan, but was unable to carry it out because of suspicion on the part of informants. That is, I selected a dozen items from each form, and approached informants who had responded to the same items when they took the complete form at least two months earlier. Three of the first four informants we spoke to replied: "Didn't you like the answers I gave you the first time?"; "I gave you true answers before. Now I can only lie"; "The answers I gave you the first time were right; do you want me to give you wrong answers now?" Since these informants all but told us that they would aim for qualitatively different responses, the reliability value that such a retest might have seemed minimal. When we tried a different tack and explained to an informant that we had "lost" the responses on these twelve items from his first test, and wanted to be sure we had a complete record of that interview, he guffawed and commented: "But that was three months ago. I cannot remember what I told you then. The answers I give you now will have to be different." This individual did acquiesce to our request for a retest, and in perfect fulfillment of his own prophecy gave responses that were strikingly different from his earlier version.

On the other hand, a genuine error on our part did reveal something of the stability of informant responses over time. During the final weeks of field work I was checking all my protocols and discovered that the protocol of a particularly interesting villager was missing from the SCT file. This was approximately thirteen months after he had first taken the SCT. The informant was especially friendly with us and unlike the individual above, acquiesced to our request for a retest with obvious pleasure. Later, when I was packing my field notes, I discovered his original SCT; it had been mistakenly filed with some other materials. Considering that more than a year had gone by, his responses on the two protocols were amazingly similar. Following, for example, are the "before" and "after" responses to the first three sentence fragments, all "aggression" items:

"He is most annoyed when . . .": his peace of mind is disturbed and when distasteful feelings pass across his mind, *versus,* he wants to concentrate, but some other feelings disturb him and don't let him concentrate.

"When he gets angry, he wants to . . .": let off his anger in a suitable way; maybe it is bad or maybe it isn't bad to let off one's anger. *versus,* do something to let off his anger.

"When he insulted me, I . . .": felt displeased, as it was natural, and wondered why he insulted me, *versus,* I was displeased and annoyed with the person who had insulted me.

[212] [7] All the SCT's were administered orally, rather than in written form. This was necessary not only because 40 percent of our potential informants were illiterate, but because among the 60 percent who could "write," the very process of writing creates additional psychological obligations: the necessity to write in a beautiful hand; to phrase one's thoughts in an appealing, and even poetic, manner; to be sure that one's spelling is correct and that one does not smudge the paper. Many villagers perceive written messages as having a reality and value of their own, as contrasted with speech, which dissipates itself almost immediately after it is articulated. (See Sjoberg 1960: 285–293 for an excellent discussion of the social psychological significance of writing in peasant societies in general.)

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becoming psychologically involved with it; having accomplished this, it was necessary to sustain their interest; and should they become tired or bored toward the end, it was necessary to rekindle their attention to see them through to the finish. With these ends in mind, I had my assistant divide each form of the SCT into two equal groups of "easy" items and "difficult" items. The 72 items were then ordered so that the easiest item became item number 1; the next less easy, item number 72; the next less easy item number 2; and so on. The most difficult item in the schedule was number 36. Thus, the final interview took the form of following a progression from easy items to difficult ones back to easy ones. The position of an item was occasionally changed if the answer to it could conceivably affect the answer to an item which came later.

What was perhaps most surprising about this entire procedure was my assistant's perception of "easy" and "difficult" items. He had selected as the opening item of Form A, *"He was most afraid of . . . ,"* and as the opening item of Form B, *"When he insulted me, I. . . ."* When I pointed out to him that the opening items of the interviews should interest and relax informants, not threaten them, he answered that all the Thai peasants he ever knew, which were considerably more than I knew, think about being afraid and insulted "all the time," and that it was very "easy" for them to express their feelings of fear and their response to insult: "these are things that happen to them everyday." I then pointed out to him some of the items I would have selected as "easy" items, if I had ordered the schedule myself. I immediately chose, *"He wishes he were. . . ."* The assistant smiled, and pointed out that this was perhaps one of the most difficult items—he had placed it in the 47th position—because Thai villagers find it very difficult to think about the future or about being something other than who they are. He agreed that many of them want to be something other than who they are, but they cannot think about it too long because it worries them "and gives them a headache." Assuming that at the time he knew the subjective side of his culture considerably better than I did, I went along with his selections.

Very early in the research it became apparent that language was the lifeblood of much of the project, and that considerable attention would have to be devoted to translation procedures.[8] However, the significance of the translation process in affecting the quality of my data did not really strike home until I actually began the task of translating the pretest SCT items from English into Thai. This was only half the task: the informants' *responses* would also have to be translated later from Thai into English.

At first glance, there was nothing seemingly complex about the transla-

[8] An expanded version of the following discussion on translation originally appeared in Phillips 1959–1960.

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*125 tion assignment. Since the SCT items described very basic human experiences, and since I had tried to select items which would be appropriate in any culture, I expected the job to go relatively quickly. It soon became clear, however, that even "very basic human experiences" resist quick translation. Using two translators, I first tried the usual technique of "back-translating": one person translated the items from English into Thai, his Thai version was then translated back into English by the other person, and the two versions were compared. The results of this procedure, however, were so dismal that it was abandoned after a dozen items. It was obvious that the majority of the translations were not coming through accurately, but the source of error could be discovered only after prolonged discussion. Items that originally read *"He often daydreams of . . ."* or *"Sometimes a good quarrel is necessary because . . ."* appeared in the retranslated versions as *"When he sleeps during the day he dreams of . . ."* or *"Sometimes a quarrel brings good results because. . . ."* (This last item later proved to be utterly untranslatable. After much discussion the translators decided that although it was conceivable that an American might enjoy a quarrel for its cathartic effects, the notion would be incomprehensible to a Thai.)

In order to save discussion time and to profit from the accuracy of a consensus, the following procedure was substituted. Both translators, working independently, translated the remaining items into Thai. All items which were identical in every respect were set aside. The assistants then discussed among themselves the balance of the items: what their English intent and meanings were and how these could be best communicated in simple Thai. If after fifteen minutes they could not reach agreement on a particular item, they were to put it aside for later discussion with me. By combining my limited Thai with what I hoped were proper probes and with the translators' explanations of why they originally disagreed and now agreed, I decided on the acceptability of the items; in effect, this step substituted for the English retranslations of "back-translating." The whole procedure took approximately a week and a half.

The items on which they could not agree were considerably more difficult to handle. For one thing, they required more than three weeks' discussion. The differences between the translators were always small, but crucial. For example, in the item, *"His most attractive quality is . . ."* there is no Thai equivalent for "quality." There are terms for "inborn personality traits," "behavior," "manners" (politeness, etc.), and "physical characteristics." One translator was sure I meant "behavior," the other, "manners," and during their disagreement the other alternatives did not even occur to them. It took a half-hour to tease them out. Sometimes the translators could . . . come to any decision: there is no way to say in Thai, at

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*125 of whether the test—or *any* test—is really th best way of investigating what the researcher wants to know.

I raise these questions because my use of the instrument does not presuppose that the major value of the SCT derives from its being a "test" in the sense of providing a neat, easily administered, and easily scored synopsis of the villagers' predispositions to behavior. (Of course, some psychological testers would point out that because the instrument lacks norms it should not be considered a "test" at all.) Rather, I have used the instrument because it possesses certain characteristics that enabled me to obtain a kind of data that I could not have obtained as efficiently by other means, *viz.*, the villagers' internal views and definitions of a series of relatively unstructured but highly realistic psychological situations, presented in a manner that created a minimum of anxiety and resistance. Beyond this general consideration, and the fact that it uses "suggested" rather than direct questions, the SCT is essentially no different from other interview procedures. Perhaps the only thing that it has in common with a "test" is that all the "questions" are asked at the same sitting.

Construction of the SCT

There were three major stages in the construction of the SCT. The first stage involved the specification of the various problem areas to be covered by the technique. On the basis of the available literature on Thai personality, it was apparent that three areas—aggression, dependency, and attitudes toward authority—loomed particularly large in the psychic lives of most Thai, and that items descriptive of these areas should be included in my version of the SCT. Too, during my early months in the field, there were several facets of the villagers' behavior that were mystifying—for example, the mechanisms they used in orienting themselves to other people—and it was decided to include items which would tap such areas. Most of these items were derived from the events and conversations of the workaday world: the villagers' repeated use of the phrase *maj daj* (I cannot do it; I am not able; I do not know how); their ambivalent attitudes toward *nagkleengs* (the aggressive, daring, sometimes bullying individuals who speak their feelings from their hearts). It should be noted that although these items were derived directly from Bang Chan culture, a concerted effort was made to phrase them for the SCT schedule in more universal, non-culturally specific terms. In addition there were several specific items which were standard fare on most versions of the SCT, but which seemed to represent universal psychological issues or problem areas, that is, "He is most afraid of . . ." (anxiety); "He often daydreams of . . ." (psychological isolation).

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least in a half-sentence, "*He feels frustrated when. . . .*" This item, along with three others, was eventually rejected. 125*

Before the items were finalized, they were all reviewed by an American linguist thoroughly conversant in Thai. Despite all our previous efforts, he suggested lexical changes in approximately thirty items and pointed out a basic but easily remedied grammatical flaw (with semantic implications) which ran through almost the entire test.

For the more time-consuming task of translating the villagers' protocols back into English, I managed to obtain the services of two urban Thai translators, both graduates of British universities. The only contact these translators had with informants was through the SCT responses. The theory and method of the test was explained to them as was a list of twenty instructions which were to be used as translation guides. (These are described in Phillips 1959–1960.) After each test was translated (the translator working independently of his colleague and the author), it was checked by me for ambiguities, multiple meanings, and statements that simply did not make sense. These questionable items, which averaged approximately one-third of each test, were then analyzed and discussed by the author and a third person and when necessary, changed or qualified. Thus, responses that were originally translated as "*Most high government officials are . . .* kind people. They speak nicely, but some of them don't" or "*People have to help each other because . . .* of humanity's sake" became, after analysis, "kind people. They speak nicely (use nice-sounding words), but some of them don't" and "of humanity's sake (because it is in the nature of human beings, because they are human, to help each other)," respectively. Each test took an average of seven hours: three hours for the translation, one hour to check, and three hours to clarify questionable points. After about eighty of the tests had been completed, the translations started to become very sloppy and their clarifications more difficult, so that toward the end it took a minimum of ten hours per test. [114]

One of the more important and perplexing decisions that had to be made during the translation process was how to label the hypothetical individuals referred to in the various SCT items. The decision was important because of the controversy surrounding the question of whether the SCT is truly a "projective technique"; that is, a technique which not only induces individuals to reveal their needs and wishes, but which induces them to do this unknowingly. It is argued that materials obtained projectively are less guarded and less censored than those derived from more direct techniques. The identity of the hypothetical individual described in the sentence fragment enters into the controversy in that the informant's identification of him directly affects the "projectability" of the item. Thus, it is asserted that if the individual described in the item is referred to in the

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*125 first person singular—*e.g.*, "When he insulted *me*, I . . ."—the informant will realize that he is describing himself, and the projective advantage of the item will be lost. On the other hand, if the individual described in the item is referred to as "John," "him," "people," or some other hypothetical soul, the informant will be less aware that he is describing himself, and the projectability of the item will be maintained.

In my own work, I never became convinced that the SCT would operate as a "projective technique" in the terms just outlined. I would argue that the data elicited by the technique is indeed less guarded and less censored than data obtained by more direct investigative methods, but this is a result of the linguistic structure of the SCT, not of its projective capacity, if what is meant by "projective" is that informants are unaware that they are talking about themselves. This conclusion about the SCT is based primarily on theoretical considerations, but it is also heavily influenced by the distinctive nature of my own research medium, the Thai language.

*125 193 196 In fact, the "special" nature of Thai almost precluded the SCT operating projectively in the terms described above. That is, in ordinary Thai usage, pronouns and proper nouns are often not used. In linguistic terms, they represent "optional" rather than "obligatory" grammatical categories, with the semantic context accounting for any seeming confusion. When they are used, however, they function as specifying and explicating devices: to single out the person or persons referred to from a larger, ambiguous social "field," and thus *distinguish* him or them semantically. This specification function is further enhanced by the fact that all Thai pronouns have associated with them an attribute of social status, and some are associated with an attribute of group membership, *e.g.*, *khon raw*, which may mean either its literal English translation, "we people" or "I who am a member of an unspecified group as distinguished from you, who are a member of another unspecified group." The significance of all this is that when pronouns and proper nouns are used, Thai are considerably more attentive to their referents than are English speakers to theirs, and they tend to take them more literally.

Because of this Siamese sensitivity to "active" pronoun usage, I decided not to use the Thai equivalent of the hypothetical "John" or "Mary" (villagers would wonder precisely which "John" or "Mary"), or the first person singular forms, *phom* (used by males) and *chan* (used primarily by females, but often by males). These last two would not only reduce the supposed projective quality of the item to nothing, but would appear excessively awkward in an SCT item; using them would be akin to saying in English, "When he insulted me myself, I myself. . . ." Of the remaining Thai pronouns, those most frequently used in the SCT items were *raw*

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("we" or "generalized I")[9] and *khon raw* ("we people"). However, I used two other terms, *khon* ("people") and *khaw* ("he," "she," or "they") in those items most descriptive of the expression of ego-alien sentiments: that is, those sentiments which, on the basis of my knowledge of the villagers, I expected to be most readily denied as being self-referring. Thus, an aggression item read: *"Khon most often get angry when . . . ,"* instead of *"Raw most often get angry when. . . ."* To simplify matters for the reader, later SCT materials which list both the original English language item and the English translation of the Thai translation will also include the Thai pronouns that were used in the various items.

The third stage of the SCT construction involved the pre-testing of the SCT schedule with ten villagers. A major aim of these trial interviews was to examine the quality of all the items. I was particularly concerned with how well informants understood the items and with identifying those items which interested them, those which required revision, those which brought forth revealing material, and those which elicited useless information.

The second purpose of the pre-test was to train my assistant in how to conduct the SCT interviews. Of principal concern was to try to minimize the effects of the interpersonal situation on the informant. Such effects can never be fully cancelled out, but they can be controlled to the extent of insuring that the data obtained represent the informant's product, not the product of ideas the interviewer might introduce into the situation. The major task of the training period, therefore, was instructing of the assistant in elementary interviewing techniques.[10]

The instructions also included such considerations as seating arrangements: try to locate the informant so that the canal—where people paddle by and can be waved to—is in our line of sight, not his. Ideally, he should be able to observe only the interviewers. If interviews are to be conducted in boats (later, eight of them were) the boat should be pulled off into one of the canal tributaries to minimize the disturbance from canal traffic. In general, privacy can be obtained by telling informants that since we wanted

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[9] *Raw* as a "generalized I" is not as ear-catching in Thai as it is in English. Thus, although *raw* can always mean "we," it is a perfect synonym, not a substitute, for "I" when the speaker wishes to indicate less self-reference. Another way of putting it is that when it is used to mean "I," the ordinary "we"-"I" contrast is psychologically inoperative; *raw* simply becomes an attenuated form of "I."

[10] The techniques which I had the most difficulty impressing on my assistants concerned such seemingly simple matters as the following: never afford the informant any hint of a response; if his first few responses are wild, repeat the instructions, and pick up the interview where it was left off, adding the items with the strange responses at the end; do not hesitate to encourage the informant with comments such as "that is fine"; if the informant gives funny responses, smile but do not laugh; if he is hesitating too long on an item, simply repeat the item as a prod; if he does not respond after three repeats, go on to the next item, and the like.

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each person's own ideas, not those of other family members, it would be best to find somewhere we can be by ourselves.[11] Every informant in the sample eventually accepted our request for privacy with complete understanding. Also, it was usually easy to find an isolated spot: underneath the house, a buffalo shed, in a grove of trees, or if necessary in the boat. However, because Bang Chan notions of privacy do not apply to children, approximately one-third of the interviews were conducted with children in attendance at one point or another. The first time a child appeared, we made an attempt to shoo him away. This, however, was usually futile: he would leave and then return; only the boredom of our adult conversation would eventually drive him away. In the case of nursing children, we would always wait until the mother was free, although if the child wanted the breast during the interview we would simply continue and "ignore" his presence; his mother seemed to, at least at the conscious level.

One of the more important administrative tasks of the pre-test was to try out various instructions that would be given to *informants* on how to take the SCT. During these trial interviews, we experimented with various versions of the "introductory remarks" and settled on the following as the version to be used with our final 111 informants.

After explaining to the informant that we had come to chat, and after having chatted (which varied from ten minutes to two hours, depending upon the subject matter and the mood of the informant) we reminded him that I had been sent to Bang Chan by Cornell University to study the life and thought of the Thai people: "My professor sent me, and when I return to America, he will examine me on the information that I have gathered. So I would like to ask you for your *personal* help. I know that you can help me and can give me a true picture of the life and thought of Thai farmers. And [with a giggle] I think you can help me pass my examination." At this point, during the regular interviews, I would remind the informant that a few weeks earlier the abbot of Monastery Bang Chan had, on a ceremonially auspicious day, supervised the lottery from which the names of my informants had been selected: [12]

> *Aacaan* Phuang supervised the ceremony and your family was one of the families chosen in the lottery to be interviewed by me. Both *Aacaan* Phuang and I thought that this was the best way to select

[11] Informants were also asked, on the same grounds, not to reveal the items or their responses to other villagers. We are certain that there were several who ignored our request—not out of malice but simply because it was not that important to them. However, since there were so many items on the schedule, covering so many different areas, I doubt whether their reports to other potential informants biased our results in any substantial way.

[12] I am indebted to Robert B. Textor for having originally suggested this method of selecting part of my sample.

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families if I am to obtain the true picture about the people of Bang Chan.

I have something here that is like a game or a puzzle. It is a list of sentences about things that happen every day in life; just plain, ordinary things. These sentences, however, are not complete sentences. They are only half sentences. I would like you to finish these sentences for me. For example, take the sentence: *"When it begins to rain, he. . . ."* I would appreciate your finishing this sentence with anything that comes to your mind. The only thing I ask is that your completion makes sense: that it fits with the first part of the sentence.

You can make your completions as long as you want; the length of a sentence is unimportant. I want to tell you that with these sentences there is no such thing as a right completion or a wrong completion. All I would like is your own idea on what the completion should be. I expect that different people will give different completions, so all I want is your personal opinion.

I am going to ask other people in this family—except the children, of course—to complete the sentences. But we would like to ask each person one at a time, individually and privately. So I wonder if we can go somewhere where we can have privacy. But before we begin, why don't we try a test sentence. Tell me the completion of the following sentence: *"A boy, crossing a bridge, was showing off to a girl, and he fell into the canal, so he. . . ."*

The Selection and Nature of the Sample

The 111 individuals comprising the SCT sample represent an 11 percent stratified sample of the adult population of Bang Chan (persons over twenty years of age, or 989 of the 1,771 villagers) on four major variables: age, sex, religion, and economic status. The sample is based on a village census gathered by earlier Cornell University researchers and brought up-to-date by me during my first few months in the field. The economic status variable is based on judgments made by the seven hamlet headmen and fourteen assistant hamlet headmen living in Bang Chan, and thus represents an "inside," nonobjective view of a family's economic position in the community.

Several factors entered into the decision to select the sample on a quota rather than random basis. Most important was my decision to select informants from only two of the seven Bang Chan hamlets. This in turn was based on the need to save time. During the period that I was working on the census and traveling through all seven hamlets, I noticed that I was actually spending twice as much time on travel than I was spending with

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*125 124 informants. This was due to the widely dispersed nature of Bang Chan homesteads and to the fact that the headmen and assistant headmen for whom we were looking often were not in, requiring that we return a second and even a third or fourth time. (Appointments in the village can be made, but they are almost never kept.) There was no reason to suppose that regular informants would live any closer to the Cornell "Office," or would be any more homebound than these individuals. Since it was imperative to get on with the research, I decided to select the sample from the hamlet in which the "Office" was located and the one immediately adjacent to it. Although these two hamlets appeared similar to other Bang Chan hamlets in most respects, they contained a larger percentage of wealthier villagers, a smaller percentage of poorer ones, and more Moslems than did other hamlets. Since at the time I thought that wealth or religion might be crucial variables—for example, on such SCT items as *"The most important thing in his life is . . ."*—and since, if I had selected a completely random sample from these two hamlets I would probably have obtained too many Moslems or too few poor villagers, I decided to invoke quota considerations in the selection of informants. As it turned out later, after the data were gathered and examined, there were no notable differences in the responses of informants from different economic or religious categories to these and to most other items. This is one of the reasons that the data below are being handled in modal terms, rather than in terms of intra-sample differences. Also, my sample was much too small to consider such potential differences as anything more than heuristic. However, at the time I felt that it was necessary to have the representation on these particular variables absolutely correct.

Another factor pointing to a quota sample was the desirability of having some Buddhist monks as informants. Since on a random basis, the likelihood that any monks would have been in our sample was literally 1 in 296, it was decided simply to ignore chance considerations in order to include some of these individuals; seven of the SCT informants were monks. Similarly, there were other villagers with special attributes that I felt merited inclusion: the two male school teachers were two such individuals, as was the villager who had a reputation for being a *nagkleeng*. A young man who had been to Korea with the Thai army was also such a person.

To a certain extent, random factors did enter into the inclusion of a number of informants in the sample. This was one of the functions of the lottery, referred to earlier, conducted by the abbot of Monastery Bang Chan. However, the persons chosen by lot served mainly as a "core" group from which to select those individuals who would fulfill the criteria that had been established. When the persons in this group had been exhausted

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in terms of meeting these criteria, or when they were no longer available,[13] I went to other villagers. All told, 64 percent of the sample (72 of the 111 informants), equally divided between the two forms of the SCT, were chosen from this "core" or randomly selected group.

[13] During the SCT portion of the research, 20 percent of the households originally selected for interviewing in the lottery in effect dissolved. Note that the units of the lottery were households, not individuals. The reason for this was twofold: (a) I had originally thought of the possibility of doing some intra-familial comparisons, and wanted to be sure I would have the data should such comparisons eventually appear worthwhile; (b) more important, because of the possibility that older members of families would feel affronted should I ask for their children rather than for them, it seemed advisable to have as many informants as possible from the same family unit. This consideration was not to be taken lightly. Some Bang Chaners, for their own peculiar reasons, felt honored to be interviewed by the *farang*. To enter their house, and then in effect ignore them because they were not members of the sample would have been an insult.

It should also be noted that although the purpose of the lottery was in part to select a portion of the sample, an even more important purpose was the religious sanction that it gave to the research in the eyes of some villagers.

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IV

The Sentence Completion Technique

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The following discussion details the logical considerations which underlie the analysis of the SCT responses and the procedures which have been devised for such analysis. At the same time it will serve as an introduction to the general nature of the SCT responses.

The analysis rests upon five premises.

How the SCT Works

First, despite its title and appearance, there is nothing particularly esoteric about the Sentence Completion Technique. It is primarily a useful and efficient way of asking questions about matters which are of central concern in personality research—feelings of rejection, failure, anxiety, and the like—but which might be considered sensitive or personal by our informants. That the questions are phrased as incomplete sentences rather than as direct interrogations is an attempt to get at these issues in a psychologically comfortable way. Concomitantly, it is an attempt to circumvent the tendency for individuals to set up resistances and blocks when queried on such matters.[1]

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[1] Whether Bang Chan villagers consider feelings of rejection, failure, and so forth, to be sensitive or private topics is, at bottom, problematic, since we have little reason to assume that they or the members of any non-Western culture share our attitude in this regard. The writer suspects that in some areas Bang Chaners do share Western attitudes about what sentiments should be concealed from (or revealed to) others, and in other areas do not. For instance, Bang Chan men would no more discuss their sexual impulses toward their daughters than would American fathers—in contrast, for example, to Pilaga Indian men (Henry 1955: 263). In contrast, most Bang Chaners seem considerably more reticent than Americans about revealing their aggressive feelings, but are considerably freer in discussing feelings of personal failure. Such discussion, of course, always varies in terms of the degree of intimacy between people.

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Two general considerations thus seem clear: (a) Bang Chan villagers are precisely like other human beings in that they have a tendency to conceal and reveal certain feelings, although the specific feelings concerned may or may not be the same as those of members of other cultures; and (b) since in the beginning of his research, an investigator really does not know in what areas or to what degree his informants are sensitive, it would seem prudent to use a technique which assumes sensitivity in all areas and attempts to get at these feelings in the least uncomfortable way.

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An incomplete sentence (*e.g.*, "When I realize other people do not like me, I feel . . .") has at least three advantages over a direct question (*e.g.*, "How do you feel when you realize other people do not like you?"). These advantages are rooted in the use and structure of language.

First, the tendency to complete a half sentence is psychologically more compelling than the tendency to answer a direct question. A half sentence is both semantically and structurally an unfinished unit of thought which, because of the obligatory nature of grammatical patterns (Jakobson 1959: 144) requires completion. The necessity for grammatical completeness introduces a dimension of unconscious compulsion not found in a direct question. Without even thinking about it, we are aware that something is "wrong" with an incomplete sentence or with any syntactically irregular form, and we quickly move to make it "right." Thus, a person is motivated to complete an unfinished sentence not only to supply the information which is required by the sentence stem but because, unfinished, it sounds incorrect.

A direct question on the other hand is already a completed unit of thought. As such, it can be met not only with a direct answer but with a laugh, another question, a "don't know," and various other replies, all of which are structurally as well as semantically feasible. Such replies, however, cannot be used as full-fledged responses to an incomplete sentence, but only as asides or interjections. An unfinished sentence will normally accept only those statements which will fulfill its grammatical requirements. Because of the nature of language, these statements almost always have direct reference to the first half of the sentence; they usually cannot avoid the situation posed by the introductory phrase.

This condition also helps to account for the relatively unpremeditated nature of a sentence completion as compared to the answer of a direct question. By "unpremeditated" is meant that the completion is subject to less overt deliberation and decision than is an answer. Given a structurally induced incentive to complete a sentence, there is considerably less likelihood that much rumination will be exercised in selecting the phrase to fill out the sentence. Prolonged reflection of course encourages the introduction of resistances, evasions, and blocks.

None of the foregoing is meant to imply that people always speak in complete sentences or are totally constrained by the rules of grammar. In ordinary usage, human speech is infused with many free-floating thoughts and disconnected statements, *e.g.*, *"When I realize other people do not like me, I feel* . . . feel . . . feel . . . well . . . gee . . . what did you think of the rain today?" However, if what human beings say did not conform most of the time to the elementary rules of syntax, communication would be impossible. Extreme or continuous indifference to the rules of

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*125 syntax is in our culture—and except for certain ritual occasions, perhaps in all cultures—one of the basic symptoms of psychopathy. Witness the "word salads" of hebephrenic schizophrenics and the "mental lapses" of aphasics. (See White 1948: 527; Brown 1958: 293; Goldstein 1948; and Jakobson 1957.)

On occasion some of our Bang Chan informants would ignore syntactic considerations and use the sentence cues as triggering devices for their own unanchored thoughts and preoccupations: *"When I realize other people do not like me, I feel . . .* that's happened to me sometimes. When you see that other people don't like you, you should avoid them. The Lord Buddha says. . . ." And then the completion might develop into a brief lecture on morality. At other times, the cue would trigger off an autistic explosion: *"His most unattractive quality is . . .* don't have anything to do with him! He is a wicked person. I do not want to speak to him. He doesn't talk sense. One day while I was fishing, he came along and asked me to have intercourse with him. I cursed him!" (Other data on this informant indicate that she was referring to her estranged husband.) These types of [124] "ungrammatical" responses seem to derive from the social aspects of the [123] interviewing situation—the informant has a friendly listener with a willing [521] ear and thus occasionally ignores the original definition of the SCT task to declaim on his favorite subject[8]—and also from the fact that in social discourse our Thai villagers seem to indulge more in, and have considerably greater tolerance for, autistic thought than do most Americans. That is, the villagers are more accustomed to making and hearing statements that have little apparent "objective" meaning (or in the language of psycholinguistics, "referential" meaning: Brown 1958: 315) but which are symptoms of inner states and preoccupations. The crucial point here is that a listener often does not know—or care—precisely what a speaker is talking about, but simply accepts the other person's utterances as expressions of inner, unknown concerns. Such expressions involve the leaping over of connective thought and syntactic constraints (as in the above example of the lecherous husband) or indifference to the logical currents of the discussion.[9]

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[8] Sometimes his discussions are simply expressions of phatic communion—the desire to indulge in chitchat for its own sake. (See Malinowski 1923: 315; and Hockett 1958: 585.)

[191] [9] It should be remembered that speech is not only a device for carrying on social interaction but also a mechanism for articulating one's inner preoccupations, whether or not other people understand. It is this latter use (which, incidentally, is ontogenetically the more basic: Piaget 1932; and Langer 1942: 35) about which Bang Chaners seem particularly tolerant. In general, a speaker in Bang Chan is not held very responsible for what he says. One rarely hears in the village—except from prying anthropologists—such charges as "I do not know what you are talking about. Explain yourself." For one thing, such a query would not be particularly polite; and in the villagers' scheme of things, what a person says is really his own business, re-

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These various considerations are mentioned simply to note that our Thai informants, like all human beings, occasionally do break through the syntactic constraints of their own language, a condition which is probably aggravated here by the necessity for the SCT testing situation to be a dialogue. Nonetheless, as will be seen in examining the actual SCT responses, these lapses occur relatively infrequently. That they do occur so rarely undoubtedly attests to the power of grammatical patterns to bind human thought processes. By and large our informants are like most people in that they are habituated to think and speak in complete sentences.

The unconscious incentive to complete a sentence and the relatively unpremediated nature of the completion both help to mitigate the potentially sensitive nature of the SCT "questions" and thus the tendency to resist answering them. However, the third and most important factor is our informants' familiarity with these sentences as declarative statements rather than as direct interrogations. All the items included in the SCT touch on experiences which although perhaps personally threatening, are quite commonplace. Certainly statements like "When I realize other people do not like me, I feel such and such," portray experiences which most informants have imagined if not actually encountered in daily life; they at least have certain expectations about how they would feel under such circumstances.

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gardless of how unclear or irrelevant it might sound to others. A related factor may be the sense of the untrustworthiness of other people's statements that Textor (1959) has described as characteristic of Bang Chan discourse. However, untrustworthiness immediately implies a serious interpretation of the speaker's intent, an assumption that his statement is perceived primarily in terms of its truth or falsehood. Although this interpretation is undoubtedly appropriate for many situations, the point here is that the villagers have a considerably broader awareness and appreciation of the various uses of language: much of what people say is also viewed as a verbalization of unexplained fantasy, an articulation of a personal compulsion, or in some contexts, simply as a form of play or "nonsense."

Interpretations of fantasy or "nonsense" always depend of course upon the semantic and structural conventions of a particular language. And a common source of error is the foreign researcher who mistakes his own inability to understand the native language, especially implied meanings and assumptions, for autistic thought. The problem then reduces itself not to whether the anthropologist understands the native speaker but to whether other members of the culture do, and the matter should be checked and settled by the researcher's native assistant or interpreter.

This type of problem arose on occasion in my experience, and although I can recall instances when at my prodding the assistant could tease out into culturally meaningful terms the logic underlying an informant's statement, I can also remember cases when the assistant would concede: "I don't understand him either. A lot of people are like that. They say anything that comes into their minds, even if it doesn't make sense." From the assistant's Thai point of view, however, the latter state of affairs was quite normal and expectable.

It is this easy tolerance for the inexplicable in social discourse—or alternatively, a basic respect for the privacy of another person's thoughts—that seems to distinguish the Thai approach from our own, although we appear to share their attitude in our reaction to the autisms of children.

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*125 Yet because it is potentially offensive, it is doubtful that they have ever been faced with the straightforward question: "How do you feel when you realize other people do not like you?" When the problem however is couched in the familiar linguistic frame, "When I realize other people do not like me, I feel . . . ," informants can readily supply the response that they have been conditioned to associate with these words. The SCT is more comfortable than a series of direct questions because it taps the system of relatively unconscious expectations and conditionings which comprise the psychological essence of language and thought.

The SCT and Cross-Cultural Research

121 *125 The second premise concerns the character of the SCT data and their analysis. It is important to make explicit that the research strategy here is one which places particular emphasis on abstracting from the kaleidoscope of the villagers' thoughts and feelings a series of descriptive and analytic types. Despite their commonplace appearance, the sentences are really brief verbal summations of how informants see themselves reacting in a wide variety of real-life situations. These summations are quite abstract, and much of the graphic detail of Thai personality—as can be had, for example, from the rich description of a life-history document—must be held in temporary abeyance.

As noted earlier, the writer is keenly aware that abstracting a series of analytic types is not the only way nor, in absolute terms, necessarily the best way (if there be such a way) to study personality. The limitations of the approach, particularly its lack of descriptive detail and naturalism, should be apparent. However, the method does have certain intrinsic advantages over other techniques.

First, it emphasizes the cross-cultural significance of our data. Although I can provide little empirical evidence to support this contention (other than what by implication might be found in the work of Schaffner 1948; Farber 1951; Roseborough and Phillips 1953; Fried 1953; Rychlak 1955; Rabin 1959; and Leichty and Rabin 1961—the entire body of cross-cultural SCT material to date) I would argue that *all* human beings, regardless of type or level of culture, must deal with the kinds of problems posed by such simple phrases as "When people annoy me, I . . ."; "When he was praised he . . ."; "He wishes he were. . . ." In our SCT batteries all but four items, designed specifically for Thai culture, have this pan-human emphasis. If this assertion is correct, it would have at least two important implications. On the one hand, from a long-range programmatic point of view, it would suggest that the SCT is an ideal technique for studying the range and variation of human personality. Here is an instrument the units

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of which seem to have true cross-cultural stimulus value and the responses to which seem genuinely comparable from one human group to another.[4] The only thing which might mitigate these advantages is the fact that both the stimuli and the responses must be mediated by the translation process. But as was indicated earlier, considerable attention has been given to controlling this factor.

The reader should be aware that I am talking about my particular version of the SCT, not the technique as such. Hanfmann and Getzels (1953) have noted that the common label, "Sentence Completion Tech-

[4] The claim of universal applicability that is made for the present SCT has also been made at various times for the TAT and Rorschach tests (Henry and Spiro 1953; Hallowell 1945 and 1955*b*; and Joseph and Murray 1951, among others). Without denying the TAT's and Rorschach's capacity to perform a number of important research functions—and to perform them well—the following points should be kept in mind with regard to this specific issue.

The familiar Murray–Morgan TAT cannot be used in every culture simply because not all people practice agriculture (as is depicted in card 2), use furniture (approximately one-quarter of the set), or even wear clothes (excepting 17BM, all cards portraying people). For such cultures, the stimulus value of the cards seems dubious. Some investigators (W. E. Henry 1947, Gladwin and Sarason 1953, and Lessa and Spiegelman 1954) have retained the principle of the TAT but have departed radically from the original cards by designing sets of pictures suitable only to the local and unique conditions of the cultures they were studying. Although this procedure satisfied their immediate research needs, it has contributed little to cross-cultural studies since the various sets have nothing in common. An alternative procedure, followed by the author in Thailand, DeVos in Japan, and Marshall in India, was to modify the flora, fauna, facial features, furniture, and clothes of the originals but retain the same social situations and aesthetic effects. This method permits cross-cultural comparisons, but only among peasant or more advanced societies—an extensive but incomplete ethnographic sample.

The Rorschach presents similar problems, but on a different level. The non-representational ink blots are clearly less culture-bound than the TAT pictures. However, their essentially pictorial quality creates difficulties in cultures where pictures are unfamiliar (Pilaga, for example; see Schachtel, Henry, and Henry 1942) or where graphic symbolism, particularly abstract graphic symbolism, has strong religious connotations (tribes of Central Australia, for example). In contrast to both the Rorschach and TAT, the SCT uses a medium which is truly universal—language.

Finally, assuming that the above difficulties may be resolved—Hallowell (1955*a*) calls them "administrative problems"—it should be remembered that the Rorschach, TAT, and SCT are not in competition with each other but serve different, although not mutually exclusive, research purposes. The Rorschach focuses on perceptual processes and the control and expression of inner promptings; the TAT on social needs, sentiments, and perceptions; and the SCT on reactions to realistic situational forces. In a sense, the three techniques emphasize different points of two underlying analytic dimensions: (a) inner determined as opposed to situationally determined behavior; and (b) unrealistic as opposed to realistic stimuli. The Rorschach falls on the inner determined and unrealistic sides of these continua; the SCT on the situationally determined and realistic sides; and the TAT in between. Again, without denying the importance of studying the inner determined and unrealistically stimulated aspects of personality, I would argue that the *primary* task of culture-personality research is to study personality in terms of realistically defined, albeit abstractly conceived, situations. A not too dissimilar point of view can be found in Linton (1945: 86–89).

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121 nique," frequently makes one forget that variations in the context and form of sentence fragments actually make different versions of the SCT into entirely different "tests," leading to major differences in results and interpretations. Failure to recognize this obvious fact has led to some specious arguments (Lorge and Thorndike 1941 *vs.* Sacks and Levy 1952, for example) about the relative effectiveness of "the" instrument.

My point of view, of course, is that one can design an SCT to investigate *anything*, from cabbages to kings. The very nature of language—or more precisely, one of its defining characteristics, its "productivity" or "open-endedness"—permits this. (By "productivity" I mean, following Hockett 1959, that a speaker may say something that never before has been said or heard.) In this light, what is distinctive about the present work is not the fact that an SCT is being used but rather that the language of this particular SCT describes a number of universal social and psychological problems.

Second, the technique also helps to bring into focus an issue that is particularly crucial to cross-cultural personality studies. My primary task was of course to describe and analyze the villagers' predispositions in a number of areas of psychological concern: aggression, anxiety, dependency, and the like. There were originally thirteen such areas which, on the basis of prevailing ethno-psychological theory and practice, were presumed to be of major importance in the psychic lives of the informants. It should be recognized, therefore, that in selecting these areas I committed myself to the premise that there are in fact a number of analytic issues crosscutting all societies which are crucial to the psychosocial functioning of the members of these societies. This should not be taken lightly, because it is only on the basis of such a premise that a comparative science of personality may develop.

[114] Such a science does not as yet exist, at least as a coherent, systematic corpus of theory and fact. Kroeber is absolutely right when he says (1955*a*: 303): "Culture and personality studies are being pursued with intensity and devotion, but one feels that they are popping off in diverse and unaccountable directions much like a string of fire-crackers. One inquirer is interested in tensions, another in Rorschachs, another wants to experiment on frustration; but in effect each starts off on his own—except when a string of them go in for a fad like toilet training. . . ."

Yet, there has been a steady flame setting off all these firecrackers: the search, at times undeniably ill-planned and unreflective, for a set of abstract, analytic categories by which the personalities of all peoples can be described and compared. Papers by Kluckhohn (1953, 1954*a*, 1954*b*), Hallowell (1950, 1953), Spiro (1954), Inkeles and Levinson (1954), and Kroeber himself (1955*a*, 1955*b*) on the psychological universals in human

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121 *125 only the specification of a series of pan-human psychological issues as described above, but the selection of a research tool capable of obtaining empirical data that *accurately* reflect these issues in the various cultures studied. Aggression, anxiety, dependency, and the like may be universal human dispositions, but the causes and circumstances pertaining to them vary considerably from culture to culture. This is of course a basic anthropological truism (see particularly Whiting 1954 and Lewis 1955). Perhaps the best theoretical formulation of the problem from a research point of view can be found in an unpublished paper by Suchman (1955; see also Sears 1961) where the matter is framed in terms of what is called "concept equivalence" *vs.* "data or item equivalence." Or translated into our research operations: given the fact that the concept "anxiety" as applied to Thai culture is equivalent to the concept "anxiety" as applied to American culture, what kinds of items will bring forth *equivalent* empirical data from both cultures relevant to this concept?

My decision in dealing with this question was to design items which were sufficiently abstract so that they could be used in any culture with assurance that the empirical problems which they described were accurate and equivalent representations of the concepts.[6] In essence, statements such as *"He was most afraid of . . ."* *"When something worried him, he usually . . ."* were derived directly from the concept of anxiety, bypassing culturally specific definitions of anxiety; the experiences portrayed by the items are in themselves descriptively universal rather than culture-bound. Cultural specificity—which is of course the central aim of this research—enters when informants react to these experiences in their completions. From an operational point of view, therefore, the requirements of concept and item equivalence were effectively merged.

A final aspect of the SCT, of an entirely different order from the above, merits attention. This concerns those general methodological advantages which the SCT enjoys as an organized, semi-structured research technique.

First, the SCT permits the field worker to present his research interests to his informants rather than wait for manifestations of these interests to emerge spontaneously from the behavior or remarks of the informants. Data collected by this method is by no means any better than that obtained, for example, by observational techniques, but it is more complete. If an investigator wants to know how an adult villager would react to being struck by another person or what the villager thinks about when he is

[114] [6] Florence Kluckhohn (1960: 6–7) in her effort to develop a technique for the cross-cultural study of value orientations comes to a similar conclusion. She says that the "more highly generalized" an item was, the more readily it could be translated for use in another culture.

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alone, he might have to wait months before an act of overt physical aggression actually occurred, or before an informant volunteered some of his reveries.[7] When these events do occur, it is exceedingly difficult for the analyst to assess how typical or deviant the event may be under the circumstances, whether it is characteristic of villagers of a particular age or sex and what other individuals may do or say in similar situations. Rather than depend upon what is essentially a "catch-as-catch-can" approach, the SCT brings the research problems to the informant and asks him to deal with them directly. It should be remembered that although the resulting data are not as naturalistic as observational materials, they are always the product of the villagers' own voluntaristic inclinations: their responses represent their own internal views of how to deal with the problems posed by the introductory phrases.

A corollary to the above is the fact that the SCT presents to a large number of individuals what are essentially the same stimulus situations. The primary advantage here is that it provides a solid empirical basis upon which to make statements about how typical or deviant a response may be.

The Selective Nature of the Responses

The third premise follows much of the preceding, but merits special consideration because of the cross-cultural phrasing of the study. In a sense, it is the basic methodological principle of all anthropological research.

In examining the SCT responses, it soon becomes apparent that the majority of our informants' statements make perfect sense and are the types of reactions that conceivably could be made by any human being. The word choice and style of many of the responses are of course inimitably Thai. For example, *"The most important thing in his life is . . .* ohhh! . . . having or not having something to eat. If you have something to eat: good. If you have nothing: trouble. We people are born in order to find things to fill our mouths and stomachs. Nobody can take his property and money with him when he dies." But the expressed meanings of the responses (in this case, practical survival) are not, despite perhaps anthropological expectations, alien or extraordinary.

The point to be emphasized is that although the villagers' SCT responses may not seem immediately familiar, they do fall well within the range of what is *objectively possible*. It is this element of objective possi-

[7] From an ethnographic point of view, the fact that such events do occur so rarely is not without significance. It is additional behavioral evidence of the amount of aggression control exercised by the villagers and of the fact that they prefer not to wear their hearts on their sleeves.

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*125 bility that lies at the heart of the SCT analysis. As Kluckhohn has said
121 (1959: 247; see also 1951: 421–422):

> The most specific quality of anthropological research arises from its preoccupation with culture. This concept (in the technical, anthropological sense) refers to those *selective* ways of feeling, thinking, and reacting that distinguish one group from another. . . . In the strict sense, we can speak of culture only when there are two or more objectively possible and functionally effective means or modes of meeting the same need, . . . and a given group exhibits a consistent and stylized preference for one path to the goal among a number of alternatives that are—from the observer's point of view—all open.

121 In this light, what is most significant about the responses is not that they
*125 are in themselves descriptively unusual, nor even that other cultural groups
181 could not share some of them (the principle of "limited possibilities," supported by linguistic constraints, undoubtedly operates here), but rather that of all the objectively potential ways in which to deal with the SCT situations, the villagers select a few distinctive ways to the exclusion of others. In the example above, "the most important thing in his life" is *not* "his family" (the need for close social affiliation; being a source or recipient of succorance), his "love affair" (emotional-sexual need), "knowing himself" (realistic assessment of one's capacity for specific achievement), "passing his examination" (the need for status and accomplishment), or any other equally feasible response. Rather the response is "having or not having something to eat" (elemental subsistence). At bottom, it is the selective aspect of the SCT responses—in contrast to their strangeness or familiarity, which are secondary descriptive characteristics—that defines their essential "Thai-ness."

121 For readers who may be surprised by the interpretive labels given the
*125 above responses, it should be noted that we have touched here upon what is probably *the* crucial anthropological problem. I have tried briefly to suggest what these responses, if they were given, might mean—but in Thai, not American, terms. This compounds our interpretive problem considerably. The fact that such alternative responses are not typical is in itself, as we have just indicated, of extreme importance. However, if they were given, their meanings would not necessarily be the same to the villagers as they are to us. By way of illustration: it is hard to imagine any Bang Chaner completing the statement *"The most important thing in his life is . . ."* with the words "knowing himself." Few villagers are that introspective or self-objectifying. However, if by chance an informant did offer this completion, it would certainly not mean, as it does among some American subcultural groups, "the need for self-acceptance, personal identity, freedom from intra-psychic tensions," etc. (See Erikson 1950, 1954, 1959; Riesman

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behavior suggest that there are now sufficiently solid theoretical and empirical grounds upon which to build such an undertaking. Inkeles and Levinson deal with the problem directly (1954: 989–990):

> One promising approach is to concentrate, for purposes of comparative analysis, on a limited number of psychological issues . . . that meet at least the following criteria. First, they should be found in adults universally, as a function of both maturational potentials common to man and of sociocultural characteristics common to human societies. Second, the manner in which they are handled should have functional significance for the individual personality as well as for the social system, in that their patterning in the individual will affect his readiness to establish, accept, maintain, or change a given sociocultural pattern. A further task, one that will take longer to carry out, is to develop a set of descriptive categories for the empirical analysis of each issue.[5]

Toward this end, Inkeles and Levinson present a provisional list of analytic issues, some of which are replicated in the Thai study: relation to authority, conception of self, bases for maintaining inner equilibrium, major forms of anxiety and ways of dealing with them, modes of cognitive functioning, styles of expressive behavior, and the handling of major dispositions such as aggression, dependency, and curiosity.

In formulating the various issues to be included in the SCT, I borrowed from Inkeles and Levinson and the other writers noted above. However, like them, I wish to note that this list of categories is neither exhaustive nor definitive. In fact, because of limitations of time and instrument design, some of the areas proposed above—cognitive functioning, for example—had to be ignored. Others were also ignored during the write-up because the materials elicited were not in my opinion sufficiently meaningful or revealing. The value of our list lies not in its formal completeness but rather in the fact that the issues which are included seem, on the basis of knowledge presently available, to be of universal psychological importance. This is a beginning.

A third attribute of the SCT, related to the above, deserves comment. This concerns the abstract nature of the SCT items.

A fundamental problem in all cross-cultural personality research is not

[5] In a later paper (1956), Inkeles qualified one of these criteria by noting that there are probably many personality complexes which are functionally significant to individuals, but which have little discernible relevance to the functioning of social systems. Much depends here on how one defines "social system" and "personality"—particularly "levels" of personality. Inkeles, for example, draws a clear theoretical distinction between "basic personality" and "social personality," the latter being comprised only of those traits which are necessary for the effective maintenance or change of the social system.

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1950; and Wheelis 1958.) At best, it would suggest that the Thai informant was faced with a difficult problem external to himself—perhaps finding a job or a spouse, or thinking of his future—and was appraising his ability to deal with that problem. Also, such an appraisal would have a strong constraining element: the necessity to control one's hopes and desires (perhaps for the hypothetical job or spouse) in order to avoid potential pain or disappointment; in essence, "beware of your limitations; do not forget your station." This is in turn supported by certain Buddhist concepts, such as *ʔubeegkhaa*, or stoical indifference to the vicissitudes of life, among others.

Whether there is *any* way to express handily in Thai the Western notion of "the need for self-acceptance," is doubtful. Most villagers are too thoroughly narcissistic to require such a concept in their cognitive maps. Alternatively, there are other more direct ways of saying what "knowing myself" might mean in Thai, for example, "controlling my desires," "knowing whether I have the ability to do the job," or by referring directly to Buddhist doctrine. As such, these statements would be an expression of piety or the bolstering of one's self-confidence (or steeling oneself against failure) rather than psychic introspection.

A similar interpretive problem exists with the completion "his family." Because Thai kinship relations are so strongly influenced by concepts of benevolent superiority and dependent inferiority, most expressions of the need for affiliation with the family immediately imply the related need of succorance: security, support, protection, and sympathy, either as source or beneficiary.

The point of these comments is that the responses must always be first interpreted in the villagers' terms, not ours. Once made, precisely by explanatory notes such as these, these interpretations become part of the "data" and serve as a basis for our analysis. It should be recognized, however, that anthropological mythology (and these particular examples) to the contrary, not *all* the responses are interpretively dissimilar. When a villager says, *"When he hit me, I . . .* must hit him back," he means precisely the same thing we do. The point, therefore, is to be extremely sensitive to the possibility of differential meanings, underscore and explain it when it occurs, and use the native interpretation as a prerequisite and corrective to our own. For a brief but brilliant theoretical discussion of this problem see Bohannan 1959.

The Psychological Meaning of the Responses

The fourth premise concerns the psychological "meaning" of the responses. There are several aspects of this problem which require specification.

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*125 15 First, the informants' reactions to the imagined situations portrayed in the SCT items represent their *predispositions* to act in the manner indicated, rather than literal descriptions of how they would behave in real life.[8] They indicate a psychological readiness or propensity. Any overt behavior is the result of several determinants, only one of which is the individual's predispositions. Other factors include the nature and purpose of the reality situation; the individual's changing moods and skills; and in social situations, the expectations of the other person, his behavioral cues, and ego's perception of them, as well as the relative statuses of the participants (of extreme importance in Bang Chan). All these determinants—and probably others as well—come into play during any particular event, and the slightest change in one may result in different and unexpected forms of overt behavior. It is precisely because so many factors do lie behind the occurrence of an event that predictability in human affairs is so difficult. Yet, because to a large extent a person creates and structures for himself the situations in which he is involved, and because in these situations he is objectively free to respond in any number of different ways, his predisposition to act in a particular way is crucial in determining what actually does occur. Witness Rychlak's students. Basically it is the individual's organized system of predispositions, and their repeated—but not invariable—manifestation in action, which gives his overt behavior a certain consistency and unity, and which allows us to ascribe to him a particular "personality."

In real-life situations, however, the individual's predispositions are often obscured to the observer by more obvious factors such as those mentioned above, *e.g.*, the social climate and the expectations and status of others. A major advantage of an unstructured instrument like the SCT is

[8] Examination of the SCT literature on this point has been both time-consuming and intriguing. Despite the fact that there probably have been more than two hundred studies involving the use of the SCT—Levy (1952: 192) reports 135 studies between 1946 and 1951 alone—this writer has been able to discover only one, Rychlak's work on Japanese students in the United States (Rychlak 1955, and Rychlak, Mussen, and Bennett 1957), which concerns itself directly with the relationship between SCT responses and overt behavior. SCT responses have been correlated with other tests, attitude scales, psycho-galvanic skin responses, informants', psychiatrists', and teachers' reports, and measurements of "adjustment," but apparently only once with measures of overt behavior in the same areas covered by the items. Rychlak found that students who expressed a high degree of optimism and "sociality" on an SCT administered soon after their arrival in the United States (examples: *"To me the future looks . . .* bright"; *"To others I am . . .* very sociable") were the same individuals who months later tended to participate in bull sessions and visit American homes; conversely, individuals who exhibited on the SCT an involvement with interpersonal conflicts (examples: *"My bosses are . . .* intolerant"; *"I failed because . . .* others didn't understand me") later tended to use their leisure time in reading and avoided social clubs and parties. On the basis of these findings, Rychlak views the SCT as "a remarkably efficient predictor of the quality of the individual's social relationships."

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that it gives the informant extraordinary latitude to express his predispositions with relative freedom from these social constraints. The social constraints which do exist are self-defined and self-imposed. Other than being required to make sense, the informant has complete freedom to structure the situation posed by the SCT fragment as he pleases. His predispositions emerge unobscured as he assumes all the roles of the real-life drama, defining the situation as he chooses, placing himself and the imagined others in context, and then reacting to the situation. Although the process is a subjective and imaginative one, it retains at all times its ties to reality by the highly realistic nature of the stimuli. The predispositions thus revealed are realistic and ostensive rather than deep-lying or hidden although, as was suggested earlier, their analytic significance derives not from the manifest meanings of the responses but from more general, underlying denotations.

A second aspect of the responses concerns their psychological primacy. It is a fundamental postulate of this work that the informants' reactions represent their primary or dominant responses to the situations portrayed in the SCT items. This by no means implies that the absence of another kind of response indicates the absence of the capacity to have that sentiment nor that such an alternative sentiment is potentially inexpressible; it does mean, however, that our informants are not predisposed to react in that way.

Earlier in this chapter it was argued that the responses are "relatively unpremeditated" and that an incomplete sentence "taps the relatively unconscious expectations and conditionings which comprise the psychological essence of language and thought." Although these assertions are valid—certainly as contrasted with the results of direct questions—the word "relatively" must not be glossed over. The actual process of constructing an utterance always involves a great deal of psychic editing, and few people ever say what they "really" want to say in the sense of being completely unpremeditative. This was of course one of Freud's earliest (1904) lessons. But somewhere in the process of split-second decision making that goes on within the mind (Freud hypothesized that most of it takes place in the pre-conscious) the individual must make a choice and we have to assume that this choice, as revealed by his articulated statement, is his principal response. The individual might well have said something else. But the point is that he did *not*. The proffered statement was in fact the dominant one.

This raises a question that has been the subject of some discussion in the anthropological literature and which is particularly germane to the present analysis. A cursory review of the SCT data immediately indicates that the villlagers phrase many, although not most, of their responses in terms of cultural ideals, that is, in terms of precepts to which behavior

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*125 15 should conform. (For example: *"The best way to treat a subordinate* is . . . to speak to him with kind and agreeable words"; *"When he thinks of his father, he thinks of* . . . the goodness and kindness his father has done for him.") This is not a universal pattern since definitions of the ideal are ambiguous, lacking, or inappropriate for many of the items; also, such definitions seem not to be applied to items which imply immediate action. However, they do appear with sufficient frequency to be noticeable.

156 None of this should be surprising, inasmuch as viewing behavior in terms of "the good" and "the proper" is a central characteristic of the villagers' thought and idiom. They tend, *considerably* more than Americans, to evaluate (in an ethical sense) people and events rather than describe them, and even to describe by evaluating. Ask most villagers: "What kind of a person is so-and-so?" and their replies will consistently be in terms of whether he is "bad" or "good," rather than in terms of non-evaluative description, *e.g.*, he is "funny," "passive," "interesting." The words, *khon maj dii* and *khon dii* ("a bad person" and "a good person") are two of the most frequently occurring items in the Thai lexicon. One might epigrammatically characterize much of the villagers' thought as "super-ego-dominated." That this mode of thought should be applied to many of the SCT situations is hardly unexpectable.[9]

121 15 Having recognized this tendency, however, there is the problem of assessing its psychocultural meaning. Do such appeals to the ideal, especially as applied to the self, in any way weaken our definition of the responses as "predispositions to action?" Are many of the responses mere verbalisms that have little to do with real behavior?

121 114 15 A number of theorists, notably Murdock (1940 and 1954) and Kluckhohn (1943*b* and 1951) have taken the position that cultural behavior should be distinguished into two fundamentally different forms: ideal patterns and real patterns. The former are "those norms which are verbalized as the ideals to which behavior should conform" (Murdock 1954: 22); and the latter, patterns of actual, overt behavior. Opler has taken issue with the necessity for this distinction, and has argued (1948: 116):

> My own feeling is that the concern over precepts or ideal patterns which contrast with or stand apart from behavior is a pleasant distraction which will not get us very far. In my opinion the disparity between rule and behavior in society has been greatly exaggerated. Actually, behavior remains remarkably close to rules or precepts which are

[9] This same characteristic has been described in other contexts (Wilson and Phillips 1958, Phillips 1958, L. M. Hanks 1959*a* and 1959*b*) as the essentially moral nature of the villagers' universe: the tendency, largely implicit, for Bang Chaners to perceive events of the most diverse kinds within an ethical frame of reference. It might well be, as Redfield had argued for many years (1941, 1953, and 1956) that such a cognitive orientation is characteristic of all peasant peoples.

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considered of moment by the group. I think that it can be demonstrated that when precept and activity draw too far apart, a modification of one or the other is likely to take place to close up the gap.

In assessing my psychological test materials, I take the following position with regard to this issue. The distinction between the ideal and the real is an analytic requirement because obviously there are some instances where the two patterns are not congruent. However, once such distinction has been made there is no inherent necessity to assume that there *must* be a gap between the two patterns or if there is a gap, to assume that it must be especially wide. One will inevitably encounter in Bang Chan cases where subordinates are not spoken to "with kind and agreeable words." But on the whole, the extent to which real behavior does accord with this precept is impressive. For the most part, it is not a mere verbalism but rather a viable guide to action: a subordinate who is not treated with kind and agreeable words will not (depending of course on other situational factors as well) long maintain his ties to his superior. This same reasoning applies to the majority of the cases in which informants couch their responses in terms of cultural ideals.

A third aspect of the responses concerns the psychological "level" at which they will be interpreted. Because of the highly realistic nature of the completions, the necessity to interpret them in Thai terms (which precludes "blind analyses"—see DuBois 1944) and the necessity to work with the pooled responses of many individuals, our interpretations will not go psychodynamically very "deep." On the other hand, neither will we remain at the level of the manifest meanings of the responses. Although an informant's completion may represent a precise description of the way he would behave in real life, and in many cases does, it is more sensible from an analytic standpoint to view the response as a symptom of an underlying, more generalized, psychological orientation. The reasons for this are twofold: first, many of the responses which are superficially different seem to express simply alternate facets of a single, underlying predisposition; second, and more important, we must remember that on theoretical grounds personality characteristics are not, as Inkeles and Levinson point out (1954: 981) "phenotypic, behavior-descriptive terms, but rather are higher level abstractions that refer to stable, generalized dispositions or modes of functioning and may take a great variety of concrete behavioral forms."

In these terms, a statement such as *"When he saw that others avoided him, he* . . . also avoids them" indicates not only a person's desire not to associate with those who avoid him but, more important, an underlying, more general disposition *to accept and maintain a breakdown in social relations.* Moreover, the latter interpretation also encompasses such varying responses as: ". . . must not speak to them because they are bad. They

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like to look down upon people" and ". . . probably was not generous with them, so they avoided him." The significance of this underlying interpretation becomes even more apparent when the three responses are contrasted with other possible but unoffered completions which belong to totally different interpretive categories, for example, ". . . tried to make up with them" or ". . . asked them why?" signifying *attempts to reintegrate or understand the interpersonal rupture* and ". . . felt terribly hurt," indicating *emotional pain or disturbance.*

A Working Conception of Modal Personality

Our fifth and final premise is concerned with developing a workable conception of modal personality despite the inevitable paradoxes which attend such an endeavor.

The fundamental problem here is that in abstracting out the psychological similarities which the villagers share with one another, we become unavoidably involved in the difficulties of working with "conjugate variables"; that is, the more we concern ourselves with the commonality of a personality trait, the less we simultaneously learn about the role of that trait in the functioning of the individual members of the sample. The significance of this is not so much that we sacrifice an understanding of individuals for an understanding of the group, but that in so doing we must also sacrifice some of the depth and perceptiveness of our analysis. A successful personality study is in large measure achieved by descriptive contrast: we learn more about human beings the less they appear like other people. When subtle individual differences must be submerged for purposes of group characterization, the resulting descriptions must necessarily be less sensitive and precise.

The root of the problem lies in the fact that our basic units of analyses are individuals who, despite all the similarities they share as members of Thai culture, are obviously different from one another in specifics. Moreover, as Wallace points out in a recent article (1961*a*: 147–148), from the point of view of culture-personality theory, they *must* have certain psychological differences:

> The problem of psychic unity is sometimes obscured by our tendency to regard human societies as populations and not as groups when we make psychological statements. A population of individuals may be described without references to their interrelationships; but a group cannot be considered apart from its organizational structure. Thus physical, demographic, or personality characteristics of the members of a population can be stated, explicitly or implicitly, as a statistical distribution on one or more dimensions, and to the extent that the data

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> permit, some measure or estimate of central tendency can be calculated which will allow the attribution of some value or range on one or more dimensions to all, or a specified sub-population, of the population itself. . . .
>
> But such predicates, universally applicable to all members of a population, are inadequate for the psychological analysis of that population as a group, as an elementary consideration reveals: most culturally organized groups not merely permit but require that their members perform different roles in interaction. . . .

Although Wallace does not state it in so many words, it is apparent that he is referring to differences in age, sex, and occupational roles, or to any other roles that may be deemed important, and is assuming that the individuals who perform the roles have in some respects different personality types. (Whether the latter assumption is completely valid is still another problem. For a provocative discussion of the analytic complexity of the personality-role relationship, of the non-congruence which may occur, and of consequent psychological adjustments see Levinson 1959; Nadel 1957 also touches on the issue.) In any case, it is clear that whatever psychic unity informants have as members of the same culture, they are differentiated from each other on at least two counts: (1) their individual life experiences and genetic-constitutional backgrounds which ultimately give them each a unique personality; and (2) their performance of different social roles.

These differentiae are of course virtually self-evident. But what is not self-evident—nor easy to decide—is how much emphasis should be given to them in formulating or qualifying our conception of Thai peasant modal personality. Any decision that we make is from some point of view unsatisfactory. Should we treat our informants solely as individuals, and pursue our analysis with rigor, we would get an increasingly refined picture of the uniqueness of these individuals but, at the same time, a decreasingly clear picture of their cultural or shared characteristics. The analysis would undoubtedly be more precise but, in effect, we would be studying "idioverses"—idiosyncratic versions of culture (Mead 1958)—with little basis for determining what is culturally typical or deviant. In fact, questions of the normative or variant would become logically irrelevant. On the other hand, should we group the informants into age or sex groups and contrast the responses of these groups, it might well seem that the personality differences between men and women, for example, are greater than the similarities, or even that Thai women are more like Navaho or American women than they are like Thai men. Although I suspect that culture makes for greater psychological similarity than does sex and, as Sharp has pointed out (Sharp *et al.* 1953) Bang Chan culture is, from a cross-cultural point of view, impressive for its slight differentiation of the adult

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121 157 roles of the sexes, such findings are not empirically impossible. Finally, should we de-emphasize the distinctions between individuals and role-defined sub-groups, and consider all the responses as a whole, we would as suggested earlier be in the best possible position for determining the villagers' modal personality but would proportionately lack analytic precision. There would always be some intra-sample differences—as far down as the individual level—which the critic could point to as requiring discrimination, although such discrimination would obviously have to be achieved at the cost of group identification.

Given these various alternatives, each of which has its merits and shortcomings, what should the analyst do? I have decided to conform to the principal aim of this research and focus primarily on total group responses, that is, on those abstracted psychological similarities which all or, more realistically, large numbers of our individual informants share with one another. Operationally, this entails investigating the responses of all informants on each SCT item rather than those of each informant on all items, and explicating the major underlying psychological theme or themes of these responses.

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The inclusion of both the singular "theme" and plural "themes" in the preceding sentence is not only intentional but crucial to our formulation of modal personality. Its significance will perhaps best be seen by contrasting our approach with the two prevailing points of view governing most modal personality formulations. On the one hand, the majority of the culture-personality and particularly "national character" studies of recent years have been characterized by an assumption of psychological *unimodality*; that is, an assumption that the culture being investigated has such a high degree of psychological homogeneity that it can be portrayed as having a *single* personality pattern, with perhaps a few deviant sub-types. The assumption is based partially on precedents established within the history of ethnographic method (Herskovits 1954); partially on unconscious aesthetic considerations involved in the presentation of data (Opler 1948 on Benedict); and partially on the apparent validity of the concept in some areas of psychocultural functioning in which, once established, it is tacitly extended to include all areas. Even Wallace's sophisticated study of the modal personality of the Tuscarora (1952) is based on the premise of unimodality, although his aim is to find out precisely how *unimodal* the Tuscarora actually are.

Whatever attractiveness the premise of unimodality may have, it is clearly an oversimplification of psycho-ethnographic facts. Human beings in any culture are simply too complex to be of the same psychological stamp in all respects. In his recent paper (1961*a*), Wallace points out that a research design for the study of modal personality which involves only

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twenty binary dimensions (which is considerably less than is actually employed in most Rorschach analyses) will yield up to 1,048,576 structural types, to which Wallace adds, "the uniformity of the population on each dimension must be impressive, or the types must be very crudely defined, before any one type is likely to acquire prevalence over any substantial proportion of the group. . . ."

Having recognized the oversimplification of the unimodal approach, however, there is no inherent necessity to go the the opposite extreme and posit a complete *multimodality*. Yet this seems to be the position taken by Inkeles and Levinson (1954) and Kaplan (1954, 1957, and Kaplan, Rickers-Ovsiankina, and Joseph 1956) who, genuinely disturbed by the stereotypy and lack of sophistication of the unimodal viewpoint, argue that cultural groups are characterized by a plurality of personality patterns. Kaplan's arguments are particularly compelling in that he bolsters them with empirical cross-cultural evidence, although he himself admits (1954) that his results may be a consequence of his particular sorting and categorizing techniques. He concludes his comparative study of Navaho and Zuni TAT's with the statement that (1957): "The influence of culture on personality does not appear to create a common personality configuration in its members, but instead tends to foster a variety of personality tendencies in small groups or clusters of individuals while leaving many aspects of personality free to vary without respect to group membership."

My position, in comparison, is that the cases for complete unimodality and complete multimodality are both overstated. What both viewpoints seem to overlook is the likelihood of there being *specific areas* of psychocultural functioning in which a high degree of homogeneity exists and *other specific areas* in which a high degree of heterogeneity comes into play. This more flexible formulation not only provides a more realistic picture of modal personality than can be had from ascriptions of wholesale uniformity and diversity but directs our attention to identifying the areas of differential frequencies and attempting to account for them. For example, I suspect that those areas characterized by a high degree of homogeneity are ones likely to be surrounded by strong cultural sanctions, or are areas of psychological "focus" (psychological parallels to Herskovits' "cultural focus," [10] as it were) or, perhaps, are areas of greatest cultural conditioning; conversely, I would think that areas of high heterogeneity most likely do

[10] Although Herskovits seems to have changed his definition of "cultural focus" over time (1945 and 1948), his first definition is most relevant to our present meaning: "that area of activity or belief where the greatest awareness of form exists, the most discussion of values is heard, the widest difference in structure is to be discerned." However, unlike his formulation, which in practice assumes only one focus in one culture, our use of the term presupposes that a culture can have a number of psychological foci.

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121 157 not involve important social stakes (although they may involve very important personal ones, their highly charged personal nature perhaps being the very source of the heterogeneity). In these terms, I would expect Bang Chan SCT responses to be highly unimodal in the realm of authority—an area of sharp psychological focus—but relatively multimodal in the area of friendship. In any case, it would seem to me that whatever the ultimate reasons for an area being unimodal or multimodal, the identification of these areas is in itself an important task.

*125 *128 In the light of these remarks, I have tried to avoid establishing rigid rules about the number of major themes which may emerge from the responses to the various SCT items. The discussion which follows, and the SCT material itself, is organized in terms of specific areas of psychological functioning, and a table accompanies each SCT item. The tables are organized thematically and are designed to exemplify characteristic responses for each theme discussed in the text, although some of the minor themes and sub-themes are excluded for the sake of simplicity. The number of responses given under each thematic heading reflects the *approximate* percentage of all responses which are included in that theme. A theme is defined as an underlying, generalized psychological orientation encompassing the raw responses of two or more informants—the supposition being that it takes at least two to make a theme shared or "cultural." [11] The determination of a theme is explicitly weighted in the unimodal direction but is constrained by the nature of the responses themselves. No explicit criteria have been established for deciding the number of themes which may emerge before declaring an item, and the area it represents, either unimodal or multimodal. In fact, in terms of our empirical operations, these terms are viewed simply as ideal types. Also, it should be remembered that some of our responses are multidimensional in nature; that is, like much communication they simultaneously reveal several meanings and are interpretable from several perspectives. In this case, each perspective can conceivably yield a different number of themes. The number of simultaneous themes that occur are determined solely by the patterning of the responses themselves. Given these considerations, the statements that are made about the unimodal or multimodal nature of an area are phrased simply in terms of general comparisons as we move from one area to another. Since we are not using any fine statistical methods, this procedure is clearly the most efficient to follow.

[11] It is recognized, of course, that it is possible for responses to be shared by two or more informants solely on the bases of fortuitous factors or on the basis of the principle of limited possibilities. All human behavior, cultural or otherwise, is ultimately limited by such simple statistical considerations.

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V

Analysis: The SCT's Exploration of Thai Personality[1]

Attitudes Toward Authority

The first area to be dealt with is in a sense the easiest. Thai attitudes toward authority represent what is perhaps the most explicitly expressed and highly ramified area of their social psychological life. The notion of authority—a sense of superordination and subordination—is an intrinsic part of their linguistic structure, it being impossible to address or refer to a person without indicating his social status relative to the self; two-week-old infants are taught to *waj*, or offer the gesture of obeisance to superiors; during elections, villagers say that they are going to vote for the prime minister because "he is our Master. He has been very good and kind to us. He is like our father, and we are like his children"; the entire structure of the family is predicated on a system of superordination and subordination, even to the extent of considering a twin born a few minutes ahead of his sibling the latter's social superior. Examples expressive of this emphasis in the workaday life of the villagers could be cited endlessly.

What is impressive in the data to follow is not only the near unanimity of villagers in responding positively to what are essentially neutral authority situations, but the tendency on the part of a large number to respond positively to the authority situation even when the authority figure is avowedly wrong. Many of their responses also make quite explicit the underlying ethical justifications for the authority system.

The first item, *"When the phuujaj told him to do it, he . . . ,"* is a

[1] Words and phrases appearing in parentheses in the responses on the following pages are for purposes of clarification. The few Thai words appearing in the responses are either "complex concepts" or "difficult to translate" terms, and have been retained mainly for those readers familiar with Thai. At the top of the table, the English language item that was originally prepared for the villagers appears first; it is followed by the best English translation of the actual Thai item given to informants, including the Thai pronouns that were used. Intra-sample differences (age, sex, religion, economic position), where important, are indicated in the text, not the tables.

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*125 192 simple statement of a common experience. A *phuujiqjaj* generally means a "big person" or "big man," although in many contexts it has the same connotations as the American slang term, "big shot." (Occasionally when I used the term with Bangkokians I was laughingly told that it was not a "nice" word; however, Bang Chaners used it and responded to it in an entirely matter-of-fact way.) As it appeared in the SCT interviews, the item was clearly an abstract phrasing of a generic kind of authority situation, and could have referred to any individual the informant deemed to be a *phuujiqjaj*.

TABLE 1

*125 *When the* phuujiqjaj *told him to do it, he . . .*
*128 *When the* phuujiqjaj *tells raw to work, raw . . .*

DIRECT, POSITIVE RESPONSE:	86%	had to do it. had to do it well, to be worthy of the *phuujiqjaj*'s trust. had to hurry and do it. ought to do it *riab-rɔɔj* (in the neatest way). did as he was ordered. did it in accordance with the *phuujiqjaj*'s wishes. did what he had been told to do. had to do it, so he would get credit (praise and goodness for doing it).
CONDITIONAL (PROPRIETY):	7%	ought to do only work which is proper work. If the work were not proper, he would avoid doing it.
CONDITIONAL (ABILITY):	5%	if we cannot do it, tell him we cannot. If we can do it, do it.
"RECONCILIATION":	—	if he knew the order was right, he was glad to carry it out; if it was a wrong order, according to the regulations, but if it was necessary, he had to carry it out. And when he had an opportunity, he would point out what was wrong with the order.

*125 *128 *156 Examination of the responses indicates a single, overwhelming disposition on the part of villagers to accept and act upon the superior's authority. Four informants condition their response on the necessity, propriety, or reasonableness of the superior's order, but even in these cases the initial tendency is to respond positively; three others condition their response on their own capacity to fulfill the authority's expectations; and one villager does not reply. But all others, 86 percent, respond directly and positively to the authority demands made upon them.

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The vast majority of these simply do, or feel they have to do, what the *phuujiŋjaj* tells them. Some of the sub-types of this major response, however, are interesting in their own right. Three individuals hurry to do what they are told, while two others, all young females, are concerned with being appealing and conscientious in their conformity. Three Bang Chaners are interested mainly in gaining the superior's praise, trust, or approval. On the other hand, two others view the situation largely in terms of naked power, e.g. ". . . did it; otherwise the *phuujiŋjaj* might beat her." Perhaps the most interesting response in the group (the last in table 1) is that of the informant who reacts positively but conditionally at first; then realizes the danger of setting up any condition, and volunteers to fulfill even improper orders (although not without providing justifications); and then realizing what he has done to himself, attempts to smooth over everything later. The afterthought of "reconciliation"—the attempt to smooth over and resolve conflicts, often in logically disarming, but psychologically satisfying, ways—is quite characteristic of village thought and shows up sharply in later items. In this particular instance, of course, the informant's resolution makes considerable sense.

From the point of view of the selectivity of the responses, what is perhaps most impressive here is the unanimous acceptance by the villagers of the prerogatives of the authority figure. Although a few informants condition their response on the propriety or appropriateness of his order, not one challenges his right to issue it or uses his authority as a counterpoint to one's own needs. No one tells the *phuujiŋjaj* to "jump in the lake" (or its Thai equivalent), to "mind his own business," or even has the boldness to ask him, "why?" There is no hint of defiance or of any need to undermine the premises of the authority situation.

The next item, *"When he is in the presence of a phuujiŋjaj, he feels . . . ,"* is even more neutral and behaviorally less demanding than the above. The informant does not have to do anything. Although the item produces three closely related themes, not a single informant expresses any negative feelings toward the superior (envy, jealousy). Interestingly, there is no sense of identification with the superior either, that is, ". . . he feels he might want to be a *phuujiŋjaj* himself"; ". . . he feels that he must work hard or obtain the merit to become like him." Informants that might be considered to approach this position, as in the first two responses, are more concerned with basking in the power of the authority than they are with being like him.

The major theme to emerge from the item is the sense of esteem—respect, pleasure, honor, admiration, and gratitude—that informants feel toward the superior. More than 64 percent of the responses are of this general type. Three of these persons (see the second and third examples)

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TABLE 2

*125 *When he is in the presence of a* phuujiŋjaj, *he feels . . .*
*128 *When* raw *am (are) in the presence of a* phuujiŋjaj, raw *feel(s) . . .*
*156

ESTEEM:	64%	pleased to see the face of a man who has *bunwaasanaa* (good fortune as the result of merit from previous lives).
		it is good. He will get some knowledge from him. The *phuujiŋjaj* is more intelligent (knowledgeable) than we are.
		glad that the *phuujiŋjaj* comes to visit her, comes to look after her.
		respect (for the *phuujiŋjaj*).
		respects and salutes him.
		honored, proud, and happy.
		respect and veneration for the *phuujiŋjaj*.
DISCOMFORT:	25%	that the man is big, but she is not afraid.
		uncomfortable. He would not be in *phuujiŋjaj*'s presence if it were not necessary.
		scared of him. He is afraid that the *phuujiŋjaj* might blame him and scold him.
		anxiously frightened (*kreeŋklua*) because he (the *phuujiŋjaj*) is more fortunate (*mii bunwaasanaa:* has more merit and good fortune from previous lives) than *raw*.
PASSIVITY:	8%	*chɔɔj-chɔɔj;* she is not afraid.
"BLESSING":	—	loves and *waj*'s (salutes) the *phuujiŋjaj*.

are especially interesting in that they make relatively explicit the basis of their pleasure: they assume that the superior is helping them or giving them something, as a *phuujiŋjaj* might be expected to do.

The second theme, covering 25 percent of the responses, represents the obverse of the above: a sense of diffidence and self-abnegation that ranges from awe through discomfort to fear of dealing with the superior. From an interpretive point of view, the major analytic difference between this theme and the one above is of course, the object of attention. In this situation the informant cannot forget about himself and intensifies his own sense of subordination. However, with the single exception of the informant who wishes that he were not in the situation, there is no indication that such feelings, or the situation that causes them, are unacceptable to the self. The informants' readiness to articulate them, in fact, implies precisely the opposite. What might be suggested here is that although the internalization of the Thai authority system might not be as painless as overt behavior typically leads one to believe, villagers obviously tolerate such "pain" with little difficulty.

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The third theme encompasses the responses of four villagers who by being *chəəj-chəəj* either avoid declaring their feelings toward the superior or shift their attention from their feelings to behaving in a properly passive manner while dealing with the superior. This latter interpretation is based upon a Thai reading of the meaning of a *chəəj-chəəj* response in an authority situation. To be stoically passive, to speak only when spoken to, is not only proper but psychologically prudent. Thus, these individuals manage to meet the requirements of the authority situation without really committing themselves.

TABLE 3

When his superior gave him an order which he knew was wrong, he . . .
***When a superior gives* raw *an order that* raw *know(s) is wrong,* raw . . .**

DO NOT FULFILL (53%)		
UNELABORATED:	37%	did not do it.
		would not do it.
		did not do it, if it was wrong.
TROUBLED:	16%	was afraid and did not like to do it.
		was uncomfortable in her heart; she did not do it.
DO FULFILL (36%)		
UNELABORATED:	22%	had to do it.
		had to do it. For *raw* to go against him can't be done.
JUSTIFIED:	14%	had to do it, because he had higher status than *raw*. He might very well *daa* (denounce, scold) *raw*, if *raw* didn't do it.
		sometimes had to do it, because he wanted money from the superior.
MISCELLANEOUS:	10%	had to consider the kind of person who gave the order. If the man was an ordinary man, he would not do it. If it was necessary, he would do it.
		ought to show that he would do it, but he ought to find a way, gently, to contradict the order without letting his superior know that he did so.

There is one additional theme cutting across all three of the above that merits mention. This is the attention that is given to social forms; that is, although the item explicitly asks for the *feelings* of the informant, a large number from all three categories, 20 percent of the sample manage to work into their response their need to *waj*, bless, or otherwise fulfill their ritualistic obligations to the superior. For some of the informants described in the first theme, the form is equivalent to the feeling.

The next item represents what might be considered a test case of the above. *"When his superior gave him an order which he knew was wrong,*

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*125 *128 *156 *he . . .*" describes what is essentially a conflict between the authority system and another principle external to the system which has its own powerful validity.

Examination of the responses indicates that although 53 percent of the informants do not fulfill the wrong order, as many as 36 percent do. (There are crucial qualifications involved here: more than one-third of those who do not fulfill the order are distressed about it, and approximately one-third of those who do are not without their resistances.) The remaining responses are distributed among individuals who simply cannot act; whose decision is dependent on how high in rank the superior is; or who, like the last informant in the table, manage both to fulfill the order and evade it. However, what is most striking about the villagers' cognitive structuring of the item is the complete lack of negative reference to the authority. Three informants protest the order, one "by giving reasons," another *in order to* avoid being personally harmed, for example, ". . . had to argue. Why should he do it? In all probability, he might be easily damaged if he followed such an order." However, these are not reflections on the competence or privileges of the superior. In fact, two other villagers either cannot quite understand the premise of a superior issuing an incorrect order or are certain that he will correct it (". . . would not like to do it. Because why didn't he give a correct order?"). There are no completions here which read: ". . . he knew that the superior was not clever"; ". . . he told the superior's superior about the wrong order"; ". . . he did it knowing that it would harm the superior." The entire emphasis is on meeting or not meeting the order itself.

Of the villagers who do not fulfill the wrong order, the majority, 37 percent of the sample, present what are essentially flat, unelaborated expressions of unwillingness. However, another 16 percent are troubled by their refusal, and feel compelled to report their hesitation, their fear, and their perplexity over why the order was not correct. Two of these do take it upon themselves to ask the superior for a new order, but do it ever so gently: ". . . told him that such an order was perhaps wrong. *Raw* need not tell him point-blank. Maybe then he might change his order." Similarly, even though 22 percent simply agree to follow the superior's order, another 14 percent try to mitigate or justify their conformity by pleading that they would correct the error later, that they would not take the responsibility for the error, that the superior would denounce them for not conforming, or that they followed his order mainly because they wanted something from him.

The above results, of course, raise a fundamental question about the nature of Thai attitudes toward authority. That is, accepting the premise that none of the responses reflect directly on the competence or prerogatives of the superior, does the fact that as many as 53 percent of the villagers

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decline to carry out an incorrect order of his tell us anything about the *efficacy* of his authority or of the motivational import of the attitudes previously expressed? More broadly, is the villagers' respect, admiration, and diffidence toward the authority figure a psychologically interesting but functionally meaningless pose? The answer to this question must for the most part be negative. The most important consideration operating here is the premise that the superior's order is wrong. That as many as 36 percent should agree to follow such an order and another 16 percent feel squeamish because they do not is considerable testimony to the efficacy of his influence. This is further underscored by the fact that so few informants, only three, take issue with his order, *i.e.*, they are more concerned with not doing wrong than they are with disobeying him. At the same time, the results from this item clearly indicate that deference to authority is not *the* dominant motivation of the villagers. It might well be one of the most easily recognized and clearly expressed, but this should not be confused with its psychic priority.[2]

The discussion till now has focused on villagers' attitudes toward external authorities. We now shift attention to how they themselves respond to acting as authority figures and to how they perceive the role of the authority figure. The item, *"When he was placed in a position of power, he . . . ,"* gives the informant considerable latitude to describe how he would behave or feel in the situation, to muse over the personal meaning and significance of the position, to wonder why he obtained it, or to express satisfaction over the fact that he did.

Examination of the responses indicates that the overwhelming tendency of the villagers is to structure the item in terms of how they would perform under the circumstances. No informant ". . . wondered why" he was given the position, or ". . . felt that he had been given his due," or ". . . realized that he finally achieved what he always wanted." With the exception of *one* informant who was simply "pleased," no villager perceives the experience in terms of its *personal* rewards. It is as if they had just happened on the experience and would attempt to acquit themselves well. Considering that most of them are peasants who, outside the family, have never actually experienced the role of being a superior, this is perhaps not surprising. Perhaps even more important is the fact that good fortune, which being in a power position implies, is so unpredictable in their minds: they have little reason to feel personal reward when they are never sure when and if the power position may be attained, nor are clear about their own role in achieving it. It might be noted that those villagers whose

[2] Neither do I mean to suggest that the desire to avoid doing wrong has psychic priority in the minds of the villagers. Unfortunately, I do not know how they might resolve the following hypothetical item: *"When he was doing something which he knew was wrong, but which he really wanted to do, he. . . ."*

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TABLE 4

*125 *When he was placed in a position of power he . . .*
*128 *When placed in a position of power,* RAW . . .
*156

ACQUITTING WELL:	67%	ought to be sympathetic toward his neighbors. Should not bully (molest) them so that they suffer and become poor.
		had to maintain his dignity.
		must be just; must not be biased; must reprimand those who do wrong and praise those who do good.
		gave her money to the poor.
		had to behave well and tell his subordinates to behave well too.
		had to try to train his subordinates to know how to do the work.
NO COMMITMENT:	8%	had to assume the position.
MINIMAL PERFORMANCE:	4%	would use that power as little as possible.
REJECTION OF POSSIBILITY:	14%	wouldn't accept (that position).
		didn't want power at all.
		did not know what to do; she just kept growing rice.

responses most closely approximate a sense of convincing psychological investment in the position are two young women, who are disturbed and depressed about it, *e.g.*, ". . . was depressed, if the work was beyond her capacity and she was not familiar with the work." However, even here it is clear that they are most distressed about their capacity to fulfill the social and technical demands of the position.

Despite their lack of explicit personal investment or identification with the power role, the majority of informants are concerned with acquitting themselves well. Sixty-seven percent of the sample respond to the item along these lines. Of these, approximately 60 percent are relatively explicit in how they perceive themselves performing the role, and specify such traits as being sympathetic and non-bullying, not negligent, dignified, just, concerned with the poor, and attentive to the needs of their subordinates. The emphasis is on being a benevolent, just, but no-nonsense superior. The remaining individuals in this category are similar to the informant who says simply and abstractly that he "must behave himself well; be honest to others."

Excluding the "no answer" and idiosyncratic responses, the remaining members of the sample offer completions which fall along a three-category continuum emphasizing degrees of non-involvement in the power position: "non-committed performance of the job," "minimal performance," and "rejection of the position and what it entails." It is probably not insig-

4:Phillips E-4,5 (1956-1957) 1966
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nificant that all eight individuals in this last category, 14 percent of the sample, are females who are least likely to find themselves in formal power positions. 125* 128* 156*

These results suggest, of course, that although the majority of villagers have a relatively clear notion of how they would behave in an authority position (their ideas emerge with considerably greater clarity in the items below), they hold no strong conviction about the desirability of assuming such a role themselves, at least outside of those normal authority roles that they hold by virtue of their position in the family, their age, and the like. Their responses imply, more on the basis of what they fail to say than what they do say, a basic acceptance of their present positions in the authority hierarchy.

This implication becomes quite explicit in their responses to the item, *"When he was asked if he wanted to become boss, he. . . ."* This item was originally developed to tap reactions to responsibility in the general area of "Achievement-Failure." However, because it is so appropriate to the present discussion it will be reviewed here. Sixty-nine percent of the villagers say that they do not want to become boss and an additional 9 percent say that they would become boss only if they were really wanted, or if they were sure that it was a job that they were capable of doing. The majority of informants who reject the authority position do so flatly. However, 30 percent of this group justify their rejection on the basis of their assumed lack of knowledge or ability; their fear (because of the responsibility); because they do not have sufficient status (presumably a prerequisite for the position); or because they are just villagers. One informant's justification is perhaps the most absolute: she would not become boss because she does not have sufficient good fortune from previous existences (*waasanaa*) to permit her to fulfill the role adequately. This response and two "lack of status" responses (see the third response in the table) are expressions of the "after-the-fact" type of thinking that animates many village explanations, and which is rooted partially in the villagers' translation of Buddhist doctrine. That is, they assume that status and "boss-hood" are reciprocals of one another: only one who already has sufficient status or *waasanaa* could possibly be a boss, and one who is not already a boss lacks the status or good fortune to become one. In essence, the role of "boss" is self-fulfilling.

The twelve villagers (21 percent) who would like to become bosses for the most part do not attempt to justify themselves. The few who desire the role simply mention the honor, respect, and money that they perceive as going along with it. However, the response of one villager in this category is worth noting. This informant enjoys being a boss because "she would not have to be under anyone's control." Although a deviant response in terms of the distribution on this item, I have often heard villagers express this sentiment as one of the major reasons why they do not want to work for

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TABLE 5

*125 *When he was asked if he wanted to become boss, he . . .*
*128 *When asked if* raw *wanted to become boss,* raw . . .
*156

REJECT OFFER:	69%	she did not want to.
		would say she did not want to be boss.
		would not take the position, because his status was insufficient.
		did not want to become boss, because he is a villager.
		did not want to.
UNSURE:	9%	if he could, he would like to become one. But there are some jobs he cannot do; then he would not become boss.
ACCEPT OFFER:	21%	wanted to.
		wanted to become boss if he could, because a boss is more honored and respected, and gets more money.

anyone else, and also as one of the major reasons why they do not want to leave the land for a position in Bangkok.

The final two items in this section focus on the villagers' definitions of the proper ways to treat social subordinates. Since the items *"The best way to treat a subordinate is . . ."* and *"The worst way to treat a subordinate is . . ."* are simply obverse expressions of one another, they will be handled together. Note, however, that the informants on the two items are different: the first was a Form A item, the second a Form B item. The striking similarity in the content and style of the responses is partial testimony to the "reliability" of the two forms.

Whether in responding to these cues the villagers saw themselves mainly as the source or recipient of the treatment is unknown. However, the relative specificity of their completions suggests a richner of identification with these items greater than that obtained with some of the other SCT materials.

With the exception of one informant, whose deviancy suggests personal difficulty in this area,[8] the universal response of the villagers to the "best way to treat a subordinate" is to be benevolent, kind, attentive, and to satisfy his bodily and psychological needs. The *method* of expressing kindness and benevolence and the *specifications* of his bodily and psychological needs are perhaps what are most interesting here. Thirty-five percent of the informants specifically mention the desirability of using nice-sounding, pleasing, and agreeable words with the person of lower status. In

[8] This unique villager said *"The best way to treat a subordinate is . . .* to scold him; to keep him at home and not let him go out." In Thai terms, this Dickensian type of reaction is possible, rather than funny.

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TABLE 6

The best way to treat a subordinate is . . . *The best way to treat a person of lower status or rank is (namely) . . .*		
"AGREEABLE WORDS"	35%	we have to speak to him nicely. Agreeable words alone can make people like us. to talk nicely to him; he will then have the heart (the desire) to work. to speak to him in a nice-sounding way. If anything happens, then it should be dealt with by compromise. And we should please (humor, pamper) him somewhat. to show a good heart and a good mood when giving orders. Speaking nicely will make for good service. If you speak badly, he will not work. to talk to him nicely. Everybody likes a person whose words are agreeable to the ear.
FEED WELL:	19%	to feed him the same food that you eat; to talk to him nicely. to give him food; not to work him too hard. to look after him, giving him food. If he did not have enough to eat, he would speak badly of you.
NOT OVERWORK:	15%	not to give him too much work to do and allow him time to rest. by letting him work and letting him rest; not to work him so that he has no time to rest.

125*
128*
156*

fact, the responses of two villagers (see the first response in table 6) make "agreeable words" the *sine qua non* of social appreciation. The same pattern is repeated on the "worst way to treat a subordinate" item, although the frequency of references to using bad, rude, insulting words is lower, only 18 percent of the sample. However, if one adds the "to scold" and "to damn" references to the "bad language" references, the total amounts to 35 percent, precisely the same as the above. This emphasis on pleasant and agreeable words—on the style of language, rather than specifically on its content—reveals an extreme sensitivity to the social psychological, rather than to the functional, nature of the hierarchical relationship. There is an implicit recognition here both of the necessity to motivate the subordinate to participate in the relationship and of his freedom to disengage himself from it. His performance in the role is not assumed. Rather, he must be induced by "sweet talk" and an agreeable "front" (cf. Goffman 1959) to respond to his superior. There are no completions here which emphasize the satisfactions that the subordinate might derive from the job he has to do ("*The best way to treat a subordinate is . . .* to ask him for his best

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TABLE 7

*125 *The worst way to treat a subordinate is . . .*
*128 *The worst way to treat a person in your service (someone whom you are*
*156 *using to do something for you) is (namely) . . .*

"BAD LANGUAGE":	35%	to scold him every day. Scold him when he does anything. Never praise him when he does well. There are some people who act just like this.
		to scold and damn him in anger. Not to see his goodness.
		to reprove him and hurt his feelings.
		to use insulting language.
		to curse at him.
UNDERFEED:	13%	to give him bad food and bad clothes.
		to be grudging about food. To let the subordinate go hungry. To want only to get the job done. Like having a water buffalo and working it without giving it food. It will soon die.
OVERWORK:	20%	to have him work without any rest. To use him like cattle or a buffalo.
		by putting him to work without giving him time to stop and rest; by sticking to the rules too closely.

work"), although two informants on the "worst way to treat" item suggest this as a counter-balance to scolding him or to not looking after his physical well-being (see the first completion in table 7). Neither are there many responses that focus on the structural attributes of the relationship, that is, that the subordinate should be treated with "dignity," "respect," or "in a manner appropriate to his status." On the contrary, the completions are highly personalized and are addressed directly to the psychobiological needs of the subordinate.

The attention that is given to the physical well-being of the subordinate is apparent on both items. Two considerations are primary: that the subordinate be fed well (19 percent on one item; 13 percent on the other); and that he be permitted to rest, sleep, or not be worked too hard (15 percent on one item; 2 percent on the other item). The concern with having sufficient relaxation is highly congruent with a more generalized "low pressure" orientation of the villagers. Although this desire usually remains unarticulated, it tends to arise in contexts such as this where demands might be made upon the staying power and social responsiveness of the individual. The villagers' wish for relaxation is probably not so much a plea for relief from fatigue as it is an expression of wanting to be free from constant attentiveness to the superior's needs and desires.

The concern with being well fed, or interest in food in general, is one of

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the great preoccupations of the villagers. It appears in several items—particularly those aimed at discovering the villagers' ambitions and their notions of the most important things in life—although not always with sufficiently high frequency to be considered a "dominant" response. (In the statistical sense, it is not a "dominant" response here either.) The ethnographic reports on Bang Chan (Sharp *et al.*, 1953, Janlekha 1955, L. M. Hanks 1959*b* and 1959*c*, Jane R. Hanks 1961) have all made reference to the recurrent expression of this concern. The concern of the villagers seems especially pronounced to an outside observer not only because of its ubiquity but because in terms of the availability of food, no Bang Chaner —no matter how great his poverty—need starve. From an objective and comparative point of view, the vast majority of the villagers are very well fed indeed. The question that then arises is, why do they feel such anxiety about food? What symbolic function might their preoccupation serve? 125* 128* 156*

Although this food fixation, like many symbolic acts, probably has several functions, its purpose here appears to be quite simple: it represents the munificence, security, and benevolence of the authority figure. Since the food-giving process is the prototype of all nurturance, it seems reasonable that individuals seeking a definition of the authority situation should look for evidence of the authority's nurturing and benevolent qualities in the food-giving act. The authority who feeds his subordinate well loves him.

Having analyzed the above SCT materials, what might we say with reasonable certainty concerning Bang Chan villagers' predispositions to authority? The data clearly confirm the generally recognized willingness of villagers to respond positively and undefiantly to authority figures. Their response is accompanied by feelings of esteem, admiration, and often diffidence toward the authority figure. However, their behavioral and emotional responses toward the authority are not absolute: when the authority is wrong they are most likely to ignore him. They do this, however, without in any way challenging the prerogatives of his authority or pointing to his error. Their structuring of the situation indicates that they are more interested in avoiding the error, and the blame that might be associated with it, than in taking issue with him. At the same time, a large minority are willing to implement the error in order to conform to his authority demands.

Perhaps the most important finding of our review is that although most villagers know how to acquit themselves well in the authority role, they would not like to become authority figures themselves. They have no strong emotional orientation toward the role, and, on practical grounds, feel that they do not have sufficient ability, knowledge, and status to fulfill it adequately. The latter is related in part, in their own minds, to some of their fundamental notions of causation.

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social relationship that the rejection creates. One gains the distinct impression that to the emotionally self-concerned and self-sufficient villager (for whatever reasons he became self-concerned and self-sufficient) it is generally not worth the trouble to reaffirm the relationship.

None of the above should be taken to mean that the villagers do not *behave* in a dependent manner. Nothing could be further from the truth. The entire authority system is based upon the individual's willingness to consider himself a dependent subordinate to somebody else. But this dependency is phrased in terms of the reciprocal relationship existing between the subordinate and his superior. He remains dependent only as long as the superior satisfies his individual needs. From a social psychological point of view, his superior is actually just as "dependent" upon him.

The villagers' distinctive phrasing of their "dependency" needs is perhaps revealed most clearly in their structuring of the items, *"When he thinks of his mother, he thinks of . . ."* and *"When he thinks of his father, he thinks of. . . ."* These stimuli are related to dependency in the simplest possible way: they ask the informant to organize his thoughts and perceptions about those individuals who have been his greatest sources of dependency. Perhaps the most striking attribute of the responses is that, with the exception of two informants on the "mother" item, every villager explicitly thinks of his parents in terms of himself rather than in terms of what the parents are in their own right. There are simply no completions here on the order of "how wise she was," "how strong he was," "what a wonderful person he was," and the like. It is as if disinterested appreciation were simply not one of the villagers' cognitive and emotional premises.

TABLE 8

When he thinks of his mother, he thinks of . . .
When raw *think of mother,* raw *think of . . .*

SELF-BENEFIT:	46%	her love and her kindness and her protection.
		the good deeds she has done for him; her taking care of him since he was a little boy.
		her bringing him food and water ever since he was a child.
		her bringing him up.
OBLIGATION:	43%	making merit for her, as she died a long time ago.
		her well-being; he is concerned about it.
		her goodness. He had fed from her breast; it was her blood that fed him. He must not forget her kindness (her *bunkhun*).
		her kindness (*bunkhun*) to him. He must obey his mother.

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*125 *128 *156 In addition, they have very clear and explicit ideas of the way the authority figure should behave toward the subordinate. His proper role is that of a benevolent, nurturing individual who attends to the elemental psychobiological needs of the subordinate in order to maintain the latter's service and loyalty.

Finally, the most substantial contribution of the data is the extraordinary homogeneity that they reveal in the villagers' attitudes toward the authority system. Excepting the *"When his superior gave him an order which he knew was wrong, he . . ."* item, this homogeneity is apparent even at the most manifest levels of analysis. At the somewhat more abstract levels, it increases considerably. "Attitudes Toward Authority" clearly represents one of the more "unimodal" areas of Thai psychological life.

Predispositions to "Dependency"

Most of the items appearing in this category were originally developed in terms of Occidental, and particularly American, assumptions concerning the nature of dependency. However, after a preliminary examination of the data, it became clear that the items were not tapping dependency needs so much as they were getting at the nature of reciprocal relationships in Bang Chan. It is for this reason that the above title appears in quotes.

Whether the unilateral type of dependency that we are familiar with in the West—based on the *assumption* that one can depend on another with no expectation that such dependency be returned, and the *assumption* that to the person being depended on dependency is its own reward—could ever be applied to the villagers of Bang Chan is doubtful. It is clear that although some villagers are aware of such alternatives, most do not utilize them as part of their normal cognitive and emotional assumptions when dealing with other people. Rather, they seem to assume that all human contact is fundamentally bilateral in nature—a "contract" between independent souls—and that dependency is simply a special case of this. In the same way, it is uncertain whether villagers of Bang Chan could come to share Western assumptions about the negative sides of dependency: that people need each other so much as a source of emotional satisfaction and self-esteem that rejection by others is to be felt as painful or is taken as a sign of the diminution of one's own worth. Rather, they seem to assume that the primary reference of rejection is the party who rejected them or is some objective condition which makes the rejection appropriate. When the rejection is not appropriate (*e.g., "When he found out that his best friend spoke against him, he . . ."*) they are unable to see this as any reflection upon themselves, but rather assign blame to the other party. In all cases, the vast majority accept and are willing to maintain the breakdown in the

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TABLE 9

*125 *When he thinks of his father, he thinks of . . .*
*128 *When thinking of father, raw think of . . .*
*156
593

SELF-BENEFIT:	36%	the protection which his father offered to him.
		the good deeds his father has done for him; his father has taken care of him since he was a little boy.
		the time when he looked after him, taking care of him in sickness. If he had no father, he might not be alive.
OBLIGATION:	50%	he prays for him on Friday.
		his goodness in bringing us up from childhood. It is essential that children repay their father's goodness when he is old and can no longer work.
		if father is alive, he should go visit him and bring food. If father is dead, he should make merit for him.
		his kindness (*bunkhun*) done for her.
		his kindness to him (*bunkhun*). He obeys his father and repays the debt of kindness.

In thinking about their parents in terms of themselves, the informants give their responses in two closely related forms. They think of those characteristics of the parents that directly benefited them: their goodness and kindness to the informant; that they carried the informant in their womb or brought him into the world; that they reared the informant, took care of him when he was ill, or gave him money. Forty-six percent of the sample respond in this manner on the "mother" item and 36 percent on the "father" item. Some of their responses suggest that they were deeply touched by their recollections: one informant remembered her father "bringing her up, since the time her feet were as small as shells," and another thinks of the time her mother "brought me sweets and comforted me when I was frightened." The numerous references to food, as expressions of benevolent concern, should not be overlooked.

The other major form of the villagers' responses, and the one that bears out our earlier point, is the deep feeling of obligation that individuals feel toward their parents. In several instances, the obligation is simply assumed, and the informant gives a completion which describes the nature of his obligatory act: making merit for the parent, giving alms or blankets to monks, caring for the parent when he gets old. In most instances, however, informants indicate that they are obliged to their parents because of the kind and good things their parents have done for them. In a few cases, it is a moral imperative: "it is essential that the children repay their father's

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goodness when he is old and can no longer work"; "if you are a male, you must get ordained to redeem the sins of the parents. Just like sending them money." Many of the responses included in this category do not refer explicitly to the reciprocity of the child, but are phrased in terms of the *bunkhuns* that the parent has done for the child. Because the term *bunkhun* assumes reciprocity as part of its root meaning—good deeds which are reciprocated—references to the *bunkhuns* of the parents are included here. All told, 43 percent of the sample fall into this obligation category on the "mother" item and 50 percent on the "father" item.

The entire discussion above leads to the proposition that if the premise of reciprocity did not play such a major role in the villagers' assumptive world, there would be a few more informants who would be willing to perceive their parents as living an existence independent of themselves, and fewer informants so concerned with repaying their parents for fulfilling what is, after all, the parents' primary psychosocial role. Such a concern is likely to arise only when there is an underlying awareness that the parents have an option of fulfilling or not fulfilling their role, and that this has been impressed on the individual so dependent upon their choice.

The next item, in its manifest purpose and in its diversity of response, is less emotionally loaded than the above. In fact, perhaps the major function of the item, *"A real close friend is one who . . ."* (and its companion piece, *"The thing I want most in my closest friend is . . ."* which is so similar in response it will not be presented), is to indicate that there are no widely shared notions of a "real close friend" in Bang Chan. Whether this suggests that the figure of the "close friend" is unimportant to the villagers is uncertain. However, the diversity of the villagers' responses permits us to say relatively little about the typicality of the socially equal, yet dependent, figure in the village.[4]

Examination of the responses indicates that they fall into six different categories. Listed in the order of their frequency, "a real close friend is one who" has such qualities as faithfulness, loyalty, the willingness to die for his friend, and keeps his word (27 percent). Almost as many people (24 percent) agree that he is an individual who helps you, especially if you are poor or are in need of reminders to behave in a moral way. One informant in this category voices a definition of a "close friend" that I have heard on several occasions when villagers were discussing their relationships with kinsmen or neighbors: ". . . one who helps you when you are in trouble and goes away when you are happy." A third group (18 percent) perceives

[4] An earlier point by Hanks and Phillips (1961: 642) might not be insignificant in this regard. We noted that it "is difficult for an equal to give anything of value to an equal or to command his 'respect.' Indeed, he stands as a potential competitor for favors."

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TABLE 10

*125
*128
*156
912

A real close friend is one who . . . / *A real close friend is (namely) one who . . .*		
IS LOYAL	27%	is such that we love each other truly and would die for each other.
		is dependable, stays with you in suffering and in happiness, gives you useful advice about things, and loves you as you love him.
		is loyal.
IS HELPFUL:	24%	tells beneficial, helpful things to us.
		always helps *raw*.
		has sympathy; helps his friend when he is in trouble.
DOES NOT HARM SPEAKER:	18%	does not slander or blame *raw*.
		does not accuse *raw* falsely.
IS LIKE SPEAKER:	15%	loves me as I love him, has same thoughts, and speaks the same things.
LOVES SPEAKER:	10%	loves us very much.
		loves us, may risk his life for us, shares his food with us, does not take advantage of us, and tells his secrets to us.

a close friend as an individual who, from a positive point of view, does not slander, blame, quarrel with you, or accuse you falsely. This attention to the lack of negative qualities—as if negative qualities were people's given attributes—is repeated below in several items. A fourth group (15 percent) defines the close friend as an individual who is essentially the same as oneself, who enjoys doing the same things as oneself, or who enjoys sharing things with oneself. A fifth group (10 percent) considers the close friend to be simply a person who loves you, and a sixth group (only 2 percent) identifies the close friend as a member of his own family. Two of the idiosyncratic responses are interesting in their own right: one villager says, "I have never had any one like that at all. I have only ordinary friends"; and another says that only a person who is innocuous enough to "not bother anybody" could be considered a real close friend.

Despite their lack of consensus about the nature of a close friend, Bang Chaners do tend to agree about how they would respond *"when they found out that their best friend had spoken against them."* This item asks the villagers to state how they would behave in a situation that has *direct* relevance to them, in contrast to the above, which aims mainly at a definition of another party, albeit a party who would be expected to have some relevance to the self. However, the difference in the tone of response to the two items is striking. Here 66 percent of the sample responds with

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128*
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immediate anger, declares that he will have nothing to do with the friend, or accepts the premise of the item as *prima facie* evidence of the friend's undesirability.

Only one of all the informants raises the possibility of there being some validity to the friend's remarks, and thus indicates some concern with the friend's *evaluation* of himself, as if his friend's opinion mattered to him. He says that he ". . . tried to find out whether there was any truth in what he said. If it was my fault, I would try to make it better and look for ways to come to an understanding." Four other villagers will go so far as to talk the matter over with the friend, but their phrasing indicates that they are concerned with finding out whether the friend did indeed say what he was reputed to say, rather than discussing the value of his remarks. Five other

TABLE 11

When he found out that his best friend spoke against him, he . . .
***When finding out that* raw *best friend speaks against* raw, raw . . .**

ANGER:	66%	had to tell him off. A friend ought not to do that.
		felt angry with his friend and disliked him.
		was angry that his friend was a bad, bad person.
		was very angry and stopped going with him immediately.
		was angry.
TALK IT OVER:	10%	talked it over with him; talked about why he spoke against him.
		had to find out why his friend slandered him; if he was not a good man, he would stop being friends with him.
COUNSEL HIM:	13%	ought to advise him not to do it again.
		had to tell the friend to act correctly.
DISTRESS:	10%	felt *siacaj* (sorry, unhappy).

villagers also indicate a willingness to discuss the matter with the friend, but only to counsel him in the error of his ways: they are doing him the favor. It is probably not coincidental that four of these five counseling individuals are village monks. This is one of the few SCT items to which Buddhist monks, as a group, tend to give responses that are distinctively different from other informants. Finally, four villagers say that they are unhappy or distressed about the situation. A check of the translation of their responses indicates that although the reason for their distress is not absolutely certain, it can from the Thai point of view mean only that they are either unhappy about being slandered, or, like the preceding informants, unhappy *for* the friend; but it does not mean that they are unhappy

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*125 *128 *156 672 about having lost a friend, or about the fact that it was a "friend" who had such an opinion. In this latter respect, their meaning would be similar to the response of one informant who said that he "felt very angry because it is quite common for others to slander him, but it is very low thing for friends to slander." In both cases, the premise of being spoken against is accepted and is given priority over the strength of the friendly relationship.

In fact, perhaps the most impressive thing about this entire distribution is the overwhelming acceptance of the premise and a concomitant indifference to the source of information or the nature of the evidence, whether it be against the friend or themselves. Only six villagers suggest that they are thinking along these lines, and only one addresses herself explicitly to the reliability of her informants, when she says that she ". . . paid no attention to what they said about her best friend (or what they said her best friend said)." It is as if hearing such things about friends, or discovering such things being said by friends, were indeed, as I originally suggested to the villagers, one of those "things that happen every day in life; just plain, ordinary things."

In any event, no villager except one ever entertains the possibility of there being any value in what the friend said. Any merit in the comment or any positive motive that the friend, in his role of friend, might have had, is assumed by the villagers to be inconsequential to the act performed. The fact of his being a "best friend" does not give him any special prerogatives. In fact, the villagers give such little attention to the fact of friendship in this situation that the experience emerges largely as one of insult, rather than rejection.

*125 *128 *156 The next two items differ from the preceding one in that the stakes in

TABLE 12

When he saw that they did not like him, he . . .
When seeing (realizing) that other khon *do not like* raw, raw . . .

WITHDRAWAL OR INDIFFERENCE:	60%	did not see them again. Oh! I don't feel anything. I never worry. did not go to have trouble with them. did not go to them; did not keep company with them. let them do as they pleased. He lived his own life. Who would say anything against him?
SELF-IMPROVEMENT:	15%	had to behave better. would try to improve himself, so that they would like him.
DISPLEASURE:	8%	was displeased, and did not like them either.
REGRET:	8%	felt sorry.

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TABLE 13

When he saw that others avoided him, he . . . 125*
When seeing that other khon *do not want to stick around* raw, raw . . . 128*
156*

WITHDRAWAL OR INDIFFERENCE:	53%	she would not hang around with them either.
		did not care; she would live to an old age and see how they liked it.
		would avoid them.
		did not bother with them and did not make friends with them again.
		he did not feel anything.
ACCEPTANCE:	24%	probably was not generous with them, so they avoided him.
		they probably felt that she wasn't good enough, so they avoided her.
UNHAPPINESS:	6%	felt unhappy and sorry and thought they hated him.
SELF-EXAMINATION:	3%	ought to examine himself and find out the reason.
DISPLEASURE:	3%	felt displeased. But she was *chooj-chooj*; she did not go hurt them (beat them up).

being rejected are clearly not as high. In the items, *"When he saw they did not like him, he . . ."* and *"When he saw that others avoided him, he . . ."* there are no friends involved and the reasons for rejection are unstated. The informant thus has greater freedom to respond. Nevertheless, the responses here are very similar in their over-all effect. While the angry reactions have all but disappeared, they have been replaced by a general indifference to the experience of rejection. Thus, although informants here are not as emotionally expressive as they were on the earlier item, they are just as willing to accept the breakdown in the social relationship that the item implies. In only one of the 111 responses is there any thought of mending the interpersonal rupture, and even this is conditioned by the necessity of the rejector being a kinsman or someone the informant likes, that is, "if it is a member of his family, he will ask him the reason. If it is an outsider, he does not care. If he does not like him, he will have nothing to do with him. He lives in his own house, works in his own field, and makes his own living."

Examination of the responses on the *"When he saw that they did not like him, he . . ."* item indicates that 60 percent of the sample responds either by saying that they will not have anything to do with the people who do not like them or that they do not care, and 53 percent responds similarly on the *"When he saw that others avoided him, he . . ."* item. What is most impressive about these highest frequency responses is the simple

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*125 matter-of-factness with which they are articulated. The villagers' rejection
*128 of, or indifference to, the rejector lacks almost all sense of spleen or hurt.
*156 Many of them describe the experience as a simple transaction: *"When he saw that others avoided him, he* . . . also avoids them. If they are good to me, I shall be good to them. If the others are not good to me, I therefore avoid them"; ". . . did not want to stay around them. He would be good to those who were good to him. If they were not good to him, he would not be good to them"; ". . . did not want to associate with them, because one cannot force oneself." The basic rationality underlying the indifference of some of them is also striking: ". . . he feels *chaej-chaej* (cool, indifferent, self-possessed); does not feel glad or sad because he depends on himself, not on other people"; *"When he saw that they did not like him, he* . . . was not surprised; he was not sorry, because he did not have to ask anyone any favor"; ". . . let them feel and say whatever they like. He did not bother with them. We people have many minds, different hearts. Whatever they say, we can't be sure whether it is true or not."

Following the above dominant response, the distribution on the two items diverge a bit. A noteworthy minority, 24 percent, offer a series of responses on the "saw others avoided him" item that are not found on the other item. These responses describe a complete acceptance of the avoidance situation. That is, informants simply present reasons to explain or justify why others avoided them, for example, ". . . probably was not generous with them, so they avoided him"; ". . . felt that they might have been offended by something that he had done." (Note that the pronoun in the item is *"raw,"* the editorial "I," not "he.") This kind of response, where informants not only accept the experience of rejection but volunteer their own negative qualities as the objective reason for it, suggests of course an ultimate faith in themselves *vis-à-vis* their relations with other people. Other minority responses on the two items are as follows: on the "avoid him" item, 6 percent are unhappy, 3 percent examine themselves for the reasons for the avoidance, and 3 percent are displeased; on the "do not like" item, 15 percent want to improve themselves (although despite this Dale Carnegie approach, one villager in this category says: "Actually, it is difficult *to* please other people"); 8 percent are displeased with the situation; 8 percent are sorry others do not like them; and 3 percent cannot quite understand why they are disliked by others.

In summary of this section on predispositions to "dependency," the following points might be made. The data here tend to support earlier remarks on the importance of reciprocal relationships in Bang Chan. As a cognitive principle, the notion of reciprocity even extends to the rejection situation where many villagers say, "If people do not want to associate with me, I will not associate with them." (The percentage that say just this averages out to 40 percent.)

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averages out to 40 percent.) There are no widely shared notions about the nature of a "close friend," an individual who, although a social equal, might be expected to be a source of dependence. When the quality of the friend's fellowship is challenged or placed in serious doubt, the majority of informants accept this as a reasonable possibility and exhibit little effort to reintegrate the social rupture that is thus created. In situations where the reasons for, and parties of, rejection are unknown, villagers respond with genuine self-confidence and equanimity. Excepting the "conception of friendship" item, predispositions in this area tend toward "unimodality," although not to the degree that we encountered in the area of authority.

Orienting Toward Others

The materials to be covered in this section aim mainly at the villagers' perceptions of the way human relations should be conducted and their notions of desirable and undesirable human qualities. To a certain extent, my purpose is to check how typical and representative many of the statements on interpersonal contact are that were made earlier in the text. However, two important points about the nature of this "check" are in order. First, it must be remembered that we are dealing here with the villagers' perceptions of desirable human qualities, not those that an outside observer identifies. Inevitably, there are certain areas that an outsider may consider primary, but which the villagers may simply take for granted, or vice versa. The complete absence of references to the desirability of *sanuk* or being an "amusing talker" in the responses below is a case in point. Villagers, of course, are aware of the desirability of *sanuk* and probably could not get along well without it. But the capacity to be "sanuk-ful" is, in their environment, such a familiar and undistinguished human attribute that to them it does not merit being singled out for special regard. As a "check," therefore, these data serve mainly to identify any inconsistencies that may appear between our own perceptions and those of the villagers, rather than to provide full confirmation of the earlier observations. Likewise, it is possible that this material may reveal concerns not previously noted. Second, it should be clear that when there is confirmation, it will obviously be expressed in the villagers' idiom, not our own. Few informants below explicitly say that what they most like about others is their cordiality and affability. However, several (irrespective of sex) do say that they like the fact that others "talk sweetly," "are not coarse," or have "a soft and gentle way." This is their way of communicating the desirability of being polite and nonimposing toward others. Similarly, their indication that *"In their relations with people, the thing they are most careful of is . . .* talking to them correctly and properly"; ". . . manners and etiquette"; or

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*125 *128 *156 ". . . to talk only about good things" is their own way of phrasing the significance of social cosmetics in their psychological life.

The first item to be examined, *"The thing I like most about him is . . ."* simply asks villagers to present their assessment of desirable human qualities. Although the variability on this item is considerable, encompassing at least eight qualitatively different categories[8] (more than any item heretofore encountered), one mode of response has obvious prominence. Not unexpectedly, this is the category that describes someone else's most favorable quality as doing favors for the informant, helping the informant, liking him, or loving him. The qualities are seen in terms of their direct relevance and utility to the self. Although this may be a reflection of the value that is placed upon "generosity" in Bang Chan, it is clearly also a reflection of the villagers' self-concern (or, perhaps more fundamentally, emotional honesty). Thirty-five percent of the sample responds in this manner, and another 8 percent, although not concerned principally with the self, build some self-reference into their reply, for example, ". . . he is not haughty; whenever he meets me, he greets me." The great variation in the tone of responses within this category, however, merits mention. One informant admits that he most likes the other person because of the gifts he receives from him; another says he enjoys the respect the other gives him; and still another (a monk) merges the teachings and language of Buddhism with his own self-interests: *"The thing I like most about him is . . .* that he relieves my suffering, he nurtures my happiness, and advises and teaches me in the good and likable way." (Although this response might seem paradoxical to Western sensibilities, it makes complete sense from a Thai point of view. As a monk, one of the major functions of this person is to present himself to others as a means by which they can do good: they can relieve his suffering, nurture his happiness, and the like. That other people do indeed take advantage of the opportunity he provides them indicates how desirable they are.)

The second major form of the villagers' responses, representing 15 percent of the sample, is the "nice talk" or "sweet speech" category mentioned above. Very similar to it in intent, but lacking the explicit reference to speech, are a set of responses held by 9 percent of the sample, which

[8] Many informants also cite not one, but several, desirable qualities. My practice here, as in all cases of plural entries, is to give each citation a percentage of credit: a half, a third, etc. This is not done, however, if the secondary citations are simply amplifications of the first, non-categorizable after-thoughts, non-categorizable in themselves, or are phrased as subordinate rather than equivalent considerations. No reliability check of this "coding" has been conducted, mainly because few reliability checkers know Thai culture well enough to assign the correct cultural meanings to the responses. (See my comments in the preceding chapter on the dangers of assigning American meanings to Thai responses without using native meanings as intervening correctives. The *bunkhun* responses presented earlier are an excellent illustration of the kinds of dangers involved.)

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TABLE 14

The thing I like most about him is . . . 125*
The thing which causes raw to like him is (namely) . . . 128*
156*

SELF-REFERRING (43%)		
PRINCIPALLY:	35%	that he is good to me.
		that he does good. He is our benefactor. He helps us in our work.
SECONDARILY:	8%	that he has a good heart; he loves me.
POLITENESS (24%)		
SWEET SPEECH:	15%	that he talks sweetly; he has gentle manners.
		that he speaks well.
OTHERS:	9%	that he has a soft and gentle way.
NO BAD QUALITIES (18%)		
NOT HAUGHTY:	9%	that she has a good character. She does not look down upon raw.
ALL OTHERS:	9%	that she speaks well and never encroaches on me.
OTHERS (15%)		
GOOD LOOKS:		that he is handsome.
DILIGENCE:		that he is good; he works well, so I like him; we do not like wayward people.
ABSTRACT QUALITIES:		his good character and inborn temperament.
STRAIGHTFORWARDNESS:		that he speaks to me directly.

describe lack of haughtiness or sense of social superiority as likable qualities. Although small in numbers, it is surprising that any informants in a community as socially homogeneous as Bang Chan would think of these as traits to be evaluated. These responses become even more apparent, although still clearly in a minority, in the next item, which focuses on "dislikable" qualities. It might well be that they reflect the sense of social class and intra-village status differences, and an accompanying status anxiety, that have been observed to be emerging in Bang Chan. (See Sharp *et al.* 1953.) It might also be noted that positive personal characteristics are again being phrased in negative terms, as the absence of undesirable characteristics. Eighteen percent of all the responses here are of this type. The four remaining categories, in no case encompassing the responses of more than three villagers, emphasize the handsomeness of the other person; that he works hard or diligently (to a certain extent, an emphasis on achievement); that he has some abstract qualities which, by definition, are desirable, and thus not further analyzable (that the person is good, has a good heart, or fine character); and that he speaks directly or truthfully.

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*125 *128 *156 This last may be a reflection of the dissatisfaction a few villagers may feel over the continuous emphasis given to sweet and appealing words.

*125 *128 *156 578 The next item, *"The thing they most dislike about him is . . . ,"* is in its stimulus value essentially the obverse of the above. Thus, the negative counterparts of some of the characteristics noted above also appear here: 4 percent of the sample dislikes the lack of orderliness and a pleasing disposition in others; 13 percent dislikes haughtiness, conceit, or arrogance; and one villager dislikes a person who "does not know what work is." However, the dominant definitions of undesirable characteristics are not simply negative phrasings of the desirable. Although two villagers do dislike

TABLE 15

The thing they most dislike about him is . . .
The thing that makes* khon *not like him is (namely) . . .

TROUBLING OTHERS (64%)		
HURTFUL SPEECH:	30%	that he does not speak well and lies.
		her lies. No one likes those whose words cannot be trusted.
		that she damns others. Some people gossip about others.
ANNOYING OTHERS:	24%	that she is a troublemaker and does not speak nicely.
		that she likes to look for trouble.
THIEVERY:	10%	that he is a person who likes to steal.
BAD QUALITIES (17%)		
HAUGHTINESS:	13%	that he is conceited and lofty.
OTHERS:	4%	his bad manners; he is not *riabrɔɔj* (he lacks neatness, good order, finesse, etc.); his coarse way of speaking.

people who are ungrateful for the help they have received or who do not help others, most accept these sins of omission as realistic possibilities. (Although *bunkhuns* assume reciprocation, one always has the option of terminating the relationship.) Rather, most villagers perceive undesirable qualities in terms of the trouble that individuals actively cause others.

This trouble takes at least three forms. The first, representing the responses of 30 percent of the sample, is the deceptive or otherwise painful use of language: lying, gossiping, using rude and insulting forms to deal with others. This last, of course, means the expression of aggression: indifference to the feelings and dignity of other people. Lying and gossiping, however, reflect the sensitivity that some villagers have about the untrustworthiness of others: that beneath the gloss of smiles and amicable face-to-face contacts, people often do hurt one another. This suggests, of course, some of the ambivalence that villagers feel about "nice words" and

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"sweet speech." The second major response, representing 24 percent of the sample, is more generic in nature: it encompasses the trait of inciting other people to have arguments; the capacity to annoy people, in a manner akin to what is connoted by the American slang term, "to bug" a person; and the capacity actually to threaten others. The emphasis here is on intruding on the peace, stability, and self-concerns of other people. The last response, representing 10 percent of the sample, is interesting because of its rather non-psychological, highly practical, nature: people are disliked because they steal. Theft is something that one *hears* about in Bang Chan very frequently, but actual cases are almost never encountered. What its symbolic significance may be is unknown, unless it is simply a more concrete expression of the concern about the untrustworthiness of others.

The most striking characteristic of the above responses is that despite their diversity they almost all emphasize qualities that are directly interpersonal, rather than intrapersonal, in nature. There are no responses here which say that the most dislikable thing about a person is "his stupidity"; "his weakness"; "his incompetence." It is only when unattractiveness takes on a manifestly social dimension, when a person's activities can actually harm others, that most villagers become exercised. Otherwise, Bang Chaners seem to assume (and it is the assumption that is important) that a person can be any way he wants. To a large extent, this same assumption was implicit in the villagers' structuring of the previous item on "likable" qualities, and may help to explain why they often define positive qualities as the absence of negative ones. In that item, if a person could not be of direct help to the self or love the self (the major response), villagers desired that he deal with others in a "soft spoken" and gentle way (the second most frequent response) or at least lack offensive qualities (the third most frequent response). They seem to assume that it is better not to have a relationship at all than to have one that admits unpleasantness. Or, phrased in another way, they seem to assume that if a relationship is even to occur, it must be useful, pleasant, or harmless. What the person is otherwise like, outside of the relationship, is irrelevant to one's assessment of him.

This attention to the manifest nature of social relationships and to the necessity of keeping the relationships smooth and uncomplicated is revealed most sharply in the next two items, *"People who never show their feelings are . . ."* and *"It is sometimes good to hide your true feelings about a person because. . . ."* The latter item is clearly biased in the direction of sanctioning the social pose, and is valuable mainly for the kinds of justifications it reveals. The former item, however, has no evaluative connotations and permits villagers to respond in any direction. Examination of the responses indicates overwhelming agreement on the part of villagers about the desirability of hiding one's feelings. Eighty percent of

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*125 the sample responds approvingly; 12 percent responds disapprovingly
*128 (three quarters of whom are disturbed by the deceptiveness involved); and
*156 6 percent responds in a non-committed way. One of the non-committed is
152 almost literary as he describes a person who never shows his feelings as "a man who is like a sword in a scabbard." (His non-committment derives from the protective, as contrasted to the obviously aggressive, symbolism of the sword.)

In the majority group, more than half the informants describe people who hide their feelings as "good," "persons who do not want to cause trouble," "just men," and perhaps most cogently from a Thai point of view, "persons who realize that hiding one's feelings is a virtue that helps men to live together happily." Three of the majority informants, however, are

TABLE 16

People who never show their feelings are . . .
Khon *who never show their feelings are* . . .

APPROVAL:	80%	good people, because others do not know their feelings. thoughtful people. real men, serious men, men who do things seriously. careful people who do not want to cause trouble. people who do not want to be blamed. people who have very brave hearts.
DISAPPROVAL:	12%	bad people, because their mouths are one thing but their hearts are another.
NON-COMMITTAL:	6%	both good people and bad people.

more defensive in their justifications: they say that people who do not show their feelings do not want to be disliked or blamed by others. The balance of the majority (a dozen villagers) are the most expressive in their approval: they say that people who conceal their feelings are "patient," "brave," "pure," and "thoughtful." Their emphasis is on the highly desirable stoicism of such individuals.

Perhaps the most revealing aspect of the responses of the minority group who disapprove of the concealment of feelings is, again, the interpersonal point of departure that is used to evaluate the behavior. Such individuals are viewed mainly as deceptive, although one informant says they are cruel and another says that they are difficult to get along with. But nowhere is there any reference to the possibility of such concealment being undesirable because it makes psychic demands on the concealer or because it might be expressive of inadequacy on his part. There is no concern here

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over the possibility of these individuals being "fearful of others," "tight," or to use a readily available Thai term, *cuu cii* (compulsive, exacting). Why people do not show their feelings is their own business and their own problem (if not showing one's feelings could be thought of as a "problem"). As in the approving responses, the interpersonal effect of their behavior is what is most important.

The justifications with which villagers respond to the stimulus, *"It is sometimes good to hide your true feelings about a person because . . ."* are of three general, but closely related, types.

TABLE 17

It is sometimes good to hide your true feelings about a person because . . .
Sometimes it is good to hide true feelings about another **khon** ***because . . .***

AVOIDS ANGER:	37%	people will not be able to say that *raw* is not a good person; it makes them not angry with *raw* or dislike *raw*.
		he will not hate you.
		he will not detest *raw* and will give *raw* help.
		they will not hate *raw* in return.
AVOIDS TROUBLE:	26%	it prevents people from quarreling.
		it preserves friendships; it prevents quarrels and fights which break up friendships.
		there will be no trouble.
UNDERSCORING:	20%	it is not letting him see anything in our outward behavior. We don't let him see that we are angry and that we are controlling our feelings.
		you will not tell him what your true feelings are.
		it is bad if you do not hide your feelings.

The most frequent response, held by 37 percent of the villagers, is that by concealing their true feelings about another person that person will not dislike, hate, or be angry with them. Whether this response involves a projection (an unconscious attribution) onto others of their own aggressive feelings, which the concealment suggests to them they harbor, is uncertain. The response may simply reflect the omission of certain logical steps in the psychodynamic process, that is, "that if I did not conceal my feelings, and expressed what I felt, it could only lead to a series of events culminating in their hating me." It is interesting to note, however, that only one of all our informants makes the effort to point out that the point of the concealment may be to avoid hurting that other person ("it prevents the man from

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*125 *128 *156 152 having bad feelings and you do not lose anything"). All the other informants who are concerned about the other person (several are not) either invert the item to protect themselves or speak in more general terms of the concealment's value in preventing quarrels, preserving friendships, and the like. This kind of response is the second major justification, representing the responses of 26 percent of the sample: individuals holding this position point out that by not expressing their feelings, quarrels are precluded, "the work will not be messed up," and "coöperation and understanding" can be maintained. The third major group of informants, 20 percent of the sample, accept the value of concealing one's feelings as self-evident, and use the item to underscore the point. One informant offers a highly articulate justification for her concealment which, in its stoical overtones, is suggestive of some of the tenets of Buddhism: "one should not show one's happiness, attachment, or sorrow to anyone." Basic to this person's response is the emphasis in Buddhist doctrine on the ultimate psychological isolation of every soul.

The final item in this section, *"In his relations with people, the thing he is most careful of is . . ."* asks villagers to specify their major form of interpersonal anxiety. The "anxiety" here is intentionally low-keyed. Villagers are asked what they are careful of, not what they are frightened of.

TABLE 18

In his relations with people, the thing he is most careful of is . . .
In relations with other **khon**, *the thing* **raw** *is most careful of is (namely) . . .*

OWN BEHAVIOR (55%)		
NATURE OF WORDS:	37%	words and promises.
		that he speaks well (politely, pleasantly).
		that her words might be insulting to them.
		his own words.
MANNERS:	6%	his manners, his etiquette.
GOOD SELECTION:	6%	to try to associate with good people only.
OWN "HEART":	6%	his own feelings (mood), for fear that they will be angry with him.
OTHERS' BEHAVIOR (37%)		
THEFT:	13%	she is afraid they will steal her things.
		he is afraid that they might be thieves.
TREACHERY:	7%	he is afraid that they will double-cross *raw*.
PHYSICAL HARM:	6%	she is afraid they will attack her.

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Examination of the responses reveals two major reference points. Fifty-five percent of the sample responds in terms of what it is about their own behavior that makes them anxious; 37 percent respond in terms of what they are anxious about in the behavior of others toward them. Of those responses in the first category, the majority (in fact equal in number to all the responses in the second category) refer once more to the nature of their words. One informant sums up almost everything we have been saying about the villagers' concern with social cosmetics. He says that *"in his relations with people, the thing he is most careful of is . . .* not to talk about important matters." Other villagers point to words as the *sine qua non* of obtaining social admiration: one informant says that he is most careful of "talking. It is most important. If you talk well, people love you. If you talk badly people hate you"; another says, "his words; if a person does not speak well, he can't get anything from anybody; nobody loves him." Other informants anxious about their own behavior in this situation divide their responses equally (6 percent each) among three sub-categories: they say that they are most careful about having good manners; about being sure that they select only good, non-troublemaking individuals with whom to deal (involving an assumption that they do indeed have considerable control over the situations into which they place themselves); and a third group says that they are most careful about their own feelings and their own "hearts," indicating the concern they feel over controlling their own impulses in order to deal with others in a comfortable and amicable way.

Among the villagers who respond in terms of anxiety about what other people will do to them, the majority, 20 percent of the total sample, says that they are careful about other people stealing from them (13 percent) or being treacherous and cunning toward them (7 percent). Another 6 percent are careful lest others attack them and do them physical harm. The extremity of the replies of this sizable minority (26 percent) is perhaps what is most interesting, and somewhat surprising. The balance of responses in this category are mainly expressions of a diffuse wariness about the intentions of others ("he must keep watching and listening"; "that she must know whether they are good persons or not"), although two informants specify that they must be careful about the words, promises, or criticisms of others.

The foregoing discussion of the villagers' modes of "orienting toward others" may be summed up in the following manner. Despite the obvious tendency toward "multimodality," or high variability of response, on all items excepting the *"People who never show their feelings are . . ."* item, the villagers' reactions to the above stimuli go far in supporting our earlier remarks on the nature of social contact in Bang Chan. Villagers evaluate other people mainly in terms of how well they treat the self or how well

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*125 *128 *156 they manage not to harm the self. The interpersonal relationship is the major component of their evaluation in the sense that they are either indifferent to, or highly tolerant of, character traits of other people that exist outside the purview of their contact with them. In effect, villagers seem to assume that a person can be anything he wants to be, so long as his behavior is not detrimental to others. Villagers respond in a highly favorable manner to persons who conceal their feelings, and explain their approval by saying that such behavior helps minimize social conflict, particularly conflict of which they may be the object. Their commendation of people who control their feelings is extreme, taking the form of calling them "just," "good," "brave," "pure," and "thoughtful." In their interpersonal contacts, villagers say they are most careful about the effect of their words on others, and one informant presents what is perhaps the perfect summation of the role of politeness in their lives when he says that, in his relations with people, he is most careful "not to talk about important matters." For a sizable minority of villagers, the data also indicate a sense of untrustworthiness about the motives of others. The major forms of this lack of trust are that others will steal from or physically harm them, be treacherous, slander, or gossip about them. Our observational materials suggest that although their anxiety may have realistic foundation with regard to others gossiping about them, and perhaps slandering them, this would not be true in the case of others stealing or doing them physical harm. These fears are probably symbolic expressions of a more diffuse anxiety about harm to the self through the medium of interpersonal relationships. Whether anxiety about interpersonal relationships is indeed the major form of anxiety in Bang Chan will be investigated in the next section.

Anxiety and Reactions to Crises

121 152 In this section we are dealing with materials that present the most ticklish analytic problems we will encounter. We know from American culture that persons identify as sources of anxiety issues which are genuine existential problems (illness; payment of bills; how to deal with an arbitrary boss); issues which by most culturally "reasonable" standards should not be sources of anxiety, but which are nevertheless felt that way (how to obtain a beautiful or handsome figure with the least amount of effort); and issues which by both cultural and personal standards of "reasonableness" are not considered valid sources of anxiety, but which are nevertheless "understood" and tolerated (fear of thunder, wild animals, flying insects). In the last two cases, we know that the expressed anxiety usually symbolizes some other threat, which is considerably more crucial but unknown. And in the

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last instance, we know that the fanciful fear often serves the vital function of binding what might otherwise be extremely painful free-floating anxiety.[6] We also know from American culture that there are many objective sources of threat existing in the environment which are rarely identified as objects of anxiety, unless directly or imminently encountered, *e.g.*, being struck by an automobile. Finally, we know that there are objects or sources of anxiety that may be denied as such because of the cultural values associated with being fearful or brave: it is possible for a teen-ager to admit anxiety over an examination or an important "date," but usually not when he is asked to perform a daring deed by a group of his peers.

The point of these remarks is that despite our familiarity with the various forms and functions of anxiety, we are still hard put in most instances to identify the precise psychodynamic role of an anxiety response when it is expressed by individuals in our own culture. The problem is compounded immeasurably when we attempt to do this with members of another culture. It is for this reason that the responses below will be accepted as those things which actually frighten or worry the villagers of Bang Chan, and will not be examined for any intrapsychic functions that they may serve. The few interpretive excursions of this type that we took earlier in the text (e.g., the villagers' concern about a superior feeding them well) were sanctioned principally by the context in which the responses were made. Here, informants are asked to indicate their anxieties under a completely unspecified set of conditions.

Actually, most of the responses given below are, in terms of the villagers' culturally constituted reality, of a highly reasonable nature, suggesting that informants are reacting in terms of their genuine existential concerns. Being bitten by a cobra is a dangerous (although not a likely) possibility, and although a few villagers may hesitate *on direct questioning* to declare their belief in malevolent spirits (translated below as "ghosts"), all know about such spirits and at one time or another have performed acts to propitiate them, indicating considerable psychic investment in their reality. Although in some cases one might wonder about the motivations behind them, the responses make complete sense.

The responses to the first item, "*He was most afraid of . . .*" fall into three major categories. The vast majority of villagers (61 percent) are frightened by experiences, actually *possibilities* (and again, in their unpredictable world, the possible is psychologically critical) which threaten

[6] The major analytic difference between *anxiety* and *fear* is, in fact, that the latter is "bound" anxiety, *i.e.*, the anxiety has assumed a concrete, objective representation which the individual at least can deal with: by avoidance, doing battle with it, laughing over it, and the like.

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*125 their physical well-being.[7] They specify such threats as poverty (15 in-
*128 formants), not having enough to eat (11), illness (4), flood and fire (3),
152 death (3), and being bitten by poisonous snakes (2). There is no significant difference in the economic statuses of individuals who mention either poverty or famine as their greatest fear. While there are six references to these fears on the part of "poor" villagers, there are sixteen references on the part of "average" villagers and four references on the part of "rich" villagers, all accurate reflections of their representation in the sample. The second major category of responses, held by 20 percent of the informants, describe the actions of people as the source of greatest fear. In all cases, these refer to actions of people other than the self, and the reference in more than half the responses is specifically to thieves. In a few cases, younger informants speak of their parents scolding them or beating them. As suggested earlier, no villager recognizes any personal inadequacies as sources of fear, although the idiosyncratic *karma* (or *kam*) response, mentioned below, suggests this in a superficial way. In this regard, it might be noted that three informants assert that they are afraid of nothing. The third category, encompassing the responses of 10 percent of the villagers, mentions malevolent spirits as the sources of greatest fear. Interestingly, one of these informants tries to pooh-pooh her fear by noting that if there were no way to escape the spirit she could manage.

*125 From the point of view of one of the major concerns of this book, the
*128 most significant finding of the above data, replicated in part and in an even
152 more apposite way in the next item, is that only a minority of villagers
*156 admit to any fear, symbolic or otherwise, of the actions of other persons, and none indicate any anxiety over their own actions toward others. The relevance of this finding is, of course, that it places our earlier remarks in the "Orienting Toward Others" section in proper perspective. In that section, where we were concerned explicitly with interpersonal relationships, it was perhaps inevitable that the interpersonal mode of anxiety would loom large. Here, however, villagers are permitted to express any kind of anxiety—physical, interpersonal, intrapersonal, fanciful, magical—and only a minority do indeed give their anxiety an interpersonal form. In this connection, a remark made much earlier in the text might be recalled. In discussing the uneasiness that villagers frequently betray in their interpersonal contacts (nervous laughter and concern with inconsequential

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[171] [7] By way of general intellectual interest, it might be noted that this finding, as well as the one emerging from our next item, offers strong support to some "admittedly impressionistic and unverified" observations of Skinner (1957: 309–310) who, in discussing the major concerns of the lower class Thai members of Bangkok society, who are mainly transplanted peasants, singles out as primary their concern with "basic well-being, *i.e.*, the health and safety of the organism."

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TABLE 19

He was most afraid of . . .
The thing raw is most afraid of is (namely) . . .

THREATS TO PHYSICAL WELL-BEING:	61%	poverty. If he had enough, he would not be afraid.
		having nothing to eat. I mean when there is a flood, and all the paddy is lost, and we will starve because there is no rice to eat.
		not having enough to eat.
		having fever; getting sick and having no money.
		fire, because when a house catches fire it is a great loss.
		death.
		snakes. He is not afraid of ghosts. He can walk in the dark. But snakes are dangerous. He does not like to go anywhere after dark.
ACTIONS OF OTHERS:	20%	people. When she had money, she was afraid she would be robbed. When she did not have any, she was in difficulty.
		her father beating her.
MALEVOLENT SPIRITS:	10%	ghosts; but if there were no choice (no place to go, no way to get out of the situation), then she could manage.
		death; of ghosts haunting him. If the ghosts don't haunt him, he is not afraid.

topics) it was noted that, "uneasiness, when it occurs, is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality." The data here would tend to reinforce that conclusion. At the same time, however, it must be remembered that 20 percent of the informants do give what is at least symbolic expression to their fear of others, and it would, therefore, be most inappropriate to go to the other extreme and assert that villagers have no anxiety about interpersonal relationships. I also noted in the earlier discussion that "the nervousness that is betrayed indicates some of the internal strain that villagers undergo in having to maintain a constant front of politeness." This appears to be a case of their simply accepting—without worry, shame, or any other secondary anxiety—their own shortcomings. The anxiety that is experienced is just not *felt* as a psychological burden.

One of the responses above, although idiosyncratic, merits attention. This is the response of the villager, age 52, who says that she is frightened by her *karma*: "it depends on *raw's* mind [or heart]. Some people are afraid of ghosts. They see things and they believe that they see ghosts. That is not right. They see falling leaves and they think that is a ghost. There is nothing when they approach. The most frightening thing is bad *karma*. It

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follows you. If you kill a living thing in this life, a living thing will kill you in the next life." What is surprising is that there are not more responses of this type, especially from older villagers. The psychological significance of this kind of response is of course most difficult to assess. Although on the surface it is an expression of personal inadequacy—an expression that the informant has not done as well for herself as she could have—its essentially timeless and unpredictable quality (one never knows when the product of bad *kam* will issue) almost takes it out of the sphere of direct emotional import. It is in fact an inordinately intellectualized response, probably just as expressive of the informant's sense of psychological security as it is expressive of her anxiety. Although bad *kam* is an omnipresent and unavoidable anxiety, the fact that one can make merit to reduce such *kam* and the possibility that one might in fact have less bad *kam* than one's anxiety would lead one to believe (one never knows) is a source of considerable psychological comfort.

The next item, *"His greatest problem was . . ."* is somewhat more cerebral and reflective than the preceding one. Villagers are asked to indicate not what frightens them, but what worries and generally concerns them. Thus, although their responses are in many ways similar to those given on the previous item, they are also considerably less extreme. All reference to malevolent spirits, for example, is missing here. Again, the majority of villagers (57 percent) describe as their greatest problem their well-being and survival. Their responses, however, lack the sense of trepidation that colored their earlier replies. Here, twelve villagers phrase their replies in terms of worrying about obtaining money, being rich, having money to spend, and the like, rather than in the more plaintive terms of being anxious about poverty, a response given by only one villager. Thirteen informants also say that they are worried about "making a living" or their "work," responses that are more ambiguous than the above in that it is difficult to determine whether villagers are worried about having sufficient income from the work or are disturbed by difficulties involved in the work itself (how their rice crop is coming along). Nine informants say that they are worried about starving, not having enough to eat; one is worried about illness; one about floods; and none about death or poisonous snakes. The reappearance of the food response should not of course be overlooked.

The second major category, encompassing the responses of 24 percent of the sample, relates to worrying about other people. However, almost half these responses (11 percent of the total) are protective and succoring responses, where ego is concerned with preventing harm to his family. The other 13 percent describe ego's concern about getting along with other people. Two of these responses refer explicitly to the informant's worry over the words he chooses in relating to others or that he speak sensibly.

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TABLE 20

His greatest problem was . . . Raw *greatest problem is (namely) . . .*		
SURVIVAL:	57%	how to have money to spend and not starve. earning his living, day after day, and finding money to spend. her occupation; which career was good for her, and also continuing to do it. making his living in the future. rice and fish: food. If one does not have enough to eat, life is difficult. having money and food to eat.
WORRY OVER OTHERS (24%) "PROTECTIVE":	11%	the happiness of *raw* family. the complicated events in the nation that brought trouble to his family.
"GETTING ALONG WITH":	13%	relations with people. ("Going to visit people and have them visit us.") if it concerns the affairs of other people's hearts, we cannot solve it.
HAPPINESS:	8%	how to be rich. When one has money, one has happiness.

Interestingly, these two completions reflect ego's concern about his own capacity for dealing with others, not about how others might affect him. Also, in contrast to the preceding item, few of the responses in this category seem symbolic of any interpersonal anxiety that the villagers might feel. Here when a villager says, "*His greatest problem was* . . . his relations with people," or ". . . when she got married, she was afraid of trouble," the villager is pointing directly at the cause of his anxiety.[8] In the second response, incidentally, the cause of worry may not be relationships with other people so much as it is the burdens which such relationships create: having to be responsible for and responsive to others; having to make oneself get along with them; and in this case, with the informant a young female, perhaps the burden of having children and the loss of personal freedom that this inevitably involves.

The fact that so few (but nevertheless some) villagers structure this item in terms of interpersonal problems is, of course, congruent with the

[8] On the other hand, some of the responses describing anxiety over lack of food and rice might be expressive of an anxiety over loss of self-esteem, *i.e.*, individuals who have no food are incompetent and must depend on others. Three informants (two of "average" economic status and one "poor") actually make this point explicit: ". . . what to do to have something to eat and not starve. Starvation, in addition to being uncomfortable, makes one feel ashamed in front of one's neighbors."

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*125 *128 152 *[156] findings of the previous item, as is the fact that the majority structure it in terms of survival issues. The relative differences between the two items in the percentage of individuals holding these views (20 percent vs. 13 percent regarding interpersonal anxieties; 61 percent vs. 57 percent regarding survival anxieties) are obviously not significant.

The remaining responses on this item resist easy categorization. Eight percent of the villagers speak in general terms about their greatest problem being their desire for happiness, a response whose major significance is probably the fact that it is given by such a small number of persons. This is not to suggest that the majority of villagers are either happy or unhappy; it is simply to indicate that few have the need to articulate a general sense of unhappiness. (Indeed, from a few of the items in the "Dominant Drives and Wishes" section, it is clear that a sizable minority of villagers feel that given the possibilities of this world, they are in fact quite content. See particularly the item, *"He wishes he were. . . ."*) A few villagers here, both young males, also speak about the uncertainty of their futures as sources of worry. One villager says that her greatest problem is that she wants too much, suggesting a desire on her part for greater self-control.

The remaining items in this section are of a different order from the above. They ask villagers to describe how they would react to frightening or worrisome situations. The items are, *"If one is frightened, the best thing to do is . . ."* and *"When something worried him, he usually. . . ."* One of the more interesting attributes of the responses to both items is the sense of familiarity with these situations that they reveal. The responses are pointed, emotionally loaded (although not excessively so), and unembarrassed, suggesting again the villagers' tolerance of their own existential limitations. Their emotional tone also suggests that my assistant was originally correct when he said that it was "easy" for villagers to express their feelings of fear. In both cases, the responses tend to follow a bi-modal distribution, although the two modes are clearly related to each other psychologically.

To *"If one is frightened, the best thing to do is . . ."* 40 percent of the informants respond by saying that they would keep cool, calm, and *chəəj*. However, what is intriguing is that this is all that they would do. Their aim is to get their emotions back under control, their personal stability being paramount to any other consideration, such as discovering what caused the fright, how they might deal with the cause, or fighting that cause. The other major response, held by 31 percent of the villagers, is to express dependency. However, what is most important here is that this is a metaphorical dependency, involving seeking help from the Lord Buddha or from Allah (for Moslems) or from one's "soul-stuff," rather than from other human beings.

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human beings. In fact, the absence of any reference to other human beings, especially parents, is striking.

Of the seventeen persons who ask for supernatural help, seven, all women, explicitly say that they would call their *khwaan* (or "soul-stuff") back. Since this is a distinctively Thai concept, it merits a few words of explanation. Thai ontology holds that every individual is inhabited by a *khwaan*, who during childhood (when the individual is unstable and immature) or during a crisis can escape the body through an invisible hole in the head. One of the major functions of the top-knot worn by half the children of Bang Chan is to cover the invisible hole so that the *khwaan*

TABLE 21

If one is frightened, the best thing to do is . . .
If raw is frightened, the best thing raw ought to do is (namely) . . .

EQUANIMITY:	40%	to keep his heart calm.
		to pull yourself together (to try to compose yourself). Sometimes, just run away.
		to control oneself.
		to control your emotions until they are better.
		to stay *chɔɔj-chɔɔj*.
DEPENDENCY:	31%	to exclaim, "Lord help me!"
		to call one's soul-stuff back; call upon God, Allah.
		to think of Lord Buddha, his teaching, and his priests.
		to sometimes exclaim, *"phra chuaj"* ("Lord Buddha, or Buddhism, or monks—help me.")
FLIGHT:	8%	to avoid the situation; to run away.

cannot escape; also most life-cycle ceremonies have a special ritual devoted to "calling the *khwaan*," who although obviously not absent from the individual at the time, is called to reaffirm the necessity of his being in his place when the individual needs him most. At the same time, the formal ritual of "calling the *khwaan*" memorializes the fact that the *khwaan* is in his proper place, thus indicating that the individual in whom he resides has had the internal stability to reach the point in life that he has in fact reached. The "calling of the *khwaan*" is usually, although not always, performed by women, which might explain why all the villagers who give this response are female. The *khwaan* has four crucial attributes: (1) although he is of the self, he does have an independent existence of his own; (2) he is that part of the self that gives the self stability, and from an analytic point of view, is really an objectification of human stability; (3) he

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774 is recognized to be capricious; and (4) his departure from the body is both cause and effect of the loss of one's wits, steadiness, and equilibrium. If the *khwaan* stays away too long, the individual may become deranged and may die.

*125 *128 152 181 828 In these terms, the seven individuals who say that when they are frightened they would call back their "soul-stuff" seem to be expressing two related needs: a recognition of their ultimate dependence on supernatural forces and, very much like the majority group of informants, a preoccupation with psychological stability. There is in fact implicit to these responses almost an assumption that one of the marks of an adult, civilized "human being" (in its basic ontological sense) is the achievement of stability, orderliness, and stoicism in a universe—both inner and outer—that at any time may regress to a more primitive, chaotic state. The great attention that villagers give to being *riab-rɔɔj* (neat, clean, well-organized in appearance, demeanor, and speech); the fact that they often distinguish between adults and children in terms of the disorganization and randomness of the latter's behavior; the very fact that an individual's *khwaan* is most wayward during childhood; the high value that is placed upon being *chɔɔj* and the negative value that is placed on having a "hot heart" (*caj rɔɔn*) are all expressive of this assumption.

*125 *128 152 There are a few other categories of response to the above item that should be mentioned, although none is held by more than 8 percent of the sample. Four villagers say that the best thing to do when frightened is to run away; three villagers assert that they are never frightened; three do say that they would investigate the cause of the fright, indicating that this response is not completely lacking in Bang Chan; two say that they would comfort themselves; two are simply afraid; and two more have no idea of what to do under the circumstances.

To the item, *"When something worried him, he usually . . ."* 45 percent of the sample responds by saying that they would feel anxious, uneasy, uncomfortable, or unhappy. In essence, they seek no solution to their hypothetical problem, but simply accept the state of anxiety that has been created. For a few of them, the anxiety is extreme: they say they "could not eat, could not sleep, could not work," a response that I have heard several times in Bang Chan from villagers who were actually worrying through a problem. The other major response, held by 40 percent of the sample, is to perseverate over the problem: to keep thinking about it, to think about it constantly, or, as one villager expresses it, *"When something worried him, he usually . . .* thought about it. Sometimes he dreamt of it too."

The major theme of both the above responses is, of course, that although villagers handle their worries in an emotionally meaningful way,

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TABLE 22

When something worried him, he usually . . . *When something worries* raw, raw, *usually . . .*		
DISCOMFORT:	45%	felt rather uneasy about it. was worried, anxious and uncomfortable. suffered and felt down in the dumps. was anxious; wanted to know what would come next.
PERSEVERATION:	40%	paid attention to it; continually thought of it. thought of it and worried about it all the time. could not go anywhere until she solved the problem first. kept thinking about it; couldn't do other things easily because he couldn't help thinking about it.
SOLUTION:	6%	had to go and find the truth (find out whether the thing that was worrying him was true or not).
NO WORRIES:	6%	he has never been worried, so he does not know.

they never really resolve them or even hold out the hope of resolving them. They simply accept worry as an inherent, enervating, but tolerable part of their experience.

The minority responses here are not wholly insignificant: 6 percent of the informants do describe a happy solution of their problem in that they "find a way out," or "try to settle it first before going somewhere else"; 6 percent claim that they never worry; and a few say that although they worry, they try not to show it.

This section on "anxiety" may be summarized in the following way. In answer to a question posed at the end of the last section, the data indicate that anxiety about interpersonal relationships is not the major anxiety of the villagers. Rather, the responses of the majority of the informants focus on matters relating to survival and the physical and material well-being of the individual. However, a noteworthy minority, averaging 16 percent of the sample, do reveal symbolic or direct anxiety about their interpersonal relationships, suggesting that beneath the affable or *chooj* exteriors of at least a few villagers there is some distress about the social psychological pressures placed upon them. On the other hand, when we consider that for most human beings the most important fact about the environment is the presence in that environment of other human beings and the pressures that they inevitably place upon the individual, it is impressive that a larger number of villagers do not phrase their anxieties in interpersonal terms. The only possible explanation for this is that most Bang Chaners feel a

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*125 *128 152 *156 fundamental security about their own *psychological* worth. This is undoubtedly abetted by the fact that the modes of social interaction in Bang Chan do not demand too much from the individual, as well as the fact that the individual, with his profound sense of free choice, often ignores or isolates himself from the impingements of others. (That a stance of psychic isolation is not necessarily maladaptive will be discussed in the final chapter.) When asked how they would react to frightening or worrisome situations, most villagers respond in terms of maintaining their inner psychic stability and in terms of accepting and tolerating these familiar psychic pressures. Their responses are non-constructive, but are highly congruent with their passive and secure orientations to the world. Their responses to "anxiety" tend toward psychological "unimodality" at an interpretive level, although in the last two cases the descriptive similarity of the responses first suggest a bi-modal distribution.

Aggression: Causes and Reactions

121 152 Analyzing "aggression" in Bang Chan is very much like analyzing "sex" in contemporary American culture. The category represents at one and the same time one of the most obvious and one of the most convoluted areas of the villagers' psychological lives.

152 *156 571 The most obvious fact about aggression in Bang Chan is that villagers cannot tolerate its spontaneous, direct expression in face-to-face relationships. This is demonstrated not only by the general absence of overt aggression in such relationships but by the elaborate array of devices that villagers use to control its expression: giggling when making or receiving an untoward request, using a go-between to soften the demand of an interpersonal lien, leaving the field at the slightest hint of provocation (whether the provocation is intended or not), as well as the more general use of flattery, comedy, and self-effacement (*kreepai*). The repeated use of these devices as well as the villagers' evaluations of "people who never show their feelings" (see tables 16 and 17) reveal their sensitivity to aggression as a latent, but intrinsic, attribute of most social encounters. In fact, their evaluations of people who inhibit their feelings—or their *assumptions* about the inherently hostile nature of such feelings—suggest that their recognition of the potentiality of aggression (whether in themselves or others) is quite conscious.

The net result of these orientations is to give face-to-face contacts an aura of surface pleasantness, but at the same time a high degree of brittleness. Over and over again, villagers indicate that they prefer not to have any relationship at all than to have one that is even tinged with hostility.

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Thus, in explaining why he loves one of his closest friends, a villager says:

> We love each other because we never contradict each other or disagree. That is why we love each other. If we disagreed, there would be no love. [Investigator: "It is normal sometimes even for close friends to disagree. About what kind of things do you and your close friend disagree?"] We never disagree. Only people who are drunkards and take opium disagree. That is why our friendship has lasted so long. [Investigator: "What would happen if you disagreed?"] We would not love each other, and maybe he would take revenge on me.

In another place, this same informant says of his relationship with his wife: "My wife and I never quarrel. If we quarreled, we would have to separate. There would be nothing to divide—except the children." As indicated earlier, many villagers, fearing the volatility of a quarrel, actually do separate, often even before the dispute gets going. Similarly, individuals, particularly if they are in subordinate positions, hesitate even to approach others lest they stimulate, let alone elicit, anger. Villagers will hesitate to approach others even if they are not the object, but simply a possible catalyst, of another's potential aggression: witness the cases of the land sale deal and the broken noria cited earlier. Note that in these cases it is not manifest aggression but merely the anticipation of it that inhibits villagers from initiating or maintaining interpersonal involvements.

Although villagers decline to express or to be exposed to direct aggression, they do have several indirect, if somewhat more complicated, ways of venting these feelings. Of these, the simplest is to gossip nastily *about* people. The frequency of this characteristic peasant activity is considerable in the village: in fact, an uncharitable observer might, on the basis of Bang Chan, just as readily entitle a book about Thailand *Land of Gossip* as *Land of Smiles*. However, the very frequency of gossip seems to mitigate its intensity or effect. Villagers are so accustomed to it that it is almost a *way* of talking, a style of speech. And as is the case with much village speech, villagers listen to, but do not necessarily believe, the nasty things one person might say about another. Also, excepting those cases where a person's complaints are either realistic or justifiable, people are just as likely to listen to an individual's gossip for what it says about him as for what it says about the person whom he is criticizing. None of this is to suggest that the person gossiping does not attain release, or that the person about whom he is gossiping, *if* he found out, would not be hurt or peeved. Rather, it is the situation in which the hostility is expressed that mitigates its effect.

Less frequent and more painful than the above are the formal, almost

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152 571 ritualized, ways of expressing hostility. What is significant about these particular procedures is that their very formalism serves to keep the aggression controlled and within bounds. Thus, everybody knows precisely how to behave when a buffalo disappears in the middle of the night and an intermediary arrives the next day to arrange the price for its return. Similarly, the aggressor, his victim, and everyone else present knows what is meant when someone calls a dog by the name of a person who is within hearing range and claims it was simply a slip of the tongue. The victim might respond by stealing his antagonist's boat and returning it a few weeks later, after his adversary has suffered sufficient anxiety. Note that in all these cases a face-to-face confrontation is either avoided or concealed.

152 571 754 Related to the above is the use of magical aggression. Textor (1960) points out that magical aggression—from one person to another person—is on the wane in Bang Chan. Also, it is clear from his exhaustive inventory of the magical practices in the village that interpersonal aggression has a very minor part in what is otherwise an extremely elaborate belief and ritual system: there are no more than three or four supernatural "objects," out of more than one hundred and seventy, that even suggest witchcraft, and although these objects are considered highly potent, they are rarely 152 used. Even in the most extreme case—a young man using the oil from the 571 chin of a corpse to induce hysteria in a maiden who has rebuffed his 832 advances[9]—the victim is held partially responsible for having succumbed to the magic, a consideration that diminishes the "magical" implications of the ritual.[10]

152 762 Finally, a word should be said about the most convoluted way of expressing aggression. This is suicide, a procedure which, obviously, is applicable to only a small number of people. Nevertheless, during the relatively brief period that I was in the field, three Bang Chaners (out of a population of 1,771) attempted to do away with themselves by hanging. They always selected a conspicuous place (a tree on the Minburi highway or over the main canal) and were always unsuccessful. The aggression here is convoluted not only because it is turned inward, but also because it is

[9] This blending of sex and aggression does not have the same meaning in Bang Chan as it has in the West. Although the young man is concerned with punishing the girl for not responding to him, he is more concerned with breaking down her defenses and equilibrium, the very factors which denied him access. In English terminology, he wants to "unhinge" her, with all the duality that such symbolism might imply.

[10] While magical aggression between people is relatively minor, magical means of averting aggression by non-human forces is not. In fact, the largest number of magical practices in Bang Chan relate to protecting the health and welfare of the organism from malevolent spirits, accidents, and dangerous animals. These data, of course, are quite consistent with the SCT data on "anxiety," presented in the preceding section. [789]

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intended to hurt others. The explicit justification in all three suicide attempts was to make a spouse feel "sorry and unhappy." [152 762]

What is perhaps most intriguing about all these naturalistic ways of expressing aggression (even the last, which, despite its drama, is attempted, not actual, suicide) is that in their formalism and indirection they are actually quite flaccid. An obvious question, therefore, is whether the villagers' aggressive tendencies are, at bottom, quite weak, or whether they are simply bottled up, never to emerge in any but controlled and disguised ways. The answer to this question seems to be "both," depending upon one's analytic perspective. On the one hand, the villagers are so attentive in their relationships to shutting off aggression before it gets up a head of steam, that these relationships provide little basis—in an objective, realistic sense—for the development of aggressive feelings. When a potentially hostile act does not even take place, there is simply no reason to feel angry, other than perhaps to be angered because one's anticipations have been frustrated. However, the likelihood that overt hostility will be suppressed is itself so expectable that such secondary anger, if present, is minimal. Further, the villagers' self-concern is so great that they simply do not have that much to gain, psycho-dynamically, from being intensely angry at others. An act of interpersonal aggression assumes emotional investment in others (or obversely, that others provide the self with major emotional satisfaction). If such investment is hesitant, guarded, or otherwise weakened—as almost all of our materials have indicated—the aggression that normally accompanies that investment, or is allowed by it, will also be weakened. Simply stated: it is difficult for a person to be angry at people with whom he does not have much of an emotional relationship. [156]*

On the other hand, the great attention that villagers give to the control of aggression indicates that they are by no means at peace with these feelings. In fact, what is most impressive about aggression in Bang Chan is not its absence, but the amount and kinds of control that are exercised over it. This very process of control probably intensifies whatever "realistically derived" aggressive feelings they already harbor. Thus, although their overt social behavior does not provide a basis for the development of aggressive feelings, their covert behavior—vis-à-vis themselves—certainly does. [156]*

The fundamental issue, of course, is why villagers should be so concerned with controlling their aggressions in the first instance. This is not an easy question to answer. However, there are at least three considerations which, if taken together, might account for it. First, much of their aggression control might derive from the more generalized fear of losing equilibrium—of "falling apart" or becoming psychically disassembled; of

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152 losing their *khwaam*, as it were—if they release their anger. This is the fear of "letting go" and of regressing to a primitive psychological state. Every impulse of an adult villager is to fight this tendency. Second, by controlling their aggressions, they are not imposing their own problems on others and are maintaining the attitudes of "respect" and tolerance—as well as emotional indifference—that are otherwise so important to them. This consideration obviously does not account for the absence of aggression; it simply points up the fact that the aggression that does exist is dealt with internally, rather than socially. Finally, their aggression control seems to be based upon fear of reprisal. Although in a few instances this may be a realistic fear, it is principally a straightforward projection: they know only too well how painful the reprisals would be of people who hold the feelings of hostility that they themselves hold. This consideration is not inconsistent with my earlier remarks on the difficulty villagers have in investing hostility in others. Rather, it follows directly: the villagers' difficulty is not based upon lack of hostility, but upon the lack of social relationships which are sufficiently meaningful to merit that hostility. Rather than work out their aggressions behaviorally—in and with other human beings—they work them out in the isolation of their own inner psychodynamics.

*125 *128 152 *156 I have gone into considerable detail here because "aggression" is the one area of the villagers' lives where the meaning of behavior is not at all apparent from its manifestations. Without such background material, the following SCT results would probably also have little significance.

The first item, *"He most often gets angry when . . . ,"* reveals some of those patterns with unexpected clarity. Ostensibly, the item asks informants simply to identify the various sources of aggression. However, the term for "angry" (*krood*) in this sentence explicitly means "angry toward other people." [11] Thus, one would expect villagers to focus on the activities or characteristics of others—or, at minimum, on some dimension of a social relationship—which elicits their ire. However, their most frequent response is to ignore the semantic pressure to refer to others and to dwell on characteristics within themselves that cause their anger. Thirty percent of

[11] The importance of this point becomes apparent when *krood* is contrasted with some of the other "angrys" in the Thai lexicon: *moohoo*, angry at the situation in which one is entangled rather than toward another person; *chun*, angry at the action of another person, but not the person himself, with a suggestion of helplessness (the blast of a radio as one is falling asleep); *chiw*, to *feel* angry at another person, but to conceal its expression; *moohoochunchiew*, angry all the time, at anything, because one has a character trait to be angry; *khwakhaen*, revengeful. That the villagers should have such a rich set of lexical contrasts in this area—and I have excluded terms which are simply variations on the intensity of "angry" ("irritated" *vs.* "enraged")—is not without significance. "Anger" obviously is an emotion to which villagers attend.

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*125 *128 152 *156 others deride and gossip about the self: "people speak of him in an envious way"; "they blame her according to what is not true." In the other case, people quarrel, scold, and otherwise aggress overtly toward one another: "people come to look for trouble and damn him"; "people pick a quarrel with her." It might be added that excepting two villagers, none of the overt hostility specified by the villagers is even suggestive of physical aggression. More important, there are no completions at all which are suggestive of Bang Chaners being angry because they have been taken advantage of or because their competence has been challenged or threatened. There are no thoughts on the order of: "when they have pulled a fast one on him"; "when he has been tricked"; "when he has been cheated." The point is important because being tricked, cheated, or otherwise "one-upped" are events which some Western observers (leMay 1930, Textor 1959) have seen as occurring with considerable frequency in Thailand. The point has been implied in a few places in this book as well. These data would suggest that although such events occur, in a behavioral sense, they have little *motivational* significance to the villagers; that is, villagers seem to assume that an act of trickery or cheating is not necessarily prompted by the desire to hurt or to be hostile toward others. To them, the intrinsic attribute of trickery or cheating is self-advancement, not aggression or a sense of evil. These latter elements are by-products, and they are not so much by-products of the cheater's motivations as they are of the situation into which the cheated party was foolish enough to place himself. *If* the cheated party were to feel anger in such a situation it would be toward himself, not toward the individual who simply "took advantage of a good opportunity."

The next two items ask for the villagers' reactions to being annoyed and insulted by others. Since these two experiences are essentially intensity variations on the same theme, they will be dealt with together.

The overwhelming response of the villagers to both experiences is to avoid action and to respond internally with emotion and feeling. This is the response of 66 percent of the sample to *"When people annoy me, I . . ."* and 69 percent to *"When he insulted me, I . . ."* (Note that in the original Thai the annoyance is explicitly interpersonal, the insult, although not explicitly interpersonal, assumes a human agent.) Even when villagers do act out their responses in behavior it is mainly to flee, avoid, or get away from the annoyance (20 percent) or to improve themselves *in order* not to merit the insult (14 percent). Thus, even in these variant cases, there is no contact between the annoyer or insulter and the self, and informants, although acting out their responses, do so in isolation. Only three villagers indicate any propensity to retaliate against others (and, by definition, deal with them directly and overtly: they scold their annoyers)

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the sample responds in this manner. Thus, they say that they are hostile toward other people when they themselves are "in a bad mood and tired," "are rattled," "have done wrong," or "are old. When one gets old, one's tongue becomes sharp and one gets angry easily." The emphasis on the loss of control or psychic equilibrium can be noted here, as well as the fact that although these disequilibrium forces are in themselves not very extreme, they are presented as ample justification for anger. Even when villagers do mention others' it is not in reference to others' actions so much as it is in reference to the emotions that those actions elicit, that is, "*He most often gets angry at other people when* he is cross, such as, when other people are infuriating or annoying."

TABLE 23

He most often gets angry when . . .
Khon *most often get angry at other people when* . . .

SELF-REFERENCE	30%	when *raw* make an error in the work I, too, get angry.
		she has done something wrong.
		he is in a temper.
		he is drinking, drunk. If he is not drunk he does not become angry easily.
OTHERS DO NOT SATISFY SELF	19%	they disobey him
		they are not good to her
GOSSIP	23%	people say bad things about him.
		other people accuse him about something that has no truth.
QUARRELING	23%	they quarrel.
		he has no happiness, when other people molest him often.

Related to the above are the responses given by 19 percent of the sample which, although referring to others, focus not on any objective negative quality or action of others (as in the two categories to follow) but on the simple fact that others do not satisfy the wishes and demands of the self. Again, the self—its needs, value, and significance—is primary. Villagers falling in this category say that they are most often angry at others when "people do not do what *raw* have told them to do," "they are not good to her," "people do not do things according to my wish." Informants giving these responses fall in all age and socioeconomic categories, suggesting that they are not necessarily the attitudes of social superordinates which an older age or "wealthy" economic position might otherwise imply.

The final two categories, each representing 23 percent of the sample, describe as the causes of anger the direct actions of others. In one case,

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while another three, in inimitable Thai fashion, hedge their retaliations with conditions, or phrase them as intentions ("I would scold them if I could"; "I would like to rail at them, but I am not sure I can."). 125* 128* 152 156*

In the item, *"When people annoy me, I . . . ,"* 43 percent of the sample responds either by feeling angry or by indicating that they dislike being annoyed. The majority of these informants state their anger or dislike flatly, although a few justify it by adding that the anger or its external

TABLE 24

When people annoy me, I . . .
When someone annoys raw, raw . . .

EMOTION (66%)		
ANGER:	43%	am slightly angry.
		seethe inside.
		feel annoyed because I want to stay peaceful and cannot.
		dislike them.
		feel angry at them and I want them to go away quickly.
NO FEELINGS:	10%	well, well, I feel *chəəj-chəəj*. Nothing happens.
		have no feelings about being annoyed.
DEPRESSION:	13%	my heart and feelings are unhappy.
		am down in the dumps.
ACTION (30%)		
LEAVE THE FIELD:	20%	want to be far away. I don't want to be annoyed.
		want to get away from them.
		run away to find peace somewhere else.
ACTUAL RETALIATION:	5%	rail at them. Why should I spare them? They are not my parents.
INTENDED RETALIATION:	5%	scold them to stop annoying *raw*. If *raw* can find some way to make them stop annoying, *raw* will do it.

cause prevents them from "being at peace." Different from the above in content, but similar in its emphasis on inactivity, is the response of 10 percent of the villagers who say either that they have no feelings about being annoyed or simply feel *chəəj-chəəj*. In effect, these informants avoid or deny any reaction to the experience. Another 13 percent are also inactive, but instead of responding with stoicism or indifference, they perceive the annoyance as cause for feeling depressed and unhappy. Although not a complete withdrawal, as is the case in the category to follow, the response is another example of the villagers' emotional passivity in

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psychologically stressful situations. Finally, 20 percent of the sample responds simply by leaving the field: they go away or run away from those who annoy them. Although an "active" response in the sense that energy is expended in overt behavior, the reaction is a patent evasion of the annoyance and its perpetrators.

The total of these various categories is 86 percent, indicating that the villagers' tendency to avoid dealing directly with people who annoy them is highly unimodal indeed.

The distribution of responses to *"When he insulted me, I . . ."* is strikingly similar to the above. Because it is a more extreme expression of hurt, some of the responses are a bit more dramatic; also, the internal frequencies of a few of the categories are a bit different. However, the overriding tendency is to deal with the insult by avoiding the insulter and simply feeling internally—angrily, "indifferently," or unhappily. Here, 40 percent of the sample responds with anger or dislike; 16 percent indicate that they have no feelings about the insult or are *chəəj-chəəj;* and 13 percent are depressed, sorry, or unhappy. Only a single individual, however, reacts by leaving the field.

There are two categories of response for which there are no equivalents on the earlier item. Fourteen percent of the informants indicate that the insult has provoked them into improving themselves or behaving better. However, they are explicit in indicating that this is principally a means of ridding themselves of their antagonists. Another 14 percent present what are essentially "avoidance of the stimulus" responses. They say that they have never been insulted or they discuss the immorality of insults. Not surprisingly, all but two of the Buddhist monks in the sample react in this manner.

In summary, the SCT data strongly confirm the villagers' behavioral tendencies to control, deny, and inhibit their aggressive impulses. The data indicate that they do not lack such impulses, but rather that they are unable to act them out in an overt, social manner. Instead, they respond internally and live with the hostility (in an angry, "indifferent," or unhappy fashion) or work it out in the privacy of their own minds. The data also indicate that this tendency is culturally unimodal.

Dominant Drives and Wishes

The materials covered in this section are to the author the most interesting of all the SCT data, not so much from the point of view of what they reveal about the villagers' psychic life as from that of providing answers to questions about an area that is virtually unknown. There are numerous things that the villagers do—make merit, grow rice, tell funny stories, treat

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TABLE 25

*125 *When he insulted me, I . . .*
*128 *When there is an insult to* raw, raw . . .

152 *156	EMOTION (69%)	
	ANGER: 40%	felt *raykiad* (disgusted or repelled by what the insulter did) and I did not want to speak with her either. A person who speaks too much, who is too sociable, is no good.
		felt a little angry, that was all. I did not feel much more than that.
		was annoyed. It was none of his business.
		felt displeased, as was natural, and I wondered why he insulted me.
	NO FEELINGS: 16%	tried to control myself and not be perturbed. I tried not to let my base nature take control of me. Everyone suffers from contempt and backbiting: it is inevitable. If we remain undisturbed, they will stop of their own accord.
		was indifferent to him. I live my own life; I have my own work. I do not make my living by taking advantage of others or by cheating others. I do not steal from anybody in order to take care of my wife and children.
	DEPRESSION: 13%	felt sorry. I live my own life. I do not trouble anyone; I earn my own living.
		felt unhappy and sorry. In the future I will try not to let him insult me again.
	ACTION (28%)	
	IMPROVE SELF: 14%	felt hurt and tried to improve myself.
		would behave better, so that they would stop insulting me.
	"AVOID STIMULUS": 14%	it is not good to insult someone for no reason. There are a lot of people who like to insult others; they are men who like to gossip.
		no one ever insulted me, because I never said anything bad about anybody. Therefore, they never said anything bad about me.

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181 others politely, and the like—which, on the basis of the time and effort given to them, an observer might point to as representing the villagers' *128 major concerns. To a certain extent, I did this myself in the earlier, 181 "naturalistic observation" chapter. However, there are no available data on what villagers *themselves* perceive as the most important things in life or what *they* identify as their hopes and aspirations. Although few of the responses below are in themselves startling, what is revealing is the relative weight given to the considerations that are mentioned.

*125 It must be emphasized that the first two items here permit villagers to *128 move in almost any direction and, if they wish, to indulge their fondest *156 fancies. The fact that only a few take advantage of the latter is testament to 181 the deeply ingrained sense of self-constraint and personal limitation ("I know my place: not too high and not too low") that they impose upon themselves.

To the item, *"He wishes he were . . ."* (in Thai, *"Raw wants to be . . ."*) all but five villagers respond in terms of what is essentially their public role or public image. Of the five who do not, two are individuals who do not want to suffer or do not want to have anything to worry about; one wishes he were intelligent and clever; and the other two phrase their wishes in such abstract terms ("a person who behaves well") that they simply resist further explication. In any event, these are the individuals whose responses most closely approximate what could be called "responses of psychic introspection," an area which villagers for the most part ignore.

The majority of the responses fall into three major categories. Forty percent of the villagers respond in terms of either specifying a particular status they might achieve ("an army officer"; "a big shot"; "a government official who is comfortable and has honor"; "the mother of a doctor, district officer, or governor"); saying that they would like to be rich; or simply by saying that they would like to be good and diligent workers "growing a lot of paddy" or "having good jobs." Within this majority category, nine individuals specify the first type of wish, the examples cited being the most self-indulgent replies; seven respond in terms of becoming wealthy; and six want to be competent workers. This last response is essentially a more optimistic or assertive phrasing of the one to follow—villagers want to be a better version of what they are already—and could just as readily be included there.

The second major response, held by 25 percent of the sample, is to be just what they are now. This is a description of their responses rather than a deduction from them. They explicitly say that they "do not want to change"; "my status compels me to be what I am"; "only want to be a rice farmer, to earn my living by raising rice, as I do now." Although a minority group, the fact that so many villagers should go so far as to deny the

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premise of the item in order to express their satisfaction over their present and traditional state is not without significance. It is important to note that were we to deduct the six "competent worker" responses from the previous category, this category would then represent the majority. 125* 128* 156* 181

The third major response, given by 20 percent of the sample, describes being a "good," "respected," and "non-trouble-making" individual as the principal wish of the informant. A few of these villagers want to be "good

TABLE 26

He wishes he were . . .
Raw *wants to be . . .*

STATUS:	40%	a rich man. Then he could do anything he wanted.
		a teacher, in order to teach children so that they will have knowledge and be good children.
		an army officer.
		a person who has a lot of money and paddy fields, because I have many children. I have ten *raj* (four acres) of land now. What will the children do when they grow up? It worries me.
		a good worker, growing a lot of paddy.
STASIS:	25%	he does not want to be anything.
		he never wishes anything, because his status compels him to be what he is.
		he is quite content to remain a farmer.
GOOD PERSON:	20%	a man who behaves well and has goodness, virture, and honesty.
		a good person, not a *nagkleeng;* one who does not *thiawtree* (go out, enjoy oneself, leave the family).

citizens," a response which, although small in number, reflects the importance that villagers attach to being members of the nation-state. (Considering all the different things that they might wish to be, how many Americans would complete the item, *"He wishes he were . . ."* with the statement: ". . . a good American"?) More than half these informants, however, build an interpersonal dimension explicitly into their replies by saying that they either want to be persons who "do not lie or incite people, do not have trouble with others" or are persons "whom others trust and respect."

What is most revealing about the above responses are the unexpected omissions. There are no references at all to religious considerations, even on 125* 128* 781

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*125 *128 the part of older people.[12] Particularly obvious is the absence of any 181 [182] reference to accumulating Buddhist merit. Neither is there any reference to the pleasures derived from dealing happily or enjoyably with other people. *125 *128 The closest we get to this is with the responses of two informants who are 571 *156 concerned mainly with the welfare of their children, and who speak in terms of "inspiring respect" in their children or assuming the role 181 [593] of "doctor" who, either by his knowledge (in case the children are ill) or wealth, could take care of them. Given all the conceivable things that villagers might wish to be—fanciful, real, personal, social, of this world, and of any world—the dominant wish is to have status, wealth, and respectability within their prevailing peasant context.

*125 *128 181 556 The next item, *"Most of all he wants to . . ."* is essentially a confirmation of the above findings. However, perhaps because of the syntax of the Thai version of the item and the inclusion of the word "most" (*"The thing which raw wants the most is* (*namely*) . . .") the responses assume a considerably more extreme and "unimodal" form. The overwhelming majority of the informants, 77 percent, want only one thing: money. A few of them say that they want what are essentially cultural variations of money: property, rice fields, land, cattle, and jewelry. Several of them almost wax purple about the significance of money in their lives: *"The thing which raw wants the most is* (*namely*) . . . have money and gold, because money can help us all the time. Whatever one wishes to have, one can use money to buy it all. Even when one wants a wife, if one has a lot of money one can have anyone's daughter"; ". . . have money. Money is better than anything else. It is only the moon and stars that money cannot buy"; ". . . to have money. She wants money very much because when she lacks other things she can find something to take their place, but when she lacks money she is most unhappy"; ". . . have wealth because everything else comes after that." These responses, of course, explicate the major function of money. They indicate that money is not an end in itself, but a means by which to achieve some of the other life goals appearing here.

*125 *128 181 593 556 The minority responses to this item are in no case held by more than four individuals. Four villagers do give religious responses, saying that what they want most is to accumulate merit (one mentions both merit and money); three refer to maintaining the welfare of their families (one of them merging money and succorance by saying that he wants enough money to provide for his family); and four say that they want happiness (again, two of them linking money and happiness together).

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[196] [193] [12] There is nothing in the grammatical-semantic structure of the Thai version of this item inhibiting a religiously oriented response. The Thai cognate for the verb "to be" here is "*pen*," which could easily result in a response such as ". . . *pen khon thii mii bun*," or ". . . a person who has merit." This would be the most obvious "religious" completion under the circumstances.

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TABLE 27

Most of all, he wants to . . . 125*
The thing which raw wants the most is (namely) . . . 128*

MONEY:	77%	have wealth, because everything else comes after that. 181
		have money.
		have money. Only one thing.
		have money.
		have money, clothes, and ornaments.
		have money so that he can buy things.
		have money.
		get money.
MERIT:	8%	get some merit. *Raw* want only to make merit.
FAMILY:	6%	to have knowledge; have a happy and prosperous family.
HAPPINESS:	8%	have happiness of body and mind.

The next two items differ from the preceding primarily in being more realistic and constraining. The items, *"The most important thing in his life is . . ."* and *"His greatest ambition is . . ."* ask the villagers to specify their real life goals rather than to indulge themselves (if they wish) and express their dreams and fancies. This difference in stimulus value seems to have charged their responses with a greater sense of seriousness and personal involvement than was the case on the earlier items, although from a substantive point of view the differences are not very divergent. The concerns expressed are obviously cut from the same cloth.

TABLE 28

The most important thing in life is . . .
The most important thing in raw life is (namely) . . .

SUBSISTENCE AND WEALTH:	57%	earning a living is the most important thing.
		to earn a living. What he should do to get a good job.
		food.
		having enough money to spend.
		a good career; a lot of money.
RELIGION:	10%	that one must make merit, so that in the future and in his next life he will have something to depend on.
FAMILY:	10%	her father and mother.
OTHERS (LESS THAN 10% EACH):		his father and mother, who have done *raw* good. He must repay the *bunkhun* (good deeds which assume reciprocation).
		how to be happy.
		death. Death is final. Beyond death is nothing.
		things concerning the heart.

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*125 *128 181 To the item, *"The most important thing in life is . . ."* 57 percent of the sample responds in terms of earning a living or food and money. Most of the "earning a living" responses are expressed quite flatly, but some of the food responses are presented almost with a note of urgency: ". . . rice. Very important. If there's no rice to eat, then life is very bad"; ". . . having or not having something to eat. If you have something to eat: good. If you have nothing: trouble. We people are born in order to find things to fill our mouths and stomachs. . . ." As noted earlier, the concern with elemental subsistence is primary here. The minority responses, although encompassing several categories, which thus reduces the representation in each one, are by no means insignificant. (Taken as a whole, they represent almost half the informants.) Five villagers here do stress the importance of religion and making merit; and five others point to their parents or their families as the most important things in life, responses which are slightly suggestive of a concern with fulfilling interpersonal obligations or with succorance. Three others explicitly mention the fulfillment of interpersonal obligations as important. One of these individuals is concerned with others paying a debt of kindness to him; one with doing good things for others; and one makes the relationship perfectly reciprocal. Three villagers also speak of happiness as important; two, with perfect realism, mention death. Finally, two villagers mention the importance of human feelings; this is the only reference that is made to an inner psychological state in all the responses presented to the items in this section.

TABLE 29

His greatest ambition is . . .
Raw *greatest ambition is* (*namely*) . . .

SUBSISTENCE AND WEALTH:	44%	to be rich.
		to have a place to live and food to eat all the time, so that nobody will look down on him.
		to have money.
		in regard to his daily living. How can one count on stealing things?
MERIT:	12%	to have happiness in the present and in the future. Must try to build up goodness and to avoid different kinds of badness which will bring punishment in the next life.
HAPPINESS:	10%	to have happiness in life, because her own life has met mostly with failures.
STATUS:	10%	to have a better status than *raw* now have.

The responses to the item, *"His greatest ambition is . . ."* are very similar to the above. The "earning a living" reply is replaced in frequency by the more assertive desire to be wealthy, but the food reply is just as

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common. Together, they encompass the responses of 44 percent of the informants. A third type of reply comes into evidence here, and while it is substantively not at all different from the foregoing responses, it is stylistically interesting because it represents such an excellent summation of the ambitions of the villagers: ". . . to have a place to live and food to eat; to have clothes to wear to protect himself from the sun and the wind. That's enough." The minority responses to the item again encompass several categories: six villagers wish to make merit; five want happiness, five want higher status than they presently have; two want their families to be happy; three want to behave well; and two are simply concerned about their daily living. One of the latter raises the rhetorical question: "How can one count on stealing things?"

Analysis of the villagers' definitions of the most desirable things in life reveal an overriding concern with practical matters: money, earning a living, achieving status, and having sufficient food. Some, but relatively little, attention is given to religious concerns or to satisfactions of an interpersonal nature, including even family. Psychological satisfactions that are specified relate to abstract states of happiness or to satisfactions derived from knowing that one is "behaving well," although in both cases the number of villagers who actually point to such satisfactions is relatively low. Immanent to the responses of other villagers, but again, in relatively small number, are the satisfactions to be had from being a competent farmer who, through hard work, achieves a good harvest and "a place to live and food to eat; . . . clothes to wear to protect himself from the sun and the wind. That's enough." This careful and constrained conception of the good life extends even to situations where when given license to indulge their most extravagant desires, villagers will go no further than to admit that they might wish to be "a government official who is comfortable and has honor" or "the *mother* of a doctor, district officer, or governor." (Italics added.) Excepting this area of psychological license, the villagers descriptions of their dominant drives and wishes tend toward psychological unimodality, although the minority responses *in toto* are not at all insubstantial.

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VI

Lessons from Thai Culture

12. The materials in this volume have been addressed to several issues: methodological, theoretical, and descriptive. My purpose in this final chapter is to reflect on some of these points and to examine them for their relevance to the main currents of contemporary social science research.

Turning first to the more obvious methodological issue, it is clear that of the two descriptive methods used in this study, the first, presented in the chapter on "naturalistic observation," while essentially anecdotal and less systematic than the Sentence Completion materials, was the more sensitive of the two approaches. The very fact that the discussion was not governed by a pre-planned methodological framework permitted pursuing certain issues that were central in the psychological life of the villagers, but which might not otherwise appear in a culture-personality study. On the other hand, it is also clear that the materials thus gathered have little *direct* utility for cross-cultural studies, other than to indicate that other field workers look for similar or contrasting psychological manifestations among the people with whom they are working.

The Sentence Completion materials, while descriptively less sensitive and graphic than the above, afford the great advantage of being directly translatable to any other culture, of providing a check on the typicality of the earlier conclusions, and of providing a description of the villagers' subjectively held behavioral dispositions.

While the materials were qualitatively different—one "natural," the other "instrumental"; one behavioral, the other verbal; one descriptive of action, the other descriptive of predispositions to action—they produced no striking empirical inconsistencies. Much of this may have been due to the fact that many of the SCT items focused on relatively specific interactional situations—those descriptive of face-to-face contacts—which tend to be highly patterned in Bang Chan, and into which "loosely structured" considerations rarely enter. Under these circumstances, any carefully applied method might be expected to obtain roughly equivalent data. On the other hand, the fact that much of what is analytically meaningful about Thai personality occurs before, after, or between face-to-face contacts suggests

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that an instrument such as the SCT should never be used by itself, or at least not without some reference to behavioral data. The SCT, or my particular version of it, could not readily get at the process of psychological commitment that plays such an important role in the lives of the villagers, and which underlies their "loosely structured social system." In fact, the handling of this process may well be one of the most interesting things about the villagers. In a somewhat oblique way, the SCT data implied the importance of this process: so many of the villagers' responses were phrased in terms of fulfilling social forms and rituals, that an analyst might question the degree of psychological commitment behind them. However, "psychological commitment"—the reliability, depth, and constancy of relationships; the degree of involvement necessary for insuring that an interactional event will even take place—cannot begin to be recognized as an analytic problem until one sees beyond the very social situations that presume it, and this can probably only be done by naturalistic observation and interpretation.

While the SCT and observational data did not contain any striking empirical inconsistencies, they did demonstrate the significance of an issue raised early in this study: the problem of whether the culturally interesting or distinctive is the same as the culturally frequent or modal. The analyses indicated that for the most part these two types of characterization were not incongruent. Thus, the extreme individualism and self-concern of the villagers emerged unmistakably from both sets of data. However, there were instances when the two kinds of characterization were not isomorphic, and resulted in conclusions quite different from those originally expected. Thus, on the basis of the observational materials, I fully anticipated that anxiety about interpersonal relationships would emerge in the SCT responses as the villagers' most frequent form of anxiety. The amount of gossip that occurs in the community, the references that one hears to slander, the touchiness that villagers exhibit in their actual relations with others, all pointed to this conclusion. These were the appraisals of an outside observer struck by the "different" and "unusual" facets of the culture he was studying. Yet the SCT data indicated beyond all doubt that interpersonal anxieties were not, from the villagers' point of view, their most typical form of anxiety. They were worried more about their stomachs than their hearts.[1] This conclusion, deduced from the villagers' own per-

[1] One might argue here from a psychoanalytic point of view that the stomach is simply a substitute for the heart. However, one might also argue from a psychoanalytic point of view that the heart is simply a substitute for the stomach. This Freudian principle of the substitutability of needs cannot by itself account for the *direction* of the substitution (unless one assumes a doctrinaire early Freudian or neo-Freudian position) nor can it prove the *existence* of the hypothetical substitution. These can be demonstrated only by detailed, empirical data on the traumata, repressions, fixations,

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ceptions, took on additional significance when related to the sense of psychological worth and self-love that the people of Bang Chan *also* exhibit. Again, the essential issue here is not the presence or absence of anxiety about interpersonal relationships. There is little doubt that villagers do suffer such anxiety. Rather, the question is one of *relative* frequency, and, by implication, the *relative* importance of such suffering to the *total* need and deprivation system of the villagers. It is precisely with regard to this larger kind of question that an instrument such as the SCT can provide context and perspective.

Turning to the theoretical issues that have been raised or suggested by the data, perhaps the most important is the problem of "conformity" as it relates to the villagers' loosely structured social system. This problem is of course at the center of all social psychological research. It is concerned with how, why, and the extent to which individuals relate to their social environments. In fact, in a recent paper aimed at synthesizing the theoretical premises underlying most current culture personality research, Bert Kaplan (1961*b*) presents a cogently argued case for the necessity of anthropologists and psychologists to shift their attention from the study of why individuals behave in particular ways to the study of this more generalized disposition. He says (665–666):

> Up to now our emerging theory appears to suggest a jungle-like situation in which wholly free and autonomous individuals, in a relatively opportunistic way, make use of the available channels of social partici-

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regressions, and other psychodynamic processes of informants. Even so, it is highly unlikely that the anxiety responses of adults are *simply* the result of a series of unconscious processes—substitutive, projective, or otherwise. It must be remembered that an anxiety response is just as often a function of the ego, oriented to and in the service of the organism's reality needs, as it is a function of unconscious needs derived from the difficulties of the developmental process. When we consider that the villagers live in one of the most unpredictable universes imaginable and that they are a people entering the throes of a revolution of rising expectations, it is not at all surprising that they should feel anxious about threats to their physical well-being, expressed as a fear of going hungry or being poor. In fact, I would suggest that at bottom these are expressions of an existential anxiety about the essential instability, uncertainty, and impermanence of all life (including their own), an anxiety which has its cognitive basis in the "Wheel of Law" and other Buddhist doctrine. It might be argued that since, objectively viewed, the villagers are well fed and enjoy one of the highest standards of living in Asia, such anxieties are without foundation. I would answer by saying that the villagers are not aware of the per capita income figures for Asia, and that "reality" for any people is how they subjectively perceive and define it, not what it objectively is. To say that there is no realistic basis for the villagers' anxiety about going hungry and being poor is like saying that there is no realistic basis for their belief in interminable existences or in the timeless continuity of the self. In both instances they believe these things to be the case, and ultimately that is what is important.

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pation and the rewards that are attached to them. . . . However, there is much evidence that conformity is ordinarily a generalized and diffuse disposition, not something that occurs only when some desired reward is in sight. One might say that it is the basic way of life of all but a few persons in any society. The essential meaning of most social action is not that the actor wishes to do this or that act, but that he wishes to stand in a conformative relationship to the social demands that exist in the situation. In the great majority of social situations most of us are not concerned with the problem of what to do, but much more with the problem of finding out what it is that would be appropriate. When we know what this is, compliance follows almost automatically. The basic fact is that we are mostly good citizens, persons who want to do what is right, correct, decent, and fitting. The culture and personality issue that we have been working to define so far, is not why persons wish to do this or that act, but why they are good citizens. Or, in other terms, what is the motivational basis for the generalized disposition to conformity. . . .

The approach outlined in this highly persuasive argument would clearly contribute to increased understanding of the functioning of social systems, particularly complex, smoothly operating ones. However, on the basis of our Thai materials, I wonder if it is not in fact based on the highly debatable assumptions that (a) all social systems function *equally* smoothly; (b) that all social systems are *equally* demanding in their functional requirements for people to conform; and (c) that persons in *different* societies are *equally* motivated, through socialization or otherwise, to conform. Kaplan in fact says: "One might say that it [conformity] is the basic way of life of all but a few persons in *any* society." (Italics added.) It seems to me that Thai culture provides a powerful argument for the capacity of a social system to function and of its members to have reasonably satisfying relationships with one another (they get done in a pleasant way the things that have to be done) while the standards for and dispositions to conformity are very low indeed. Again, it is perfectly true that Bang Chaners are highly motivated to conform, and even to over-conform, in face-to-face relationships. However, the most striking characteristic of these relationships is not the conformity exhibited in them. It is rather that there is never any assurance that the relationships will actually occur, or if they do occur, that the commitments undertaken in one face-to-face encounter will be carried over to the next. The conformity typically is immediate, short-lived, and uncertain. Bang Chaners may wish "to stand in a conformative relationship to the social demands that exist in the situation." But they first must make a judgment on whether or not to stand in that relationship, a decision that is very much based on their being "free and autonomous individuals, [who] in a relatively opportunistic way, make use of the

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156 available channels of social participation and the rewards that are attached to them. . . ."

121 114 15 Without claiming in any way to know the thinking that prompted Kaplan's provocative comments on the importance of the motivation of conformity in shaping action, I wonder if it is not based on the supposition that situations in all cultures are similar to those that we typically encounter in our own highly complex, functionally specific culture—a culture which, *if it is to operate in the highly complex and relatively efficient way we know it*, requires that individuals conform to the demands of their tasks. In other terms, to what extent is the argument for conformity based on the supposition that the majority of relationships in most societies are similar to those which obtain, for example, between workers on an assembly line or between a secretary and her employer, where, if conformity were not maintained most of the time, the consequences would be functionally disastrous, disastrous to the very *purpose* of the relationship? While I take issue here with Kaplan, there is one crucial aspect in which I am in complete agreement with what he seems to be aiming at. That is, if his argument is in fact based upon, and directed at understanding, a strictly American model, I can thoroughly understand the import of his question: "What is the motivational basis for the generalized disposition to conformity . . . [?]" After living in Thailand for several months and observing, and often identifying with, the ease with which individuals pursued their own purposes, oblivious to the requirements of conformity, I began to wonder not about the Thai capacity to maintain loosely structured relationships but about the considerably more mystifying American capacity to conform to the expectations of others. From a psychological point of view, the latter is by far the more difficult and demanding, requiring as it does inhibition of and control over one's own desires and a deeply developed predisposition to orient oneself to others. How this orientation is developed and sustained on such a pervasive scale as is found in American culture—particularly with regard to the rewards involved ("Are *instrumental* rewards such as money really sufficient to link person A to person B?")—is clearly, as Kaplan suggests by his posing of the issue, an analytic problem the motivational details of which we presently have only the dimmest understanding. To a certain extent this orientation is explicable in terms of the simple malleability of human beings; in terms of the consummatory rewards that instrumental satisfactions eventually lead to; or perhaps in terms of what Wallace (1957) calls, "cultural identification," or the love of one's culture patterns for their own sake (in this case, love of the modes of social interaction to be found in one's culture). This last would involve interactional patterns assuming a *motivational* "functional autonomy" (Allport 1937) of their own, that is, ego deriving an *intrinsic*

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satisfaction from fulfilling another's expectations. However, it is clear that the actual motivational process individuals go through in order to learn to be concerned with the expectations of others—and considering the pervasiveness of this concern, it must involve either intensive or sustained learning—has yet to be examined in a ramified way.[3]

To my knowledge, the only scholars to address themselves directly to the question of the motivations and rewards for conformity are Kaplan in an earlier paper (1957) and Parsons (1952, 1961, and Parsons *et al.* 1953). Kaplan argued that there are two motivational tendencies making for conformity: the desire to behave morally and the desire to please others. The former tendency is quite explicable in terms of the development and functioning of the super-ego (a universal human attribute), and by emphasizing this, particularly with his later use of the pointed phrase, "good citizen," Kaplan's contribution is considerable. However, the latter consideration begs the question of why individuals should be so motivated to please others, and raises the additional problem, as I have done here, of whether all people are equally motivated in such directions. Parsons' early discussions of conformity simply propound the "evaluative, cognitive, and cathectic" satisfactions that the fulfillment of prescribed patterns award to the individual. In his later, more carefully elaborated essay, he sees the roots of conformity in the inherent helplessness of the human infant. In what is essentially a masterful sociological translation of Freud, he argues that conformity develops into a "generalized goal" or "mode of organization of the ego" as the individual successively identifies with, cathects, and internalizes the attitudes of the powerful figures (his parents) who respond to his helplessness. In this sense, Parsons seems to be arguing that the individual's major initial reward for conformity is the maintenance of his own life. The individual's conformity is gradually generalized as he goes through successive developmental stages, reaching its crystallization—the "point of no return," as it were—in the painful options of the Oedipal

[3] The theories that have been most concerned with the nature of conformity and "self-other" orientations—role theory and "symbolic interactionist" theory—have for the most part viewed the motivations and rewards for conformity as self-evident. That is, the immense literature of these "schools" has tended to focus not on why individuals should wish to conform in the first place, but on the skills, consequences, and non-motivational processes of conformative behavior. Writers such as G. H. Mead (1934), Cameron and Magaret (1951), Sarbin (1954), Shibutani (1961), and Rose (1962) all recognize the necessity of individuals to be socialized into conformity, but they go no further than describing the manifest processes of socialization—"intentional instruction" and "incidental learning," "imitation" and "spontaneous play activities." Having once mentioned these processes, they simply go on to assume that the conformative motivation is thoroughly internalized and self-sustaining. The only exception I have found is Shibutani who addresses himself to the matter of reward in a single sentence (1961: 509): "For most children, the voluntary inhibition of impulses begins with attempts to please those whom they admire."

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12 situation. It might be added that since the Oedipal situation is very much of
114 a moral crisis, Parsons' arguments go far in supporting Kaplan's earlier
15 contentions. Parsons, however, says little about the *different* ways in which parents respond to the child's helplessness and little about *variations* in the intensity and types of identifications, cathexes, and internalizations that the individual may implement—factors which would obviously lead to different kinds of conformative tendencies. Our earlier materials on Bang Chan socialization are particularly instructive on this point. In fact, if Parsons' formulation were linked to those data, it would go a long way to explain precisely why Bang Chaners have such a weakly developed sense of conformity. In the same way, the contrast helps to underscore the profound sense of interpersonal involvement, dependence, and concern inculcated in members of our own culture during the developmental process. To Parsons, the quintessence of these interpersonal investments is, of course, the Oedipal situation: the prototypic encounter with the power of external authority and all that such power implies for the individual's need to conform and to deny and control his own impulses. If this interpretation is correct, it would further suggest that the Oedipal situation must be based, *in the first instance*, on the developmental experience of close interpersonal involvement—an experience which, as our Thai data demonstrate, is subject to broad cross-cultural variation.

*128 The problem of "conformity" raises an additional question, one that has
*156 been implicit to many of our earlier remarks, but which merits explicit consideration in these final pages. At several points in the text, it was suggested that the villagers, with their profound sense of self-concern and freedom of choice, often choose to ignore or to isolate themselves from the effects and influences of others. This kind of behavior is a major dimension of their loosely structured relationships; it appears as well in their handling of dependency, anxiety, and aggression. From a psychological point of view, the behavior can be interpreted in one of two ways. On the one hand, it can be interpreted to mean that the villagers have difficulty in relating themselves to others, and use isolation as a means of defense. Implicit here is the notion of emotional deprivation, for who but a deprived person should wish to withdraw from contact with others? On the other hand, the behavior can be read to mean that the villagers are emotionally tough, and simply do not need other people very much. Here isolation is seen as self-reliance and mature emotional security. Throughout this study, I have chosen to stress the latter interpretation.

*128 This kind of interpretation is not an easy one to justify in contemporary
114 Western social science. Implicit to almost all of our thinking is the Judaeo-
*156 Christian assumption (more recently codified by Durkheim and Freud)
181 that the greatest psychological pleasures an individual experiences are

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derived from his interpersonal contacts, commitments, and interdependencies. In fact, I would suggest that perhaps the major reason that Freud (although correct) placed so much emphasis on sex is because the sexual experience is the most absolute expression of interdependency. My materials from this little community in Thailand, where psychological isolation is the norm and where this norm is so impressed upon the Western observer, have stimulated me into wondering if perhaps our past assumption has represented only *half* the story. What we have failed to see (or if we have seen, ignored) is that there is immense psychological satisfaction to be gained through psychological isolation, or from experiences that require or presuppose isolation. Such satisfactions are found in the pleasures of lonely creativity. (Has a committee, family, tribe, or neighborhood ever written a symphony or a poem, or even a fable?) Additional examples are sleep ("sweet sleep"); directing oneself toward the extremities of human experience in matters of faith and religious belief (by definition, a lonely, isolated experience); inducing mind-body alterations, as in hallucinatory states. These are all pleasurable experiences that can be talked *about*, but never shared. My point is of course that for historical and other reasons we have come to assume that loneliness is maladaptive, something which at best is to be avoided, at worst dreaded. And this is clearly not the case: no more than is the experience of dealing with a spouse, a brother, a child, a friend, or a teacher maladaptive.

What is perhaps most surprising is that the evidence for the need for isolation and privacy has been so readily available, and yet until recently so easily ignored. All of us who have observed children—in whom the elemental psychological needs of our species are most clearly and unashamedly expressed—have been impressed by the child's need for contact, love, response, and stimulation. But equally apparent is the child's need for privacy and lack of stimulation. Thus, we are just now beginning to become aware that the child's use of his thumb (in Bang Chan, his forefinger), his trips into quiet fantasy, his recurrent assertion, "Leave me alone!" are not simply amusing infantile epiphenomena, nor even defenses against an oppressive external world, but are expressions of a fundamental human need to be with oneself.

The villagers of Bang Chan, of course, are not children. They are people who for their own distinctive psychocultural reasons—their Buddhist ethos, their child-rearing practices, their loose and simple social system—have heightened this essential human need to be left alone, and express it in a mature, adult way. Unless one assumes that the only universe is the social universe, theirs is not a case of emotional deprivation. It is rather an honest and unabashed expression of another kind of psychological need, one which we in the Western world, for our own peculiar

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*128 *156 psychocultural reasons, have chosen not to recognize.[8] They are "emotionally tough," as I described them earlier, to the extent that they squarely face such unavoidable facts of life as the presence in the world of other human beings who cannot be trusted; the absolute loneliness of birth, illness, and death in an endless cycle of existence; and the presence of inner feelings and impulses that can never be shared, and that are best "handled" by being stoical, *chaoj*, and even "sanug-ful."

In concluding, I wish to re-emphasize that this study does not purport to represent an exhaustive description of the personality characteristics of Bang Chan villagers. Most of the discussion is in fact given over to describing and analyzing dimensions of their interactions, refining and amplifying points in the previous literature that related to interaction, and working out the dynamics of social behavior and its meaning to the individual. However, there is little or no material here on the villagers' fantasy life, their unconscious mechanisms of defense, their cognitive processes, and other attributes of the total universe of events that comprise their psychological life. Even in the brief discussion above about their need for isolation, little is said about what they do when they are isolated. The major purpose has been to describe and interpret those characteristics that are revealed to an outside observer and, when possible, to dispel the penumbra that otherwise and, perhaps not unintentionally, obscures their psychic lives.

[8] This lack of recognition will probably not last long. The emerging concern in the Western intellectual community over the question of "personal identity"; the supposed search for "psychological freedom" expressed in the new interest in hallucinogens such as LSD and the faddish interest in the "incommunicable" elements of Zen Buddhism; the ferment created by the writings of Kierkegaard, Tillich, and Camus, all of whom emphasize the existential loneliness of man; and the emergence of Existential Psychoanalysis, will eventually work their way down into the thinking and the concrete research concerns of social scientists and into the popular mentality.

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[For general information on the Sentence Completion Test used by the author in this field study, with examples of the types of questions employed, see category 116, pp. 8, 86-87, 100, 109-138, and 142-199.]

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[For information on the author's analysis and interpretation of the results of the Sentence Completion Test, see category 116, pp. ix, 4-8, 11-12, 39, 53-54, 96, and 142-199.]

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[For information on various aspects of the Bang Chan social personality as revealed in the interpretation and analysis of the results of the Sentence Completion Test, see category 116, pp. 30-38, 47-48, 51-52, 60-61, 67-83, 88-95, 108-109, and 143-196.]

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ASPECTS OF HEALTH, SANITATION AND NUTRITIONAL STATUS IN A CENTRAL RICE VILLAGE

STUDIES IN BANG CHAN, 1952-1954

Hazel M. Hauck

with the assistance of

Amorith Rajatasilpin,

Sopha Indravood, Chumlong Kittivaja, and Sawvanee Sukvanich

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[Title page]

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THE CORNELL UNIVERSITY SOUTHEAST ASIA PROGRAM

The Southeast Asia Program was organized at Cornell University in the Department of Far Eastern Studies in 1950. It is a teaching and research program of interdisciplinary studies in the humanities, social sciences, and some natural sciences. It deals with Southeast Asia as a region, and with the individual countries of the area: Burma, Cambodia, Indonesia, Laos, Malaya, Philippines, Thailand, and Vietnam.

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A list of Program staff and publications is given at the end of this volume. Information on current course offerings, fellowships, and requirements for degrees will be found in an Announcement of the Department of Far Eastern Studies obtainable from the Director, The Southeast Asia Program, Morrill Hall, Cornell University, Ithaca, New York.

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BANG CHAN

FOREWORD

114 The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

[113] The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on [128] health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

361 Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, [187] Minburi. A century-old canal and to the north of it a post- [991] war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

621 In 1954, when data for the present study were still being 162 gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the house- [592] holds were made up of independent nuclear families consisting of parents and unmarried children. The average size for all 243 families was 5.7 persons. Rice farming was the main occupa- 241 tion of 80 per cent of all families. The population in 1954 [463] worked and lived on about 2800 acres (7000 rai) of land. With [311] the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple [132] food of the people. During the wet season and into the cooler 281 dry season, from May or June to February, the growing of the [517] single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

621 The Thai countryside is divided into hamlets, each with [422] a headman in charge of the thirty to sixty households of the [128] hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

and KY followed by a number.) The center of social life in Bang Chan is the Buddhist monastery or wat and the adjacent government primary school. The community simply consists of the clientele which regularly patronizes Wat Bang Chan and this school rather than other comparable institutions elsewhere in the region. Within the area of the community lives a minority of Thai Moslems constituting about ten per cent of the population. They have their own mosque which happens to be just outside Bang Chan, but they attend many secular and some Buddhist functions at Wat Bang Chan. A number of small stores, which also serve as coffee houses and men's clubs, are used as neighborhood centers in different parts of the village. Near the central wat and school, there is also a store, and the house provided by one of the headmen for use as the Project headquarters.

This present interim report of the Cornell Thailand Project includes some of the data necessary for the design of a program to improve health and diet in Bang Chan. Another report, now in preparation, will give the results of a detailed dietary survey made in the community following the health survey reported on here. These two studies together will indicate existing deficiencies in health and diet, and will permit the formulation of recommendations for needed changes in behavior as these can be realized in the context of the village and national culture.

The author of this study, Dr. Hazel M. Hauck, is Professor of Food and Nutrition in Cornell University. She has been associated with the work of the Cornell Thailand Project since 1950. She not only designed and supervised the research on health, nutritional status, and diet in Bang Chan, but during almost a year of field work in Thailand she obtained valuable data on many other topics for the Project's files. Some of her daily work in Bang Chan made little sense to the villagers, but they nevertheless became devoted to her. Her energy, tact and fine spirit in facing the discomforts and difficulties of rough field work in a tropical foreign land inspired both her Thai and American associates. Working with Professor Hauck were Dr. Amusith Rajatasilpin, now a teacher in the School of Public Health in Bangkok; Miss Sapha Indrasud, now in the Ministry of Public Health; Dr. Chumlong Kittiveja, of the Dental School of the University of Medical Sciences, Bangkok; and Miss Saovanee Sudsaneh, who has been doing post-graduate work in nutrition at Cornell and Harvard. To all of these faithful workers, the Cornell Thailand Project is greatly indebted.

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Ithaca, New York
September, 1956

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BANG CHAN

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The author wishes to express her gratitude for the assistance of her Thai co-workers: Dr. Amusith Rajatasilpin and Miss Sapha Indrasud, whose services were provided by the Food and Drug Administration, Bangkok, Thailand, through the courtesy of its director, Dr. Yong H. Chutima; Dr. Chumlong Kittiveja, whose services were made available through the courtesy of Dr. Luang Vach Vidyaddhana, Dean of the Dental School, University of Medical Sciences, Bangkok; and Miss Saovanee Sudsaneh, who served as field worker with the Cornell Thailand Project during 1953-54.

[126] Stool examinations were made at the Department of Pathology, Chulalongkorn Hospital, Bangkok.

[128] Some preliminary tabulations and analyses of data were made at the Division of Statistical Services, National Economic Council, Bangkok, through the courtesy of its director, Dr. Tooi Xocusai.

ooo For the interest and friendliness of the people of Bang Chan, without whose cooperation the study would not have been possible, the author is particularly grateful.

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Summary

12 The general condition of health and sanitation in the village of Bang Chan, Thailand, and the nutritional status of 166 persons in a random sample including 31 village households and of 233 primary school children are described.

141 The mean height for adult men in the random sample was 158.6 cm. (62.4 inches) and for women, was 151.3 cm. (59.6 inches).

Mean weights for adult men and women were 53 kg. (116.6 lb.) and 45.3 kg. (99.7 lb.) respectively. Mean and median weights for various age groups did not differ markedly nor consistently.

145 In general, the Thai children were shorter and weighed less than western children of the same ages. Mean heights and median weights fell below the 10th percentile of Iowa school children whose measurements have been reported by Stuart and Meredith (1946).

The reported age at menarche, for 94 females in Bang Chan, ranged from 13 to 19 years, with a median age of 15.

As judged by the median ages of eruption of specific permanent teeth and the number of permanent teeth per child at each age level, dental maturity of children in Bang Chan was approximately the same as that of children in other regions, both western and eastern, for which data are available. Although the average number of teeth at some ages was lower for children in Bang Chan than for American or English children, the differences were neither marked nor consistent.

164 Children in the Bang Chan primary school were found to be relatively free from caries. Of 226 school children 7 to 14 years of age, whose teeth were examined by a dentist, 42% were completely free of caries of both deciduous and permanent teeth. Of the total group of children, 68% (76% of 116 boys and 60% of 110 girls) were free of caries of permanent teeth. The average number of carious permanent teeth per child was 0.5 for boys and 0.9 for girls. For children with caries experience, the figures were 1.9 and 2.3 for boys and girls respectively. None of the children examined had any filled teeth.

The reason for the relatively low incidence of caries

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164 among children in Bang Chan is not known. One thing which
[146] residents of Bang Chan appeared to have in common with other populations which have been reported to be relatively caries free, was low intake of sugar, particularly in a form which would be apt to adhere to the teeth.

Adults up to 44 years of age, in the random sample, retained most of their teeth. A few adults in Bang Chan have
[301] had missing teeth crowned. More sound than missing teeth were found to be crowned, however, i.e. in this community a crowned tooth appears to have cosmetic value.

759 A variety of serious illnesses were found to occur among
[164] residents of Bang Chan. As a rule, local traditional practitioners were consulted first, but most persons reported to have been seriously ill eventually received treatment by outside practitioners with some training in modern medicine.

[344] The majority of mothers in childbirth were attended by
[745] local traditional midwives, but a few difficult cases were taken to the government Health Center in the nearby town of Minburi, where a trained midwife was in attendance.

165 Of 438 pregnancies reported by 84 mothers, over 90%
[163] resulted in live births. Of the 397 living children born to these women, 81% survived at the time of interview. Within the first month of life, 7% had died, and a total of 11% died within the first year. Tetanus was prominent among causes of death of infants under one month of age. Infantile beriberi caused some deaths among older infants. In a majority of cases, the cause of death of infants could not be clearly identified, but fever, debility and convulsions were the symptoms most commonly described.

146 Almost half of the persons examined for possible signs of nutritional deficiency, 46% of the school children and 47% of the family sample, were free of such signs. The remainder, slightly more than one half of persons examined, had from 1 to 7 signs each. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Signs most often noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine
[164] in the diet. The only clearly defined deficiency disease observed among residents of Bang Chan during the field study was beriberi.

14 Hemoglobin values of 11.5 g or less per 100 ml. were

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14 observed in 9% of the school children 7 to 14 years of age who were examined, and in about 6% of the males and 25% of the females over 15 years of age. Of 337 persons examined, however, 2 only, one child and one adult female, were found to have hemoglobin values under 9.75 g per 100 ml.

744 Modern sanitation was practically unknown in Bang Chan. Few families had covered pit latrines or made any effort to [514] cover excreta. Intestinal parasitism was common. Garbage [164] might be fed to animals, but was frequently thrown into the [364] canal or elsewhere about the compound. Provisions for protecting foods from contamination were meager.

When rain water was available, it was used for drinking, but several months each year water from the canals or fish ponds was used without prior treatment. For washing vegetables, cooking and washing dishes, canal and pond water was used throughout the year.

744 A few changes in sanitary practices, if they could be
751 brought about, might reduce some kinds of illness substantially. For example, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

758 Modern medicine will probably not be readily or
121 generally available to a majority of the residents of Bang Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

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Introduction

121 This investigation was undertaken in connection with the Cornell Thailand Project, one of several studies under the auspices of the Department of Sociology and Anthropology which are focused on the process of cultural change. Bang Chan, the community chosen for intensive investigation, has been described previously (Sharp et al., 1953). The studies to be reported [Doi] herein were designed to contribute to a baseline description of the community culture and were carried out during the first and second years of a 5-year project, i.e. from September 1952-May 1954.

114 For the clinical examination of the school children and families, the research group consisted of Dr. Anusith Rajatasilpin, Miss Sapha Indrasud, Bua Srisuay, a local villager who assisted in many practical ways, and the author, who assumed major responsibility for planning and directing the work. Dr. Chumlong Kittiveja, of the Dental School, University of Medical Sciences, Bangkok, examined the teeth of the school children. Some data on sanitary practices were collected by Miss Saovanee Sudsaneh, in connection with the dietary survey.

121 The main investigations undertaken fall into two categories: 1) studies of nutritional status and 2) dietary studies, both qualitative and quantitative. In connection with both types of studies, information was collected concerning certain aspects of health and of sanitation in the village. Additional data concerning health practices, illness and death in Bang Chan were recorded by members of the Cornell research group in their field notes. This present report is concerned primarily with presenting findings from all of those sources regarding aspects of the health, sanitation and nutritional status in this rural Thai community.

Methods

Clinical Examination

125 Schedule. - In general, the clinical examination was directed toward discovery of signs and symptoms which might either be indicative of nutritional deficiency or of some disturbance which might be associated with or lead to nutritional deficiency. Certain items, such as cristal height, bicristal diameter, and age at menarche were included because information concerning them would contribute to our knowledge of norms for Thai people, and the clinical examination presented a good opportunity for obtaining such information.

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12 As advocad by the Joint FAO/WHO Expert Committee on Nutrition (1951), this study combined clinical appraisal with dietary surveys. The only laboratory tests done were for hemoglobin content of blood, and examination of stools for parasites. Suggestions for planning the schedule for the clinical appraisal were obtained from the report on the second session of the Joint FAO/WHO Expert Committee on Nutrition (1951), Nicholls (1951) and especially from Professor Dean Smith of the London School of Hygiene and Tropical Medicine (1952).

125 Choice of physical measurements, and of procedures in making them, were influenced by a tentative list of specifications for anthropometric measurement, developed by the Committee on Anthropometry, Food and Nutrition Board, National Research Council (1951).

The schedule used for clinical examinations, and a description of procedures used, are included in Appendix A.

Sampling. - All of the children attending the Bang Chan primary school were examined. Three or four children who were listed on the school rolls were not present at any time during the period when examinations were in progress, and were considered by the teachers as non-attending.

Persons in a random sample of households in 5 of the 7 hamlets in the Bang Chan community were also examined. The two most outlying hamlets were excluded from the population to be sampled because of the difficulty, during the dry season, in getting to them or having them come to us. Of 230 households in the 5 hamlets, 31 were included in the random sample. Age and sex distribution of the 166 persons in the sample were roughly similar to distributions for the approximately 1700 persons in the village as a whole, as determined in the census of December 31, 1953. Following is a summary of the age distribution:

[162] [62]

Age in Years	Bang Chan, 7 Hamlets	Random Sample, 5 Hamlets
0-14	38%	41%
15-19	11%	10%
20-59	44%	41%
60 and over	7%	8%

[162] The sample included one Muslim family of 13 members.

In the 31 households, 166 of 184 persons, i.e. 90% were examined. Of the 10% non-response group, half were unavailable, for example away at work when the examinations were in [123] progress. The remaining members of the non-response group

A A [See pp. 51-52--Analyst]

125 included adults of both sexes and some preschool children who
123 were unwilling to allow the physician to examine them. The small non-response group included persons of both sexes and a wide range of ages, and would therefore not be expected to bias the sample seriously. In general, rapport and cooperation were excellent.

Reproductive Function in Females

[145] Information concerning menstrual history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 35).

Information on child-bearing history was obtained from women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 36).

Illness and Injury

12 Evidence concerning the nature and extent of illness and
[164] injury in Bang Chan was obtained from various sources:

1) direct observation by the physician at the time of the physical examination, or when the physician was asked to visit a sick person in the village;

2) field notes in which information concerning illnesses, accidents and deaths were recorded as research workers learned of them; and

3) information obtained by structured interview in connection with surveys conducted by various persons working on the Cornell Thailand Project.

Adults in households which were included in the random sample were asked after the clinical examination whether any family member had been ill or injured during the past year. If so, the interviewer asked the nature of the illness or injury and what was done. The portion of schedule 6 which relates to this is included in Appendix A.

Some questions on illness were included in a survey of household heads in Hamlet KY-7 (Hanks, 1954) and in a structured interview to which there were 335 respondents from the

A [see pp. 51-52--Analyst]

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12 total of 336 households in Bang Chan (Ralis, 1955).[1] Appropriate portions of schedules used are included in Appendix A. A A

Women in the random sample of village households, and women whose young children were included in the child feeding study, were asked about survival of all children born to them (See Appendix A, schedule 3, item 36). With the exception of a few old women, those who reported that one or more children had died, were asked to describe the child's symptoms and the circumstances surrounding the death. When the description was clear enough to permit diagnosis, the physician recorded cause of death, as well as the informant's description.

Sanitation

Information concerning toilet practices was obtained from adult members in 30 of the 31 families included in the random sample of households. Additional information on toilet care of infants and toilet behavior of preschool children was recorded in field notes.

In connection with a weighed dietary survey, the observers noted practices relating to care of food, disposal of garbage, and source and treatment of drinking water, in 11 households on 4 days each throughout a year.

Schedules or portions of schedules used in recording the information on sanitation are included in Appendix A.

Results

Physical Measurements

141 145 Heights and Weights. - Mean values and ranges for heights, cristal heights and bicristal diameters, and both mean and median values and ranges for weights of boys and girls in the Bang Chan primary school are classified by age,

---

1. In Ralis' survey, each "kitchen-unit" was considered as a household. As generally used in this data paper, "household" includes all persons living under one roof. A number of such households in Bang Chan include more than one kitchen-unit. [592]

A A [see pp. 51-52--Analyst]

in Tables 1 and 2.[1]

Heights of children in the Bang Chan elementary school were, on the average, less than mean heights for Thai children given by Yong Chutima (Chutima, 1939). They are much below the mean heights at various ages, from charts (Class II) in use at the Dept. of School Hygiene, Bangkok.[2] Curves for mean weights of children in Bang Chan cross Dr. Yong's average curves, but are well below the average curves for girls and boys in Class II, School Hygiene charts (Figures 1 and 2). When compared with mean weights for children of the same height and age, from tables in use at the Dept. of School Hygiene, however, the two curves are seen to be similar (Figure 3). Mean heights and weights for rural children as reported by Zimmerman (1931) are not very different from those in Bang Chan.

In general, Thai children are shorter and weigh less than western children of the same age. For example, at all ages, mean heights and median weights[3] for both boys and girls in Bang Chan fell below the 10th percentile of the Iowa school children whose measurements are reported by Stuart and Meredith (1946) (Table 3). Weight of clothing was probably about the same for the two groups. In general, the median weight for a given age, in Bang Chan, corresponds to the weight of the 50th percentile for Iowa children 2½ to 4½ years younger. Thus the median weights for 8 year old boys and girls in Bang Chan, were similar to the weights of the 50th percentile of Iowa boys and girls 5 to 5½ years old, and the median weights of 13 year old boys and girls in Bang Chan were similar to weights of the 50th percentile of Iowa boys and girls at 10 and 9½ years of age, respectively. The tallest and heaviest boys and girls of these ages in Bang Chan were shorter and lighter than the corresponding median values for Iowa school children. On the average, however,

---

1. Median weights are generally considered to be more representative of a group, but mean values are included as well, for comparison with results of certain other studies.

2. Unpublished data, based on measurements of over 15,000 children, both urban and rural, made over a period of years, and compiled by Dr. Laong. Furnished through the courtesy of Dr. Ladda of the Dept. of School Hygiene, Bangkok. Subjects were grouped as Classes I and II, of which roughly 1/3 were considered Class I.

3. Most of these observations were made in November or early December, 1952. On the basis of subsequent observations, many children were found to weigh less in May than during the previous February, but weight gains were again observed the following August and November.

TEXT CONTINUED ON PAGE 15

[see pp.9-13-An.] [see p. 14-An.]

Table 1

Heights, Weights, Cristal Heights and Bicristal Diameters of 116 Male Children in Bang Chan Primary School, 1952-53, Classified by Age.

Age[1], Years	No. of Persons	Height		Weight[2]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
7	5	111.5	106.5-114.0	18.1	18.75	15.5-19.25	64.0	60.5-67.5	19.3	18-20.5
8	19	113.6	106.0-123.5	19.5	19.75	16.0-23.0	64.4	59.5-70.0	19.5	18-20.5
9	9	115.8	109.0-124.5	20.0	19.50	16.5-25.25	66.3	61.5-73.5	19.4	18-22.0
10	22	121.9	113.5-130.75	22.7	22.25	18.0-29.0	70.1	62.0-76.5	20.2	19-22.0
11	24	125.0	116.0-132.5	23.8	23.75	19.0-30.0	72.9	63.5-80.0	20.7	18-23.0
12	18	129.2	119.5-141.0	26.2	25.25	22.0-34.0	76.3	68.5-87.0	21.2	18-24.0
13	18	138.9	126.5-151.5	31.8	32.75	23.0-41.75	82.3	74.5-94.0	23.2	21-25.5
14	1	131.5		29.0	29.00		76.0		22.0	

1. Age to nearest birthday. For 3 boys in the school, age was uncertain, therefore their measurements were excluded from these averages.

2. For children weighing 22.75 kg. or more, weight of clothing was about ¼ kg.; clothing of smaller children weighed less than this.

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Table 2

Heights, Weights, Cristal Heights and Bicristal Diameters of 109 Female Children in Bang Chan Primary School, 1952-53, Classified by Age.

Age[1], Years	No. of Persons	Height		Weight[2]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
7	8	109.0	106.5-114.0	16.9	17.4	15.0 -18.75	61.0	58.0-65.0	18.8	18.0-20.0
8	15	113.5	103.0-125.0	19.2	19.8	14.5 -24.25	64.7	56.0-74.5	19.5	18.0-21.0
9	9	118.3	114.5-125.0	22.1	22.0	20.25-26.50	67.8	66.0-70.0	20.1	18.0-22.0
10	12	121.6	113.5-134.5	22.5	22.0	19.0 -29.75	71.0	67.0-82.0	20.3	19.0-22.0
11	24	126.9	117.5-141.0	24.7	24.4	18.5 -30.5	74.5	62.5-85.0	21.3	19.0-23.0
12	21	133.3	124.5-150.5	28.2	28.0	22.0 -38.0	79.1	72.5-87.5	22.4	20.0-25.0
13	18	137.1	126.5-146.0	30.8	30.4	21.0 -37.25	81.6	70.0-90.0	22.8	19.5-26.0
14	2	137.7	133.0-142.5	32.9	32.6	31.75-33.75	80.5	76.5-84.5	21.5	19.5-23.5

1. Age to nearest birthday. For 5 girls in the school age was uncertain, therefore their measurements were excluded from these averages.

2. For children weighing 22.75 kg. or more, weight of clothing was about ¼ kg.; clothing of smaller children weighed less than this.

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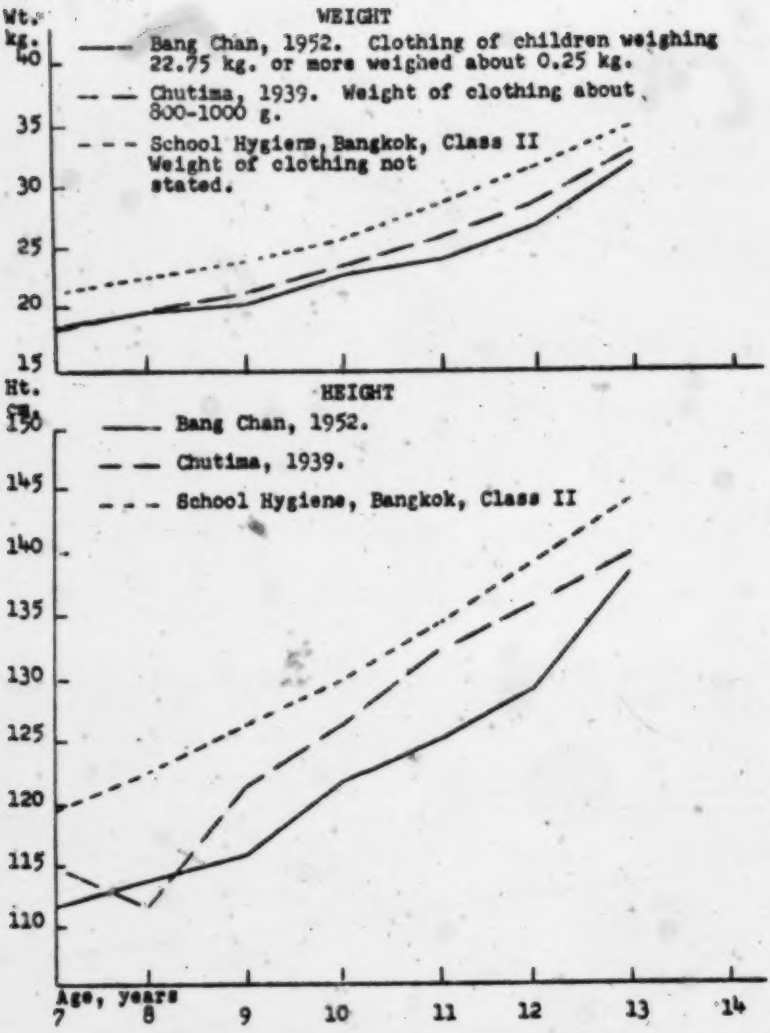

Figure 1. Mean heights and weights of boys in Bang Chan elementary school, compared with mean heights and weights of Thai children as reported by others.

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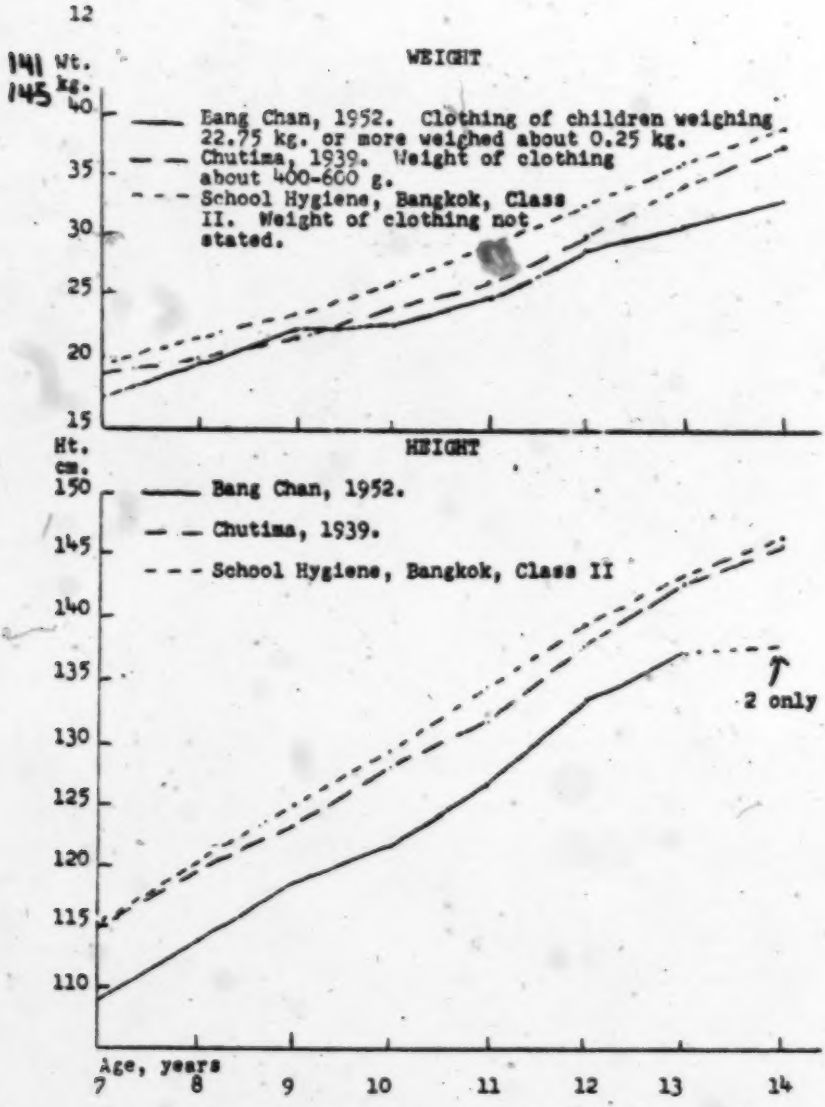

Figure 2. Mean heights and weights of girls in Bang Chan elementary school, compared with mean heights and weights of Thai children as reported by others.

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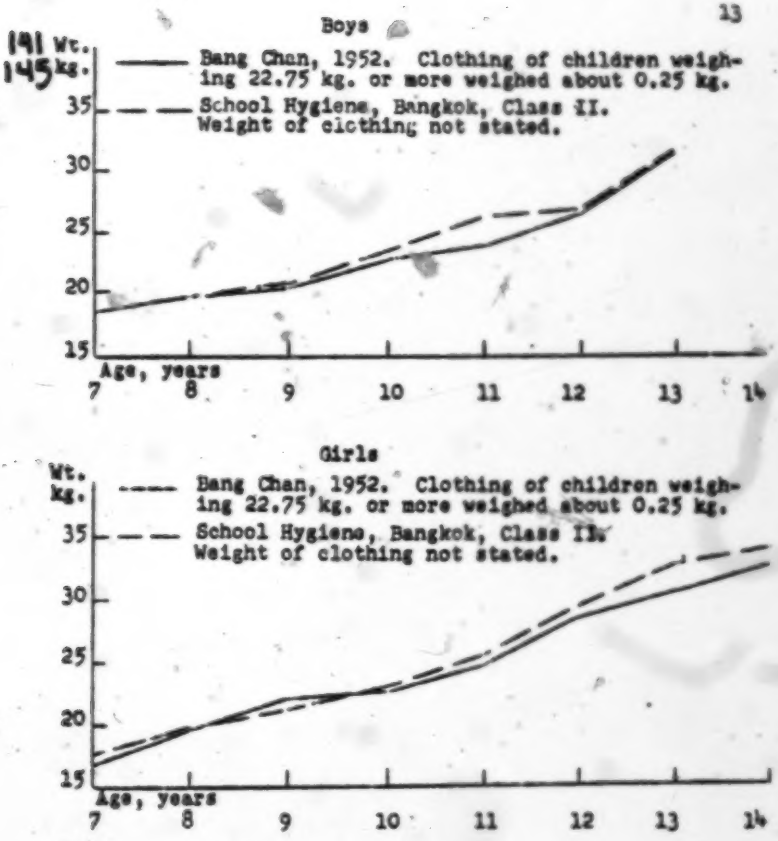

Figure 3. Mean weights of boys and girls in Bang Chan elementary school compared with mean weights (Class II) for children of the same height and age, in table used at Department of School Hygiene, Bangkok.

Table 3

Heights, Weights and Bicristal Diameters of Children in Bang Chan Elementary School, Compared to Measurements of American School Children (Stuart and Meredith).

	Age[3]	Bang Chan				Stuart and Meredith[1]		
		Height		Wt.[2]	Bicr. diam.	Percentile 10		
		Mean	Range	Med.	Mean	Ht.	Wt.[4]	Hip Width
		cm.	cm.	kg.	cm.	cm.	kg.	cm.
Boys	8	113.6	106.0-123.5	19.75	19.5	123.1	23.2	19.2
	11	125.0	116.0-132.5	23.75	20.7	137.3	30.1	21.1
	12	129.2	119.5-141.0	25.25	21.2	142.4	32.7	21.9
	13	138.9	126.5-151.5	32.75	23.2	146.6	34.9	22.7
Girls	8	113.5	103.0-125.0	19.75	19.5	122.1	22.0	19.1
	11	126.9	117.5-141.0	24.4	21.3	137.0	28.4	21.4
	12	133.3	124.5-150.5	28.0	22.4	142.6	31.5	22.4
	13	137.1	126.5-146.0	30.4	22.8	149.1	36.2	23.6

1. H. C. Stuart and H. V. Meredith (1946).
2. Includes small amount of clothing, weighing on the average about ½ kg. for the 11-13 year old children.
3. Ages 8, 11-13 chosen for comparison because for each age from 15-24 children of each sex had been measured.
4. Weight in pounds changed to kg. Children were weighed in light socks, shorts, and for older girls, brassieres.

5: Hauck et al. D-5 (1952-1954) 1956 AO7 Central Thai AO7
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141 145 Bang Chan children could not be considered as markedly underweight. Few were so thin that one could "count their ribs" and still fewer would be considered plump by American standards.

141 Heights and weights of males and females over 7 years of age[1] in the family survey are summarized in Tables 4 and 5. The height of the tallest man in the random sample was 172.5 cm. (67.9 inches) and that of the shortest, 150.5 cm. (59.3 inches). The height of the tallest woman measured was 159 cm. (62.6 inches), but one 16-year old girl, the daughter of the tallest man in the random sample, was taller, 161 cm. (63.4 inches). The height of the shortest adult woman measured was 142.5 cm. (56.1 inches). Mean heights for men and women 20 years of age or older, in the random sample were 158.6 cm. (62.4 inches) and 151.3 cm. (59.6 inches) respectively.

The weight of the heaviest man in the random sample was 69 kg. (151.8 pounds) and that of the heaviest woman was 70 kg. (154 pounds).

Mean weights for men and women in the random sample were 53 kg. (116.6 pounds) and 45.3 kg. (99.7 pounds) respectively. Note that, in general, differences are slight between mean and median weights for age and sex groups including a number of individuals. The group of 6 men over 60 years of age is an exception, as values for two individuals weighing 66 and 69 kg. respectively raise the mean markedly. An even wider range of weights occurred in the group of women 60-81 years of age, but the influence of one high weight (70 kg.) was offset by a correspondingly low weight (27 kg.). Thus the tendency noted among western populations, for mean weight to exceed the median weight for a given age and sex group, was not apparent in the population of Bang Chan.

141 145 Girls in Bang Chan may have reached adult height and weight by age 20, since the small differences in the averages for ages 15-19 (mean age 17 years) and the successively older age groups are probably associated with individual variation and the small numbers in each group (Table 5). Note that, in general, Bang Chan women did not appear to increase in weight with age, after adult stature is reached. Zimmerman (1937) states that Thai females reach maturity of height at age 17. Mean values from School Hygiene tables are similar, for heights of school girls 17 or 18 years of age and older, and mean weight increases from 17 years on are in the neighborhood of 1 or 2 kg. Mean heights for adult women in the random sample of households in Bang Chan are slightly below those recorded by other observers (Table 6).

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1. Measurements of preschool children are included in Appendix B, Table 19.

[see p.17-An.] [see p. 18-An.] [See p. 67-an.]

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Table 4

Summary of Heights, Weights[1], Cristal Heights and Bicristal Diameters of 62 Males Over 7 Years Old, in the Random Sample of Village Households, Bang Chan, 1952-53

Age	No. of Persons	Height		Weight[1]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
8	1	112.0		17.5	17.5		64.0		18.5	
9	1	113.5		19.5	19.5		63.0		20.0	
10	3	121.7	120.5-122.5	23.4	23.5	22.25-24.5	69.7	68.5-70.5	20.0	19-21
11	2	129.5	129.0-130.0	26.3	26.3	25.0 -27.5	77.0	75.0-79.0	21.5	21-22
12	5	130.8	119.5-137.5	27.3	28.3	22.0 -31.0	77.3	69.5-84.5	20.8	18-23
13	2	145.8	140.5-151.0	35.8	35.8	33.25-38.25	86.3	82.0-90.5	25.0	25-25
14	2	149.0	145.0-153.0	38.0	38.0	34.0 -42.0	85.5	85.0-86.0	22.5	22-23
15-19	9	153.8	141.5-167.0	45.1	45.8	35.75-53.25	91.4	82.5-101.0	25.4	24-27
20-39	20	157.5	152.0-171.0	51.8	52.0	42.5 -58.5	91.4	86.5-99.0	26.5[2]	24-28
40-59	11	160.6	151.5-172.5	54.9	55.0	45.5- 61.0	93.1	86.0-101.5	27.7	24-29
60-66	6	158.0	150.5-172.5	53.4	49.8	43.0 -69.0	91.6	86.0-101.0	27.9[2]	25-30
Partial Total 20-66	37	158.6	150.5-172.5	53.0	52.0	42.5 -69.0	91.9	86.0-101.5	27.1	24-30

1. For children weighing 22.75 kg. or more weight of clothing was about 0.25 kg., clothing of smaller school children weighed less than this. Clothing of adults weighed about 0.25 kg.
2. Measurement was not obtained for 1 person in this group.

Table 5

Summary of Heights, Weights[1], Cristal Heights and Bicristal Diameters of 70 Females Over 7 Years Old, in the Random Sample of Village Households, Bang Chan, 1952-53

Age in Years	No. of Persons	Height		Weight[1]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
8	4	112.4	100.0-117.0	18.2	19.6	13.0 -20.5	63.1	56.0-66.0	19.4	18.0-20.5
10	4	124.0	120.0-126.5	24.1	23.6	19.75-29.5	71.9	67.5-75.0	19.8	18.0-21.0
11	2	122.3	120.0-124.5	23.1	23.1	22.0 -24.25	71.5	69.0-74.0	21.0	20.5-21.5
12	3	135.3	127.0-140.5	29.7	30.5	27.75-30.75	79.0	75.5-81.0	22.0	21.0-23.0
13	3	142.0	138.5-145.5	34.9	36.0	32.25-36.5	85.8	84.5-87.5	21.7	21.0-23.0
14	1	142.5		33.8	33.8		84.5		19.5	
15-19	8	151.3	143.5-161.0	45.4	45.5	40.0 -50.5	90.0	85.0-96.0	25.8	23.0-27.0
20-39	21	150.1	142.5-158.0	45.9	47.0	32.5 -58.0	87.2	81.5-96.5	26.3[2]	22.0-31.0
40-59	16	150.3[2]	143.5-157.0	44.0	43.0	37.0 -55.5	87.8	78.0-93.5	26.9	23.0-29.5
60-81	8	151.4	146.0-159.0	46.0[2]	46.3	27.0 -70.0	88.1[2]	84.0-93.0	28.0[2]	24.0-30.0
Partial Total 20-81	45	151.3	142.5-159.0	45.3	45.7	27.0 -70.0	87.6	78.0-96.5	26.7	22.0-31.0

1. For children weighing 22.75 kg. or more weight of clothing was about 0.25 kg; clothing of smaller school children weighed less than this. Clothing of adults weighed about 0.25 kg.
2. Measurement not obtained for one person in this group.

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Table 6

141 Mean Heights and Weights of Women in Random Sample of Village Households, Bang Chan, Compared to Heights and Weights of Thai Women as Reported by Other Observers.

	No.	Ages	Mean Height	Mean Weight[1]
			cm.	kg.
Women, Bang Chan	8	15-19 (Av. 17)	151.3	45.4
	45	20-81	151.3	45.3
Nurses, Siriraj Hospital[2]	198	17-26	152.6	47.5
Medical Students[2]	14	17-25	154.7	44.5
School girls[3]	76	19	152.0[4]	46.9[4]
School girls[3]	48	20	151.9[4]	47.4[4]
Laborers, Huahin Ry. Freight Service	32	20-40	156.2	49.9
Rural Women[5]	113	20-39	151.7	47.0

1. Clothing of women in Bang Chan weighed about 0.25 kg., and that of nurses about 0.5 kg. No estimates were given of weight of clothing of women in the other groups.

2. Chutima, 1939.

3. From tables in use at Dept. of School Hygiene, Bangkok.

4. Means for 2 groups classified on basis of physical status, but evidently not height or weight.

5. Calculated from figures given by Zimmerman, 1937.

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Among the men and boys in the random sample of households, however, mean height and weight was distinctly less for the age group 15-19 (mean age 17) than for the older age groups (Table 4), and mean height and weight increased with age among the subgroups. Thus mean height of 4 boys 18 and 19 years old was 157.6 cm., and mean weight 50.2 kg. as compared to 150.1 cm. and 38.5 kg. for 4 boys aged 15-16. Among the 20 men in age group 20-39, 3 were age 20, and 4 either 23 or 24. Mean heights for both of these subgroups were 157 cms. The number of young men examined in Bang Chan is too small to permit judgment as to when adult stature is attained. On the basis of measurements of Siamese males, from the medical service of the Royal Siamese Navy, Dr. Yong concludes that "growth, as regards both height and weight stops at age 22" (Chutima, 1939). According to Zimmerman (1937) rural Siamese boys increase in height steadily until about 19 years of age, at which time they seem to have reached maturity. Adult men in Bang Chan were on the average a little shorter than other groups of Thai men whose measurements were available to us (Table 7).

Bicristal Diameter. - Some additional information concerning body build is obtained from this measurement. In general, for Bang Chan children of elementary school age (Tables 1 and 2), mean bicristal diameters correspond to hip widths for Iowa school children one to three years younger (Stuart and Meredith, 1946). Mean bicristal diameters of adult men and women in Bang Chan (Tables 4 and 5) correspond approximately to the values for the 10th percentile of the 18 year old boys and girls in the Iowa study. Andrews (1943) found the hip breadth of Central Thai men to be 26.98 ± 1.48 cm., which is similar to the mean of 26.9 cm. for 31 adult males, aged 20-59, in Bang Chan.

Cristal Height. - At the time this study was undertaken, the Committee on Anthropometry of the Food and Nutrition Board, National Research Council had tentatively recommended cristal height as an additional measurement pertaining to the long dimension of the body. Mean values and ranges, for various age groups, are presented in Tables 1, 2, 4 and 5.

Dental Status

A dentist examined the teeth and mouths of 226 school children, 7 to 14 years of age, in good natural light, using mouth mirror and probe. Teeth of persons in the random sample of village households were inspected by the physician in the course of the clinical examination. Data on dentition and dental health were analyzed by Kamalanathan (1956).

As noted by the Joint FAO/WHO Expert Committee on

[TEXT CONTINUED ON PAGE 21]

[see p.: 16; 20; 9-13; 16, 17; 9-13, 16, 17]

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Table 7

141 Mean Heights and Weights of Older Boys and Men in Random Sample of Village Households, in Bang Chan, Compared to Heights and Weights of Older Boys and Men as Reported by Other Observers.

	No.	Ages	Mean Height	Mean Weight[1]
			cm.	kg.
Older boys, Bang Chan	9	15-19	153.8	45.1
Men, Bang Chan	37	20-66	158.6	53.0
Royal Agricultural College, North Siam[2]	302	17-24	164.5	55.6
Soldiers[2]	46	21	165.5	55.9
Medical students, Chulalongkorn University[2]	83	18-26	165.4	55.3
Convicts, Southern Penal Colony[2]	124	21-40	164.0	55.1
Students[3]	285	19	162.8	50.75[4]
Students[3]	50	21	164.2[4]	52.0[4]
Central Thai[5]	about 950	20+ mean 32.6	163.5± 5.44	53.48
Men, rural areas[6]	478	20-84	162.3± 5.43	54.05± 6.39

1. Clothing of men in Bang Chan weighed about 0.25 kg. and of the Central Thai studied by Andrews weighed approximately 0.5 kg. No estimates were given of weight of clothing of men in the other groups.

2. Chutima, 1939.

3. From tables in use at Dept. of School Hygiene, Bangkok.

4. Average for figures for 2 groups, classified on the basis of physical status, but evidently not height or weight.

5. Andrews, 1943.

6. Zimmerman, 1937.

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As noted by the Joint FAO/WHO Expert Committee on 21

Nutrition (1951) the part played by diet in the production of tooth which are unduly susceptible to caries is still controversial, although in general, the importance of nutrition, especially in the formative period, is widely accepted. In accordance with the recommendation of this Committee, caries rates are recorded as a separate item, and are not taken as a criterion of malnutrition.

Dentition. - Median ages of eruption of specific permanent teeth in 240 Bang Chan children, ages 7 to 14, are shown in Table 20 (Appendix B). For this purpose, data on 226 children in the Bang Chan primary school, and 14 additional children between these ages, in the random sample, were included. The percentage of boys and girls at each age, having each specific tooth erupted, was calculated. Median ages of eruption were estimated according to the method suggested by Klein et al. (1937). A graph was drawn for each kind of tooth, for each sex. Cumulated percentages for each specified kind of tooth erupted were represented on the x axis and age in years at one year intervals on the y axis. Median age of eruption was estimated by determining the point at which the age percentage eruption curve cut the 50% perpendicular.

In Bang Chan, as elsewhere, the median age of eruption for specific teeth is lower for girls than for boys. In some cases the difference is slight, in others, from several months to more than a year. The difference is most marked for lower canine teeth.

The average number of teeth, deciduous, permanent and total, at each age, is shown for children 7 to 14 years of age, in Table 21 (Appendix B). For ages 8 to 13, the greater dental maturity of girls than boys is reflected in the larger average number of permanent teeth present at each age.

On the basis of median ages of eruption for specific teeth, and the number of permanent teeth per child at each age level, dental maturity of children in Bang Chan appeared to be approximately the same as for children in other regions, in both eastern and western hemispheres, with which they were compared. Although the average number of teeth at some ages was lower for children in Bang Chan than for American or English children, the differences were neither marked nor consistent (Kamalanathan, 1956).

Caries Incidence. - Caries incidence was found to be low among Bang Chan children as compared to many regions in which surveys have been made. Of 226 children examined by the dentist, 42% (45% of the boys and 38% of the girls) were totally free of caries. When all carious teeth, both deciduous and permanent, were included, the average number of carious teeth per child was 1.8 (1.6 for boys and 2.0 for girls).

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164 Considering deciduous teeth only, in a group of 173 children, 93 boys and 80 girls who had deciduous teeth, 56% of the boys and 50% of the girls were free from caries. The average number of carious deciduous teeth per child was 1.4 and 1.5 for boys and girls respectively. For those with caries experience, the number of carious deciduous teeth per child was 3.2 for both boys and girls.

In the entire group of 226 children, 76% of 116 boys and 60% of 110 girls were free from caries of permanent teeth. The average number of carious permanent teeth per child was 0.5 for boys and 0.9 for girls. For children with caries experience, the figures were 1.9 and 2.3 for boys and girls respectively. None of the 30 boys with caries of permanent teeth had more than 4 such teeth, whereas 5 of 43 girls had more than 4 carious permanent teeth.

164 171 Data for children aged 12 to 14 in Galesburg, Illinois and Colorado Springs (Dean et al. 1942) have been chosen for comparison of caries experience in permanent teeth, with that in Bang Chan. In these cities, the fluoride content of the water is conducive to low caries incidence, yet the percentage of children aged 12 to 14 having caries experience was 72.2 and 71.5 for Galesburg and Colorado Springs, respectively as compared to 41% for Bang Chan, and the number of DMF[1] permanent teeth per child was 2.36 and 2.46 as compared to 0.88 carious permanent teeth per child in Bang Chan.

The reason for the relatively low incidence of caries among children in Bang Chan cannot be stated with certainty. Similarly low or even lower caries incidence has been reported for certain age groups of children in various parts of the world, for example in North China (Afonsky, 1951), in the northern islands of Samoa where the people had little access to store foods (Lösee, 1952) and in a small isolated village in Greece [146] (Phillipas, 1955). One thing which residents of Bang Chan appeared to have in common with such other populations which are relatively caries free, was low intake of sugar[2], particularly in a form which would be apt to adhere to the teeth.

757 Restoration of Decayed and Missing Teeth. - None of the children examined had any filled teeth. Up to 44 years of age, the adults examined had retained almost all of their teeth, and [145] no evidence of restoration, other than crowning was noted. Decline in average number of teeth was marked after age 55.

Of 92 adults with teeth, at least 7 men and 6 women had been to a dentist as evidenced by the presence of crowned teeth

1. DMF denotes decayed, missing and filled. Children in Bang Chan had no filled teeth.

2. Sudsaneh (1956) found the average per capita intake of sugar in 11 families to be only 6 grams per day.

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757 in their mouths. More than half of the teeth crowned were said to have been sound, and no crowned molars were noted. The services of a dentist appear to have been sought more for their cosmetic value than for dental care as such.

276 164 Betel Chewing and Dental Health. - Betel chewing was not habitual with any of the adults under 25 years of age who were examined. Among adults above this age in the random sample, 13 of 29 men, or 45%, and 34 of 40 women, or 85% chewed betel. The group of adults from 25 to 44 years of age was singled out for study of caries incidence in relation to betel chewing, since adults retained most of their teeth up to this age. Among 19 betel chewers, 3 persons had 5 defective teeth whereas among 19 non-betel chewers, 7 persons had 46 defective teeth. Others (Gerry et al. 1952; Shouric, 1948) have reported a lower incidence of caries among betel chewers than non-chewers. Caution must be used in interpreting our observations, however, because the sample is small, and the teeth were not cleaned before counting caries. Stain and calculus may have obscured small caries in betel chewers.

The impression was gained by casual observation that protruding incisors were common among habitual betel chewers, and that the teeth of some betel chewers appeared to be loose. Since such protruding incisors were not noted among the school children, nor among non-chewers, we associated them with habitual betel chewing. Both Gerry et al.(1952) and Balendra (1949) noted a higher incidence of gingivitis among betel chewers than non-chewers. Since most of the older persons in our sample chewed betel, our data offered no clue as to the possible effect of betel chewing on the loosening and loss of teeth among older persons. Another item of possible importance, and on which we have no data, is the extent to which tobacco is used as an ingredient of the mixture which is spread on betel leaves.

276 146 Platt (1945) considered betel chewing as a potential source of calcium in the diet. He stated that the amount and utilization of calcium ingested with 6 betel leaves was similar to that from 10 ounces of cow's milk.[1]

The amount of calcium ingested in this way doubtless varies not only with the frequency of betel chewing, but also with the amount of juice swallowed. In Bang Chan, spitting out the juice appeared to be more customary than swallowing it.

276 Further research is needed to decide whether the potential disadvantages of betel chewing outweigh its potential benefits. Moreover in any attempt to decrease the practice of betel

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1. Platt, 1945. Footnote, p. 21.

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276 chewing, the extent to which the betel leaves and areca nuts are associated with festival occasions must be taken into consideration. Betel chewing was forbidden in Thailand by the Thai government but the enforcement of this regulation proved impossible and it has been forgotten since World War II.

Nutritional Status

180 125 Incidence of Anemia. - Hemoglobin was determined by means of a Spencer Hb-meter. About 9% of the school children had hemoglobin values below 11.5 g. per 100 ml. but one value only was below 9.75 g. (Table 8). As might be expected since none of the girls in the primary school had passed the menarche, no difference was apparent between values for boys and girls.

Table 8

147 Hemoglobin Values of 233 Children, Ages 7-14, in the Bang Chan Primary School, 1952-53

	Number of Children	Hemoglobin, grams per 100 ml.					
		Under 9.75	9.75-11.5	11.75-12.5	12.75-13.5	Over 13.5	Not Ascertained
Boys	121	0	10	32	44	33	2
Girls	112	1	10	25	38	37	1
Total	233	1	20	57	82	70	3

In the group of persons 15 years and older, in the random sample of village households, the usual difference in hemoglobin values between males and females is evident (Table 9). About 6% of the males and 25% of the females had hemoglobin values of 11.5 g. or less/100 ml. with one only below 9.75 g. Many of these might be considered as borderline rather than anemic.

A [see p.25-Analyst]

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Table 9

147 Hemoglobin Values of 104 Residents, Age 15 and Older, in Random Sample, Bang Chan, 1952-53

	Number of Persons	Hemoglobin, grams per 100 ml.					
		Under 9.75	9.75-11.5	11.75-12.5	12.75-13.5	Over 13.5	Not Ascertained
Male	48	0	3	7	9	28	1
Female	56	1	13	10	14	11	7
Total	104	1	16	17	23	39	8

146 125 Occurrence of Possible Signs of Malnutrition. - Most of the signs and symptoms included on the schedule for clinical examination were those known to be of value in the assessment of nutritional status (Joint FAO/WHO Expert Committee on Nutrition, 1951). Some items included need to be investigated more fully before their value can be determined. Among the 146 164 items on the schedule, (Appendix A) the following were not observed in any of the persons examined:

Eyes: photophobia, lachrymation, blepharitis, xerophthalmia, Bitot's spots, gross corneal vascularization.

Face: Folliculosis, nasolabial seborrhoa, dyssebacia, suborbital pigmentation.

Lips: Scars of cheilosis and of angular stomatitis.

Tongue: Edema, color change to scarlet or magenta. (In 30 adults, however, such color changes if present would have been obscured by the discoloration from betel chewing.)

Gums: Retraction, loss of interdental papillae.

Parotid glands: Enlargement.

Skin: Perifollicular congestion, petechiae.

Edema

Calf tenderness

Inability to rise from squatting [see p. 51-Analyst]

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In addition, the two cases of symmetrical dermatosis observed were not of the pellagroid type and should probably not have been included with the possible signs of nutritional deficiency.

The only instance of thyroid enlargement noted (an obvious thyroid adenoma) was in a 13 year old boy who had always lived in Bang Chan. He knew of no one else in the family with such enlargement.

Five girls and women in the random sample refused to permit the examining physician to palpate the liver and spleen, but he was able to carry out the rest of the inspection.

Almost half of the groups examined, 46% of the school children and 47% of the family sample, were free of the possible signs of nutritional deficiency. The remainder had from 1 to 7 such signs. Persons in the random sample were grouped according to age, and the percentage of each group found to have each number of signs is shown in Table 10. Note that most of the

Table 10

Number of Possible Signs of Nutritional Deficiency Occurring in 166 Individual Residents in the Family Survey, Grouped According to Age

Age Group, years	Number of Persons Examined	Percentage of Each Group Found to Have Each Number of Signs			
		0	1	2	3 or more
6 and under	33	94	3	3	0
7-14	34	47	38	9	6
15-19	17	76	18	6	0
20-39	41	32	54	7	7
40-59	27	7	33	22	37
60 and over	14	21	7	21	50
Total Group	166	47	30	10	13

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preschool children were free of signs. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Among the children, a larger proportion of school children than preschool children or adolescents had possible signs of malnutrition; i.e., more than half of the children 7-14 years of age, as compared to 6% of the children 6 years old or under, and 24% of the age group 15 to 19 years.

The incidence of specific signs among school children and persons in the random sample of families, is summarized in Table 22 (Appendix B).

Several points concerning the distribution of specific signs possibly associated with nutritional deficiencies deserve comment. The most prominent group of signs among school children were the skin signs: xerosis which occurred in 15% and phrynoderma in 5% of the children. Even loss of elasticity of skin occurred in 3 boys. Among adults, these signs were confined almost wholly to the group of older women.

Liver enlargement was next in frequency among school children, with 9% of them exhibiting this sign. We have no evidence as to the cause of liver enlargement. It is sometimes associated with protein deficiency, but our data on food intake (Sudsanoh, 1956) is on the basis of family consumption, hence we do not know whether school age children have relatively low intakes of total protein or of animal protein. Liver enlargement may also be associated with intestinal parasitism, which was common in Bang Chan.

Dry, "staring" hair was observed in 18 children. One case of diminution of pigment was recorded. A number of other cases in which dark hair had an auburn cast, were noted by the non-Thai nutritionist, but were accepted as normal hair color by the Thai physician.

Ulcers on the legs below the knees were observed in 14 school children. Such ulcers, though not associated with any specific nutritional deficiency, occur commonly in ill-nourished subjects (Smith, 1952).

Some school age children both in the random sample and in Bang Chan primary school, did not have knee and/or ankle jerk. These signs were more prominent among adults, however, particularly among men, than in the school age group.

The occurrence of skin changes among older women, together with the higher incidence of low hemoglobin values among women than among men, accounts for the seemingly higher incidence of possible signs of malnutrition among adult women than men. The only clear difference in occurrence of signs among

[see p. 67 - Analyst]

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146 164 women of childbearing age as compared to older women, was in the incidence of skin changes. Certain of these, i.e. xerosis, loss of elasticity and atrophic skin, were observed, in the adult group, only among older women. In some cases at least these signs may have been associated with aging rather than nutritional deficiency, unless, indeed some of the common signs of aging prove to be due to long continued intakes which are suboptimal. Among the school children, however, these skin changes were clearly abnormal.

At the clinical examination, redness of the gums was noted in a few cases only among school children, most of whom were examined in November. The dentist, who examined the children in February, noted redness of gums in about one-fourth of them. This difference may reflect a difference in standards used by the physician and dentist, or the incidence of this sign may have increased between examinations.

Certain groups of signs tended to occur together. Thus the various skin signs: phrynoderma, xerosis and loss of elasticity were often associated. Of 23 cases with absence of knee jerk, 16 had absence of ankle jerk also, and the various changes in tongue and lips not only tended to occur together, but these were often associated with absence of knee jerk and/or ankle jerk. The signs of possible nutritive deficiency most commonly noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine in the diet (Sudsaneh, 1956).

146 142 Bowleggedness was observed in a larger proportion of adults than children, but according to our criteria, did not occur in either group to the extent that we had been led to expect from previous reports. Among the 198 school children in Bang Chan who were examined by a physician in 1948-49, 69, i.e., about 35%, were reported to have bowed legs, with 4 cases called "severe" (Sharp et al. 1953, p. 249). Among the 233 children in Bang Chan school whom we examined, 9 only, i.e., less than 4%, were considered bowlegged according to our criteria, and none of these cases was severe. Chutina (1939) stated that "Another condition prevalent in Siam and fundamentally due to improper diets since infancy is bow-leggedness. Only about 25% have normal lower limbs, the rest being bowlegged and many are knock-kneed . . . The percentage of extreme bow legs is about 20% while mild bow legs form about 55% of our school children." Since these other observers determined bowleggedness by casual inspection[1], some of the difference between the earlier observations and ours may be due to difference in criteria used. The children

1. Personal communication from Dr. Yong Chutina.

146 pictured as bowlegged in Chutima's report (1939) are, however,
142 clearly so, and represent more extreme cases than we encountered among the children in Bang Chan in 1952-53. If the incidence of bowleggedness among children in Thailand is indeed decreasing, an investigation into possible causes of the change would be of interest.

142 To the nutrition specialist on the team, who was not Thai, the knee joints appeared to be large. Moreover, although the term "knock knees" was not included on the schedule, it was entered frequently by the physician under comments (Appendix B, Table 22).A Whether this condition is related to heredity,
[516] nutritional status, or to some other environmental influence such as the life-time habit of squatting on the heels, is not known.

146 The physician's estimate of general appearance and vitality were recorded early in the examination, before he sought for specific signs. About 80% of all persons examined were rated as "good," and less than 1% as "poor." About half of all persons rated as "good" in general appearance and vitality were without clinical signs, as compared to about 30% of those rated "fair." Of persons with 3 or more possible signs of malnutrition, however, about 2/3 were rated "good" (Appendix B, Tables 23 and 24).A As has been observed frequently, such a general appraisal is not correlated with the presence or absence of clinical signs possibly associated with malnutrition. Clearly, in Bang Chan, there is little or no malnutrition of the sort that causes marked apathy.

In summary, a variety of possible signs of malnutrition were noted both in the school children and the persons in the random sample of village households. More than half of the total number examined had one or more signs possibly due to malnutrition, but the only clearly defined deficiency disease encountered was one case of beri beri[1] in a 49-year old man.

Reproductive Function in Females

84 Menstrual History. - Information concerning menstrual
125 history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied.

145 Most of the women from whom information on age at menarche was obtained were under 40 years of age. A few could

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1. History of beribori among nursing mothers and their
[149] infants was obtained in several instances, and cases of beri-beri, in both sexes, were seen among persons not included in the population samples which were examined.

A [see p. 71-Am.] B [see pp. 72, 73-Analysis]

145 not recall the age at menarche.

The median and modal reported age at menarche was 15 years, with a range from 13-19 years (Table 11).

Table 11

Reported Age at Menarche of 94 Females in Bang Chan.

	Age in Years						
	13	14	15	16	17	18	19
Number at each age	6	18	34	21	8	4	3
Percentage at each age	6	19	36	22	9	4	3

This estimate, made from ages given by recall, is necessarily approximate; however, none of the girls between 12 and 14 who were examined clinically, had passed the menarche. Moreover, median and modal ages at menarche were 15 years for sub-groups aged 15 to 24, and 25 to 39 at the time of inquiry, hence the inclusion in this series of women for whom the event was not recent did not alter the estimated median age at menarche. Wilson and Sutherland (1953) conclude that in tropical countries the onset of menstruation as compared with that for English children, 145 may be either early or late. Tanner (1955) notes that if 114 climate has an effect on age at menarche, it must be a minor one, 121 and that at present the effect of race cannot be disentangled from nutritional and socio-economic circumstances. Basing his [146] judgment on the effects on man of famine associated with war, and on results of direct experiments on animals, Tanner expresses the conviction that nutrition plays a major role in determining the age at which menarche and the adolescent spurt in growth occur. If this view is correct, the relatively late median age of menarche in Bang Chan may be associated with inferior nutritional status.

145 One of 17 women in the age group 35-44 had passed the menopause, whereas 12 of 16 women over 45 years of age had done so. One of 7 women over 55 years of age, 2 of 7 women age 50-54, and one of 2 women age 45-49 had not yet reached the menopause. The reported ages at menopause were: 30-34 years, 2 women; 40-44 years, 3 women; 45-49 years, 3 women and 50-54, 5 women.

147 Approximately 100 respondents gave information concerning

duration and regularity of monstrual periods, and intervals between periods (Table 12).

Table 12

Characteristics of Monstrual Periods of Women in Bang Chan

	Percentage of Respondents in Each Category			
Duration, days	Under 3	3 or 3+(a)	4 or 4+(a)	5 or more
91 respondents	6	78	11	5
Interval	**Short**	**Usual (b)**	**Long**	
101 respondents	0	84	16	
Regularity		**Regular**	**Irregular**	
102 respondents		89	11	

(a) A plus sign indicates variability of period, as 3-4 days.

(b) usual - approximately 1 lunar month.

While the usual variations were encountered, a large majority of responses were similar. Thus the typical woman in Bang Chan monstruated at regular intervals of about 1 lunar month, for a period of approximately 3 days. While the sample is small, the only unusual feature of menstrual history as compared to western standards appears to be a somewhat older age at menarche.

Pregnancies. - Most married women in Bang Chan have children. The range in number of pregnancies for a given number of years of marriage is great, however (Table 13), and suggests either 1) relatively low fertility in many cases, or 2) the existence of some method of birth control of which the research workers, including the Thai physician, had no information. Zimmerman (1931, p. 230) has commented that in Thailand the birth rate did not seem to be under human control. He said that rural Thai did not know about birth control nor practice any form of it to any extent.

[see p. 32-Analyst]

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Table 13

163 Relation of Reported Number of Pregnancies[1] to Years of Marriage During the Child-bearing Period, for 77 Women in Bang Chan

Years Marriage During Child-bearing Period	Number of Women	Range, Number of Pregnancies	Total Pregnancies	Average No. Pregnancies Per Woman
2 or less	10	1-3	13	1.3
3-4	7	1-3	13	1.9
5-6	6	2-3	16	2.7
7-8	3	2-5	9	3.0
9-10	7	3-5	27	3.9
11-15	15	2-9	74	4.9
16-20	10	1-12	66	6.6
21-25	6	3-13	52	8.6
26-30	5	2-12	35	7
31 or more	8	3-14	52	6.5
Total 21 or more	19	2-14	139	7.3

1. 2 women, married 10 and 21 years respectively, who reported no pregnancies, were omitted from the tabulation. A few others could not be included because of inadequate information.

All but one of the 84 mothers surveyed had living children at the time of interview. One woman, aged 23, had been pregnant 5 times in 5 years of marriage, with 1 miscarriage, 1 death in utero, and 1 stillbirth. The 2 children born alive to this mother were considered by the interviewing physician as probably premature, and were classified as dying because of "debility." Of a total of 438 pregnancies reported, however, 397 or over 90% resulted in live births (Table 14).

[see p. 33-Analyt]

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Table 14

Relation of Live Births to Total Pregnancies as Reported by 84 Women in Bang Chan

	Number of mothers	Total cases	Percentage of total pregnancies
Pregnancies	84	438	100
Miscarriages	23	33	7.5
Deaths in utero	4	4	0.9
Stillbirths	3	4	0.9
Live births	84	397	90.6

Illness and Injury

Medical Services Available to Residents of Bang Chan. - Within the community of Bang Chan, about 8 traditional "doctors" and 15 traditional midwives practiced their skills. Three of the traditional practitioners were Buddhist priests. The others earned their living chiefly by farming. In addition, two or three persons who were skilled at massage, and at least one medium had some reputation for success in treating sick persons.

The nearest source of trained medical assistance was Minburi, the market town about 3 miles from Bang Chan. The staff of the Minburi Health Center, which was under Thai government auspices, included a first-class doctor, a dentist and a nurse-midwife. One or two beds were available for the use of critically ill patients until they could be taken to a hospital in Bangkok. For less critical illnesses, the second-class doctors who operated private clinics in Minburi seemed to get more patronage from residents of Bang Chan than did the doctor at the Health Center.

The majority of women in Bang Chan were delivered at home, by the traditional midwives. During 1952-53 we learned of two pregnant women who planned to go to the Minburi Health Center for delivery, but time did not permit them to carry out their plans. Some cases of prolonged or difficult labor were, however, brought from Bang Chan to the Health Center, where a labor room and a delivery room were available in a separate wooden building. Facilities were very simple. Patients lay on

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mats on the floor as most of them would have done at home. Relatives were welcome; indeed they were supposed to come and help.

Nature and Incidence of Illness and Injury, and Treatments Sought by Residents of Bang Chan. - Evidence concerning the nature of illness and injury in Bang Chan was obtained in connection with the clinical examination of school children and persons in the random sample of village households; from questions in two types of structured interviews with household heads: 1) in the entire village, and 2) in one hamlet, KY-7; and from the field notes of workers associated with the Cornell Thailand Project.

In connection with the clinical examination, information was obtained from heads of 30 of the 31 households whose members were examined (See schedule in Appendix A).[1] In this group, none reported any accident or injury, and 26 said that no member had been ill within the year. Illness was reported as occurring in 4 households only. In one of these, a 49-year old man reported loss of sensation over the extremities and other symptoms which led the physician in the research group to conclude that he had beriberi. As treatment, this man had used an herb recommended by a priest, a native medicine given him by a neighbor and had gone to a private clinic at Minburi where he received an injection.[1] In another family, a 39-year old man who had asthma, took an advertised remedy which he purchased from a drugstore. Two children in the third family had fever for 8 days, for which a traditional practitioner prescribed herbs. In the fourth family, a 1-year old child with eczema was taken first to a traditional practitioner, then to a private clinic in Minburi where he was given an injection.

On the basis of other observations, however, we believe that illness and injury are more common in Bang Chan than is suggested by the replies to this particular inquiry. For example, no mention was made in one of the households surveyed of a baby who had been too ill to be weighed and measured, when team members called, and who recovered in a day or two without outside help. Coming as they did at the end of the clinical examination which was new to most of these people, perhaps the questions asked seemed relatively unimportant. No attempt was made to probe beyond the person's reply to the questions as stated.

Replies to questions in connection with an intensive

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1. From casual observation, one is led to believe that the villagers have considerable confidence in "injections," although the nature of the injection received or desired, is not usually specified.

A [see p.51 - Analyst]

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164 survey made in one hamlet, KY-7, give a rather different picture of the extent of illness and injury in Bang Chan, if the situation in this hamlet is at all representative of the whole. Hanks (1954), found that serious illness had occurred within the previous year in 17 of 38 households[1] in the hamlet KY-7. Twenty-four persons of various ages were involved, and the illnesses were described as lasting from a few days to 3 years. Specific diseases were mentioned in 7 cases: diphtheria, typhoid fever, pneumonia (2 cases), malaria and beriberi (2 cases). In the majority of instances, however, symptoms rather than diseases were mentioned, i.e. fever, diarrhea, pain in chest, disorder of throat, lung complaint, swollen feet, and the like. One case, described as a wound in a 5-year old child, might have been due to accident.

751 In all, the 24 ill persons obtained a total of 40 "treatments,"[2] from one to four types of treatment per patient. Treatment by modern doctors was used more frequently than other means of help (Table 15), although such treatment is not available within the community of Bang Chan. Fifteen of the 24 persons who were seriously ill had treatment by modern doctors, several patients receiving treatment from more than one. Thirteen patients had one type of treatment only (as that from either traditional practitioner or modern doctor), 7 used 2 types, 3 used 3 types, and 1 had 4 types of treatment from 5 individuals. The latter case was that of a child who was described as sick for 60 days with pneumonia, neck swelling and fever, and was treated by a traditional practitioner, two priests who were also traditional practitioners, and a medium, all in Bang Chan, and a second-class doctor in Minburi. Another child who was sick with lom sandan (faintness, weakness or loss of consciousness) for three days was treated by 4 local traditional practitioners and a second-class doctor at Minburi. One child with saang (a disease of young children, said to be caused by the loss of the soul or spirit) was treated by the modern doctor at Minburi, only.

757 As a rule, local practitioners of one sort or another
759 were visited or called first, those in Minburi next, and those in Bangkok, only after nearby help had been consulted. This order was not invariable however. For example, in the hamlet KY-7 series (Hanks, 1954) was one woman who was sick with beriberi for about 8 months after childbirth. She went first

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1. Interviews were not obtained with 3 of 41 household heads in the hamlet.

2. Each type of practitioner, as traditional practitioner or modern doctor, was counted as a separate "treatment."

[TEXT CONTINUED ON PAGE 37]

A [see p. 36 Analyst].

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Table 15

Treatment Used For Serious Illness by 24 Persons in 17 Households, Hamlet KY-7

Specified Treatment	Locality			No. of Persons Treated
	Bang Chan or adjoining area	Minburi	Elsewhere[2]	
Persons consulted:[1]				
Modern doctor[3]		18(21)	4(7)	19
Traditional practitioner	11(14)		3	11
Priests	3 (4)		1	4
Muslim masseuse	1			1
Medium	1			1
Medicines used without advice of practitioner:				
Purchased from market			1	1
Obtained from neighbors	1			1
Home remedies	2			2
Total	19(23)	18(21)	9(12)	40

1. Figures indicate the number of persons who had the specified type of treatment, not the number of visits or treatments. The higher numbers in parenthesis indicate that in some cases a patient consulted more than one person in a category, i.e. more than one traditional practitioner or modern doctor.

2. Modern doctors in Bangkok and Tonburi, and at Don Muang; traditional practitioners at Chachoengsao, Bangkok and in the rural area near Bang Chan.

3. Doctors most often visited in Minburi were "second-class," i.e. not graduates of medical schools, but persons with a limited amount of training in modern medicine.

757 to a second-class doctor in Minburi, then to a nearby Muslim
759 masseuse, then to a local traditional practitioner who gave her some jaa tom (cooked medicine). Another instance, recorded in the field notes, is that of a school teacher's baby who had abscesses on her head. The mother took her child first to Minburi, where she was given an injection and a sulfa drug to be taken orally. The child did not get well immediately, and before all of the drug had been taken, the mother took the child to a local traditional practitioner who gave her a decoction of herbs which was to be given by mouth. Thus in some cases, modern doctors were consulted first, and local traditional practitioners later, if relief was not as speedy as was expected. The experience in this one hamlet suggested a willingness to try a variety of treatments, and the existence of a considerable degree of confidence in modern medicine.

758 According to Ralis (1955), 213 of 335 household repre-
743 sentatives interviewed had visited a clinic or hospital. Of these, 156 had gone to Minburi, and 135 to hospitals or clinics in Bangkok, some having gone to both places. Of 258 hospital or clinic visits, 125 were for treatment or hospitalization; the bulk of the rest were to accompany patients or to visit hospitalized relatives or friends. No significant difference in reports about seeking treatment or hospitalization was found between groups of persons differing in literacy, or in socio-economic level.

144 Infectious disease. - The principal evidences of infectious disease noted in the course of the clinical examination for assessment of nutritional status were trachoma and smallpox scars. Occasional cases of ringworm and other fungus infection, and of pediculosis were observed by the physician.

When the 233 school children and 148 additional persons included in the random sample of village households are considered together, i.e. a total of 381 persons or more than one-fifth of the total population of the village, only 3% were found to have trachoma. Eleven of 13 cases found were among 237 children 7 to 14 years of age, i.e. an incidence for this group of 4.6%. Zimmerman (1931) reported 119 cases or 4.3% of all persons examined in Central Thailand, and 277 cases or 2.9% of persons examined in the whole Kingdom. Among the school children examined, however, he reported an incidence of 12.6%.

Of 381 persons examined in Bang Chan, only 10, or fewer than 3% had smallpox scars. Two cases only were in adults, the remaining 8 being among children of school age. Our records do not show when the most recent cases occurred in the village.
751 According to Zimmerman (1931), 88% of over 2200 school children examined had been vaccinated. No information was obtained concerning the proportion of residents of Bang Chan who had been

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751 vaccinated but among school children the percentage is very high. During the survey period a health officer came to the Bang Chan elementary school to vaccinate children; and at that time at least one nearby resident, a school teacher's wife, brought her infant for vaccination.

164 Illnesses probably, in most cases certainly, of infectious origin, which were mentioned in the field notes, include the following, which are listed roughly in the order of frequency: skin disorders such as abscesses and boils, fever, respiratory disorders including colds and influenza, tuberculosis, "upset stomach," measles and diphtheria. Two cases of diphtheria with one death, occurred while the survey was in [744] progress. At this time health authorities came to the village to inoculate the children on a voluntary basis (Hanks et al. 1955). As already noted, malaria and typhoid (one case each), were mentioned as occurring during the year previous to the inquiry in Hamlet KY-7 (Hanks, 1954).

[759] [743] A number of references were made to history of cholera, smallpox and malaria, but these did not appear to be current threats. Two cases of severe diarrhea were called "cholera" but one was on the way to recovery the next day. The traditional practitioner who was asked to treat the other, urged that she be taken to the hospital, and himself accompanied the patient and family members. At the hospital, they were told that members of the family and neighbors should "get vaccinated and have their toilet covered."[1] No further mention of this case is made in the field notes, hence the correct diagnosis is not known to us.

Since a modern doctor was frequently not seen, diagnosis of disease was often uncertain. More often, major symptoms were described or the disorder was given a local name, for which there is no good English equivalent, such as various kinds of ssang and lom.

Non-contagious disorders. - Among current non-contagious disorders mentioned in the field notes, in replies to questions on surveys, and in some cases observed by the physician, were the following, listed roughly in order of frequency: menstrual disorders, headaches, beriberi, cancer, asthma, eczema, nephritis, and rheumatism.

Accidents. - Accidents which were recorded in field notes include bites of dogs, spiders, leeches and snakes, falls from buffaloes and down ladders, burns, cuts, drowning and poison from drinking kerosene. Among the school children examined,

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1. Field notes, S.S., April 29, 1954.

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164 malunion of old fractures was observed in two cases.

165 Deaths. - Information concerning deaths in Bang Chan
12 during the period of the field study was obtained primarily from field notes. Mothers interviewed or examined by members of the research group which was specifically concerned with health and diet provided further information on infant mortality, and Ralis (1955) obtained some information concerning deaths of children in the respondent's family.

165 Deaths occurring while the field study was in progress. - During approximately 21 months of field study, members of the research group noted 14 deaths in the village. Three infants died, two within a few days of birth, and one at about two months of age. Two children died by accident, one as the result of a fall from a water buffalo, and the other by drowning. One child died of diphtheria and one of Hodgkin's disease. Of the seven adults who died during this period, one was a pregnant woman who became acutely ill and died while enroute to the Health Center at Minburi by boat. The cause of her illness was not known. One young man committed suicide, two adults died of tuberculosis, two of cancer, and one of colitis. One of those who died of tuberculosis was a young woman, the mother of seven children. She was urged by the physician on the team to go to the hospital in Bangkok, but she was unwilling. A sibling 8 years old, who lived in the same household, had died previously with a severe cough.

Mortality among infants and children. - Of the 397 living children born to 84 women interviewed, 323 or 81% of the children survived at the time of interview. Forty-three, or 11% had died within the first year, and 26 or 7% within the first month of life.

Although the data obtained by Ralis (1955) did not permit us to calculate the exact number of children born to the 335 household members interviewed, the number dead, and the number surviving at the time of interview, apparently more than twenty per cent of the children born into these families died (Appendix A). A This estimate, for the village as a whole, tends to substantiate the figures obtained from the 84 mothers whom we interviewed.

Some information was obtained from 36 mothers concerning the cause of death of 58 children who were born alive. Twenty-one of these had lost one child only, 8 had lost 2 each, and 7 had lost 3 children each. Reported causes of death are summarized by ages, in Table 16. A

In most cases, no specific cause could be assigned, and the case was classified according to the most prominent symptom as fever, convulsions or digestive disturbance.

A [see p.51-Analyst] B [see p.40-Analyst]

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40.

Table 16

Reported Causes of Death of 58 Infants and Children in Bang Chan. (Information obtained from parents.)

	Number of children dying at each age			
	Under 1 month	1 month to 1 year	1-5 years	5-10 years
Cause of death:				
Tetanus	8			
Probably tetanus	4			
Infantile beriberi		2		
Convulsions, cause unknown	1	4	2	
Fever	6	7	4	
Debility	4	2		
Digestive disturbance		2	2	
Sepsis	1		1	
Drowning				3
Diphtheria			1	
Other	2			2*
Total	26	17	10	6

*one with severe cough (tuberculosis ?)

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Deaths of infants a few days old, with a description of lockjaw, inability to suck, stiff back and clenched hands, were recognized as due to tetanus. The common practice of native midwives is to place the cord over a hard rhizome or clod of earth and to cut it with a tapered piece of bamboo. Thus, infection with the tetanus organism may occur from contact with the soil. Note that 12 of 26 deaths reported for infants under 1 month, were diagnosed as tetanus or probably tetanus. Zimmerman (1931) summarized important causes of death in Siam, based on the physician's diagnosis made after symptoms were described by the head of the household. Of 1800 deaths which occurred in the 18 months preceding the survey, 2% were diagnosed as tetanus. For the Central area, 3.8% of 495 deaths were from tetanus. Most, if not all of the cases of infantile tetanus could be prevented if native midwives learned to avoid contact of the cord with earth or a soil-coated rhizome. By using sterile scissors for cutting the cord instead of tapered bamboo which must be pressed against another surface to accomplish the cutting, contact with soil could be avoided. Of 335 household heads interviewed, 220 owned scissors of some kind (Ralis, 1955).

Infants several months old, who had some of the symptoms of infantile beriberi, as convulsions and almost voiceless crying, were considered as cases of infantile beriberi only if the mother had symptoms of beriberi, such as numbness or tingling in the extremities, or difficulty in walking, at the time. One mother had lost 3 infants at 3 or 4 months of age, with similar symptoms, but described the symptoms of beriberi in herself at the time of the death of the last baby only. The other two cases were therefore listed as convulsions, cause unknown. The occurrence of infantile beriberi reflects the unsatisfactory nutriture of the mother, whose milk is therefore low in thiamine content. To prevent deaths from infantile beriberi, the general level of nutrition in the village, and particularly the food habits of pregnant and nursing women, should be improved.

Note also the number of deaths from "debility." As the Joint FAO/WHO Expert Committee on Nutrition (1951) has pointed out, the number of early deaths from "congenital debility" becomes insignificant where the health and nutritional status of pregnant women approaches the optimal.

Intestinal Parasitism and Bowel Habits

Intestinal Parasitism. - All school children were provided with tin containers labelled with their names, and asked to bring a stool sample to school. Fourth grade children whose first stool samples were negative, were asked to bring a second specimen. Parasites were found in some of these second

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125 specimens. In all, specimens were obtained from 189 or 81% of
126 the children and of these 32% were negative. In 128 stools
164 containing parasites, 196 infecting organisms were found, or an average of 1.5 per infected child. Protozoa and helminths which are pathogenic or which may cause severe diarrhea were identified 126 times, and harmless forms 70 times. Of the harmful forms, Ascaris lumbricoides was found in 96 or 51% of the stool samples, Giardia lamblia in 19, or 10%, and hookworm, Endamoeba histolytica, Trichuris trichiura and Diphyllobothrium in 2% or less. Of the harmless forms noted, Endamoeba coli was found in 45 specimens or 24%, Iodamoeba williamsi in 21 or 11%, Endolimax nana and Chilomastix mesnili each in less than 2%. Doubtless the extent of intestinal parasitism in these school children was greater than the figures indicate, since some cases would be missed in examination of single stool specimens collected in this way. One might expect intestinal parasitism to be relatively common, also, among other family members.

125 Bowel Habits. - In connection with the clinical survey,
147 persons examined were asked whether they had "constipation" or
514 "diarrhea" frequently, occasionally, or never, i.e. not within the past 6 months. As the physician phrased the questions concerning "constipation," the replies indicated whether the respondent had daily bowel movements ("never constipated"), or usually had a bowel movement each day ("occasionally constipated") or usually had longer intervals between bowel movements ("frequently constipated"). Replies are summarized in Table 17.A

126 Considering the inadequate sanitation in Bang Chan, and
147 the prevalence of intestional parasitism, the fact that 3/4 of the persons questioned said they "never" had diarrhea, is worthy of note. Most persons who reported having diarrhea,
[146] were troubled occasionally rather than frequently. The fact that nearly 2/5 of those questioned had bowel movements less often than once a day, is not surprising in view of the fact that diets which are relatively low in fibrous foods and in the B complex vitamins frequently result in sluggish behavior of the large intestine. That approximately 3/5 of the respondents in Bang Chan usually had a daily bowel movement is perhaps more noteworthy. Even in areas where diets tend to be much more liberal, some persons usually have bowel movements at intervals of 2 or 3 days or even longer. If such persons have stools of normal character and experience no discomfort, this bowel habit may be considered normal for them.

A [see p. 43 – Analyst]

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W9
W6
514

Table 17

Bowel Habits of Persons Questioned in Bang Chan, Thailand, 1952-53

Group	Number of Persons Reporting	Frequency of Bowel Movements			Frequency[1] of Diarrhea		
		Daily	Usually 1/day	Usually longer intervals	F	O	N
		%	%	%	%	%	%
Random Sample of village Households	158	57	11	32	2	19	79
Primary school children	233	53	3	44	2	26	72
Total respondents	375[2]	54	7	39	2	23	75

1. F - Frequent; once a week or oftener.
O - occasional; less often than once a week.
N - never; not within the past 6 months

2. Primary school children in random sample counted once only. Information not obtained in a few instances.

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Sanitation

364 Disposal of Garbage. - Of the 6 categories for disposal of garbage listed on the schedule (Appendix A), 3 only were used by the families who took part in the dietary study (Table 18).

Table 18

Disposal of Garbage in 11 Households, Bang Chan

Round[1] of dietary study	Number of Families Using Each Method			
	I	II	III	IV
[231] Garbage fed to animals	10	10	10	10
Garbage thrown into canal	2	6	3	4
Garbage thrown elsewhere	5	5	5	5

1. Each family was visited 4 times during the year. Each series of visits to the 11 households was called a round.

Ten of the 11 families fed some garbage to animals, and for 4 families, on 10 survey days, (i.e. 1 to 4 days per family), this was the only manner of garbage disposal. One family had no animals other than chickens, and these were not fed garbage on the survey days.

Each family seemed to have its own pattern for disposal of garbage which was not fed to stock. Those who threw it in the canal, did so consistently, except when the nearby canal was dry, and those who threw garbage elsewhere, did this consistently. No one was observed to burn or bury garbage.

251 Protection of Food From Contamination by Insects and Other Animals. - Large oil tins, with covers, were commonly used to store dry rice and other non-perishable foods in the kitchen area. One family covered the container with a plate.

In 8 of the 11 households of the dietary study some provision was made for storage of left-over and perishable foods. None of the households had screened cupboards, but two used some means to ant-proof the legs of the cupboard such as rubbing them with powdered pitch, or setting them in bowls of water.

A2 [see p. 63-Analyst]

251 One family stored cooked food in a basket which was hung from the ceiling. One homemaker frequently covered such foods with a basket, and in one instance a homemaker, who usually took no precautions to protect cooked foods, used a basin to cover food left on a table.

271 312 Source and Treatment of Water For Drinking and Culinary Purposes. - From the time the dietary survey was begun, on May 26, 1953, through January 18, 1954, all families used rain water for drinking.

Of the 14 survey days, spaced at about weekly intervals, between January 28, 1954 through May 8, 1954, canal water was used for drinking on 7 days, water from fish ponds on 4, and rain water on 3 days. No distinction was made in source of drinking water for children and adults.

312 744 [846] All families used canal water for washing vegetables, cooking, and washing dishes, on the survey days from May 26, 1953 through March 18, 1954. On the 6 survey days between March 24 and May 8, 1954, 4 families used water from the fish pond for these purposes. In no instance was the water treated in any way before being used, although alum is known to be used, at times, in the village, to settle or clear water, and boiled water is given mothers and infants to drink during the post partum rest period.

514 Disposal of Excreta. - Of 30 families from whom information was obtained, 20 had pits for toilet use, only one of which was equipped with a cover. One other family had a flush latrine. Of the 8 families who had no special place which was used for toilet purposes, 4 reported that family members urinated on the compound, 3 that they used the fields, and 1 that either compound or field might be used for urination. One reported that the compound was used for defecation as well as urination; the remaining 7 said they went to the field to defecate.

Six families with pit latrines covered feces in some way: 3 used earth, 2 ashes, and 1 either earth or ash. A majority of those who used either an uncovered pit or had no designated place, reported that no attempt was made to cover feces. From six families, no information was obtained on this point. Various materials were mentioned as being used in the manner in which western peoples use toilet paper. Cocoanut husks were mentioned most frequently (25 times), and other materials in this order: paper (newspaper 9 times, straw paper once), wood (4 times) and water (3 times).

From the information available, custom and convenience rather than sanitary considerations appear to determine practices that are followed. If improved practices are

514 contemplated, use of a pit with cover seems more apt to be adopted than the flush latrine. Moreover, the flush latrine is not only more expensive and difficult to move, but cocoanut husks and the like cannot be thrown into it without clogging the trap. If the husks, paper, etc. are left exposed after use, they attract flies and other insects, and are a possible source of infection.

Choice of a suitable site for a pit latrine in a village such as Bang Chan, which is flooded at times, may be difficult. Certainly it requires the advice of a sanitary engineer.

000 Changes in Sanitary Practices Needed. - A few changes in sanitary practices, if they could be brought about, might reduce some kinds of illness substantially. For example, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

Modern medicine will probably not be readily or generally available to a majority of the residents of Bang Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

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Appendix A

Schedule for the Clinical Examination

125

Cornell University Thailand Project 1952-53. Schedule 3.

Date .....

1. Hamlet ..... House No.....
2. Name 1).....
   2).....
3. Sex M F
4. Birth date .....
   Age yr..... Mo.....
5. Single ..... Married....yr.
6. Weight ..... kg.
7. Height ..... cm.
8. Bicristal diam. ..... cm.
9. Cristal Ht. ..... cm.
10. General appearance and vitality:
    poor....fair....good.....
11. Hemoglobin:
12. Stool examination:
13. Hair:
    a. Dry and staring .....
    b. Diminution or loss of pigment .....
14. Eyes:
    a. Photophobia .....
    b. Lachrymation .....
    c. Blepharitis .....
    d. Xerophthalmia .....
    e. Excess conjunctival tissue .....
    f. Bitot's spots .....
    g. Corneal vascularization (gross) .....
15. Face:
    a. Folliculosis .....
    b. Nasolabial seborrhea ....
    c. Dyssebacia .....
    d. Suborbital pigmentation .....
16. Lips:
    a. Cheilosis .....
    b. Scars of cheilosis .....
    c. Angular stomatitis .....
    d. Scars of angular stomatitis .....
17. Tongue:
    a. Papillae atrophied .....
    b. Papillae hypertrophied .....
    c. Edema .....
    d. Color change-scarlet ....
    e. Color change-magenta ....
    f. Appearance-fissured .....
    g. Appearance-geographical .....
    h. Not ascertained - Betel .....
18. Gums:
    a. Swelling .....
    b. Redness .....
    c. Recession .....
    d. Retraction .....
    e. Loss of interdental papillae .....
19. Parotid glands enlarged ....
20. Thyroid:
    a. Enlarged .....
    b. Scars .....
21. Betel: Yes..... No.....

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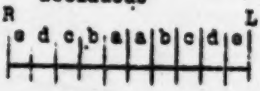
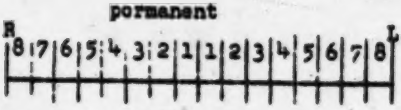
125 **Schedule for the Clinical Examination (continued)**

22. Teeth

deciduous



permanent



O - missing ± - just erupting
X - carious ∮ - filled

23. Skin:
- a. Symmetrical dermatosis .....
- b. Phrynoderma .....
- c. Perifollicular congestion .....
- d. Petechiae .....
- e. Xerosis .....
- f. Loss of elasticity .....
- g. Atrophic .....
- h. Ulcers .....

24. Edema: .....

25. Knee jerk absent .....

26. Ankle jerk absent .....

27. Calf tenderness .....

28. Inability to rise from squatting .....

29. Liver enlarged .....

30. Spleen enlarged .....

31. Posture-Winged scapulae .....

32. Skeleton:
- a. Frontal bosses .....
- b. Beaded ribs .....
- c. Wrists enlarged .....
- d. Bowed legs .....

33. Diarrhoa:
- a. Frequent .....
- b. Occasional .....
- c. Never .....

34. Constipation:
- a. Frequent .....
- b. Occasional .....
- c. Never .....

35. Menstruation:
- a. Regularity: Yes.... No.....
- b. Duration, ...da
- c. Interval .....
- d. Menarche, ...yr
- e. Menopause .....yr

36. Children:
- a. Total children born .....
- b. Number of children alive now .....
- c. Stillbirths .....
- d. Deaths in utero ...
- e. Miscarriages .....
- f. Other deaths .....
- g. Age of the oldest child .....yrs.
- h. Age of the youngest child .....yrs.

Comments .....

.....

.....

.....

.....
Examiner

Procedures Used in Obtaining Information Recorded on Schedule for Clinical Examination, and Descriptions of Possible Signs of Nutritive Failure

114 For the clinical portion of the nutrition survey, the team consisted of a Thai physician, who carried out the clinical examination, the nutritionist, who made the physical measurements, a second-class chemist, who did the hemoglobin determinations and served as interpretor, and a local boy who not only propelled the boat but helped in other ways such as giving directions to the children concerning preparations for being weighed and measured. The nutritionist was the only non-Thai on the team. The physician's internship had been served in a hospital in which he had opportunity to see many patients with nutritional disorders.

121 The material which follows is primarily descriptive of the procedures agreed upon in advance of the clinical examination. When different descriptions of a given sign were obtained from the various sources, the criteria which the physician agreed to use, after discussion with the nutritionist, are stated here. Some of the signs described were not observed in any of the persons examined in Bang Chan.

Before beginning the survey, the examining physician and the nutritionist agreed that only signs which could be considered undoubtedly positive should be so recorded.

123 In preparing the schedule, care was taken to avoid
125 diagnosis, i.e. the physician was to record what he saw. If the examining physician believed diagnosis or probable diagnosis would be helpful, he recorded this under Comments. Thus Comments included such items as the following:

1. Diagnosis of deficiency disease, together with nature of onset, association with other conditions such as pregnancy, malaria or dysentery.

2. Obvious present disease as trachoma, ring worm etc. or evidence of past disease, as smallpox scars.

3. Complaints such as bloody stools, or other conditions which might affect adversely the general health and nutrition.

The schedule was designed to be used with all ages and both sexes. Items relating to menstrual and child bearing history were placed at the end, to be used for adolescent girls and women.

Comments on the items on the schedule follow:

1. Hamlet and house number. Information given by the school child or householder was checked later with the census data.

125 128 2. Name. The name was recorded according to the Mary Haas system of transliteration, modified for use on a typewriter. Later a code number was given each individual examined.

3. Sex. The appropriate symbol, M or F, was circled.

4. Birth date, when known, was recorded in Thai, according to the Thai calendar. This information was later translated into age in years and months. Information given by school children was checked against that in the school records, which were obtained by the school teachers from the Naai Amphoeoe, or district officer. At present, parents are required by law to register the birth of a child within 15 days. In practice, however, the interval between birth and registration is frequently longer, and the recorded date may be somewhat later than the actual birthdate. In preparing height-weight-age tables, age to nearest birthday was used. In a few cases, the birth date as given by a school child and that in the school records differed enough so that age to nearest birthday was in doubt. Data for such children were omitted in preparing the tables.

5. Marital status was recorded either as single, or the number of years married. To avoid embarrassment if there had been no legal marriage, the question was phrased so as to mean "How long have you had a house?"

6. Weight. A bathroom scale with 1/2 kg. divisions, with a magnifying glass over the scale reading so that one might interpolate to 1/4 kg., was used. All persons were asked to stand with the feet squarely on the platform, with the toes not extending beyond it. In order to get weights under as nearly standard conditions as possible, school children and adults were instructed to remove all but a minimum of clothing. All boys, [29] and the younger school girls removed their blouses, belts, and any items in pockets, leaving only short trousers, for the boys, and for the girls, a Thai-style skirt (phaasin) or standard western style school costume consisting of cotton skirt with attached bib and shoulder straps. Older girls were asked to re- [29] move the outer blouse and belt but were allowed to keep on the under blouse or camisole, as well as skirt. The children did not wear shoes to school.

[29] In the homes, preschool children were usually weighed nude, older girls and women in inner blouse, and phaasin or phaanung, and the men in trousers only.

Several examples of each type of clothing were weighed. Clothing worn by children whose body weight was 22.5 kg. or less, usually weighed considerably less than 1/4 kg., and would therefore make no detectable difference in the observed weight. Clothing worn by the larger school children and adults weighed, on the average, about 1/4 kg.

School children were asked to empty the bladder before being weighed. To minimize the effect of food, school children were weighed between 10 A.M. and noon. We were unable to carry out these precautions in connection with the survey of persons in a random sample of village households.

7. Height. A locally made wooden measuring device, hinged so as to fold (4 sections, each 50 cm. long) and provided with a sliding set square, was used for measuring height. The individual was told to stand with heels and shoulders against the measuring device, with chin parallel to the floor. Persons old enough to cooperate were asked to take a deep breath and "stand tall." The set-square was brought into contact with the person's head and the height, to the nearest 1 cm., noted. Smaller school children sometimes had to be helped to assume the desired position. An infant was measured by putting the device on the floor, and placing the baby on it. The knees were then pressed down, so that the backs of knees were in contact with the scale. One team member then placed a flat-surfaced object such as a book, perpendicular to the scale, against the soles of the feet, while another brought the set-square into contact with the infant's head.

8. Bicristal diameter was measured with a polvimeter. The subject stood, with heels together, before the examiner, who felt for the highest points of the iliac crests, and placed the polvimeter, with firm pressure. The polvimeter was calibrated in centimeters, but readings were estimated to the nearest 0.5 cm.

9. Cristal height. The height of the iliac crest was taken as the vertical distance of the left iliac spine from the floor. The subject was asked to stand with left side toward the measuring device used for height, and the distance of the set square from it. The examiner felt for the iliac crests, placing her right hand so that the thumb was at the level of the tip of the iliac crest. She tried to see that the subject's pelvis was held level and not tipped. An assistant then lowered the set square to the examiner's thumb, and the height was measured by reading the level of the set square.

10. General appearance and vitality. This item represented the examining physician's impression of the behavior of the subjects. Facial expression, attitude, degree of alertness, and behavior while waiting for the examinations were taken into account. Thus a child with good vitality would appear alert and interested, whereas a child who was rated poor might be apathetic, abnormally subdued or lacking in initiative.

11. Hemoglobin was determined by means of a Spencer Hb-Meter (American Optical Co., Scientific Instrument Division, Buffalo 15, N.Y.). Values were recorded in grams per 100 ml. of blood. Very little resistance was encountered to the finger

puncture, although a few adults and two school age children refused. No attempt was made to determine hemoglobin for most children under school age.

12. Stool examination. Each school child was furnished with an appropriate container labelled with his name. Pupils were asked to bring the container, with stool sample, to the teacher. Specimens were examined at the Pathology Department of Chulalongkorn Hospital.

13. Hair.

a. Dry and staring. Hair which has lost its normal sleekness and luster, and is dry and brittle.

b. Diminution or loss of pigment. In dark haired people, an auburn tinge is evident in mild cases. (Note: None of the cases seen in Bang Chan had progressed beyond this to "ginger" or tow-colored hair).

14. Eyes.

a. Photophobia, when present, was always recorded. If obviously due to some non-nutritional eye disease, this fact was recorded under comments.

b. Lachrymation, which is often associated with photophobia, was recorded when elicited by brief eye examination.

c. Blepharitis. Inflammation of the muco-cutaneous junction of the eyelid, with or without scaling and crusting or loss of eyelashes. If blepharitis was obviously associated with some non-nutritional eye disease, such as trachoma, this fact was recorded under comments.

d. Xerophthalmia. The conjunctiva is abnormally dry and appears thickened, yellowish and opaque.

e. Excess conjunctival tissue. Thickening of the bulbar conjunctiva, which appears opaque and yellowish. The tissue is moist. When the subject moves the eye from side to side, a thickened conjunctiva is thrown into a moving ripple of folds.

f. Bitot's spots. An extreme form of thickening of the epithelium of the bulbar conjunctiva. The spots resemble patches of chalk paste which have been striated with a pin.

g. Corneal vascularization (gross). Loops of newly-formed capillaries appear near the corneal margin, and extend onto the cornea. Since a slit lamp, which is necessary for observation of early stages, was not used, gross changes only could be noted.

125
128

15. Face.

a. Folliculosis. Pouting of the sebaceous and pilosebaceous follicles of the face.

b. Nasolabial seborrhoea. A scaly or greasy desquamation; flaky accumulations of seborrhoeic material in the nasolabial folds.

c. Dyssebacia. A condition probably representing a severer degree of folliculosis. The pouting sebaceous follicles contain plugs of greasy material. The condition is usually most marked in the nasolabial folds, but in severe cases extends to the nose, cheeks, chin and the whole butterfly area.

d. Suborbital pigmentation. A brownish or greyish-brown area of pigmentation under the eyes, often seen in severe starvation.

16. Lips.

a. Cheilosis. The earliest change in cheilosis is a loss of the normal uniformly shiny appearance of the vermilion of the lips. A somewhat "velvet-like" appearance is associated with a milky "bloom". In more severe cases the lips are reddened, capillaries are engorged and the mucosa at first appears thin and shiny; later, scaling, ulceration and cracking may occur, with crusts of blood and serous exudate.

b. Scars of past cheilosis: Multiple antero-posterior linear scars of the lips; the vermilion of the lips takes on a slightly tissue-paper like appearance.

c. Angular stomatitis. A lesion which varies in severity, ranging from slight scaliness with small cracks in the epithelium at the corners of the mouth to a pale, moist and ulcerated appearance with fissures extending onto the neighbouring skin of the face.

d. Scars of angular stomatitis. Scars in the corners of the mouth.

17. Tongue.

a. Papillae atrophied. The tongue is dry, smooth and glazed, with atrophy of the papillae.

b. Papillae hypertrophied.

c. Edema. Swelling which is evidenced by indentations of the teeth along the margin of the tongue.

125 128 d. Color change - scarlet. A bright red color of the tongue, like that of raw beef.

e. Color change - magenta. The normal pink color of the tongue is changed in the direction of blue or purple.

f. Appearance - fissured. The presence of deep central or lateral fissures which may run antero-posteriorly or transversally.

g. Appearance - geographical. Superficial erosion of the tongue, appearing in irregular patches. These are redder than the unaffected area.

h. Not ascertained - Betel. This category was added to designate cases in which the tongue was so coated from betel chewing that color changes and changes in papillae could not be noted.

18. Gums.

a. Swelling. Swelling of the interdental papillae with an increased tendency to bleeding when the papillae are pressed. Later, the whole gum may be swollen and purplish.

b. Redness (gingivitis). The gums are red and hyperemic, particularly at the margins.

c. Recession of the gums.

d. Retraction. The margins of the gums become detached from the tooth.

e. Loss of interdental papillae. The papillae no longer fill the interdental spaces neatly.

19. Parotid glands enlarged. Mild degrees of enlargement may be detected more readily by observation from above or behind than from in front. Both Smith (1952) and Nicholls (1951)[1] mentioned the association of parotid enlargement with malnutrition in the tropics.

20. Thyroid enlarged. Obvious enlargement was recorded. An item was included for scars of thyroidectomy, if any should be seen.

21. Betel. If the subject chewed betel frequently or habitually, so that the teeth were stained, this item was checked "yes". In the "no" category, may be some persons who have tried

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1. Nicholls, 1951, p. 394.

betel chewing, but have not persisted in it.

22. Teeth. Changes in the teeth were noted by means of a series of symbols on two dental diagrams, one for deciduous and one for permanent teeth. Teeth just erupting, missing, carious or filled were noted. A dentist examined the teeth of the school children, in good natural light, using mouth mirror and probe. Inspection of persons in the random sample of families was carried out by the physician without mirror or probe, therefore the record is of gross changes only. If a tooth was crowned, the physician inquired whether the tooth had been sound or carious before being crowned.

23. Skin.

a. Symmetrical dermatosis. Any skin disorder which had a symmetrical distribution was noted, and the physician's diagnosis recorded under Comments. Pellagroid dermatosis begins as an erythema resembling sunburn and develops into a symmetrical, rough hyper-pigmented dermatosis with sharply defined margins, usually on areas exposed to sunlight. Areas may desquamate with serous exudate in the centre.

b. Phrynoderma. A type of follicular hyperkeratosis which occurs on the back of the arms, on the thighs, abdomen, shoulders and buttocks. Viewed through a lens, the enlarged glands are seen to be plugged. The eruption can be felt by passing the tips of the fingers over it.

c. Perifollicular congestion. Congestion occurs around the hair follicles, frequently limited to the legs and forearms.

d. Petechiae. Pinpoint hemorrhages, which are most apt to occur around hair follicles.

e. Xerosis. Dryness of the skin, diminution or absence of sebaceous secretions, sometimes also of sweat. (Note: Crackled skin was originally included as a separate sign. No clearly defined cases were noted, however, and since the physician was uncertain of the distinction between early stages of crackled skin, and xerosis, the latter term was used to cover all such lesions.)

f. Loss of elasticity. Diminution of suppleness of skin seen as a fine wrinkling, particularly over the calves. When the superficial skin is pinched up and released it returns very slowly to its smooth condition.

g. Atrophic skin. Thinning of the skin, generally most marked on legs below the knee. The skin usually appears smooth, tightly stretched and shiny.

Note: The skin changes known as xerosis, loss of elasticity and atrophic skin, which are associated with defective nutrition, mimic closely the changes in senility.

125 h. Ulcers. Single or multiple ulcers, other than
128 those associated with varicose veins, confined to the skin of the legs below the knees.

24. Edema, if present, was noted.

25. Knee jerk. Absence of the knee jerk was recorded.

26. Ankle jerk. Absence of the ankle jerk was recorded.

27. Calf tenderness. The patient's reaction was noted when the calf muscles were squeezed firmly.

28. Inability to rise from squatting. The patient is made to squat with his thighs fully flexed on his legs, and is asked to rise. When this is done with difficulty, the hands grasping the knees and aiding the legs to bring the body into an erect position, the test is positive.

(Note: This test was not applied to persons who were obviously active and had good muscular coordination. Thai customarily sit or squat on the floor, and would be peculiarly aware of such difficulty.)

29. Liver enlarged.

30. Spleen enlarged.

For this part of the examination (items 29 and 30), the subject was asked to lie on his back with his knees flexed, to relax the abdomen and take a deep breath. The physician palpated the costal margins in the usual manner. If liver or spleen were found to be enlarged, the appropriate space was checked, and the description of size and texture of the organ entered under Comments.

31. Posture:

Winged scapulae. The fingers can be placed easily under the inner border or tip of the scapula.

32. Skeleton.

a. Frontal bosses. Protruding forehead, giving the person a "box-headed" appearance.

b. Beaded ribs. A line of enlargement at the costochondral junction of the ribs.

c. Enlargement of epiphyses at wrists.

d. Bowed legs. The subject was asked to stand with feet parallel and together, the body erect. If the space between his knees was more than 1 finger breadth (1.5 cm.) or the legs below the knees curved outward obviously, the person was considered to be bow legged.

125
128 e. Knock Knees. The subject was considered to be knock kneed if the knee joints overlapped markedly.

33. Diarrhea. As phrased, the question meant literally "Do your bowels run or not?" If the answer was affirmative, the physician asked further questions to determine about how often this occurred. "Frequent" diarrhea meant that watery stools were passed every week, i.e. that stools seldom were formed. "Occasional" diarrhea meant the passing of watery stools once in a long time, and "Never" meant that diarrhea had not occurred within the past 6 months.

34. Constipation. The question as asked by the physician meant literally "Do you have a stool every day?" The physician checked "frequent" if the subject did not usually have a bowel movement each day; "occasional," if the subject usually had a daily bowel movement, but once in a while a day was skipped. "Never" meant that the subject had a bowel movement daily during the previous 6 months.

Note that this question does not relate to constipation, in the true sense, since it tells nothing of the character of the stool or feelings of the subject, but is confined to the interval between stools.

35. Menstruation.

a. Regularity. This was indicated by a check mark after yes or no.

b. Duration. The question "How many days does it last?" The number of days, as stated by the informant, was recorded.

c. Interval. The replies were grouped into 3 categories: 1) usual interval, i.e. about 1 lunar month; 2) markedly less than 1 month; or 3) markedly longer than 1 month.

d. Menarche. The age in years, at first menstruation, was recorded. Young girls, who appeared adolescent, were asked by the physician if they had menstruated yet. To be sure the question was understood and properly answered, a woman school teacher questioned these girls separately.

e. Menopause. Age, in years, of last menstruation, was recorded for women who had passed the menopause.

36. Children. Appropriate numbers were recorded in each category.

a. Total children born . . . . . .

125 b. Number of children alive now . . . . . .

128 c. Stillbirths . . . . . .

d. Deaths in utero . . . . . .

e. Miscarriages . . . . . .

f. Other deaths . . . . . ., i.e. deaths of children born alive. Notes were made on the age and circumstances of death. When the description was clear, the physician noted the cause of death.

g. Age of the oldest child . . . . . in years.

h. Age of the youngest child . . . . . in years.

The investigator noted whether or not related items such as years of marriage, age of oldest child, age of youngest child, age at menarche, and age at menopause, were reasonably consistent. A few replies were discarded as unreliable.

Schedules Used in Recording Information on Sanitation

125

Cornell University Thailand Project, 1952-53,
Schedule 8, Sheets 1 and 2.

F. At this season what kind of water is used for each of the following purposes, and what treatment, if any, is given to it?*

USE	SOURCE			TREATMENT			
	Rain	Khlong (canal)	Fish-pond	None	Alum	Boil-ing	Other (what)
1. Drinking, adults							
2. Drinking, children							
3. Washing vegetables							
4. Cooking							
5. Washing dishes							

G. How is garbage disposed of? (check)

1. Buried ..... 4. Thrown elsewhere .....
2. Burned ..... 5. Fed to animals .....
3. Thrown into khlong (canal) ..... 6. Other .....

H. Does the householder attempt to protect food against contamination by insects, animals etc.? Note means used.

Means used	Type of Food	
	1) Dry rice -- other nonperishable foods	2) Perishable foods and left-over cooked foods
1. Container covered:		
a) Solid cover		
b) Faachii (fiber)		
2. Food safe:		
a) Screened		
b) Ant-proof legs		
3. Other		
4. None		

* Indicate whether answer is obtained by query (q) or observation (obs.)

125 Cornell University Thailand Project, 1952-53, Schedule 6.

3. Toilet facilities:

a) Flush latrine ..... b) Pit ..... c) With cover .....

d) None - Use:

	Compound	Fields	Khlong (canal)	Other
For urination				
For defecation				

e) Treatment of feces (for items b. & d. only)

1) None ..... 2) Covered with earth ..... 3) Other ...

f) "Toilet paper": 1) Newspaper ..... 2) Straw paper .....

3) Cocoanut husks .....

4) Other .....

125 Schedules Used in Recording Information on Illness or Injury

Cornell University Thailand Project, 1952-53, Schedule 6.

1. Has any member of the family been ill or injured during the past year? Yes ..... No .....

2. If yes, give details below:

a) Family member	b) Nature of illness or injury:	c) What was done?*

* Include persons asked for help; drugs used, with information from labels if available; and techniques.

Household Questionnaire, KY-7, March-April 1954 (Hanks)

Question: Was there serious sickness in your family during the past year?

If R says that serious illness occurred in his family:

What was the name of person who was ill?

What was the name of the illness?

Names of persons who were called to treat the patient, listed in the order in which they were called.

125

Cornell Methodology Project: Thailand
Bang Chan Structured Questionnaire

28. a. Your own children, all of them that have ever been born, how many are there?

b. How many of your children are still living?

c. How many of your children have died?

Responses to this question follow:

Children of 331 Household Heads, Bang Chan

Item No.	(28a.) Number born	(28b.) Number still living	(28c.) Number dead
None	24	29	198
1	32	40	44
2 or 3	69	83	56
4 or 5	73	82	17
6 or more	133	97	9
Number of respondents	331	331	324

33. a. Have you ever been to a clinic or a hospital?

b. If YES: In what various places?

c. If R HAS BEEN TO CLINIC OR HOSPITAL: For what various purposes did you go?

Appendix B

Table 19

191 Summary of Heights and Weights[1] of 34 Pre-school Children in
145 the Random Sample of Village Households, Bang Chan, 1952-53

Age	No. of Persons	Height		Weight		
		Mean	Range	Mean	Median	Range
		cm.	cm.	kg.	kg.	kg.
Males						
Mo.						
Under 1	2	50.8	50.0-51.5	3.4	3.4	2.95-3.8
5-6	1	61.0		5.5	5.5	
11-12	1	69.0		8.3	8.3	
Years						
1-1½	4	68.5	65.0-70.0	8.3	8.1	7.0 -10.0
2	1	89.0		13.0	13.0	
3-3½	3	86.7	83.5-90.0	11.2	10.5	10.0 -13.0
4-4½	4	96.5	90.5-104.5	14.2	14.0	12.75-16.25
4½-5	1	98.5		12.5	12.5	
6	2	105.0	101.5-108.5	17.0	17.0	16.5 -17.5
Females						
Mo.						
1	1	63.0		5.2	5.2	
3	1	54.0		5.5	5.5	
7	1	63.0		5.5	5.5	
9	1	60.5		6.3	6.3	
11-12	1	70.0		7.5	7.5	
Years						
1½-2	2	73.3	71.0-75.5	9.3	9.3	9.3 - 9.3
2½-3	2	81.5	81.0-82.0	10.5	10.5	10.0 -11.0
3½-4	3	85.5	85.0-86.0	11.7	12.0	10.5 -12.5
4½-5	1	94.5		12.5	12.5	
6	1	108.0		18.5	18.5	
7	1	107.5		17.5	17.5	

1. Preschool children were weighed nude.

Table 20

145 Estimated Median Ages of Eruption of Specific Permanent Teeth in Children of Bang Chan[1]

Tooth	Jaw	Side	Boys		Girls	
			Age of Eruption		Age of Eruption	
			Each Side	Average	Each Side	Average
			Years	Years	Years	Years
1. Central Incisor	Upper	Right	8.0	8.1	7.7	7.8
		Left	8.2		7.8	
	Lower	Right	7.0-[2]	7.0-	7.0	7.0-
		Left	7.2		7.0-	
2. Lateral Incisors	Upper	Right	9.2	9.1	8.6	8.8
		Left	8.9		9.0	
	Lower	Right	8.2	8.2	7.6	7.6
		Left	8.1		7.6	
3. Canine	Upper	Right	11.4	11.5	11.0	10.9
		Left	11.6		10.8	
	Lower	Right	11.3	11.3	9.9	9.9
		Left	11.2		9.9	
4. 1st Bicuspid	Upper	Right	10.4	10.5	9.7	9.8
		Left	10.6		9.9	
	Lower	Right	11.0	11.1	10.4	10.4
		Left	11.1		10.4	
5. 2nd Bicuspid	Upper	Right	11.9	11.9	11.6	11.6
		Left	11.8		11.5	
	Lower	Right	11.8	11.8	11.5	11.5
		Left	11.7		11.5	
6. 1st Molar	Upper	Right) Left)	7.0-	7.0-	7.0-	7.0-
	Lower	Right) Left)				
7. 2nd Molar	Upper	Right	12.2	12.2	12.1	12.1
		Left	12.1		12.0	
	Lower	Right	11.5	11.7	11.5	11.6
		Left	11.8		11.6	

1. Adapted from Kamalanathan, 1956.
2. 7.0- More than 50% of 7 year old children had this tooth erupted, hence the age of eruption is given as less than 7.0.

Table 21

Average Number of Teeth: Deciduous, Permanent, and Total, at Each Age, in Children 7 to 14 Years of Age, Bang Chan[1].

Age, years	Boys				Girls			
	Number Examined	Average No. Teeth			Number Examined	Average No. Teeth		
		Dec.	Perm.	Total		Dec.	Perm.	Total
7	5	15.0	6.4	21.4	8	17.3	5.5	22.8
8	18	14.9	7.8	22.7	16	14.5	9.0	23.5
9	9	12.4	10.6	23.0	8	12.0	10.8	22.8
10	23	9.5	14.8	24.3	13	6.3	17.6	23.9
11[2]	27	6.8	17.9	24.7	24	4.6	19.8	24.4
12[2]	23	4.2	21.9	26.1	20	3.0	22.6	25.6
13[2]	17	0.5	26.3	26.8	22	0.7	27.4	28.1
14	3	0.0	28.0	28.0	4	0.0	28.0	28.0

1. Adapted from tables in Kamalanathan, 1956.

2. Six children in the age groups 11 to 13 had one or more 3rd molars erupted.

Table 22

146 Summary of the Occurrence of Clinical Signs Possibly Related to Nutritional Deficiency, Bang Chan

	Random Sample of Families[1]							School Children[1]	
	Adults		Children						
	M	F	15-19 M	15-19 F	7-14 M	7-14 F	under 6 yrs.	Boys	Girls
Total number of persons examined	37	45	9	8	16	18	33	119	114
Clinical Signs									
Hb 11.5 g. or less/100 ml.	2	14	-	-	1	3	-	10	11
Hair - dry and staring	-	-	-	-	1	2	-	9	9
- diminution loss of pigment	-	-	-	-	-	-	-	-	1
Eyes - excess conjunctival tissue	3	6	-	-	-	-	-	-	-
Lips - cheilosis	-	-	-	-	-	-	-	1	1
- angular stomatitis	1	2	-	-	-	-	-	1	2
Tongue - papillae atrophied	-	1	-	-	1	-	-	1	1
- papillae hypertrophied	2	1	-	-	-	-	-	2	3
- appearance, fissured	1	1	-	-	1	-	-	2	-
- appearance, geographical	-	1	-	-	1	-	-	3	-
- NA Betel[2]	(8)[2]	(22)[2]	-	-	-	-	-	-	-

Table 22 (cont.)

	Random Sample of Families[1]							School Children[1]	
	Adults		Children						
			15-19		7-14		Under		
	M	F	M	F	M	F	6 yrs.	Boys	Girls
Gums - swelling	-	-	-	-	-	1	-	2	2
- redness	-	1	-	-	1	1	-	2	3
- recession	-	-	-	-	-	-	-	-	1
Thyroid enlarged	-	-	-	-	-	-	-	1	-
Skin - Symmetrical dermatosis	-	-	-	-	1	-	-	1	1
- phrynoderma	-	-	1	-	-	-	-	5	6
- xerosis	-	2	-	-	-	2	-	24	12
- loss of elasticity	-	7	-	-	-	-	-	3	-
- atrophic	-	6	-	-	-	-	-	-	-
- ulcers	-	-	-	-	1	1	-	8	6
Knee jerk absent	11	2	1	-	2	2	(5)[2]	-	3
Ankle jerk absent	9	2	1	-	-	1	(6)[2]	-	2
Liver enlarged	1	(2)[2]	-	(1)[2]	1	(2)[2]	1	14	7
Spleen enlarged	-	(2)[2]	-	(1)[2]	-	(2)[2]	-	-	1
Skeleton - bowed legs	13	13	1	-	2	-	2	8	1
- knock knees[3]	-	1	-	1	1	-	-	10	6

1. Eighteen children in Bang Chan primary school were also in the random sample of village families.
2. Not ascertained.
3. The term "knock knees" was not included in the schedule, but the figures are included here because it was mentioned so frequently under comments.

Table 23

146 Relation of Number of Possible Signs of Nutritional Deficiency to Vitality Ratings of School Children, Bang Chan

Vitality Ratings	Number of Persons	Number of Persons With Each Number of Clinical Signs						
		0	1	2	3	4	5	6 or more
Poor	2		1	1				
Fair	48	13	22	9	2		1	1
Good	182	95	58	24	3	2		
Not ascertained	1			1				
Total	233	108	81	35	5	2	1	1
Percentage of persons with each number of signs		46	35	15	4 (3 or more)			

Table 24

Relation of Number of Possible Signs of Nutritional Defiency to Vitality Ratings of Persons in the Random Sample of Village Households, Bang Chan

Vitality Ratings	Number of Persons	Number of Persons With Each Number of Clinical Signs						
		0	1	2	3	4	5	6 or more
Poor	1		1					
Fair	30	11	10	5	4			
Good	121	55	37	12	8	5	3	1
Not ascertained	14	12	1					1
Total	166	78	49	17	12	5	3	2
Percentage of persons with each number of signs		47	30	10	13 (3 or more)			

6: Goldsen and Ralis Z-4.5 (1955) 1957
AO7 Central Thai AO7

FACTORS RELATED TO ACCEPTANCE OF INNOVATIONS IN BANG CHAN, THAILAND

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ANALYSIS OF A SURVEY CONDUCTED BY THE CORNELL CROSS-CULTURAL METHODOLOGY PROJECT, MAY 1955

Rose K. Goldsen and Max Ralis

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THE CORNELL UNIVERSITY SOUTHEAST ASIA PROGRAM

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The Southeast Asia Program was organized at Cornell University in the Department of Far Eastern Studies in 1950. It is a teaching and research program of interdisciplinary studies in the humanities, social sciences and some natural sciences. It deals with Southeast Asia as a region, and with the individual countries of the area: Burma, Cambodia, Indonesia, Laos, Malaya, Philippines, Thailand, and Vietnam.

The activities of the Program are carried on both at Cornell and in Southeast Asia. They include an undergraduate and graduate curriculum at Cornell which provides instruction by specialists in Southeast Asian cultural history and present-day affairs and offers intensive training in each of the major languages of the area. The Program sponsors group research projects on Thailand, on Indonesia, on the Philippines, and on the area's Chinese minorities. At the same time, individual staff and students of the Program have done field research in every Southeast Asia country. Study centers are maintained in Bangkok and Djakarta in addition to special library and other research facilities at Cornell.

A list of Program staff and publications is given at the end of this volume. Information on current course offerings, fellowships, and requirements for degrees will be found in an Announcement of the Department of Far Eastern Studies obtainable from the Director, Southeast Asia Program, Morrill Hall, Cornell University, Ithaca, New York.

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FOREWORD

Having two portraits of a community produced by two different field workers is itself a signal event in anthropology, but to have two portraits of the same subject by workers using different methods is unique. A portrait of Bang Chan is being made in traditional style under the Cornell Thailand Project, using unstructured interviews and intuitive judgment to reach generalizations. In contrast this data paper suggests a photograph of a detail made with Dr. Max Ralis as cameraman and Dr. Rose K. Goldsen as darkroom expert who hands us the final print. Dr. Goldsen is Co-Director of the Cornell Cross-Cultural Methodology Project; Dr. Ralis, Field Director of that project.

Dr. Ralis visited Bang Chan in May, 1955 where, after preparing his questionnaire, he proceeded with the assistance of specially recruited interviewers to visit every household in the community within the course of four weeks. His task was facilitated by advice from orthodox field workers in formulating the questions into colloquial Thai as well as in selecting the relevant indices for inquiry. The details of training interviewers and collecting data appear in the Appendix. Then with suitcase bulging with completed schedules he returned to Ithaca and completed preliminary tabulation of the results before being called away to new work. He left the legacy of further analysis to Dr. Goldsen who produced the present study without benefit of first-hand knowledge of Bang Chan.

The problem was to see if these data could be used to analyze which populations in Bang Chan benefited from agricultural innovation and modern medical facilities and to distinguish how this group might differ from the remainder that did not avail itself of the new. The survey of the acceptance of innovations in Bang Chan parallels similar studies conducted by the Cross-Cultural Methodology Project in other areas where Cornell maintains field stations: Peru, India, and Nova Scotia. The aim of this project is to determine the cultural conditions under which customarily used methods of data-gathering are analytically useful, and to develop techniques for adapting these methods to the demands of varying cultural milieux. Bang Chan provided a laboratory, so to speak, to test the analytic usefulness of the social survey in a cultural context that varied considerably from Western culture, where survey methods have been developed. As one also interested in this aspect of Bang Chan, I found her steps in identifying the content of innovation a fascinating sequence. Field workers are prone to generalize after a few visits.

121 I recall seeing portable motors stored in some Bang Chan houses and
[243 can still picture many threshing floors with neatly layered heaps
[246 of rice straw where the mushrooms grew. A few of these apparently
"progressive" farmers had special ponds to which they proudly in-
vited me to watch the feeding of the tilapia fish. Occasionally
one of them seized the opportunity of my visit to inquire about
sending a sick kinsman to a Bangkok hospital. Without Dr. Goldsen's
analysis I might easily have been lured to generalize that certain
farmers were "innovation minded."

*177 The survey's evidence against a general "innovation mindedness"
*178 cautioned me to reconsider my impressions. I realized that it would
121 be an oversimplification of the social network in Bang Chan to
621 think of it as containing a group of "progressives" who sought
avidly each new agricultural wrinkle and who pitted themselves
against another group of "conservatives" who resisted change. In-
stead I was led to see some farmers interested in certain new
things, others indifferent to these but interested in other things.
Bang Chan looked more like a mosaic of small groups, each fitting
or rejecting the new according to its circumstances.

*177 Instead of thinking simply of a group of highly motivated,
*178 wealthy farmers who assumed the responsibility of trying out the
243 new for the benefit of their less affluent neighbors, I was
244 alerted to recognize a variety of kinds of innovation. Innova-
tion in growing rice, where one might employ a motor or fertilizer,
differed considerably from earning extra cash during the dry season
by growing mushrooms. The analysis of the survey evidence made me
sensitive to the realization that mushroom culture was clearly a
seasonal activity requiring little investment and open to any
family, rich or poor, that needed cash. Certainly no genuine rice
farmer would permit this extra work to interfere when the rains
called time for ploughing. The finding that no correlation
existed between acceptance of motors and growing mushrooms seemed
in retrospect clear, almost self-evident.

*177 The survey analysis indicating that owning a motor, despite
182 my initial impressions, bears no relation to use of modern medical
244 facilities, made me reexamine my initial impressions. My own
757 studies had made me aware that making a living is a positive
action among Bang Chan farmers: it requires forethought and will.
Health, however, for Bang Chan is a kind of negative entity to be
taken for granted until sickness arrives. Bang Chan has no
vitamin pills nor tonics to maintain health, though all work
actively to relieve sickness. Growing mushrooms and using modern
medical facilities are phenomenally different undertakings. Cer-
tainly the survey analysis in this regard bore out and corroborated
this "thematic" analysis.

6: Goldsen and Ralis Z-4,5 (1955)-1957
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Even at this stage of the Cross-Cultural Methodology Project the value of the survey approach becomes evident. Survey method in an area such as Bang Chan is still too untried to recommend it as an external check against the findings of anthropologists who have lived and worked in the area and have innumerable checks of internal consistency. But when, as in the present case, survey findings can be used to amplify and modify the impressionistic findings based on qualitative data, they serve to sharpen the anthropologist's perception and to alert him to subgroup differences which his emphasis might overlook or minimize. The hazards of structured interviewing, particularly questions of validity, are too well known to detain us here. The present case, however exemplifies a type of survey analysis that can be of aid to the anthropologist insofar as it makes him reexamine his impressions and break down his overall, modal montage into the more discrete pictures of subgroups. We hope that this sort of collaboration between the survey analyst, usually at the mercy of these hazards, and the anthropologist whose immersion in the culture enables him to interpret the meaning of these responses, will enhance the value of both methods.

We look forward to learning in greater detail where structured interview and further analysis of this type will serve best to advance current research.

L. M. Hanks, Jr.
Director of Research
Cornell Thailand Project

North Bennington, Vermont
May, 1957

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INITIAL ACCEPTANCE OF INNOVATIONS IN BANG CHAN

The Concept of Acceptance of Innovations

The study of culture change is enlightened by specific investigations of how the members of a community come to accept an innovation, ultimately incorporating it in the fabric of their familiar and accepted cultural ways. The present analysis examines data collected in Bang Chan by means of survey interviews,* to see what light may be thrown on the factors accelerating acceptance of certain innovations in that particular village.

Before turning to the analysis of the data collected in one particular community, however, it is important to make two general, theoretical points: the first has to do with a logical analysis of the elements intrinsic in the concept "acceptance of innovations" by a community or a social aggregate; the second has to do with the underlying logic of the analytic procedure utilized in this paper.

The concept "acceptance of an innovation" may be better analysed if it is broken down into three separate facets. One important facet of "acceptance" is the initial adoption or trial of the innovation by one or more persons of a group. A second facet is the continued use of the innovation. Finally, the third facet can be viewed as the individual's psychological acceptance of the idea of the innovation when it is fully incorporated into his community's way of life.

Both initial acceptance and continued use may be independent of psychological acceptance, and vice versa. An innovation such as contraceptives might be used by individuals (even though it conflicts with concepts already present in the culture). The Salk vaccine might be culturally and psychologically accepted by many, on the other hand, even though they may have no opportunity or desire to use it for themselves or others.

A complete analysis of the concept "acceptance of innovations" would deal with all three of its facets. The present report, however deals specifically with the first two only.

A Note on the Logic of Correlational Analysis

The generalizations reached in the present study are based on statistical correlations of responses collected in a social survey. These generalizations are of two main types. First: the frequency distribution of any given item or variable lead to generalizations

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* For a discussion of how the survey was made, see Appendix A.

121 concerning the climate of opinion in the sample studied. The apparent precision of these frequency distributions, however, should not be misleading, for the specific magnitude of any given percentage distribution might have fluctuated considerably, had the questionnaire been worded slightly differently, or had the conditions of administration been slightly varied. These distributions may be considered reasonably accurate, however, within their own context. They cannot be expected to hold true for all time, for all places, or for all instruments; nevertheless, the varying magnitudes within a category (more people say a than say b), and the range of the categories used (almost all; a large majority, more than half, less than half, a small minority, a negligible proportion) can be considered accurate descriptive statements.

Second: the internal relationships between different variables lead to generalizations of greater stability than the frequency distributions. Thus, generalizations describing the way subgroups of the population vary from each other may be considered relatively stable.

Cross-tabular analysis provides evidence for these generalizations, following the logic of the ex-post facto experimental model. The linkage between variables is determined by observing how those members of the sample who differ from each other on the first variable, distribute on the second. It is this kind of analysis which is commonly carried out in studies of epidemiology. Such studies search for the possible correlates of a disease or pathology by means of the same kinds of cross-tabular comparisons. Before the tubercle bacillus has been isolated, it was important to study the relation of the sick and healthy portions of the population to urban and rural residence, family income, living conditions, etc. In the search for causes of traffic accidents, those persons with and those without a record of accidents can be compared in age, drinking habits, time of day or any other characteristics which may lead to significant clues.

The present study follows precisely the same line of reasoning. It examines the reported incidence of use of each of several innovations (not tuberculosis or car accidents) among groups in a community, who differ from each other in important aspects: those who have accepted another innovation compared with those who have not; members of the community who have favorable attitudes towards the new practices compared with those who are negatively disposed; those who are exposed to urban influences compared with those who are not; young people compared with old people, etc. The extent to which the incidence of use of the innovation differs beyond chance expectation in the groups thus contrasted provides a measure of the association or linkage between it and the related variables studied. The design of the present analysis may be presented schematically as follows:

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Design for Analysis

I. Dependent Variables

A. Acceptance of agricultural innovations

1. Motor
2. Fertiliser
3. Tilapia fish
4. Mushrooms

B. Acceptance of non-agricultural innovations

1. Use of clinic and hospital facilities

II. Independent Variables

A. Motivation level (indexed by attitude to each innovation)

B. Role and status factors

1. Economic level
2. Age
3. Family size

C. Communications factors

1. Literacy
2. Exposure to media of mass communication
3. Breadth of social contacts within the community

D. Urban orientation

1. Acceptance of urban patterns
2. Contact with urban centers

E. Capital investment factors

F. Other factors

1. Community integration and identification
2. Religious beliefs and superstitions
3. Personality factors
4. Knowledge of political figures
5. Willingness to perform industrial work

Interpretation of Results

What kind of causal interpretations may grow out of such an analysis? In the first example, tuberculosis, the experimental researcher might point out that further research has ultimately

121 established that none of the correlated factors finally turned out to produce the disease--the necessary condition was a bacillus. Indeed, some of the factors mentioned might be viewed as results of the illness rather than as causal factors. Correlational analysis in a study of this type can establish only that the factors associated with tuberculosis constitute the context within which the necessary condition (in this case the bacillus) was known to operate. In the second example, traffic accidents, it is perfectly apparent that age , or time of day, cannot produce a car accident, but the linkage between accidents and other factors provides portions of the context where accidents occur.

Why is it important to understand this context' Such knowledge can lead to inferences about more direct causation, which serve to narrow down the clinician or experimenter's search for the necessary condition. Indeed, a necessary condition may operate only when it is imbedded in this complex matrix of other related variables--or may even be rendered inoperative when the context is changed. Thus efforts toward change or improvement can be made more effective by being directed to the relevant conditions.

It is essentially this kind of reasoning which underlies the procedure of the present study. Just as in the examples cited, linkages can lead to inferences about causation which may later be checked in the laboratory, so, in the same way, linkages discerned in the present study can lead to inferences about causal factors. They are useful chiefly in providing the context within which the decision to try out these sorts of innovations comes about. In this sense of understanding the context, efforts to produce social change may be made with more understanding of the dynamics.

We may now turn to the data collected in Bang Chan for a study of factors related to acceptance or rejection of innovations within the larger context of a rural community in contemporary Thailand.

THE COMMUNITY AND THE INNOVATIONS

The Scene of Bang Chan

361 Twenty-five miles by highway northeast of Bangkok is situ-
[131] ated the community of Bang Chan. In this section of the central plains the inhabitants live as near as possible to the rice paddies which they till, so that instead of a compact village Bang Chan is a community spreading broadly along the banks of a
[621] canal network which from its two-mile stretch through Bang Chan, covers most of Central Thailand. Under these circumstances precise definition of the community becomes difficult and might be

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area.

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them.

As the survey results indicate, about 80 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor.

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. So also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions.

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The Innovations

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A. Agricultural Innovations: During the past few years, certain innovations have come to Bang Chan which have increased agricultural productivity and improved the level of living. Some of these innovations are listed below.

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[241]

1. The small motor. One innovation is the small engine, gasoline motor, which is used mainly as a water-lifting device for irrigation purposes. In 1950 only five small motors were found in Bang Chan.* Twenty-one per cent of the respondents in the 1955 survey, however, report owning these motors; the majority of the respondents (68 per cent) claim to have used this labor-saving device which is sometimes jointly owned by more than one household and is frequently loaned out.**

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2. Straw mushroom growing. Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per cent of the respondents report that they have engaged in this activity***). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

One advantage in the culture of straw mushrooms is that it permits quickly realized returns. The cycle, from sowing spores in moistened straw to harvesting the mushrooms, takes about two to three weeks. Another advantage is that there is relatively little heavy work or investment required besides the acquisition of straw and spores. A third advantage is a ready market, for the plant is sought by Chinese dealers in Bangkok who supply hotels and restaurants. Bang Chan rice farmers who engage in mushroom growing as a sideline activity sell it either to local middlemen or directly to the Chinese in Bangkok.

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[113] * Sharp, L., H. M. Hauck, K. Janlekha, and R. D. Textor, Siamese Rice Village, A Preliminary Study of Bang Chan. Thailand, Cornell Research Center, June, 1953.

[125] ** The questions: "Do you own a small engine motor or not? (If 'NO'): Have you ever made use of one in your work?"

[125] *** The question: "Have you ever grown mushrooms, or not?"

6: Goldsen and Rallis Z-4,5 (1955) 1957
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3. Tilapia raising. In 1951, FAO suggested to the Thai Government that cultivation of tilapia be encouraged to help meet the rising need for fish in Thailand. Tilapia is a species of fish which multiplies and grows relatively fast. The strain, which came originally from Africa, is popular in Malaya and was expected to be easily marketable, thus a source of added income in Thailand. The Thai Government followed the FAO suggestion in 1952: a few Bang Chan residents dug the special pools required for the fish culture and began to raise tilapia mainly for commercial purposes. About a third (31 per cent of the households*) reported in 1955 that they have engaged in this activity. [177* 178* 228]

From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months. [434]

4. Artificial fertilizer. Artificial fertilizer has made its appearance in Bang Chan only recently. Informants in the community reported that only two farmers had tried artificial fertilizer in 1952. In the 1955 survey, 12 per cent of the farmers reported that they have used fertilizer or are using it. This fertilizer is mainly ammonium sulphate sold both by the government and commercial distributors. Only a few farmers (3 per cent) have ever employed it for all, or for the larger part of their fields. The remainder (9 per cent) have used it on a trial basis in only a small part of their fields.** [241 197* 178*]

Fertilizer, then, has been tried out on a much smaller scale than either mushroom growing or raising tilapia. Apparently two important barriers operate against its wider acceptance. First, its high cost and the difficulty of purchase and transportation (66 per cent of farmers with ideas on the subject gave these reasons for not using fertilizers); second, popular opinion in Bang Chan declares that artificial fertilizer is not fit for low lands since it washes away and is thus waster (29 per cent of the farmers with ideas on the subject advanced this as reason for not using fertilizer). In addition, fertilizer yields delayed returns.

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* The question: "Have you ever raised tilapia, or not?" [125]

** The question: "Have you ever used fertilizer or not? .. To what extent have you used fertilizer on your fields?" [125]

743 #177 #178 B. Institutional Care of the Sick: Equally important as agricultural innovations in raising the level of living of an area such as Bang Chan are the efforts to improve the health and welfare of the population. Since the thirties there has been a clinic in the neighboring market town of Minburi and some Bang Chan farmers used clinics and hospitals in Bangkok before that time. Only about a third (36 per cent) say they have never been to a clinic or a hospital; over a third (37 per cent) have themselves gone for treatment; about one fourth (23 per cent) report having brought a patient there; over one tenth (12 per cent) say they visited relatives there; and a few (3 per cent) say they went there for various other reasons.*

ANALYSIS OF DATA ON AGRICULTURAL INNOVATIONS

121 The central question to which the present analysis directs itself is: What are some of the factors which may be said to account for the fact that certain members of the community are willing to try out these innovations and to continue using them, while others are unwilling even to make the initial attempt? Is there some general pattern to be discerned among the several innovations? Is there any discernible clustering among them; that is, are some community members more "innovation-minded" than others, in the sense that if they try out or accept one innovation they are more likely to accept another? Or are these innovations accepted independently of each other? The following analysis of the survey responses attempts to shed some light on these and related problems.

Factors in Acceptance of Agricultural Innovations

241 402 #177 #178 Use of the small motor is basic to acceptance of other agricultural innovations. Although only a minority of the persons of Bang Chan report that they own a small motor, many more used this machine through joint ownership or borrowing. Indeed, knowing whether a person owns or uses such a motor is a useful indicator of his readiness to accept other agricultural innovations. If he owns or has used a motor, then he is about five times more likely than others to try fertiliser, about two and a half times more likely to try raising tilapia, and about one and a third times more likely to try straw mushrooms.

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[125] * The question: "Have you ever been to a clinic or hospital...? In what various places...? For what various purposes did you go ...?"

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TABLE 1. THOSE WHO OWN OR USE SMALL MOTOR ARE MORE LIKELY THAN OTHERS TO TRY OTHER AGRICULTURAL INNOVATIONS (FARMERS ONLY)

	Owns motor	Does not own motor but uses it	Neither owns nor has used motor
(Total cases)*	(70)	(150)	(106)
Have you ever used fertilizer?**			
Yes	16%	16%	3%
No	82	84	97
Have you ever raised tilapia?			
Yes	53%	29%	22%
No	47	71	78
Have you ever grown mushrooms?			
Yes	48%	49%	37%
No	52	51	66

* The bases on which per cents are computed appear in parenthesis at the head of each column in this and subsequent tables. Actually the bases vary by a few cases, table to table, since there were always a few respondents who did not answer a given question or whose answers were unclassifiable.

** Asked of farmers only. The bases are:

Owns motor	65
Does not own motor but uses it	141
Neither owns nor has used motor	82
NA	5

There is some evidence, then, that if a person is willing to try out one agricultural device, such as the motor, he is more likely to try out other agricultural innovations. However, this "clustering" cannot support the hypothesis that there is something like "innovation mindedness" in general, or that acceptance of any innovation in a series is predictive of acceptance of all other innovations in the same series.

Evidence may be cited to substantiate this contention. In the first place, if such a clustering indeed prevailed, one would expect users of any of these agricultural innovations to be more disposed than others to use, as well, certain non-agricultural innovations, such as hospital or clinic facilities, for example.

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228 And no such tendency may be discerned in the present data. (See
241 Table 2.)
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743 TABLE 2. USERS OF HOSPITAL AND CLINIC FACILITIES SHOW NO SIGNIFI-
182 CANT DIFFERENCES IN RATES OF ACCEPTANCE OF AGRICULTURAL INNOVATIONS

Agricultural Innovations	Percentage who have ever gone to hospital or clinic for treatment	Total cases
Mushrooms		
Tried them out	36%	(143)
Never did	38	(188)
Tilapia		
Tried it out	44%	(104)
Never did	34.	(225)
Motor		
Tried it out	37%	(215)
Never did	36	(106)
Fertilizer*		
Tried it out	37%	(32)
Never did	34	(232)

* Farmers only

228 In the second place, use of the motor is much less strongly
241 linked to use of mushrooms than the use of fertilizer or tilapia.
244 It may well be that there may be some common factor strongly underlying the decision to use the motor on the one hand, fertilizer and tilapia on the other, while the decision to try mushroom-growing is relatively more "autonomous". A possible explanation for the
402 greater "autonomy" may be sought in the differential requirements
*197 for growing mushrooms compared with the requirements for adopting
*178 the other innovations.

Both tilapia and sulphates demand extra heavy work, care, an essential initial investment, and willingness to wait for a delayed return. An additional requirement for a successful and continuous pay-off from both these innovations may be an aptitude to follow rather complicated instructions. In the case of mushroom growing, however, the initial investment is relatively small, the labor may be tedious but is not heavy, no protracted or complicated care is involved, and the results of the effort are relatively quickly realizable.

There is some justification, then, for the inference that initial adoption of innovations such as fertiliser and tilapia, which require increased labor, will depend to some extent upon the availability of some labor-saving device (such as the small motor) which will enable the busy farmer to perform the necessary labor and, perhaps, leave him freer to exercise the care required for these innovations to be successful. Hence the relatively stronger relationship among these innovations. An innovation which does not make these demands, however (such as mushroom growing), is more likely to find acceptance on its own terms and may thus be less dependent for its acceptance upon availability of some sort of labor-saving device.

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Innovation and Attitude Towards It

There is further evidence in the survey substantiating the greater "autonomy" so to speak, of the decision to try mushroom culture compared with the decision to try fertiliser or tilapia.

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The present study tested the hypothesis that use of these innovations would be related to a favorable attitude toward them. Attitude toward the four innovations was determined by examining responses to the questions: "What is your opinion about fertiliser?" "...about mushroom growing?" "...about tilapia?" Responses were classified according to whether they revealed positive, mixed, or negative affective feelings to each of the innovations.

[121]
[125]

In general, positive attitudes towards all these innovations are widespread in Bang Chan. About three-quarters of the residents express positive feelings toward mushroom growing and over half express positive attitudes to artificial fertiliser and tilapia raising. (See Table 3.) None of these innovations elicits widespread expressions of disfavor, although the respondents are more likely to express an unfavorable attitude to tilapia (29 per cent) than to fertiliser (14 per cent) or to mushrooms (7 per cent)

TABLE 3. THE MAJORITY IN BANG CHAN HOLD POSITIVE ATTITUDES TOWARDS AGRICULTURAL INTRODUCTIONS

Attitude	"What is your opinion about..." Mushrooms	Fertiliser	Tilapia
Positive	76%	59%	57%
Neutral or mixed*	6	3	2
Negative	7	14	29
No opinion	9	16	8
Not ascertainable	2	8	4
Total cases	(333)	(333)	(333)

* The neutral or mixed attitude category comprises responses conveying partly favorable and partly unfavorable feelings such as, "some kind is good, some kind is not so good"; "in some ways I like it, in some ways I dislike it."

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228 Now let us examine the extent to which the decision to try out
241 the innovation is linked to a positive feeling towards it. The decision to try fertilizer and to raise tilapia turned out to be indeed linked with positive feelings towards these innovations. Among those favoring fertilizer, the proportion using it is six times as high as those with neutral, mixed or negative attitudes (18 versus 3 per cent); among those with positive attitudes to tilapia raisers of this fish are twice as frequent in comparison with those having neutral, mixed, or negative attitudes (43 versus 22 per cent). These relationships are shown in Table 4 below.

TABLE 4. ATTITUDES TO FERTILIZER AND TILAPIA RAISING ARE LINKED TO THEIR USE

	Attitude	
	Positive	Neutral, Mixed & Negative
Fertilizer		
Tried it out	18%	3%
Never did	82	97
Total cases*	(168)	(55)
Tilapia		
Tried it out	43%	22%
Never did	57	78
Total cases	(191)	(104)

[125] * Based on responses made by 293 farmers who expressed a codable attitude to fertilizer.

244 On the other hand, the data revealed no relationship between
*177 attitude to mushroom growing and growing them. The proportion of
*178 users and former users among those who have favorable attitudes and those who have negative attitudes remains relatively constant. Table 5 shows that among respondents with positive attitudes, 47 per cent have tried mushroom growing; while among respondents with negative attitudes, 42 per cent have done so; percentage differences are statistically insignificant.

TABLE 5. ATTITUDES TO MUSHROOM GROWING SHOW NO RELATION TO ITS ADOPTION

	Attitude	
	Positive	Neutral or Negative
	(252)	(42)
Tried mushrooms	47%	42%
Never did	53%	58%

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It appears, then, that we may be dealing with two types of innovations, one type (fertilizer and tilapia) where attitude is linked to decision to use it and another (mushrooms) where attitude seems to be unrelated to such use.* And here again may be further substantiation of the greater autonomy of the acceptance of mushroom growing. For, in the case of innovations such as artificial fertilizer and tilapia, it is known that they require investment of funds and labor, risk, delayed return, and departure from well-known ways. It could be that in the face of these disadvantages acceptance will occur only if motivation is high. Acceptors would then be selected mainly from among those who have high motivation and accompanying positive affective feeling. Those who do not have these feelings would, following this reasoning, be less likely to overcome their objections to the disadvantages of the innovation in question.

There is also the second type of innovation like mushroom growing. This innovation is much less "costly" not only of funds but effort. Hence, high motivation and accompanying positive affect might be less influential than other factors--factors quite aside from the crop itself--on acceptance of this type of innovation. Consequently, growers of mushrooms may be recruited equally from persons with favorable attitudes and less favorable attitudes towards this crop.

These findings suggest the more general hypothesis (which might be corroborated by analysis of related contextual data collected in Bang Chan, and by examining equivalent situations in other underdeveloped areas) that: the more complex the innovation, the more effort involved in employing it, the more risk involved, and the less immediate the return, the greater the likelihood that acceptors will be recruited from a selected group of highly motivated people, rather than at random among all persons "eligible" to accept it. If the innovation requires the high motivation which is needed to overcome the disadvantages of investment, work, risk, and rarity, then this attitude toward it is important. If the innovation demands only short-term investment and relatively light labor, then this motivation is of little importance in the decision to try it.

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Sociological Factors in Agricultural Innovation

The decision to use the small motor, once made, tends to accelerate the decision to try out other agricultural innovations, especially fertilizer and tilapia and, to a lesser extent, even mushrooms.

* Both mushroom growing and tilapia raising are sideline activities to the Bang Chan rice farmer and are, therefore, comparable in this respect.

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228 mushrooms. The following section searches for sociological factors
241 linked to these decisions. For example, are the well-to-do farmers*
244 more apt than the less well-to-do to adopt agricultural innovations? To what extent is literacy a factor in acceptance of innovations? To what extent do differences in literacy, communications habits, cultural contacts and urban orientation account for tendencies to adopt or reject these changes?

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[125] * The following analysis has been made, in most cases, for male farmers only. The distribution of initial acceptance among the three groups of male farmers, females, and male non-farmers is given in the following table.

*179
*178 TABLE 6. USE OF AGRICULTURAL INNOVATIONS AMONG THREE GROUPS OF BANG CHAN VILLAGERS

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	Male Farmers (211)	Male Non-farmers (82)	Females (32)
Tried motor	71%	61%	48%
Didn't try	29	39	52
Tried mushroom growing	46%	35%	41%
Didn't try	54	65	59
Tried tilapia raising	35%	25%	31%
Didn't try	65	75	69
Tried fertiliser	15%	5%	**
Didn't try	85	95	

** Asked of farmers only.

It is apparent, as one would expect, that it is mainly the farmers who try these innovations. Relatively few women (with the exception of tilapia raising) and even fewer non-farmers say they have tried them. Since the absolute number of acceptors among women and non-farmers is too small to bear the separate treatment which would be essential to analyse the factors influencing the use or non-use of innovations, they have been excluded from the following presentation, which refers, thus, to male farmers only.

Economic Level

It could be, of course, that people on a higher economic level are in a better position to try agricultural innovations, since they might more easily afford not only an initial cost but also possible loss in trying out something new.

The survey data provide several indicators of economic level. Among other questions on this subject, all respondents were asked: "Here in your household how many buffaloes do you own?" About one-quarter reported owning no buffaloes at all; a little more than that proportion reported owning four or more; the median number of buffaloes reported was between two and three.

In Bang Chan buffalo are an indication of wealth, as is the amount of land planted to rice. Thus all farmers in the sample were also asked, "Last time you planted rice, how many rai* of rice did you plant?" About a third reported that they planted 19 rai or less; about one-fourth reported that they planted 40 rai or more; the median number of rai reported was 26.3.

If the reported number of buffalo owned is an adequate measure of economic level, then one would expect a high correlation between reported buffalo ownership and reported number of rai planted. If the expectation is borne out by the survey data the two indices may be used interchangeably. (Table 7 reports this relationship for the male farmers in the sample.)

TABLE 7. FARMERS[ø] WHO OWN MORE BUFFALOES ARE MORE LIKELY TO CULTIVATE LARGER LAND HOLDINGS

"...how many buffaloes do you own?"

"...how many rai of rice did you plant?	None, one or two (99)	Three or more (113)
Less than 9	31%**	11
10-19	32	7
20-29	18	37
30-39	15	23
40-or more	3	41

ø Male farmers only
** Percentages may add to 99 or 101 owing to rounding of figures.

* A Thai land measure; 1 rai = 0.4 acres.

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Decisions to use all these innovations--with the possible exception of the use of fertilizer--seem to be more widespread among the upper economic levels of the population. (See Table 8.) One wonders whether the initial link between use of the motor and readiness to try the innovations may actually disguise a more basic relationship based simply on ability to afford the investment and the risk.

TABLE 8. FARMERS* ON HIGHER SES LEVELS ARE MORE LIKELY THAN OTHERS TO HAVE USED THE MOTOR, TO HAVE GROWN MUSHROOMS AND TO HAVE RAISED TILAPIA

	Ownership of Buffaloes	
	2 or less (99)	3 or more (112)
Used motor		
Own	6%	37%
Use	53	45
Neither	41	18
Grew mushrooms		
Yes	30%	60%
No	70	40
Raised tilapia		
Yes	26%	42%
No	74	58
Used fertilizer		
Yes	12%	17%
No	78	83

* Male farmers only

The following table presents again the initial relationships between use of motor and readiness to try out other innovations. But this time the link is examined separately for persons on the different economic levels.

Table 9 was made by first dividing the population into two groups, those from high and those from low economic levels. The resulting two groups were then further subdivided on the basis of whether they owned (or used) a motor or whether they did not. In each of the four resultant groups the percentage that raised tilapia was then calculated. Thus among those of high economic level who own or use motors, 45 per cent raised tilapia, and we infer that 55 per cent did not raise tilapia. The same procedure was repeated to ascertain the percentage that has tried fertilizer and subsequently the percentage that has tried mushroom growing.

This table shows that in tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertilizer holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic Level			
	High*		Low**	
Owns or used motor (Proportion who have raised tilapia)				
Yes	45%	(89)	33%	(57)
No	25	(21)	17	(40)
Owns or used motor (Proportion who have tried fertilizer)				
Yes	20%	(89)	16%	(57)
No	5	(21)	*	(40)
Owns or used motor (Proportion who have tried mushroom growing)				
Yes	40%	(89)	34%	(57)
No	37	(21)	23	(40)

* Three buffaloes or more
** Two buffaloes or fewer

[231]

LITERACY

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

125 he could write, could only sign his name, or could do neither.*
212 Those who said they could write a letter are considered here to be literate. All others are grouped together as illiterates or on a low level of literacy.

212 The literacy rating was tested for validity as follows: in
872 Long Chan literacy is known to be related to age. Ever since
125 1925** there has been a school in the community. Since that date school attendance has been compulsory. Attendance has been fairly full for the last twenty years, but most older residents have never had the opportunity for formal schooling.

212 The survey data reflect this correlation between literacy and
*177 age. Among farmers under 40 years of age, only 16 per cent were
*178 rated as illiterate or barely literate by the survey criterion;
561 while 59 per cent of those of 40 years or older are rated as illiterate. Thus one can have reasonable confidence in the survey response as a rating of literacy.

TABLE 10. LITERACY OF FARMERS DECREASES WITH AGE

	Age	
	Under 40 yrs.	40 yrs. or more
Literacy		
Illiterate	16%	59%
Literate	84	41
Total cases	(79)	(131)

*177 Literacy is linked discernibly to acceptance of the motor and
*178 mushroom growing. The proportion of literate farmers who have
228 tried the motor is twice as high as the corresponding proportion
241 among those who are illiterate. It is less strongly linked to the
244 decision to grow mushrooms, and is, at best, weakly linked to the decision to raise tilapia or to use fertiliser.

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212 * In addition, interviewers asked respondents who said they could write to demonstrate it by writing something on the ques-
402 tionnaire.

[125] ** See Ripeyan Rice Village, pp. xii.

TABLE 11. LITERATE FARMERS* ARE MORE LIKELY TO HAVE USED THE MOTOR AND TO HAVE TRIED MUSHROOM GROWING

	Illiterate (Cannot write a letter) (92)	Literate (Can write a letter) (118)
Motor		
Own	16%	35%
Use	35	60
Neither	48	14
Mushrooms		
Have tried	38%	53%
Have not	62	47
Fertilizer		
Have used	12%	17%
Have not	88	83
Tilapia		
Have tried	29%	39%
Have not	71	61

* Male farmers only

If Bang Chan were like certain areas of the United States and Europe, it might be objected that such a relationship between acceptance of innovations and literacy reflects a spurious link with economic level: that illiterates tend to come from the economically deprived strata of the population; hence an observed relationship with literacy may actually reflect the initial correlation with economic level. In Bang Chan, however, this is not the case. A Bang Chan farmer who is well-to-do is as likely to be illiterate as literate, as is illustrated by the table below.

TABLE 12. LITERACY AND ECONOMIC LEVELS ARE UNRELATED IN BANG CHAN*

	Literacy	
	Low (91)	High (119)
Economic Level		
Low	49%	56%
High	51	44

* Male farmers only

Hence the correlation between use of innovations and literacy may be taken at face value and does not reflect a spurious link with economic level.

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Communications Media

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With the increasing use of mass communications, the community member is exposed to sources of information other than the printed word. Ownership of radios has nearly tripled in about five years (in the 1955 survey radios were reported in 14 per cent of the households, whereas in 1949* only 5 per cent of the households reported owning a radio). Quite apart from ownership, radio listening is widespread; less than one-fifth of the people in Bang Chan claim they never listen to the radio (18 per cent). Motion pictures are also popular. Only one-tenth claim to having never attended a movie, while half (48 per cent) say they have seen motion pictures more than ten times.

There is, of course, a strong relationship between exposure to one of these media and exposure to the other. Table 13 below indicates that the majority (84 per cent) of respondents who listen to the radio likewise report frequent movie attendance. Similarly, the majority (67 per cent) of those who say they never listen to the radio, reported that they go to movies rarely or never.

TABLE 13. EXPOSURE TO RADIO AND MOVIES SHOWS HIGH INTERRELATION

	Radio listening		
Movie Attendance	High Exposure (regular or occasional listeners) (111)	Low Exposure (listen seldom) (143)	No Exposure (60)
High exposure (10 times or more)	64%	33%	13%
Medium exposure (4 to 9 times)	19	17	21
Low Exposure (0 to 3 times)	16	51	67

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Exposure to the communications media is strongly linked to acceptance of a basic innovation such as the motor. It is not directly linked to acceptance of the other agricultural innovations (fertilizer, tilapia, mushrooms). Respondents who report frequent exposure to radio listening and motion picture attendance are significantly more likely than others to say they own or have used the motor. (Among daily radio listeners 88 per cent report use of the motor; and this proportion declines steadily until among those who never listen, only 44 per cent use the motor; for movies the corresponding proportion of users ranges from 76 to 36 per cent.)

* Siamese Rice Villages, op. cit.

TABLE 14. HIGH EXPOSURE TO COMMUNICATIONS MEDIA IS LINKED TO ACCEPTANCE OF THE MOTOR

	Exposure to Radio			
	High			Low
	Listens Daily (45)	Listens Occasionally (64)	Listens Seldom (148)	Never Listens (80)
Small Engine Motor				
Used it	82%	78%	64%	44%
Didn't use it	12	22	36	54

	Exposure to Movies			
	High			Low
	Ten times or more (161)	4-9 times (60)	1-3 times (75)	None (33)
Used it	76%	69%	59%	36%
Didn't use it	24	31	31	64

Of course it is important to check whether these relationships hold true when people on different economic levels are examined separately; for literates as well as for illiterates. We infer that the basic link between use of the motor and exposure to the media of communication holds for literate as well as illiterates; for poorer as well as for richer farmers. More specifically, the relationship between exposure to the communications media and decision to use the motor is even more marked for less well-to-do and for the illiterate farmers, in contrast to the better-off farmers and those who can read and write.

TABLE 15. EXPOSURE TO MOTION PICTURES IS LINKED TO ACCEPTANCE OF MOTOR ESPECIALLY FOR THE ILLITERATES AND FOR THE ECONOMICALLY LESS WELL-OFF*

	Exposure to Motion Pictures			
	High		Low	
	(Percentage Using Motor)			
Economic Level				
Low	76%	(47)	44%	(32)
High	81	(44)	75	(45)
Literacy				
Illiterate	63%	(36)	44%	(33)
Literate	88	(77)	82	(41)

* Male Farmers Only

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*178
207 Exposure to the media of mass communication seems to act, in
a sense, as a substitute for literacy. It may be that through
212 these means either an illiterate farmer can obtain information
about the more complex agricultural tools and methods or motivation
546 to try improvements, or both, even though he may not know how to
read and write. One may infer that he tends to act on the infor-
mation thus obtained, since he is more likely than his unexposed
opposite number to try out these innovations.

*178
*177 Acceptance of Urban Patterns

369 The printed word and the mass media are, of course, not solely
channels for the communication of knowledge. They are, at the
same time a means whereby the farmers may establish some sort of
contact with the more sophisticated world outside the community
even with highly urban Bangkok.

[291] The survey indicates in a general way the extent to which
[416] the people of Bang Chan have accepted urban patterns. Their grow-
[207] ing acceptance of urban modes is readily apparent even to a casual
visitor: many own shoes, flashlights, wrist watches, radios,
bicycles, fountain pens, modern furniture.* Other urban behavior
is likewise beginning to be noticeable.

[493]
[413] One very simple indication of the degree to which urban in-
[358] fluences have penetrated is the change in manners of taking
food. The farmers traditionally eat with their hands rather than
using a fork or spoon. In Bangkok, however, eating utensils are
customarily served with the meals in restaurants and are widely
adopted as well by the city population. Some Bang Chan inhabi-
*177 tants have picked up this simple urban custom and have substituted
*178 it for eating mainly with their hands. In Bang Chan of 1955, for
example, a sizeable minority (26 per cent) report that they use a
264 spoon, fork or both for the evening meal.
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[207] That such a simple question can roughly measure exposure
[546] to urban influences, is indicated in the following table, which
shows that respondents who report customarily eating with "urban
utensils" are more likely to be exposed frequently to radio and
motion pictures and are more likely to have visited in Bangkok.

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[412] * Survey respondents report that their households possess a
flashlight (81 per cent); scissors (66 per cent); kerosene lamp
(27 per cent); radio (14 per cent). About 41 per cent say they
own at least one pair of shoes.

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TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Patterns	
	With hands (242)	With fork and/or spoon (84)
Listens to radio		
Regularly (daily)	10%	23%
Occasionally	17	28
Seldom	31	35
Never	32	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	15
2 - 4 times	29	23
5 or more times	28	55

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When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive to urban influence are twice as likely as others to use fertiliser (21 per cent versus 9 per cent), one and a half times as likely to grow mushrooms (37 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per cent versus 61 per cent). There is no noticeable relationship, however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

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[244]
[402]
[228]

These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for those on high as well as low economic levels and also for the literate as well as illiterate farmers.

[212]
[434]

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TABLE 17. VILLAGERS RESPONSIVE TO URBAN PATTERNS ARE MORE LIKELY THAN OTHERS TO USE AGRICULTURAL INNOVATIONS

Agricultural Innovations	Eat with fork and/or spoon	Eat with hands
Artificial fertiliser		
Tried it	21%	9%
Never did	79	91
Total cases*	(69)	(218)
Mushrooms		
Tried growing	57%	39%
Never did	43	61
Total cases	(84)	(242)
Small engine motor		
Own one or have used it	82%	61%
Never did	18	39
Total cases	(84)	(242)

* For farmers only; excludes all non-farmers

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TABLE 18. ACCEPTANCE OF URBAN PATTERNS IS LINKED TO ACCEPTANCE OF MOTOR AND MUSHROOM GROWING, IRRESPECTIVE OF ECONOMIC AND LITERACY LEVELS

	Economic Level				Literacy Level			
	Low		High		Illiterate		Literate	
Acceptance of urban patterns	(Proportion who used motor)							
Eat with hands	53%	(77)	76%	(73)	47%	(73)	83%	(76)
Fork or spoon	75	(20)	89	(34)	69%	(16)	90	(38)
	(Proportion who tried mushroom growing)							
Eat with hands	28%	(77)	58%	(73)	38%	(73)	47%	(76)
Fork or spoon	45	(20)	65	(34)	44	(16)	66	(40)
	(Proportion who used fertiliser)							
Eat with hands	11%	(77)	13%	(73)	10%	(73)	14%	(76)
Fork or spoon	19	(20)	26	(34)	3	(16)	23	(40)

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 18.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once	Twice or more
	(Proportion who own or use the motor)	
Illiterate	44% (40)	58% (51)
Literate	83 (36)	88 (83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

*178
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as apt to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	38%	(40)	86%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	50%	(67)	85%	(76)
One or more	57	(24)	88	(43)

[562]
[241]
[228]
[244]

*Male farmers only

However, no such relationship was discerned between these culture contacts and trying out either fertilizer, tilapia, or mushrooms.

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Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

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Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

[402]
[228]
[241]
[244]

The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertilizer or mushrooms.

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[125]

TABLE 21. INCIDENCE OF MOTOR USE IS HIGHER AMONG VILLAGERS WHO REPORT WIDER SOCIAL CONTACTS

	Social Contacts ("...Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here:")	
	"More" or "the same" (143)	"Fewer" (55)
Motor		
Has used it	77%	55%
Never did	23	45
Tilapia		
Has tried it	39%	21%
Never did	61	79
Fertiliser		
Has used it	16%	11%
Never did	84	89
Mushrooms		
Has tried them	49%	40%
Never did	51	60

Once again, however, when this link between breadth of social contacts and use of the innovations is examined separately for the literate, compared with the illiterate farmers, we find further substantiation of the previous finding that under certain circumstances contact may act as a substitute for literacy in acceptance of complex innovations. For, although the link between social contacts and use of tilapia remains constant for literate as well as illiterate farmers, it is mainly for those who are illiterate that exposure to wider local social contacts is associated with greater incidence of motor use.

[212]

*178
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TABLE 22. AMONG ILLITERATE FARMERS USE OF MOTOR IS LINKED TO WIDER SOCIAL CONTACTS

	Exposure to Influence of Others: Have more friends or about the same		Have fewer friends	
	(Proportion who tried small motor)			
Literacy				
Illiterate	64%	(56)	26%	(27)
Literate	87	(86)	86	(78)
	(Proportion who tried tilapia)			
Illiterate	34%	(56)	15%	(28)
Literate	43%	(86)	26	(27)

[369] This finding corroborates and expands the previous discussion of the culture contact and acceptance of innovations. Exposure to influence of others from outside the community (through contact with the city, with the airport, with the agricultural fair, for example), as well as exposure to the influence of others from within (through friends and associates) clearly relates to the decision to use an innovation such as the motor. Its effectiveness is not felt equally by the whole population, mainly instead, by those who are illiterate.

The significance of these internal and external contacts to illiterates may be that through such contacts they are likely to gain needed information and motivation which, if one can read and write, is available through other sources. If one cannot read and write, however, it is the outside world which provides this kind of needed information.

Capital Investment and Debt

426 Bang Chan's economy is largely a money economy and many farmers avail themselves of credit facilities through professional money lenders. Most loans are sought for the purpose of replacing capital equipment and purchasing land and buffalo.*

The present survey secures a rough measure of the extent of such borrowing in Bang Chan. The majority of farmers (39 per cent)

[113] * See Janlekha, Kamol C. A Preliminary Study of the Economic Conditions of Siamese Rice Farmers in Bang Chan, Thailand. M.S. Thesis Cornell University, 1951, p. 73.

admit in response to a direct question* that they have a debt. Confidence in the validity of these responses as an index of indebtedness is increased since the expected correlation between indebtedness and ownership of buffalo is reflected in the survey data.

TABLE 23. INCIDENCE OF REPORTED DEBT IS HIGHER AMONG VILLAGERS WHO REPORT OWNERSHIP OF MORE BUFFALOES

	Reported Ownership of Buffaloes		
	None (81)	One to three (155)	Four or more (97)
"...Do you now have a debt?			
Yes	49%	56%	69%
No	51	44	31

When the use of agricultural innovations is examined for those farmers who say they have a debt, compared with those who deny it, it becomes apparent that there is a relationship only between indebtedness and use of the motor but not with any of the other mentioned innovations. Seventy-nine per cent of the male farmers who said they have a debt own or use the motor; among those who claim they have no debt the proportion owning or using the motor is significantly less (60 per cent).

TABLE 24. INCIDENCE OF MOTOR USE IS HIGHER AMONG FARMERS WHO REPORT INDEBTEDNESS

	"...Do you now have a debt: "Yes" (125)	"No" (85)
Motor		
Has used it	79%	60%
Never did	21	40
Tilapia		
Has tried it	37%	33%
Never did	63	67
Fertiliser		
Has used it	14%	16%
Never did	86	84
Mushrooms		
Has tried them	45%	48%
Never did	55	52

**Male farmers only

* The question: "...I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?" Janlekha's M.S. thesis, ibid., reports a similar distribution of indebtedness for his sample of 96 farmers.

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402 One is tempted to speculate about the significance of this relationship. One possibility deserves further investigation if the data were only available. If one important reason for incurring debts is to secure or to replace capital equipment, then those farmers more willing to make a capital investment, even though they incur a debt, are more likely to use the motor. Conversely, farmers unwilling or unable to contract debts for a basic improvement in their capital equipment might be the ones less likely to adopt an innovation such as the motor.

Other Factors

121 A number of other factors which conceivably might have been expected to differentiate those who tried out these innovations from those who never made an attempt to use them were investigated and proved to have no differentiating power. Factors such as age and family size, for example, were examined to see whether differential acceptance existed among younger compared with older age groups, or small as compared with large families. No such differences appeared. In the same way, the survey's rough measures of community integration and identification, certain religious beliefs and superstitions, certain personality traits, of knowledge of political figures, and willingness to perform industrial work likewise revealed no differential rates of acceptance when groups were compared.

*178 USE OF MODERN HEALTH FACILITIES

743 Improvements in agricultural production must certainly not be viewed as the only efforts worthy of attention to raise the level
75 of living in Bang Chan. Equally important are efforts to train the population to use modern health practices and facilities.

Hospitals have been available since the twenties in Bangkok and a clinic in Minburi since the thirties. Despite these facilities, much curing continues in the traditional way through priests or certain farmers of the locality who have learned from other practitioners to compound medicines, set bones, deliver babies and expel demons.

743 In the present survey the majority of respondents reported
[125] that they have sometimes in their lives used hospital or clinic facilities. To the question, "Have you ever been to a clinic or hospital?" 63 per cent answered affirmatively. Less than half of those who replied indicated having gone for their own treatment or hospitalization, the remainder for other reasons. The distribution of responses is given below.

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[125]

"Have you ever been to a clinic or a hospital? (If yes) For what various reasons?

No, never went	37%
Yes	63
For treatment or hospitalization	37*
To bring a patient there	23*
To visit relative(s) or friend(s)	14*
Other reasons	3*

* These responses should not be cumulated since some respondents reported more than one reason for going.

If, indeed, the responses to this question are to be considered a valid index, one would expect respondents who reported having used these facilities also to report a higher incidence of visits to Bangkok, where the available hospitals are located. This expectation is confirmed by the responses to the two relevant questions.

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TABLE 25. INCIDENCE OF TRIPS TO BANGKOK IS HIGHER AMONG RESPONDENTS WHO REPORT VISITS TO CLINIC OR HOSPITAL

"In the past year, how many times did you go to Bangkok...?"	Have you ever been to a clinic or a hospital?"		
	Yes, for treatment (123)	Yes, for other reasons (91)	No (118)
Ten or more times	32%	31%	17%
Two to nine times	40	37	29
Once	13	12	25
Never	15	20	30

The present study now asks what factors are associated with use of modern health facilities.

Demographic Characteristics of Hospital Users

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It is important to answer one question in advance of more detailed analysis. Does an affirmative reply to the question, "Have you ever been to a hospital or clinic" measure need for medical care rather than acceptance of modern health practices.

No direct measure is available of the actual state of health of the survey respondents. But, assuming that older people need medical care more than younger people, then we have an indirect index of whether or not hospital use is higher among people of advanced age. The data show no such relationship.

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TABLE 26. INCIDENCE OF HOSPITAL AND CLINIC VISITS IS SIMILAR FOR ALL AGE GROUPS

Have you ever been to a clinic or a hospital?	20-29 (41)	30-39 (80)	40-49 (85)	50-59 (60)	60 or over (57)
No, never	31%	31%	36%	37%	41%
Yes, for treatment	39	44	39	31	31
Yes, for other reasons	29	25	25	32	28

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If the responses reflect primarily the need for medical care, women who bear children have a greater need for medical care than men, and one would therefore expect hospital use to be higher among women than men. But again, thus hunch is not clearly borne out by the results.

TABLE 27. INCIDENCE OF HOSPITAL AND CLINIC USE IS SIMILAR FOR MEN AND WOMEN

Have you ever been to a clinic or a hospital?	Women (90)	Men (243)
No, never	41%	33%
Yes, for treatment	31	39
Yes, for other reasons	28	26

There is, then, reasonable justification for inferring that reported use of clinics or hospitals reflects predisposition to use modern health facilities and not simply a need for medical care.

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Economic Level

Although higher economic level was linked to the principal agricultural innovations, it is not related to use of hospital or clinic facilities.

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Literacy

On the other hand, just as literate persons were more disposed to use the major innovations (p. 19), in the same way those who can read and write report a greater incidence of hospital or clinic use.

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TABLE 28. INCIDENCE OF HOSPITAL AND CLINIC USE IS HIGHER AMONG LITERATE VILLAGERS

Have you ever been to a clinic or a hospital?	Literate (163)	Illiterate (169)
No, never	27%	44%
Yes, for treatment	42	33
Yes, for other reasons	31	23

Apparently here, too, exposure to sources of information predisposes the inhabitants to greater acceptance of modern health practices.

Exposure to Mass Media

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Again, as with agricultural innovations, exposure to the media of mass communication is linked to acceptance of modern health practices.

TABLE 29. INCIDENCE OF HOSPITAL AND CLINIC USE IS HIGHER AMONG VILLAGERS EXPOSED TO MASS MEDIA

	Movie Attendance		
Have you ever been to a clinic or hospital?	Ten or more times (161)	4-9 times (60)	Three times or less (108)
No, never	25%	32%	55%
Yes, for treatment	48	33	22
Yes, for other reasons	27	35	23

	Radio Listening		
	Daily or occasionally (111)	Seldom (148)	Never (60)
No, never	20%	39%	58%
Yes, for treatment	52	33	18
Yes, for other reasons	28	28	23

Mass Media as a Substitute for Literacy

It will be recalled (see p. 21) that the mass media seem to act as a substitute for literacy. The same relationship reappears here. The table following indicates that literacy links with use of hospitals or clinics only when exposure to mass media is rare.

[212]

*178 With more frequent exposure to these media, the link between literacy and use of hospitals or clinics decreases.
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TABLE 30. EXPOSURE TO MASS MEDIA IS LINKED TO HOSPITAL USE, ESPECIALLY AMONG ILLITERATES

	Literate		Illiterate	
	(Proportion reporting use of hospital or clinic)			
Movie Attendance				
High (ten or more times)	78%	(103)	71%	(38)
Low (nine times or less)	64	(56)	48	(111)
Radio Listening				
High (listen "frequently")	81%	(48)	79%	(42)
Low (listen "seldom or never")	66	(86)	48	(122)

*178 Acceptance of Urban Practices
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Table 17 showed that acceptance of certain urban practices was linked to acceptance of the major agricultural innovations. Acceptance of urban practices is also associated with use of clinics and hospitals. Use of modern medicine is significantly higher among those who no longer eat with their hands than among those who do.

TABLE 31. ACCEPTANCE OF URBAN PRACTICES IS LINKED TO USE OF CLINIC AND HOSPITAL FACILITIES

	Customarily Eat With	
	Fork or spoon (84)	Hands (342)
Have you ever been to a clinic or a hospital?		
No, never	28%	39%
Yes, for treatment	48	33
Yes, for other reasons	24	28

*178 Contact Outside Bang Chan
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It has already been reported (see Table 23) that hospital and clinic use is higher for those who, during the past year, have paid more frequent visits to Bangkok. This correlation may seem, at first, spurious, since the main centers of medical care are situated in Bangkok. But the questions asked about contact with Bangkok for the one-year period preceding the survey, and visits to the hospital or clinic over an unspecified time period show

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that the relation of these two indices appears valid. In addition there is further substantiation of the hypothesis that contacts with the world outside Bang Chan are linked with use of modern medical practices: The incidence of such use is significantly higher among those who have visited the airport than among those who have never done so.

TABLE 32. INCIDENCE OF HOSPITAL OR CLINIC USE IS HIGHER AMONG THOSE WHO HAVE VISITED THE AIRPORT

	Trips to the Airport		
Have you ever been to a clinic or a hospital?	None (148)	One (58)	Two or more (134)
No, never	41%	34%	28%
Yes, for treatment	35	40	39
Yes, for other reasons	24	24	33

Moreover, additional support for this contention is found in the higher incidence among hospital and clinic users, of knowledge of the world outside the community.

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It is reasonable to assume that greater contact with the capital city is likely to increase the farmers' awareness of its major public figures. And, indeed, the incidence of hospital and clinic use is highest among those who are able to name correctly certain of Thailand's major public figures, as the Prime Minister and the National Police Chief.

TABLE 33. INCIDENCE OF HOSPITAL OR CLINIC USE IS MORE WIDESPREAD AMONG VILLAGERS WHO ARE AWARE OF THAILAND'S PUBLIC FIGURES

	Have you ever been to a hospital or a clinic?			
	No, never	Yes, for other reasons	Yes, for treatment	Total 100%
...Who is now the Prime Minister of Thailand ...Would you please tell me his name?				
Names Prime Minister	27%	30%	43%	(192)
Does not know	48	23	29	(140)
...Who is now the Chief of Police of Thailand...Would you please tell me his name:				
Names Chief of Police	23%	31%	46%	(144)
Does not know	48	25	28	(164)

*178
743 Use of Health Facilities and Other Factors Associated With
241 Agricultural Innovations
572 Although use of the basic agricultural innovations was shown
426 to be linked to breadth of contacts within the community, on the one hand, and to indebtedness, on the other hand, the association between these factors and use of modern health facilities, although showing the same tendency, is not statistically significant. For the sake of completeness, the figures are reported below:

TABLE 34. NO RELATIONSHIP BETWEEN INDEBTEDNESS OR INTERNAL SOCIAL CONTACTS AND USE OF HOSPITALS AND CLINICS

	"Have you ever been to a clinic or a hospital?"			
	No, never	Yes, for treatment	Yes, for other reasons	Total (100%)
Social Contacts				
"More friends"	31%	39%	34%	(61)
"The same"	40	35	25	(154)
"Fewer friends"	33	41	27	(94)
Do you now have a debt?				
No	40%	33%	28%	(140)
Yes	33	41	26	(192)

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SUMMARY

1. In the community of Bang Chan in Central Thailand, various factors are studied statistically in order better to determine the conditions of acceptance of selected agricultural innovations and conditions for using the facilities of modern medicine in clinics and hospitals. Four agricultural innovations were selected, viz. gasoline motor, raising of fish (tilapia), use of fertilizer, and mushroom culture.

2. The present study was concerned with the initial adoption or trial of innovations, rather than the continuing use of these innovations or the merging of the new with the old features of the culture.

3. While adoption of the gasoline motor was associated with all other agricultural innovations, no generalized acceptance of the new was found because: a) adoption of the gasoline motor bore little or no relation to use of non-agricultural innovations such as hospital and clinic facilities; and b) adoption of gasoline motors was only weakly associated with raising of mushrooms.

4. A cluster of traits including high motivation and sizable capital outlay was associated with the use of the gasoline motor.

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) so distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and receptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike acceptors of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

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APPENDIX A

March 1956

HOW THE BANG CHAN SURVEY WAS CONDUCTED

How the Study Came to be Made

121 The survey conducted in May 1955 was part of a program* for testing diverse techniques of data-gathering in cultures substantially different from U.S. and Western European cultures, where the survey method of gathering data had been developed and tested.

114 The survey questionnaire was developed and the field work carried out with the help of area specialists of the Cornell Research Center in Bangkok. Mr. Robert B. Textor and Mr. Loobonga Smithsaya of the Cornell Thai staff assisted the field director and recruited the English-speaking Thai university students who interviewed for the survey.

The Questionnaire

12 After a period of training interviewers about the questionnaire and techniques of interviewing, the questionnaire was pretested in a rural community near Bang Chan. Then the staff, consisting of the field director, his deputy, and five Thai interviewers, among them one woman, moved to Bang Chan to carry out the survey.

124 Thai and English-language versions of the schedule were drawn up, but of the 335 interviews conducted in the survey,
125 the overwhelming majority was conducted in the Thai language rather than through an interpreter.

The Interviewers

124 The interviewers were a mixed group: one Thai-speaking American anthropologist; one trained Thai anthropological field worker; two Thai Christians (one a theology, the other a medical student); one Thai Buddhist medical student, one Thai Buddhist female social worker; and an American sociologist who used the Thai interviewers as interpreters.

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[122] * The Cornell Cross-Cultural Methodology Project for the Development and Testing of Improved Methods to Study Underdeveloped Areas is supported by a grant from the Rockefeller Foundation and is a project in the Department of Sociology and Anthropology.

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On the average, an interview took about 40 minutes. Interviews ranged from about 20 minutes to one and a half hours. During the first days of interviewing the duration of an interview was on the average a little longer, and decreased as the interviewers became familiar with the instrument. For the first four days of interviewing, the daily output of interviews amounted to an average of 23; from the fifth day on the daily average output increased to 32 interviews.

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The survey focussed mainly upon factors associated with the acceptance or rejection of certain changes in the village. The questionnaire was designed to permit: (1) a check on whether a question was meaningful to the respondents in the sense of its analytic significance in the study design; (2) testing the relative analytic sensitiveness of different types of question and answer categories; (3) collecting data whose manifest content was identical to content which had been investigated in other field stations; (4) collecting data, which, while differing from the manifest content covered in other field stations, nevertheless, had the same conceptual significance in this particular culture analysis; and (5) collecting specific information of interest to the area specialists assisting the Methodology Study.

Sampling

Problems of sampling were minimal. The entire area previously studied by Cornell anthropologists, consisting of seven hamlets, constituted the universe from which respondents were to be selected. The sampling unit was a household, defined as a single person or a group of persons constituting an economic unit and customarily using the same kitchen. Interviewers were instructed to select the head of the household as respondent. The head of the household was defined as that resident whom other members considered to be the head. If the head of the household was unavailable, interviewers were instructed to substitute "an articulate member of the household," defined as a person in a given household eligible to substitute as head. The majority of the respondents (85 per cent) were the actual heads of their households; substitutions were made only in the remaining 15 per cent of the cases. Interviews were gathered from all but one of the 336 households in the Bang Chan area studied.

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The sample obtained is composed of 243 males and 90 females, of 298 Buddhists and 35 Moslems. As far as ascertainable, the respondents reported their place of birth as follows:

140 were born in Khoshnjaow Commune
116 were born in Bang Chan Commune
11 were born in Minburi Commune
30 were born outside of the three above communes

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621 The age breakdown of the sample is as follows:

41 cases of 20 to 29 years of age
75 cases of 30 to 39 years of age
85 cases of 40 to 49 years of age
68 cases of 50 to 59 years of age
41 cases of 60 to 69 years of age
16 cases of 70 years or more

The occupational status breakdown is as follows:

269 farm operators
24 farm laborers
18 in trade or commerce
10 in service occupations
12 other (2 retired, 2 artisans, 1 traditional doctor, 1 janitor, 1 air force man, 1 policeman, 1 children's caretaker 1 gardener, 1 laborer in irrigation department, and 1 occupation unspecified)

123 Respondent Reaction to the Survey

The respondents were in general cooperative and congenial as is substantiated by the following interviewers' ratings:

(1) 93 per cent of the respondents were reported as cordial at first contact;

(2) 96 per cent of the respondents were reported friendly, cooperative, and responsive for all or most of the interview;

(3) 90 per cent of the respondents were reported as speaking freely for all or most of the interview,

(4) 91 per cent were reported as answering to the point of most or all questions, as giving reasonable, applicable answers;

(5) Only 3 per cent of the respondents were reported as giving many guarded, insincere or evasive replies, whereas 15 per cent were reported as giving some guarded, insincere or evasive replies; and 80 per cent of the respondents were reported as giving no guarded, insincere or evasive replies.

114 The interviewing period fell in a relatively quiet season between harvesting and planting of paddy. At that time farmers were readying implements and beginning to prepare for harrowing and sowing the seed-beds. The period coincided with a period of university vacation so as to recruit English-speaking interviewers. The morale of the staff was high at all times.

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APPENDIX B

Cornell Methodology Project
Thailand, May 1958

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BAN CHAN STRUCTURED QUESTIONNAIRE (Frequency Distributions)

A. Ser. No. B. Hamlet and N C. Date of Interview D. Name of Respondent [162]

F. Sex
- M. Male 213
- F. Female 90

G. Religious Affiliation
- B. Buddhist 298
- I. Muslim 35

H. Main Occupation [46]
- 8. Farm operator 269
- 9. Farm laborer 24
- X. Trade and commerce 18
- Y. Service 10
- O. Other, Specify_____ 12

I. R is HH or not HH
- 1. HH 277
- 2. Not HH 56

J. If not HH, relationship to HH
- 3. Husband —
- 4. Wife 43
- 5. Son 10
- 6. Daughter 2
- 7. Father —
- 8. Mother —
- 9. Mother-in-law —
- X. Other relative 3

1.a. Were you born in Ban Chan Commune, Khanae Tao Commune, Mimburi Commune, or outside?

b. If outside, in what province were you born? [166]
- 1. BC Commune 116
- 2. KT Commune 141
- 3. Mimburi Commune 11
- 4. Commune unascertainable 2
- 5. Outside BC, KT, Mimburi 30
- 7. Unascertainable 33

2.a. How old are you?
b. In what zodiac year were you born? [162]
- 1. 20 to 29 41
- 2. 30 to 39 [illegible]
- 3. 40 to 49 [illegible]
- 4. 50 to 59 [illegible]
- 5. 60 to 69 [illegible]
- 6. 70 and over 17

48

621
125
[872]

3.a. Is there anyone from your house who is now attending nattayum school?
1. Yes 84
2. No 309

b. Do you have any children who have not yet entered or not yet finished prathom school?
1. Yes 201
2. No 191
→ Unascertainable 4

c. IF YES: Do you plan to send any of these children to nattayum school or not, or is it uncertain?
1. Plans to send 66
2. Does not plan to send 83
7. Unascertainable 52

[863] 4. What kind of occupation would please you the most—farming or some other occupation? If some other occupation, what other occupation would please you the most?
1. Farmer prefers farming 266
2. Farmer prefers other occupation 25
3. N. from other occupation prefers his occupation 25
4. N. from other occupation prefers farming 8
5. N. from other occupation prefers another occupation 5
6. Unascertainable 4

5. How is Ban-na NC-KT in your opinion? Is it a very good place to live, a fairly good place to live, or not such a good place to live?
1. Very good 71
2. Fairly good 254
3. Not so good 4
0. Unascertainable 4

[276] 6.a. Do you smoke cigarettes or not?
1. Yes 204
2. No 118
— No Answer 7

b. If yes: Would you say that you smoke more cigarettes than most people in NC-KT, less than most people in NC-KT, or about the same as most people in NC-KT?
1. More 11
2. Less 68
3. About the same 124
0. Unascertainable 8

7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things? [177*] [178*] [125]

1.	Fertiliser	2
2.	Small engine	4
3.	New rice seeds	3
4.	Tilapia	96
5.	Other fish, specified	13
6.	Fish, unspecified	80
7.	Mushrooms	45
8.	Poultry	179
9.	Pigs	21
X.	Other, specify	68
0.	Unascertainable	45

[241] [402] [243] [228] [244] [235] [231]

8. Here, some farmers get a lot more rice from one rai of land than others get. Generally speaking, what are the various reasons why this is so? [243] [433]

1.	Fertiliser	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify	53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify	25
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

44

125
[402]

b. If no: have you ever made use of one in your work, or not?
3. Yes 145
4. No 106
5. Unascertainable 8

11. What is your opinion about fertiliser?
(See code at end)

[241]

12.a. IF R IS A FARMER: Have you ever used fertiliser or not?
6. Does not apply 17
7. Yes 32
8. No 232
— No Answer 12

b. IF HAS NOT USED FERTILIZER: For what various reasons have you not used fertiliser?
(See code at end)

c. IF HAS USED FERTILIZER: Have you ever used fertiliser in your seed-beds, or not?
9. Yes 20
X. No 13

d. IF HAS USED FERTILIZER: To what extent have you used fertiliser on your fields? On all your fields, or on the larger part of your fields, or on the smaller part of your fields?
1. On all fields 4
2. On larger part of fields 4
3. On minor part of fields 24
4. Unascertainable 1

13. What is your opinion about mushroom growing?
(See code at end)

[244]

14.a. Have you ever grown mushrooms, or not?
1. Yes 143
2. No 188
— No Answer 2

b. IF NO: Do you have any relatives or relative-like neighbors, who have grown mushrooms or not?
3. Yes 141
4. No 44
5. Unascertainable 4

15.a. What is your opinion about tilapia raising?

[228]

b. Have you ever raised tilapia, or not?
1. Yes 104
2. No 215
— No Answer 4

45

16.a. ASK ONLY FARMERS: This year just now beginning, will you do anything for increasing your income, outside of rice farming? [125] [434]

3.	Does not apply	13
4.	Yes	162
5.	No	107
6.	Unascertainable	11

b. IF YES: What various things will you do? [224]

0.	Nothing	3
1.	Mushrooms	42
2.	Poultry	51
3.	Fish (Incl. tilapia)	10
4.	Fertiliser	2
5.	Other, specify_____	84
6.	Unascertainable	6

[235] [228] [241]

17. ASK ONLY FARMERS:

a. Last time you planted rice, how many rai of rice did you plant? [243] [433]

1.	4 rai or less	14
2.	5 to 9 rai	25
3.	10 to 19 rai	49
4.	20 to 29 rai	65
5.	30 to 39 rai	53
6.	40 to 49 rai	32
7.	50 to 59 rai	19
8.	60 to 69 rai	14
9.	70 to 79 rai	2
X.	90 rai or more	—
0.	Unascertainable	20

b. And what was the total yield?

1.	120 tang or less	15
2.	121 to 300 tang	28
3.	301 to 600 tang	59
4.	601 to 900 tang	59
5.	901 to 1200 tang	56
6.	1201 to 1500 tang	25
7.	1501 to 1800 tang	10
8.	1801 to 2100 tang	10
9.	2101 to 2700 tang	7
X.	2701 or more tang	3
0.	Unascertainable	21

c. How about the year before--how many rai did you plant?

1.	4 rai or less	16
2.	5 to 9 rai	19
3.	10 to 19 rai	51
4.	20 to 29 rai	67
5.	30 to 39 rai	53
6.	40 to 49 rai	26
7.	50 to 59 rai	20
8.	60 to 69 rai	13
9.	70 to 89 rai	5
X.	90 rai or more	—
0.	Unascertainable	23

[6]

125
[243]
[433]

17.d. And what was the total yield at that time?

1.	120 tang or less	20
2.	121-300 tang	14
3.	301-600 tang	62
4.	601-900 tang	64
5.	901-1200 tang	50
6.	1201-1500 tang	23
7.	1501-1800 tang	10
8.	1801-2100 tang	8
9.	2101-2700 tang	7
X.	2701 or more tang	4
0.	Unascertainable	31

e. And how many rai did you plant two years back?

1.	4 rai or less	18
2.	5 to 9 rai	17
3.	10-19 rai	45
4.	20-29 rai	72
5.	30-39 rai	52
6.	40-49 rai	26
7.	50-59 rai	18
8.	60-69 rai	12
9.	70-89 rai	4
X.	90 rai or more	—
0.	Unascertainable	29

f. And what was the total yield that time?

1.	120 tang or less	20
2.	121-300 tang	24
3.	301-600 tang	48
4.	601-900 tang	69
5.	901-1200 tang	38
6.	1201-1500 tang	8
7.	1501-1800 tang	7
8.	1801-2100 tang	5
9.	2101-2700 tang	4
X.	2701 or more tang	1
0.	Unascertainable	69

[243]
[435]

18. ASK ONLY FARMERS:

a. Have the changes in the price of rice during the last two or three yea
caused you any worry, or not?

7.	Yes	156
8.	No	104
9.	Unascertainable	33

b. IF YES: What are you doing about it?
(See code at end)

[243]

19.a. Do you, at present, have your own home rice mill, or not?

X.	Yes	105
Y.	No	228

b. IF YES: What various things do you do with the polishings? 125

1.	DA as mill not used	3
2.	Used for feed	99 [243]
3.	Used for food	—
4.	They are sold	3
5.	Other, specify_____	3
6.	Unascertainable	2

c. ASK ALL: During this past year, did your family eat home-milled rice entirely, in major part, in minor part, or not at all? [262]

7.	Entirely	5
8.	For major part	51
9.	For minor part	78
X.	Not at all	199

20.a. As you know, some people have had plenty of chance to learn to read, while others have hardly had any chance. How about you yourself? Are you able to read the Thai language, or haven't you ever had the opportunity to do any reading? [212]

1.	Yes, can read	224
2.	No	109

b. IF R CAN READ: Would you say it is hard for you to read, or easy, or about medium?

3.	Hard	15
4.	Easy	85
5.	Medium	124
6.	Unascertainable	—

c. ASK ALL: How how about writing? How is it with you yourself? Are you able to write Thai, or haven't you ever had the opportunity to do any writing?

7.	Yes, can write	227
8.	No	106

d. IF R CAN WRITE: How much writing do you do? Are you able to sign your name, or can you also write a letter?

9.	Sign name only	63
X.	Can write letter	163
0.	Unascertainable	1

21.a. Suppose there were a factory in Minburi paying 20 ticals per day. Would you apply for a job to work in this factory? [464]

7.	Yes	162
8.	No	159
9.	Unascertainable	12

b. Do you think that someone else from your house would apply for a job there?

X.	Yes	105
Y.	No	211
0.	Unascertainable	17

125

[789] 22. Have you consulted with a medium frequently, occasionally, seldom, or never?

1. Frequently	7
2. Occasionally	4
3. Seldom	66
4. [illegible]	856

[775] 23. Have you been disturbed by a ghost frequently, occasionally, seldom, or never?

5. Frequently	6
6. Occasionally	8
7. Seldom	55
8. Never	864

[641] 24.a. Excuse me, could you tell me, who is now the prime minister of Thailand? If you know, could you please tell me his name?

1. Correct answer	193
2. Incorrect answer	89
3. DK, cannot recall	111

b. Excuse me, could you tell me, who is now the chief of police of Thailand? If you know, could you please tell me his name?

4. Correct answer	167
5. Incorrect answer	24
6. DK, cannot recall	1h2

25.a. IF R LIVES IN BC COMMUNE: Who is the district officer in Minburi? If you know, could you please tell me his name?

1. DA, as from Bangkapi	194
2. Correct name of present DO	9
3. Correct name of past DO	—
4. Incorrect name	16
5. DK, cannot recall	111
— No Answer	3

b. IF R LIVES IN KY COMMUNE: Who is the district officer in Bangkapi? If you know, could you please tell me his name?

6. DA, as from Minburi	141
7. Correct name of DO	10
8. Incorrect name	—
9. DK, cannot recall	154
— No Answer	28

[434] [829] [556] 26.a. Throughout the world and here in Bang Chan-Khamno Yao too, it is common among men that there must be some who are rich and some who are poor and some who are neither rich nor poor. How about you yourself? Are you rich, or poor or neither rich nor poor?

1. Rich	2
2. Poor	68
3. Neither	363

b. IF POOR: Here in BC-KY, do you think there are many or few people who are poorer than you?

5. Many	30
6. Few	31
7. Unascertainable	7

27.a. Excuse me, but at present do you have a (wife/husband) who lives and eats with you, or not? [125] [592]

1. Yes	255
2. Yes, qualified _____	6
3. No	72

b. IF NO: Excuse me, but is this because you are widowed, separated, divorced, or is there some other reason? [589] [586]

4. Widowed	45
5. Separated	9
6. Divorced	1
7. Other, specify	10
— No Answer	7

28.a. Your own children, all of them that have ever been born, how many are there? [592] [162]

8. None	24
9. One	32
X. 2 to 3	70
Y. 4 to 5	74
0. 6 or more	133

b. How many of your children are still living?

0. None	29
1. One	40
2. 2 to 3	83
3. 4 to 5	82
4. 6 or more	97
— No Answer	2

c. How many of your children have died? [165]

0. None	198
1. One	44
2. 2 to 3	56
3. 4 to 5	17
4. 6 or more	9
— No Answer	9

29.a. Have you ever been ordained as a priest, or not? [793] [792]

1. Yes	187
2. No	31
— No Answer	2

/Male Buddhist (220)/

b. IF NO: In the future, do you want to be ordained as a priest, or not?

3. Yes	20
4. No	11

c. ASK ALL: How many sons do you have twenty years old or over? [593] [162]

5. None	176
6. One	56
7. Two	29
8. Three or more	29
— Unascertainable	43

50

125 29.d. IF R HAS SONS 20 AND UP: Of your sons over twenty, how many have been ordained as Buddhist priests, or not?

[793]	7. DA	212
	8. None	22
[593]	9. One	58
	X. Two	35
[792]	Y. Three or more	16
[162]		

e. Do you have any sons under twenty?

	9. Yes	188
	X. No	108
	— No Answer	37

[793] f. IF YES: In future, do you want your sons under twenty to be ordained as priests, or not?

[782]	Y. Yes	186
	0. No	—
	— No Answer	2

g. IF YES: But aside from your admirable desire to have them ordained, in your true heart how sure is your expectation? Are you very sure or not very sure, or fairly sure that they will be ordained?

	1. Very sure	140
	2. Not sure	26
	3. Fairly sure	12
	4. Unascertainable	9
	NA	1

h. All over Thailand there are some Thai men who are over 50 but have never been ordained as priests. For what various reasons might this happen?
(See code at end)

[461] 30. Suppose there was some work you could do individually, or that could be done in a small group of two or three, or that could be done in a large group. Which way would you prefer to do the work--as an individual, or in a group of two or three, or in a large group?

	8. Individually	60
	9. Small group	55
	X. Large group	202
	Y. Undecided, depends	4
	0. Unascertainable	12

[572] 31. Around here in EC-KY there are some people who have many close friends and there are other people who have few close friends. And how about yourself? Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?

	5. More than most	62
	6. Fewer than most	94
	7. About the same	154
	8. Unascertainable	23

32. Last night, when you ate at your own house, did you eat with your hands, with fork and spoon, or with spoon alone? 125 [264]

9.	Hands	242
X.	Fork and Spoon	11
Y.	Spoon alone	73
0.	Unascertainable	7

33.a. Have you ever been to a clinic or a hospital? [743]

1.	Yes	624
2.	No	119

b. IF YES: In what various places?

3.	Minburi	156
4.	Bangkok	135
5.	Other place	7
6.	Unascertainable what place.	

c. IF R HAS BEEN TO CLINIC OR HOSPITAL: For what various purposes did you go?

7.	Treatment or hospitalization	123
8.	To bring a patient there	77
9.	Visit relatives or friends	45
X.	Other reason, specify_____	11
0.	Unascertainable	—

34.a. During the last year, did it occur to you frequently, sometimes, or never that you had difficulties falling asleep? [513]

1.	Frequently	73
2.	Occasionally	151
3.	Never	109

b. During the last year, did it occur to you frequently, sometimes, or never that you had a headache? [164]

4.	Frequently	50
5.	Occasionally	174
6.	Never	109

c. During the last year, did it occur to you frequently, sometimes, seldom or never that you lost your appetite?

7.	Frequently	50
8.	Occasionally	173
9.	Never	110

d. During the last year, did it occur to you frequently, sometimes, or never that your hands trembled so as to bother you? [164]

X.	Frequently	17
Y.	Occasionally	93
0.	Never	418
—	No Answer	5

e. During the last year, did it occur to you frequently, sometimes, or never that your heart beat so fast as to bother you?

1.	Frequently	36
2.	Occasionally	154
3.	Never	241
—	No Answer	2

52

125
[513] f. During the last year, did it occur to you frequently, sometimes, or never that you had a nightmare?

4.	Frequently	16
5.	Occasionally	120
6.	Never	197

[546] 35. In your life, how many times have you seen a movie, or haven't you ever seen one?

5.	Ten times and more	161
6.	4 to 9 times	60
7.	1 to 3 times	75
8.	Never	33
—	No Answer	4

[426] 36.a. Excuse me, I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?

5.	Yes	192
6.	No	140
7.	Unascertainable	1

b. IF YES: Is your debt now higher, or lower, or about the same as it was two years ago?

8.	Higher	68
9.	Lower	95
X.	About the same	28
Y.	Unascertainable	1

c. IF NO: How about two years ago, did you have a debt then or not?

9.	Yes	61
X.	No	78
Y.	Unascertainable	—
—	No Answer	1

[441] 37.a. Do you or anybody in your household buy certain products in order to resell them at a profit?

9.	Yes	85
X.	No	242
Y.	Unascertainable	2
—	No Answer	4

b. IF YES: Do (you/they) sell things regularly, occasionally or just at festival times?

7.	Regularly	31
8.	Occasionally	49
9.	Just at festival times	5
X.	Unascertainable	—

[241] 38.a. And now, I would like to know a little more about fertiliser. Do you think fertiliser is very good, fairly good or bad?

1.	Very good	106
2.	Fairly good	149
3.	Bad	15
4.	Unascertainable	63

125

b. And how about mushroom growing? Do you think mushroom growing yields very good money, good money, or little money? [244]

5. Very good money	68
6. Good money	160
7. Little money	49
8. Unascertainable	56

c. And what about Tilapia. Do you think tilapia raising pays very good money, or good money, or little money? [228]

9. Very good money	15
X. Good money	73
Y. Little money	175
O. Unascertainable	70

39. Do you believe in medium strongly, somewhat, or not at all? [787]

1. Strongly	12
2. Somewhat	192
3. Not at all	105
4. Unascertainable	24

40.a. Suppose you could do the same work in another rural place and earn ½ more than here. For example, it would be a place 100 kilometers from here. Would you be willing to leave for that place or not? [166]

5. Yes	118
6. No	203
7. Unascertainable	12

.b. IF NO: For what various reasons would you not be willing to go?
(See code at end)

41.a. If you had no land to work in NE-KY would you move to another place or not?

X. Yes	166
Y. No	112
O. Unascertainable	20
— No Answer	35

b. IF NO: For what various reasons?
(See code at end)

42.a. Some people say that, generally speaking people who live in Bangkok have more genuine and lasting happiness than people here in NE-KY. Do you agree or disagree? [369] [829]

1. Agree	136
2. Disagree	134
3. Unascertainable	63

b. IF AGREE: For what various reasons do you agree?

If Agreement (See code at end)

54

125 [369] [829] [793] [792] 42.c. IF DISAGREE: For what various reasons do you disagree?

If Disagreement (See code at end)

43. Do you agree or disagree that all priests are honest and moral men?

I. Agree	197
I. Disagree	90
O. Undecided	40
— No Answer	6

[829] 44. Do you think it is right or wrong for a Thai to marry a Chinese?

1. Right	55
2. Wrong	182
3. Unascertainable	91
— No Answer	5

[775] 45. Do you believe that ghosts bother people? Strongly, somewhat, or not at all?

4. Strongly	40
5. Somewhat	136
6. Not at all	124
7. Unascertainable	28
— No Answer	5

[653] 46.a. During the past year, have there been any activities for the public welfare in BC Wat, or not, to which you contributed labor?

1. Yes	232
2. No	102

b. IF YES: For what various activities did you contribute labor?

_____

_____

c. During the past year or so, have there been any activities for the public welfare in the wat, or not, to which you contributed money or goods?

1. Yes	264
2. No	63
— No Answer	6

[651] d. IF YES: For what various activities did you contribute money or goods?

_____

_____

47.a. Now about activities not connected with the wat or with religious ceremonies in the home. During the past year, have there been any such activities for the public welfare in BC-KY, to which you contributed labor, or not?

1. Yes	94
2. No	232
3. Unascertainable	7

47.b. IF YES: For what various activities did you contribute labor? 125
(See code at end) [653]

c. During the past year, have there been any public welfare activities, not connected with the wat or with religious ceremonies in the home, or not, to which you contributed money or goods?

1.	Yes	126
2.	No	197
3.	Unascertainable	8

d. IF YES: For what various activities did you contribute money or goods?
(See code at end)

48.a. Have you attended the ceremony of wisaka bucha at Wat BC every year, or only in some years, or only once in many years, or never? [796]

8.	Every year	156
9.	Only in some years	135
X.	Once in many years	21
Y.	Never	14
0.	Unascertainable	7

b. Have you attended the ceremony of gilding the Buddha's footprint at Wat BC every year, or only in some years, or only once in many years, or never?

1.	Every year	225
2.	Only in some years	62
3.	Once in many years	17
4.	Never	9
5.	Unascertainable	20

49.a. Excuse me, this is a strange question, but do you own a pair of shoes? [291]

6.	Yes	136
7.	No	197

b. Of what various materials are your shoes made?

8.	Leather	65
9.	Cloth, canvas	87
X.	Other, specify_____	11
0.	Unascertainable	
—	No Answer	1

50.a. In your household, is there a hatchet, or not? [412]

1.	Yes, hatchet	309
2.	No	24

b. (In your household), is there a pressure lamp, or not? [416]

3.	Yes, pressure lamp	188
4.	No	145

c. (In your household), is there a flashlight or not?

5.	Yes, flashlight	271
6.	No	61
—	No Answer	1

125
[412] 50.d. (In your household) is there a pair of scissors of any kind or not?
7. Yes, scissors 719
8. No 124

[207] e. (In your household) is there a radio or not?
9. Yes, radio 47
0. No 896

[402] f. (In your household) is there a winnowing machine, or not?
X. Yes, winnowing machine 108
Y. No 831

[243] g. (In your household) is there a windmill, or not?
1. Yes, windmill 161
[402] 2. No 778

[805] 51. Do you have a wrist watch, or not?
[405] 3. Yes 79
4. No 852
— No Answer 1

[231] a. Here in your household, how many buffaloes do you own?
5. None 81
6. One 87
7. Two 67
8. Three 41
9. Four or more 97

b. (Here in your household) how many pigs do you have?
0. None 321
1. One 8
2. Two 3
3. 3 or more 1
— No Answer 7

[235] c. (Here in your household) how many chickens do you have?
4. None 35
5. 1 to 2 7
6. 3 to 4 17
7. 5 to 9 31
8. 10 or more 863

d. (Here in your household) how many ducks do you have?
0. None 908
1. 1 to 2 9
2. 3 to 4 16
3. 5 to 9 18
4. 10 or more 49

57 125

53. Which of the following six qualities do you feel is the best thing for man: Virile, friendly, educated, rich, religious, lazy? [577]

5.	To be virile	2
6.	To be friendly	31
7.	To be educated	56
8.	To be rich	43
9.	To be religious	136
X.	Not to be lazy	57
Y.	Unascertainable	15
—	No Answer	3

54. Do you drink tea frequently, occasionally, seldom, or never? [272]

1.	Often	22
2.	Occasionally	68
3.	Seldom	158
4.	Never	88

55. Do you drink whiskey frequently, occasionally, seldom, or never? [273]

5.	Often	17
6.	Occasionally	73
7.	Seldom	157
8.	Never	76
9.	Unascertainable	—

56.a. In Thailand are many people who smoke opium. Excuse me, during your life have you ever smoked opium, or not? [276]

1.	Yes	45
2.	No	287
3.	Unascertainable	1

b. IF NO: Excuse me, do you think there is anything wrong with smoking opium, or not?

4.	Yes, it is wrong	281
5.	No, it is not wrong	5
6.	Unascertainable	1

c. IF SOMETHING WRONG: What are the various reasons why you think it is wrong?

7.	Bad for health	43
8.	Habit forming	42
9.	Waste of money	220
X.		
Y.	Other reasons, specify_____	40
0.	Unascertainable	

57.a. In the last month, how many times did you go to Nimburi or didn't you go at all? [484]

0.	Did not go at all	67
1.	Once	95
2.	2 to 4 times	130
3.	5 to 9 times	39
4.	10 to 19 times	30
5.	20 times or more	20
6.	Unascertainable	1

58

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[484]

57.b. IF R DID NOT GO DURING LAST MONTH: How many months ago was the last time you went to Nimburi?

7.	Within last 3 months	34
8.	More than 3 months ago	25
9.	Never been to Nimburi	1
X.	Unascertainable	3
—	No Answer	4

58. This past year, how many times did you go to Bangkok, or didn't you go at all?

0.	None	71
1.	Once	56
2.	2 to 4 times	90
3.	5 to 9 times	28
4.	10 times or more	67
5.	Unascertainable	1

59. In your life, how many times have you been to Don Muang Airport, or haven't you been there at all?

6.	None	148
7.	Once	58
8.	2 to 4 times	72
9.	5 times or more	52
X.	Unascertainable	3

60. In your life, how many times have you been to the annual agricultural fair or the Agricultural Experimental Station at Bang Khan, or haven't you been there at all?

0.	None	227
1.	Once	47
2.	2 to 4 times	45
3.	5 times or more	14
4.	Unascertainable	

61. In your life, have you ever been beyond the boundaries of Thailand, or not?

X.	Yes	13
Y.	No	318
0.	Unascertainable	2

62.a. Have you ever lived in Bangkok, or not?

1.	Yes	117
2.	No	216
—	Unascertainable	

[464]

b. IF YES: What various duties or jobs did you have when you lived in Bangkok?

4.	Soldier	37
5.	Police	10
6.	Student	22
7.	Artisan	1
8.	Laborer	23
9.	Other, specify _____	33
0.	Unascertainable	2

62.a. IF YES: What is the total number of months that you lived in Bangkok? 125 [166]

5.	One year or less	31
6.	13 to 24 months	30
7.	25 to 60 months (5 yr)	21
8.	More than 5 years	35
9.	Unascertainable	

63.a. Is there anyone now eating and living in your house who once lived in Bangkok, or not? [592] [166]

9.	Yes	36
1.	No	196
7.	Unascertainable	1

b. IF YES: What is your relationship to this person(s)?

1.	Son	9
2.	Daughter	6
3.	Father	2
4.	Mother	-
5.	Brother	2
6.	Sister	13
7.	Other relative	14
8.	Unascertainable	-

c. IF YES: At what age did he leave HC?

1.	Below 15 years	5
2.	15 to 19	8
3.	20 to 29	25
4.	30 years or more	5
5.	Unascertainable	4

d. IF YES: How long did he (she, they) live in Bangkok?

6.	Less than one year	5
7.	1 to 4 years	19
8.	5 to 9	6
9.	10 years or more	5
X.	Unascertainable	1

64.a. Is there anyone who has previously eaten and lived in your house and who is now working in Bangkok, or not?

1.	Yes	98
2.	No	241
3.	Unascertainable	

b. IF YES: What is your relationship to this person(s)?

4.	Son	35
5.	Daughter	21
6.	Brother	16
7.	Sister	8
8.	Other relative	18
9.	Unascertainable	—
—	No Answer	2

60

125 [166] [592] 64.a. IF YES: At what age did he leave BC?

1.	Below 15 years	6
2.	15 to 19 years	18
3.	20 to 29 years	30
4.	30 years or more	5
5.	Unascertainable	6

d. IF YES: For how long has he (she, they) been gone from BC?

6.	Less than one year	12
7.	1 to 4	43
8.	5 to 9	19
9.	10 years or more	19
X.	Unascertainable	

[464] [463] e. IF YES: What various duties or jobs does he (she, they) do in Bangkok?

1.	Housewife	17
2.	Unskilled laborer	19
3.	Skilled laborer	13
	Armed forces	17
	Service	9
	Employee	5
4.	Other (retired, selling things)	2
5.	Unascertainable	6

[166] [593] [602] f. IF YES: During the last year, have you seen this person(s) several times, once, or not at all?

9.	Several times	65
X.	Once	16
Y.	Not at all	8
O.	Unascertainable	3

g. IF YES: Does he (she, they) make regular remittances to this house?

X.	Yes	31
Y.	No	56
O.	Unascertainable	5

[207] 65. Do you listen to the radio regularly daily, occasionally, seldom, or never?

6.	Regularly-daily	45
7.	Occasionally	66
8.	Seldom	118
9.	Never	60
—	Unascertainable	14

[525] 66.a. Do you play the lottery regularly, occasionally, seldom, or never?

1.	Regularly	80
2.	Occasionally	56
3.	Seldom	220
4.	Never	38
5.	Unascertainable	—
—	No Answer	1

b. IF REGULARLY, OCCASIONALLY, OR SELDOM: Suppose you were to win the second prize of 10,000 baht. What various things would you do with this money?

(Pre coding)

	Qu 11	Qu 13	Qu 15A
1. Positive, no evidence: very good, good, nice	103	114	77
2. Positive, with evidence: good results, specific statements	47	120	95
3. Neutral or mixed	11	20	6
4. Negative, no evidence: no good, bad, of no use	9	5	15
5. Negative, with evidence: difficult to apply in deep water, must keep using it, too expensive, same results as without fertiliser	33	13	80
6. Positive, qualified: Fertiliser too expensive	13	—	1
7. Positive, qualified otherwise: only for high land; very hard to purchase; requires to keep on using it	32	18	18
8. Respondent states he has no opinion	54	31	26
X. Negative, qualified: It's not quite good, it depends on the soil	4	4	3
0. No answer	4	3	1
9. Respondent's attitude not ascertainable	23	5	11

	Qu 12B
0. D.A.	85
1. Too expensive	78
2. Difficult to purchase	15
3. Not fit for low land	39
4. Soil not suitable	3
5. No ascertainable reason given	28
6. Too little land	7
7. Other reasons	56
8. Have never used it before. Do not now either	12
X. N.A.	105
9.	21

	Qu 18B
X. N.A. Unascertainable	60
0. D.A.	151
1. Nothing, cannot do anything	70
2. Grow mushrooms	12
3. Raise poultry	15
4. Raise fish (including Tilapia	7
5. Use fertiliser	—
6. Find job as laborers	6
7. Other: try to find new seed, sell vegetables, borrow money from neighbors, keep rice until price goes up, economise, send sons to work	86

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		Qn 477	Qn 118
125 621	1. Too old to move, old man	33	12
	2. Easy to make living here, more comfortable, happy here	36	8
	3. Loves place, born here, would like to die here	37	26
	4. Doesn't like to leave area	10	4
	5. Relatives are here, likes neighbors, family here	32	28
	6. Own land	19	15
	7. Can't move her house, worried about housing in new place	7	1
	8. Change career, use other occupation	2	18
	9. Other: Big family, had to move too far, wouldn't know how to find a new place, people here one can trust, will help you	39	13
	0. D.A.	130	205
	X. No answer, unascertainable	7	13

		Qn 478 (labor contrib)	Qn 479 (money contrib)
125 653	4. D.A.	238	208
	5. School	23	21
	6. Bridge	36	36
	7. Canal	16	8
	8. Road	13	23
	9. Other: district office, festival shelter, marriage of neighbors	8	8
	0. N.A.	1	9
	X. Rest house	5	5

		Qn 669
125 525	1. Make merit, give alms, buy a golden belt, build a mosque	172
	2. Purchase land	91
	3. Trade, build a market, open rice mill	34
	4. Spend for the family, unspecified, improve group condition	68
	5. Build a house	40
	6. Purchase of farming equipment or stock	22
	7. Pay debt	7
	8.	
	9. Other: Offer sons to Thai army, to be carpenter, keep money in bank and collect interest, educate children, benefit country	44
	0. D.A.	39
	X. No Answer	2

43

Question 29.b. Reasons respondents give for why some old men have not served in priesthood (multiple choice replies).

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Immediate deprivation	
Dependents (worry about family, have wives, they have many children)	78
Financial reasons (they are very poor, they have no money, their parents are very poor, in debt)	56
Property (worry about property and professions)	15
Life situation	
Married too young (too early, have wives early, "fell in love, got married, acquired dependents, so could not get ordained")	50
Wrong orientation to life (they believe in a wrong way of life, they are lazy and not religious, they pay too much attention to worldly things, they cannot pray, "they don't think of their parents enough, they think only of themselves, and only of the present")	19
Religious belief system	
Apathy to priesthood (they do not like it, feel indifferent about ordination, have no intention of being ordained)	43
Indifference to Buddhism (they are not true believers, they did not participate in religion, "they aren't sons of Lord Buddha," "they don't love their race or Buddha")	19
Qualification	
Illiteracy, ignorance (they cannot read, they are ignorant, "afraid cannot abide by teachings and discipline," "they cannot read so they are ashamed if they become priest")	21
Personality (they are ruffians, they are disorderly drinking men, they are poorly brought up, they are not good enough, mental disturbance)	11
Background	
Lack of parental supervision (their parents can't control them, "nobody would give the advice and so they did not enter the priesthood)	5
Parental objection ("Some men have quarrels and their parents don't want them ordained," "they cannot receive permission from their parents")	2
Other reasons ("Because such man did not get ordained in previous incarnation, either," "because he has sinned in the past life and has had luck in this life," "they have to be soldiers," "they don't know the merit of sin," "they are too old, their merit did not reach the certain point so they did not have the chance," "they have children and sometimes feel ashamed before monk who have been ordained," "they forget")	8
No answer	43
Don't know, unascertainable	37

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125 Question 42.b. Reasons for Agreement (multiple choice replies)
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Amount of effort in earning a living
- Earn living more easily, lighter work, a farmer has to work too hard, life is hard here--easy there 29
- Can work indoors, needn't work in sun and rain 19
- Other (living is easy if you have money, don't have as many worries as farmers, can trade more easily) 3

Availability of jobs and money
- They have salaries so don't have to worry 11
- Earn more money, earn more money for pleasure, earn money more quickly, can make money in commerce 11
- They have money, they have properties 10
- Can find job more easily 10
- Good occupations 1

Conveniences
- More comforts 10
- They can get everything they want, can get everything easily 7
- Can find food more easily, it's more plentiful, food is better 6
- They have communication, transportation, water and light 5
- Everything is convenient 4
- Other (more privacy, children have a better chance for education, many pleasures, better living, no troubles) 5

Other Reasons
- More civilized, they have "knowledge," they can write, they govern the country, Bangkok is progressive, wherever you live you are happy if you behave well 8

No Answer 8

Question 42.c. Reasons for Disagreement (Multiple choice replies)

Cost of Living (Cost of living too High, must spend too much money, everything more expensive, food is expensive there) 34

Availability of jobs and money (Easier to make living here, no way of earning money there, hard to find a job there) 23

Dangers of Bangkok life (Fires, traffic, wars, too much fighting there, cheating, robberies, bandits) 17

No security (Poor people starve there, occupation is not permanent, economically less secure) 14

Urban Atmosphere (It's too crowded, the weather is bad, the air is bad, It's too noisy, too many mosquitoes, no kindness) 14

Integration in Bang Chan, lack of it in Bangkok (Work is harder here--but you have peace of mind, people have no strength or unity there, plenty of friends and relatives here, can live in own house here) 12

Bang Chan is O.K. (There is plenty of food (vegetables) here, life is easier and more convenient here) 9

Specific qualifications needed (Don't have enough knowledge, education, or experience to be happy there, must be a skilled worker) 7

Question 42.c. (Cont'd)

Need for Money in Bangkok (Only happy there when have plenty of money)		125
Amount of effort in earning a living (Have to work every day there	6	369
Other reasons (Too many poor people there, many illnesses there, the life of the people there depends on the farmer, people from Bangkok always go to the country when anything bad happens, people can be happy both places, different people have different hearts)	4	829
No Answer	12	
Don't know	4	
	5	

Question 46.b. For what various activities did you contribute labor? 125

Earth work		653
Earth work at Wat	18	
Earth work at Mosque	7	
Earth work, unspecified (digging dirt, filling low places, digging klong, loading and unloading earth and bricks)	53	
Cement Work		
Cement work at Wat (moved cement bags, laid concrete floor)	12	
Cement w ork, unspecified (building cement sidewalks, helped make concrete, poured concrete)	14	
Building and Repairs		
Building sala (pavilion, repairing pavilion)	51	
Building mosque (repairing Surao porch)	8	
Built priest house, construction work in wat, latrine in Wat, repair crematorium	8	
Building bridge	21	
Building road	13	
Constructionwork, unspecified (carried posts, repair a building, carpentry)	7	
Services		
At Wat fair (helped cook and serve, helped manage, sweeping)	27	
At Surao fair (helped cook and serve)	3	
Services, unspecified (boiled water, cooked, carried water)	15	
Guilding the gold leaf, miscellaneous labor at footprint guilding festival)	7	
Priest's funeral (cooked, helped at cremation)	7	
Other (served at Katin ceremony, solicited money for Wat)	3	

Question 46.d. For what various activities did you contribute money or goods? 125

To the Wat, unspecified	19	431
Contribution, unspecified	19	651
Construction activities		
To build pavilion (sala), to repair pavilion	57	
To make path, build street on Wat grounds	27	

125 Question 16.d. (Cont'd)

431 Construction activities (Cont'd)

651 To the Wat (to repair Wat, construction in Wat, fixing walls) 27

Contribution for building materials (buy cement, concrete floor, wood and tin, for new cement sidewalks, water tank) 21

To Sunee (general fund, repair) 9

To build a bridge 8

To buy a generator 6

To build priest's house bathroom 5

To build preaching hall 3

[796] Ceremonials

[764] For ceremonies, unspecified 12

To guild the golden leaf 27

To cremation (to build crematorium; to cremate father, people without relatives; to build corpse go-down; priest's funeral) 12

To Wat fair 10

Other (to Katlin, to revise the Buddhist sacred book, to ordain priest, for building Buddha figure, to New Year festival, for dancing girls) 11

To Sunee fair 4

Food and related donations

Gave rice, unspecified 5

Gave rice (food) for Wat, priests 18

Gave rice for Wat fair 7

To buy utensils (including cooking utensils) for Wat 6

To buy utensils for Sunee 6

Gave food to Sunee 1

APPENDIX C

Cornell Methodology Project,
Bangkok
2 May 1955

Interviewer Guide

Bang Chan Survey 1955

I. INTRODUCTION

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This survey is a multipurpose study. One of its objectives is to help determine HOW one can best use a technique such as a survey for community research in South East Asian villages. A survey is one of several techniques used in community research by Western social scientists. The study of a community permits to acquire knowledge about what is essential and important in the life of a village and town. Once a store of knowledge is available and described, the door is being opened for the introduction of improvements and improvements based on scientific knowledge and not based on hunches and speculative thinking. However, the instruments of social science research still bear great limitations. Life processes are the laboratory of research. Thus, dynamic processes are faced which make research complex.

Another objective of this survey is to study the meaning in a given cultural setting of variations in question wordings, different types of answer categories, and various types of questions in terms of question structure.

Finally, an attempt is made as well to collect some data from a typical rice village in the hinterland of Bangkok for supplementing cultural anthropological hypotheses and findings.

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This interviewer guide is to assist the interviewer in his task. Here anticipated difficulties and weaknesses in this survey are brought to light in order to make it easier for the interviewer to avoid traps inherent in field situations. First of all, it should be noted that replies to ALL QUESTIONS ARE REQUIRED. It means that a given number for each question or subquestion must be ENCIRCLED ON THE ANSWER SHEET OR THE RESPONDENT'S REPLY MUST BE REGISTERED IN THE PLACE PROVIDED FOR. Unless strict adherence to this rule is obtained from each interviewer, questionnaires will contain omissions and become valueless. Such questionnaires would signify a loss of effort, a loss of time, and unnecessary exposure of respondents to interviews. Secondly, an interviewer who has any doubts about procedural points, should discuss them without any hesitation either with the field director, or with his deputy, Mr. Textor, or with Mr. Civ, who, all three, consider it their responsibility to clarify all possibly confusing matters and to give such training to each interviewer as to enable him to perform his task with ease.

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II. DEFINITIONS

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Definitions are here provided only for a few basic terms within the context of this survey. An attempt will be made to discuss the many concepts contained in the questionnaire before the beginning of the actual field work, as the desirability to keep this guide short makes it unadvisable to go into lengthy details at the present time.

[592]

A household is a single person or a group of persons making one economic unit and distinguished as one kitchen unit. It is likely that members of the same household sleep under one roof (or roofs) belonging to one person, but the main criterion of the definition is the kitchen unit. With each kitchen goes one household. There is occasionally more than one household under one roof; this is found when more than one kitchen is encountered in one dwelling unit.

The head of the household, shortly referred to as HH, is the person whom other members of the household consider to be the head and who lives in this household - we exclude absentee heads of households.

Relationship to the HH is to be designated as whatever applies among the following categories: husband, wife, son, daughter, father, mother, mother-in-law, or "other relative."

Respondent, shortly referred to as R., is the person being interviewed. The R. should preferably be the HH, or, in the absence or nonavailability of the HH, an articulate adult member of the household.

Articulate member of the household is a person in a given household who could be considered eligible to substitute as R. for the HH. An articulate member of the household is another member of the same household as the HH. Such an articulate member should be an adult in the position to express himself without unusual difficulties and he is expected to have a scope of views not much less limited than those of the HH.

III. PROCEDURE

[131]

Our survey will be conducted in Bang Chan, shortly referred to as BC. This is a rice village about 20 miles from Bangkok. The Cornell Research Center has been working in this village for many years and friendly relations have been established all over. Senior members of the Cornell Research Center have taken great pain in maintaining good rapport with the villagers and are, naturally, anxious that nothing should occur to damage the established fine relations. Each interviewer is expected to keep this in mind all the time while in BC.

The basic unit in the social structure of RC is the household. A number of households is grouped in a hamlet under a headman. We will bring our survey altogether into seven hamlets. The total number of households as defined by us above will be in the neighborhood of 350. Our target is to secure one interview from each household kitchen unit. 124 621

Field conditions will be arranged such as to give each interviewer the best possible comfort and working facilities. Tentatively, interviewing time is set for 8 to 11 and 16 to 19 hours. However, weather and the experience of the first interviewing days will dictate the fixing of a more definite or a more flexible time schedule. After the end of each morning and afternoon interviewing period, the interviewers will deliver their completed interviews to Mr. Civ who will check the same for completeness. 124

Interviewing areas will be assigned and designated to each interviewer in due time. Then, the interviewer will proceed similarly or just as reported in notes on a trial interview by Mr. Civ: "I saw a man sitting on the ground in front of the house. With a smiling face, I made a Thai salute and said: Hello! Good morning, Sir, I would like to ask for your permission to ask you something about the life of Thai farmers as well as about the way of life in general... Sitting down near the R., I said smoothly: Excuse me, Sir, are you the KH?... How many kitchens do you have in your house? Only your family living in the house?... Thank you, Sir... Now, I am starting the questions, please be kind enough to answer, you will of course."

Should the potential R. ask the interviewer about his activity, the suggested reply is: I am doing research for the Cornell University.

Should the KH tell the interviewer that he has no time at the given moment, then the interviewer will attempt to fix an hour at the convenience of the KH.

Should any difficulty arise, it is suggested that the interviewer report the trouble as soon as practicable to the field director or his deputy.

Each interviewer is required to adhere rigorously to the phrasing of the questions in the questionnaire. Below, indications are provided for probing in situations, where it might be advisable. Probing is using some unbiasing short phrases for strengthening the question stimulus. Just what exactly is included in a probe will depend on the given situation, the nature of the R. and the degree of rapport between interviewer and R. At times, a short period of silence of perhaps 15 to 20 seconds might well produce the desired stimulus and make the R. speak after his first initial hesitation.

124 Each interviewer is actually given three instruments
125 to work with: (1) The questionnaire according to which he asks the given questions VERBATIM AND IN THE ORDER INDICATED, (2) The answer sheet on which he registers IMMEDIATELY AFTER EACH QUESTION RESPONSE the obtained replies, and (3) the interviewer checkform which is filled out after the completion of the entire interview, as soon as practicable.

IV. DISCUSSION OF QUESTIONS

The questionnaire consists of 66 questions according to the devised numbering system. Actually, many of the questions are frequently made up to include one or more subquestions. EACH QUESTION REQUIRES AN ENTRY ON THE ANSWER SHEET. However, 26 questions contain subquestions which are conditional. These are to be asked only in the case that a given condition is fulfilled in the response to the main questions. The conditional subquestions carry the following numbers: 3c, 6b, 9 b and c, 10 b, 12 b, c, and d, 14 b, 16 b, 18 b, 19 b, 20 b and d, 26 b, 27 b, 29 b, d, f, and g. 33 b, 36 b and c, 37 b, 40 b, 41 b, 42 b and d, 47 b and d, 49 b, 56 b and c, 57 b, 62 b and c, 63 b,c, d, 64 b, c, d, e, f, and g, and 66 b.

Six questions should be addressed to FARM OPERATORS ONLY. These questions are: 9, 12, 16, 17, 18 and 41. ALL OTHER QUESTIONS SHOULD BE ASKED OF ALL Rs.

The questions are formulated in such a way as to provide certain answer categories. These are: yes-no, agree-disagree, right-wrong, calibrated, multiple choice and open-ended categories. The way to handle these answer categories has been discussed in length.

At this point, attention is directed to the open-ended reply category, because it is more difficult to deal with. One procedure would be to write down verbatim a response obtained from the R. However, a R. might, at times make a speech and the interviewer would then not be in the position to register all that is said. He would not, furthermore, consider it necessary to register what had been said not connected with the question asked. Therefore, the interviewer would likely to be summing up the response. Such pertinent summaries are most important and frequently made. In this questionnaire, it had been attempted to anticipate the response categories to open-ended questions on the answer sheet to a great extent, as they are likely to fall in given patterns. In such cases, the likely answer categories are found on the answer sheet. On the other hand, open-ended questions remain to be filled in by the interviewer, when lines instead of categories are found on the answer sheet. Here, a verbatim rotation of the R.'s pertinent points is essential. In case of doubt, each interviewer is encouraged to discuss such

125 items the same day with Mr. Texter or with Mr. Civ. As the
124 space provided on the answer might not be sufficient for this purpose, the back page of the interviewer checkform should be used and an asterik should be placed in the space provided for the reply on the answer sheet. It is expected that for these questions one to three line replies would be of normal length. Such replies, posted on the backpage of the interviewer checkform, can be written in Thai and sufficient space should be left between the various notations for an English translation to be fitted in.

Before an item by item discussion of the questions, just two more remarks about probing. Probing is chiefly used in two kinds of situations: (a) when a R. is slow in replying to a question, or seems not to have understood a given question, or when he might try to avoid a reply by stating that he does not know (D.K.) or "does not recall"; in such cases the question or relevant parts of it are repeated verbatim; and (b) when a R. gives an irrelevant answer and the interviewer is prompted to probe with the intention to stimulate a response to the point of the question; here, usually more probing will be necessary than under (a).

DO NOT PAY ANY ATTENTION TO THE "CLM." COLUMN NUMBER DESIGNATIONS which follow question numbers on the answer sheet.

Qu. 2: Write in the precise age obtained on the line behind the corresponding age group. Below, you find a table of the zodiac years ranging from 24 to 73, which will provide you with a check and an adjustment of the frequently approximative age indicated by the R. For instance, assume that a R. says he is 50 years old, when you ask him: How old are you: You then ask him in what zodiac year he has been born. Assuming his reply is "khaan," you then read from below table "53 years" and this is the age which you register in the line behind: " 50 to 59" age group.

[805] Table of zodiac years

maaee	24, 36, 48, 60, 72	chalua	30, 42, 54, 66, 78
woog	23, 35, 47, 59, 71	khaan	29, 41, 53, 65, 77
rukha	22, 34, 46, 58, 70	tho	28, 40, 52, 64, 76
coo	21, 33, 45, 57, 69	maroong	27, 39, 51, 63, 75
kun	20, 32, 44, 56, 68	maseng	26, 38, 50, 62, 74
chuad	31, 43, 44, 67, 79	maaia	25, 37, 49, 61, 73

Qu. 6: You ask the R.: Do you smoke and offer him simultaneously a cigarette.

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Qu. 7: Some reply to this question is desirable and probing might be at times required. In the case that one reply to the point is obtained, no further probing is necessary. If there is no answer or an answer not to the point, probe once by repeating the question and, if necessary, by adding: You probably can tell me something about the new things.

Qu. 8, 9c, 11, 12 b, 13, 15 c, and 16 b ARE AS WELL QUESTIONS where probing might occasionally be required. When we talk of fertiliser, we have exclusively artificial fertiliser in mind and not manure or compost.

Qu. 17 a, 17 b, 17 c, and 17 d are provided with lines behind the given answer categories on which the figures in rai or tang respectively should be registered in the corresponding place just as you handle this in Qu. 2.

Qu. 18 b: This is perhaps a difficult question for some Rs., as simple as it might look. Probing-eventually the use of a silence period for stimulating embarrassment and response-is recommended, when no first reply is forthcoming.

Qu. 46 and 47: Pretests have indicated that the concepts of public welfare work and the distinction of what are contributions in connection with the Wat or religious activities and other contributions are not very clear in the minds of many Rs. Proceed according to the principle of sound logic for obtaining replies to Qu. 46 as distinguished from Qu. 47. In these questions some explaining might be exceptionally well justified.

Qu. 58: City limits of Bangkok are defined as follows: Present city limits at Rm 11, Lord Prov.

Qu. 62 b and 64 c: Probe for each duty and job. You can consider this like a multiple choice question, as the same R. might refer to more than one duty or more than one job held.

Qu. 66 b: This last question is again an open-ended question of the projective type. It is expected that respondents will have no difficulties in expressing their wishful thoughts. You can probe freely, if need arises.

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[For information on the acceptance of innovations by the people of Bang Chan, see Category 116, pp. iv, 6-37 and 43.]

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[For information on contacts between Central Thai and Western culture, see Category 116, pp. iv, 6-22, 36-37 and 43.]

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A STUDY OF THE ECONOMY OF A RICE GROWING VILLAGE IN CENTRAL THAILAND

A Thesis

Presented to the Faculty of the Graduate School of

Cornell University for the Degree of

Doctor of Philosophy

By

Kanol (dd Janlekha

September 1955

[Title Page]
[p. i]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7

BIOGRAPHICAL SKETCH

114 Kamol Odd Janlekha was born on July 22, 1918, in Nakorn Rajsima, Thailand. After graduation from Vajiravudh High School in 1935, he was sent by the Thai Government to study Agricultural Economics in the University of the Philippines, where he was graduated with the degree of Bachelor of Science in Agriculture in 1940.

In 1940, he entered Thai government service and served as Head Section of Rice Extension from 1941 to 1946. Throughout World War II, he also served as Food Drive Officer for Bangkok, Thonburi, Nonburi, Ayuthia, Chainat and Supanburi. Concurrently, he was also a member in the Occupation Sub-Committee of the Board of Evacuati[illegible]

He was employed as an instructer in Kasetsat University, Bangkok, in 1948. In this same year, he assisted Professor Lauriston Sharp of Cornell University in the preliminary community study of Bangchan, Thailand. In 1949, he served as field director of an agricultural economic survey of Sarapee District, Chiengmai, co-sponsored by the Thai Government and Food and Agricultural Organization of the United Nations.

He entered Cornell University in 1950, and received a Master of Science degree in 1951. During 1952-53, he was

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114 sent by the Southeast Asian Program of Cornell University to continue his research in Bangchan, Thailand. He completed the requirements for the degree of Doctor of Philosophy in September, 1955 with a major in Economics of Agriculture, and minors in Cultural Anthropology and Far Eastern Studies.

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The efforts of Bangchan villagers, who willingly and extensively contributed their time and knowledge to this study, are sincerely appreciated.

122 Finally, the author gratefully acknowledges the long-term financial support from the Cornell Southeast Asian Program and from the Government of Thailand which made the present study possible.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7

To

000 My teacher and friend

Lauriston Sharp

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7

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INTRODUCTION

I. PURPOSE OF THE STUDY

The Dominance of Rice in the Economy of Thailand

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In Thailand, rice holds such a dominant position that the whole economy of the country may almost be described as a rice economy. According to the 1947 census, 84 per cent of the working population were directly engaged in production of rice which occupied more than 90 per cent of cropped land. The dominance of rice in the Thai economy was attributed by Pendleton to the following factors: (1) Much of the best land in Thailand is flooded during the rainy season, and no other crop can be grown without special and expensive alteration of land; (2) Rice is the most wonderful food crop for man in the tropics, for even without fertilizers it will grow and produce at least a reasonable amount of food on soils too low in fertility for other food crops; and (3) Thailand has abundant cheap labor skilled in growing diverse varieties of rice with a fair degree of efficiency.[1]

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Another factor may be added to Pendleton's list -- wet rice, which has for long been the staple product of the country, combines with locally produced fish, fruit and some vegetables for an adequate diet of the populace.

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1. Robert L. Pendleton, "The Agriculture of Siam," Foreign Agriculture, Volume 10, No. 11 (November 1946), pp. 156-57.

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Furthermore, in his study of Chinese community leadership in Bangkok, Skinner observes that most aspects of Thai culture and society militated against the masses' taking up non-agricultural pursuits. In Skinner's words:[2]

> In the early 19th century, the basic division in Thai society was that between the elite and the masses. The king and the royal aristocracy together with the bureaucratic nobility wielded full economic and political power. Beneath these strata were the masses, the great majority of whom were either freemen or slaves. Within this hierarchic system, each individual had a fixed (though not unchangeable) status with clear-cut responsibilities and rights toward individuals above and below him. Every freeman was in theory the client or retainer of a person in the elite strata, while every slave was the property of an individual in the upper strata.
>
> The great majority of the freemen were agriculturalists, but not serfs; they were attached not to the land but to the patron, and in certain circumstances could transfer patrons. The client-patron relationship was paternalistic and interdependent; the freeman got security and care in return for his customary services. Freemen, however, as well as slaves, were not permitted to flee or leave the purview of their patrons and owners. In addition, all male freemen within certain age limits and many classes of slaves were liable to public service in the king's name for four months of each year -- this obligation being the basis of the corvee system. Public work of all kinds -- temples, canals, fortifications -- were built by corvee labor, while the army was manned by conscripts and slaves. Patrons were responsible, when requested, for supplying a certain number of their clients in a corvee capacity to specified government department.
>
> This description, though brief and somewhat oversimplified, suffices to show that the institutionalized status of the Thai masses precluded the personal freedom and geographical mobility necessary for

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2. G. William Skinner, A Study of Chinese Community Leadership in Bangkok, together with an Historical Survey of Chinese Society in Thailand" (unpublished doctoral thesis, Cornell University, Ithaca, New York, 1954), pp. 117-18.

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competition in new economic ventures. Moreover, the system discouraged even the further development of Thai craftmanship and skills. Talent was rewarded by forced service in the patron's household, under disadvantageous economic and social conditions. Agriculturalists had fewer obligations and a less coerced life than artisans, who when especially skilled, could be forced into royal service for life. Under these circumstances, Thai initiative and creativity were stifled.

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To complete the picture, a last factor contributing to the dominance of rice in Thai economy should be included. The revolutionary changes in Thai society and economy during the reigns of Mongkut and Chulalongkorn served only to strengthen the occupational patterns already set. Corvee was gradually weakened during the second half of the 19th century through cash exemption and state employment of wage labor, and the system was officially abolished in 1899. Chulalongkorn brought slavery to an end by process begun in 1874 and finished in 1905. The patronage system, too, was dealt a severe blow in the governmental reforms and reorganization of 1891-92. Coincidental to the gradual gaining of freedom of the Thai masses during these decades was the growing demand for Thai rice, initiated by the free trade opportunity offered by the Bowring Treaty in 1854 and stimulated by the opening of the Suez Canal in 1869. The tremendous expansion in rice cultivation which occurred during the second half of the century absorbed almost entirely the increase in Thai population as well as the Thai labor and energy freed by the abolition of the old semi-feudal system. The Thai, then, had no inclination

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175 to seek a life divorced from villages and rice cultivation;
178 the wealth of unused land which was theirs for the clearing
433 coupled with the world demand for rice meant that they also
56 had no necessity to consider any shift from the traditional livelihood. Thus the net result of the social reform and economic expansion during the reigns of Mongkut and Chulalongkorn was to confirm the Thai masses in their preference for rice cultivation.[3]

Lack of Attention to the Village Economy

* 243
433 In spite of the growing dominance of rice in the
654 economy of Thailand and the consequent increasing government responsibility in the success or failure of the crop, the nature of the operations of the rice economy in the village has been given surprisingly little attention. The result has been: (1) ignorance of the most simple facts about rural conditions resulting in wrong or doubtful popular concepts; and (2) ready popular acceptance of biased concepts promulgated by various interest groups.

829 Among the young intellectuals educated in Bangkok or abroad, civil service officials stationed in Bangkok, and the aristocrats, all of whom have no direct contact with village life, there seems to exist a stereotyped picture of the rice farmer. Only lip service is paid to his importance. He is thought of as an uneducated citizen, often cheated by the Chinese rice dealers. He is a man behind the plow

3. Ibid., p. 120.

829 far removed from what is going on in the civilized world.
Most of the time he appears barefooted in soiled clothes.
[291] He is rather content, wanting only enough food for his
[301] family and perhaps a few gold necklaces to adorn his wife
and their daughters. He grows the best quality rice the
world has known in the most fertile soil, and should be
rich if only he does not gamble and drink too heavily. With
"rice in his field and fish in his pond" he has the simplest
[342] life and no problems. Although he is located in an open
[358] country with fresh air, his living quarter is rather un-
healthy -- a thatched shack with dirt floor where buffalo
manure is scattered around. His farm work is simple, con-
sisting only of sowing seeds, plowing, harrowing, harvesting,
and threshing. He has one or two water buffaloes to help
[407] in the preparation of land and threshing. Farm implements
[412] are crude and simple, consisting of plows, harrows, sickles,
[52] and a noria (a kind of water-lifting device). The farmer
works hard during the short work season, devoting the greater
part of the year to such activities as drinking, cock fighting,
fish fighting, playing cards and various kinds of gambling.
Since he works little and spends much, he is always in debt.
If he is one among the few good farmers who work more and
do not indulge in wasteful pastimes, he usually has a sur-
[454] plus income which he hoards. He is too stupid to take ad-
vantage of savings-bank facilities which the government has
made available to farmers in every district.

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829 Among the city people who have some contact with
369 village life, the picture varies depending upon individual experience but is often exaggerated. Generally speaking, contacts are of two types -- through landlord-tenant relationships, and through short visits, usually during the dry non-working season when festivals abound. In either case, the picture of the farmer and his village life is distorted.

There are of course many who are really familiar with rural conditions. These are the farmers themselves and the people who have been living in a [641] market town for a long time. Unfortunately very few of these have occasion to become the effective spokesman for rice [647] farmers. If they ever enter the government service, they usually become only low grade officials whose voice is rarely heard.

829 It has been observed that distorted pictures of
433 rural conditions have frequently been reduced into wrong or doubtful popular concepts which often lead to the adoption of policies harmful to the rice economy in general and the rice farmer in particular. To cite a few examples, during the business recession in 1952, rice farmers were accused of having hoarded cash thus creating a scarcity of 829 money in the cities.[4] It is also generally held that farmers are poor because they have been and are being cheated by the Chinese rice dealers, and that once the problem of the

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4. Editorial in Prachatipatai (Le Democrate), 1952.

7: Jamlekha X-4,5 (1948-1953)1956 AO7 Central Thai
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829 Chinese middlemen is solved the farmer's problems will be all over. Another sweeping generalization is that farm poverty is due to the fact that farmers are lazy and indulge in gambling and drinking and thus waste a good six months or more in expensive pastimes. To remedy the situation, it has been suggested that farmers must be induced to work more, preferably by close and tight supervision since they are stupid as well as stubborn![5]

829 433 The second type of negligence involved the acceptance of biased concepts proposed by various groups whose interest is diametrically opposed to that of rice farmers. A higher price for rice, it is often propounded, will not benefit rice farmers because the increment will all go to the rice dealers; hence, a raise in price is nothing but a [435] help to the Chinese middlemen.[6] It is also often held that rice growing is profitable and the rice farmers are now quite prosperous as rice prices have gone up more than twenty times since the war; and as for those farmers who are apparently poor, it is actually their own fault due to self indulgence.[7] Small movable rice mills are held to be damaging to the farmers because they have created a large number of middlemen who in turn combine and put pressure on the farmers in the

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5. See my paper, "Thai Rice Farmer and His Economic Problems" (paper read at the Siam Society, Bangkok, May 17, 1949).

6. Prachatipatai, op. cit.

7. Ibid.

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829 form of price fixing.[8]
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These popular concepts are both illusive and illogical, and we shall have occasion to discuss them in the later chapters. For the moment, let us consider the consequences of the lack of knowledge about the real situation in the village and the prevalence of doubtful as well as biased concepts of the village rice economy.

433 The commercialized rice growing area of Thailand is
654 located in the Central Plain, which is roughly triangular
[503] in shape with each side about 150 miles in length and is criscrossed by canals for irrigation and communication. It is in this area that the government rice promotion program has been concentrated. In 1938 a rice man, an equivalent of the American county agent, was assigned to each of the 91 rice producing townships in the area to carry out the program of bolstering rice production through advocacy of improved varieties and through rendering technical advice and direct help in water adjustment. In 1954, a new Rice Department was created to deal specifically with problems in rice production, and the supervised area was extended to cover the entire country. In order to perform their duty efficiently, the rice men need not only the technical knowledge in the agronomic aspect of rice production but also the general background information on village economy.

654 Again, not only is such information necessary for
433 the ordinary functioning of the supervision and extension
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8. Ibid.

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654 433 185 work of the Ministry of Agriculture, it is also indispensable to the formulation of an integrated national policy. Even as late as 1953, M. L. Dej Snidwongse, the former Governor of the Bank of Thailand, remarked that Thailand was not ready for an overall economic plan because reliable data were still lacking.[9]

659 648 433 Thailand's shortage of economic data is currently a major obstacle to the potential economic aid she might receive from abroad. Although various international assistance agencies are being stationed in Bangkok, with limited background information, experts of these agencies are willing to endorse only conservative recommendations. It is a pity that these experts should waste much time and effort in securing simple information which should be made available to them at the outset. Hence, the much needed tangible aids are slow to materialize.

656 435 433 Still, the damage brought about by the shortage of information is not as grave as that incurred by doubtful and biased concepts previously mentioned. Much can be said about the postwar control of the price of rice. Suppression of the small movable rice mills is also an unnecessary step. If large rice mills are desired for other purposes and cannot in one way or another compete successfully with small rice mills in spite of their apparent advantage in scale of business, it would seem that the interest of the farmer might be

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9. In an address delivered at the Economist Lunch Club, Bangkok, 1953.

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better preserved by direct government subsidy to the former rather than suppression of the latter.

Purpose of the Study

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The primary purpose of this study is not to recommend an elaborate agricultural policy for Thailand, nor to influence its present course, but to lay ground work for further researches necessary for effective formulation of a realistic policy. More specifically, it is intended to locate agrarian problems and pose meaningful questions for subsequent studies on a national scale. Whenever possible, it also seeks to dig out details which are usually not uncovered by the more extensive studies of a survey type.

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II. SOUTHEAST ASIAN SETTING OF AGRARIAN PROBLEMS OF THAILAND

Some writers suggest that Western economic theory is not valid for the East because of differences in setting. This point should not be over-emphasized; for good theory takes into account exceptions to the rule, which some people interpret as disproving the generalization. It is important to note, however, that economic principles are generally based on certain assumptions and that there are several instances when assumptions taken for granted in the West do not apply in the East. To avoid the danger of over-simplification and to be alert to the consequent pitfalls, it is perhaps worthwhile at this juncture to digress into the Southeast Asian setting before occupying ourselves with the economic operations in a single rice producing village of Thailand.

Basic Historical Background

The heart and civilization of the West are its cities and towns. According to Zinkin, it is the nature of these cities and towns and their effect on Western society which historically differentiate Europe from Asia.[1]

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1. Maurice Zinkin, Asia and the West (London and Aylesbury: Hunt, Barnard & Co., Ltd., 1953), p. 11.

The same author maintains that Asian cities were rarely long-lived and that their economic basis was not commerce. Asia has known no City-State nor Corporations, hence there was no growth of diverse loyalties as in Europe. No associations of citizens had arisen; for there were no citizens, there were only subjects and monarchs. The true Eastern city has always been a collection of civil servants, soldiers, and artisans, all dependent upon the whims of power. The cities in Asia could provide no focus of resistance to arbitrary power, and the capacity to resist has resided in the village only. Asian villages, on the other hand, are very old, and if need be, could function without any external authority.[2]

In the West, what gave the cities their importance was their economic life, not their political position. Relatively speaking, European peasantry played a minor role in the economy of the country. On the other hand, cities in the East grew rich because their lords were powerful. The preference of Asian merchants for gold and silver, which they could hoard, over productive investment was the natural reaction to the knowledge that any apparent possession of wealth would bring in a tax-collector. The lack of security for capital in Asia helps explain the technical backwardness of the area.[3]

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2. Ibid., p. 13.

3. Ibid., pp. 15-16.

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Until the most recent time, real opportunity did not exist in Asia. Government was carried on by appointees of the monarch. In China they were scholars, in Japan soldiers, in India and Southeast Asia they were the local nobilities. Nowhere were they merchants.

The Western village was constantly drawn into a wider economy, and the countryman was brought in touch with the larger world. In Asia he was not. While the Western peasant was ready to migrate to the cities or emigrate overseas and could adapt himself to the changing modes of life brought in by the Industrial Revolution, his Asian counterpart could conceive no other way of life than agriculture.

Finally, the growth of the middle class was a purely European phenomenon. It was the peculiar conditions of urban life that had shaped the type of mind of the middle class people. In the countryside, there were usually only two classes -- the landed and the landless. On the other hand, there was room for an infinite gradation in the city. It was this play of levels which had given the Western city dweller, and through him all members of Western society, his flexibility and curiosity of mind, his admiration for skill and appreciation of success, the weight he gave to tradition, and the readiness with which he innovated. This urban class and these urban traits and urban professions had been lacking in Asia.[4]

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4. Ibid., p. 18.

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Southeast Asia and World History

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At the present time the whole of Southeast Asia is obviously and dangerously entangled in world history. Often it is suggested that this is quite a new thing. Actually, there is nothing new in the entanglement of Southeast Asia in world history. After pointing out that the Southeast Asian states derived their civilization from India but fell within the political orbit of China, Professor Coedes summarizes the consequences:

> Most of these states have reacted to the great shocks that have disturbed the Indian peninsular and the Middle Kingdom. The conquests of Samudragupta in the Ganges Valley and South India in the 4th century and the expansionist policy of Chola emperors of Tanjore in the 11th century have had their repercussions on the other side of the Bay of Bengal. Even more markedly has the history of Further India been influenced by affairs in China. The Chinese have never looked favorably on the growth of strong powers in the southern seas, and it deserves notice that Funan, Cambodia, and the Javanese and Sumatran realms reached the zenith of their prosperity during just those epochs when the great dynasties of China were enfeebled. Also these countries are mutually linked together by numerous ties, geographic and economic, and every revolution in any one of them, by disturbing the whole region, has had repercussions on the others.[5]

Similarly, Krom suggests links between the course of events in India and the spread of Indian settlements over Southeast Asia.[6]

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In a talk on the Tropical Far East and world history at the Siam Society, Bangkok, Furnivall pointed to economic

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5. J. S. Furnivall, "The Tropical Far East and World History," Journal of the Siam Society, Volume 39, Part 2 (January 1952), pp. 120-21.

6. Ibid., p. 121.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai
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648 geography for an explanation of the relations between South-
439 east Asia and the outer world. The history of the China trade and the spice trade, Furnivall indicated, had revealed that Southeast Asia was of minor importance in each trade route, but it was significant as a byway along both routes, and it was sensitive accordingly to convulsions affecting the course of trade along either route. In Furnivall's words:

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> For China there have always been two main lines of communication with the West: the land route across central Asia, and the sea route round the coast. Throughout the ages traders have followed whichever route seemed easier. Both routes, however, are liable to interruption. The land route is exposed to wild hordes in central Asia and to the results of political catastrophes in the Middle and Near East. The sea route can easily be blocked at its main gateway, the Straits of Malacca. Yet, when both these two main routes are blocked, there is still a byway. Traffic can still find a way down the great rivers of Southeast Asia -- the Irrawaddy, the Salween, the Mekong, and the Red River -- diverging when convenient to the shorter rivers, the Sittang and the Menam. Time and again these rivers, and especially the Irrawaddy, have played a part in history.
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> For the trade in spices from the Moluccas, the Straits of Malacca are of supreme importance; there is only one main route. But this narrow channel can easily be held against outsiders. When it is blocked, however, there are two byways. One byway is through the Sunda Straits between Java and Sumatra; repeatedly throughout the course of history we find mention of Bantam under various names, and of places close to Bantam -- Jakarta or Batavia, and Benkulen. There is also a second byway, from various points along the western coast of Burma and Malaya cutting across the mainland to the Gulf of Siam or continuing further to the Mekong and Annam.[7]

Colonization, Old and New

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The search for gold following Vespasian's placing of an embargo on this precious metal from Rome during 69-79 A.D.

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7. Ibid., p. 121-22.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai
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175 was suggested by Furnivall as a cause of the foundation of
439 Indian trading centers at convenient sites along the coasts
648 and main rivers of Southeast Asia. The same author places the date of the first Indian colonization in the area at about 150 A.D.[8] Harrison, however, maintains that the first definite Indian settlements were established in the first century A.D.[9]

175 Indian settlements were typically colonial in the
177 old sense of foreign settlement without foreign rule. The-
563 settlers came as traders, intermarried with the local people,
648 acquired wealth, and formed an aristocracy. Then, as new migration ceased, the Indian rulers and aristocracy were absorbed into the people. In the inscriptions, the language and written characters took on native forms, and the names of persons and places were no longer Indian but native. Similarly, in the religious monuments and other buildings a native style was superimposed on the earlier Indian models.

175 Most authors have credited these Indian settlers
177 with having brought Indian culture to Southeast Asia. Harrison,
648 for example, takes for granted that "Indians who voyaged overseas to Southeast Asia naturally brought with them the ideas and practices of Hinduism and Buddhism."[10] He further speculates that "traders, adventurers and craftsmen were followed by Brahman and Buddhist priests and teachers,

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8. Ibid., p. 127.

9. Brian Harrison, South-east Asia (London: Macmillan & Co., Ltd., 1954), p. 10.

10. Ibid., p. 12.

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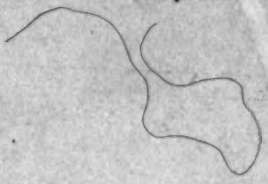

carrying the civilizing influence of Indian cultural and spiritual life and implanting it in these new lands by introducing the art of writing and the classical Sanskrit language and literature; bringing as well their own vernacular languages to enrich the vocabularies of Southeast Asia.[11] It may be argued, nevertheless, that since there is little good evidence for any large Indian emigration to Southeast Asia, much Indian culture could have been brought back by cosmopolitanized Southeast Asian traders who often spent months in India waiting for the monsoons to change their direction.[12] It should be noted in this connection that during this time of early Indian colonization trade relations were also extended westward by Indonesians (who earlier reached Madagascar) and other Southeast Asians.

During the expansion of Islam, from 1350 to 1500, Moslem colonization followed the Indian pattern. Thus we may say that formerly a colony was merely a settlement in a foreign land and the settler had little or no political connection with the home land. The Indian and Moslem became foreign rulers, but they did not establish foreign rule. Subsequently, the Portuguese and Spaniards came as royal agents and with a warrant from the Pope to undertake both the conquest and conversion of the people. The old idea of a colony as a settlement survived: there were grandees

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11. Ibid., pp. 15-16.

12. The author is indebted to Professor Lauriston Sharp for the development of this idea.

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175 with large estates, permanent immigrants of lower rank who
648 married native women, and priests spending a lifetime in
563 their parishes. But the colonies were ruled by Governors from Europe. They were both settlers and rulers. The Dutch came merely as traders, but they could obtain tropical produce only in the form of tribute; economic circumstances required them to accept sovereignty on behalf of the home company and to rule the people indirectly through native chieftains, and also to settle permanently, though on a comparatively small scale, to supervise native cultivation. They were primarily rulers and were settlers only by force of circumstance. In the 19th century the English carried the process a stage further. Through the industrial revolution they had goods to sell, and the object of their policy was not tribute but trade. This required direct rule, but not settlement, except in the ports. Finally, with the growth of capitalism and the opening of the Suez Canal, the typical system of colonial development was by foreign capital with European management and imported Asian labor. Thus there was a process of development from the old colonial system of foreign settlement without foreign rule to a new system of foreign rule without settlement.[13]

Impact of the Changing Trend of Trade with the West

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648 In the nineteenth century, the age-old means of communication between the different parts of Southeast Asia

13. Furnivall, op. cit.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai
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648 were revolutionized by the techniques and aims of the West.
175 After 1850, European-owned steamships began the gradual
177 process of taking over the bulk of the inter-port trade
648 from native sailing boats and Chinese junks. The opening
439 of the Suez Canal in 1869 made possible the great modern
505 expansion of Western rule and trade, and thereby brought about the economic and social revolution which has created the Southeast Asia of today. The year 1870 is the real dividing-line between medieval and modern in the history of Southeast Asia.[14]

175 Whereas during the sixteenth, seventeenth, and eight-
177 eenth centuries the various European nations active in South-
433 east Asia had, on the whole, limited themselves to trading
439 and acquisition of high-priced nonbulky commodities, such
648 as spices, the economic policy of the nineteenth century called for large quantities of bulky goods, such as sugar, fibers, oil seeds, coffee, and copra. Since the peasantry of Southeast Asia, almost without exception, raised only subsistence crops and had only limited surplus, it became necessary for the colonial powers to increase agricultural production. This was done in two ways: through the application of pressure on the peasantry to produce for export, and through the development of large-scale plantation agriculture.[15] The shift of emphasis from trade to production

14. Harrison, op. cit., p. 197.

15. Karl J. Pelzer, "The Resource Pattern of Southeast Asia," Southeast Asia in the World Today, ed. Phillips Talbot. Chicago: The University of Chicago Press, 1951, p. 109.

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thus set a new stage -- the development of the natural resources of the whole region.

This change-over from a subsistence economy to a commercial economy involved the large-scale expansion of traditional crops or the development of new commercial crops. It was stimulated by the introduction or expansion of a money economy, the flow of capital and the development of land and sea transport. It was supported by Western technology, methods of administration and systems of justice. This whole process greatly affected the traditional institution, upsetting the balance of a medieval world. The free, individualist spirit of Western rule and commerce cut at the roots of traditional social life, undermining the corporate strength of family and village. But the most serious direct threat of the new economic forces was to the peasant's ownership of land. Expanding economies, new money taxes and cheap imports meant better business than ever for the money lender. Many peasants became ruined by debt and lost their lands. Indebtedness and debt slavery were not new in Southeast Asia; the latter was fairly soon stamped out, but the former now became much more widespread than before, resulting in the creation of a landless proletariat.[16]

Characteristics of Current Southeast Asian Economy

In spite of all the differences among the countries of Southeast Asia in the natural environment, ethnic

16. Harrison, op. cit., p. 210.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai
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184 distribution, and aspects of Western colonial policy which have tended to increase the contrasts between parts of the region, there are certain considerations of broader nature and of far-reaching significance that give validity to the concept of Southeast Asia as a regional unit possessing certain common features which will be discussed in brief as follows:

a. Common heritage of colonialism.
b. Dual economy.
c. Plural society.
d. Dominance of the agricultural section.
e. High rate of population growth.
f. Determination to industrialize.
g. Small size of market and slow rate of capital formation.

433 The direction as well as the pace of economic develop-
648 ment in the colonial or protected areas of Southeast Asia has been primarily determined by the overriding economic interests of the imperial powers. Even in Thailand, where political independence was preserved, economic dependence upon European capital resulted in the creation of a characteristically 'colonial' economy. This is exemplified by the following conditions: (1) producer of raw materials; (2) concentration on a few export products; and (3) lack of manufacturing industries. As a consequence, these countries are highly affected by substitution, price fluctuations, and changes in consumer demand. Furthermore, they are dependent on limited markets for export, and hence are adversely

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433 affected by these few importing countries' determination
648 to be self-sufficient in food.

181 A dual economy as a distinctive character of colonial
433 rule is a theory propounded by some Dutch economists who contend that in tropical dependencies there are two distinct systems of economy. In the Western sector economic forces act in strict accordance with the economic laws enunciated by the earlier classical economists; but in the Eastern sector these laws have no force, and Western economic principles are inapplicable. The Western sector is ultra-capitalist since economic forces act freely, not even subject to the social inhibitions which still restrain them in Europe or the Western world; the Eastern sector, on the other hand, is precapitalist, with prestige carrying more weight than profit and communal influence restraining the individual desire of gain.[17] One
433 of the consequences of a dual economy is that it is difficult
438 to conduct business because the people will not trade on
439 Western lines. Inefficiency in trade leads to high operational cost and thus to social waste. Moreover, there is a likelihood of exploitation of indigenous people by Western traders as well as by foreigners of Asian origin who are free from social restraint.
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563 One feature that has long been common to the countries of Southeast Asia and is so obvious that it could not fail

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17. J. S. Furnivall, "Cooperation, Competition, and Isolation," Southeast Asia in the World Today, ed. Phillips Talbot, op. cit., p. 71.

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563 to impress even the most unreflecting sight-seer is the medley of ethnic groups. What is almost equally apparent
563 is that these ethnic groups do not mix. Each has its own
571 quarter, its own temple, its club or other meeting ground for social functions, its own forms and places of entertainment and recreation. They do not meet in these places but only in the market place to make money out of one another or perhaps with one another. They have no common link except in business. What is not quite obvious is that each ethnic group has its own special economic function. There is a plural society with its own distinctive and characteristic plural economy.

563 Typically, a plural society in Southeast Asia com-
565 prises three main sections: the Europeans, constituting an
433 upper class; the foreign orientals, Indian or Chinese, consti-
571 tuting a middle class; and the great mass of the native population in the lower class. The Europeans and foreign orientals are temporary residents, strangers to one another or at best casual acquaintances, and the native community is little more than a crowd of individuals. In the relations between the classes, there are no social ties to dull the edge of economic competition. Within each class, inherited traditions lose their force. Society as a whole is divided into groups; each group is merely a collection of individuals, and in each group life is simplified to an economic struggle for existence. Social life is reduced to its economic content, society is converted into a business concern, and only the

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563 foreign army of occupation has preserved it from disruption.
565 The essential and distinctive character of a plural society
433 is that it is dominated by economic forces, and, outside a
591 few partly sheltered oases, Southeast Asia illustrates the capitalist system in its purest form.[18]

162 Another common feature is the dominance of the agri-
171 433 cultural section of the population. The latest available
171 figures show the percentage proportions of population dependent on agriculture in the area as follows: Burma, 68; Indonesia, 66; Philippines, 69; Thailand, 85.[19] The same source indicates the proportions for various regions of the world as follows: North America, 20; Oceania, 30; Europe, 33; South America, 60; Asia, 70; and Africa, 74.

171 With the prevailing techniques of production and the
433 consequent low productivity per man, dominance of agriculture
434 means low per capita national income. When countries are grouped by level of economic development on the basis of per capita national income as of 1950, all the six countries of Southeast Asia -- Burma, Indo-China, Indonesia, Malaya, Philippines, and Thailand -- fall in the underdeveloped group.[20] Moreover, there is in Southeast Asia a true surplus
443 464 population on the land in the sense that even under the
161 present methods of cultivation a sizeable fraction of the

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18. Ibid., p. 77.

19. Food and Agriculture Organization, 1953 Yearbook, Vol. VII.

20. Eugene Staley, The Future of Underdeveloped Countries (New York: Harper & Brothers, 1954), pp. 16-17.

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man-power could be removed without significantly reducing food output. Under this circumstance, not only the productivity of agriculture but also the opportunity for urban industry to grow and flourish is hampered. A major obstacle to development of efficient manufacturing in underdeveloped countries is the small size of the market, which is in turn a consequence of the low purchasing power of the bulk of the people, most of whom get their living from the land.[21]

Southeast Asia has been characterized by its rapid growth in population. Broadly speaking, the region has been until recently one of very thin population. It seems probable that the whole of Southeast Asia in 1800 contained only about ten million people. Malaya then contained about a quarter million people, Java about four million, and Burma probably less than two million. It was, even at the end of the 18th century, a zone of labor shortage. But the last 150 years brought tremendous changes in population. It has been a period of tremendous population increases, causing people to swarm upon the more fertile areas, upon deltas and volcanic cones where people had not clustered before. By the quinquennium 1916-20, the total population of Southeast Asia had become 84 million, by 1936-40, 120 million, and by 1946-50 it was nearly 145 million.[22] This rapid population growth has been a great concern to students in economic

21. Ibid., p. 253.

22. E. H. G. Dobby, Southeast Asia (London: University of London Press Ltd., 1951), p. 386.

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development who fear that these countries might not be able to expand their production faster than population expands, in which case the result of economic development efforts will be a greater quantity of people with little or no gains in the quality of living conditions. In Zinkin's words, "The growth of population and the impact of the West have between them, in the last hundred years, so upset the delicate balance that most of the Asian countryside is now bankrupt . . . . The alarming feature of the peasant economy of Asia is not simply that it is desparately poor. It is that in recent decades, and in most countries of Asia, it has been growing poorer. It is a changing, dynamic economy. But it has been changing for the worse."[23]

Poverty is not new in Southeast Asia. What is new is the awareness of poverty and the conviction that something can be done about it. "A great change", reported Harold Butler, "is stirring Eastern society. The consciousness of misery has been created by the growing realization that it is not the inescapable lot of the poor and that chances of better life now exist."[24] All of the countries in Southeast Asia have within the past decade set up official agencies charged with planning and promoting economic development; and for international assistance to hasten it, is the constant

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23. Zinkin, op. cit., p. 34.

24. Harold Butler, Problems of Industry in the East (Geneva: International Labor Office, 1938, Studies and Reports, Series B, No. 29), pp. 65-66.

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648 theme of their spokesmen in the economic and social organs
185 of the United Nations. It is probably too early at this moment to speculate on the outcome of Southeast Asia's
000 determination to industrialize. Much can be said, however, about the element of urgency and speediness commonly attached to each project of industrial development envisaged by each of these countries. "For successful development," cautions Staley, "two things are necessary: a substantial and continued economic advance -- and a social and political outcome which produces self-reliant citizenship in a free society, stable and responsive democratic government, and cooperation with other free societies."[25] The same writer warns that if capital investment and material technology are puched energetically in an underdeveloped country while little or no attention is given to deliberate promotion of appropriate social and psychological change, the result is likely to be either a failure of the development process to "take" and become "self-generating" or creation of a menace to the free world.[26] Garner also gives similar warning, "People have to develop themselves before they can change their physical environment, and this is a slow process."[27]

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44 A most important factor that has kept Southeast Asia economically underdeveloped is the small size of market in

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25. Staley, op. cit., p. 202.

26. Ibid., p. 203.

27. Ibid., p. 203.

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each of the countries in the area, which is due to the low level of their real income. This small size of market has important effects on the volume of international trade, on the pattern of foreign investment, and on the use of domestic savings.

Because of their low level of productivity and hence of low real purchasing power, the underdeveloped agricultural countries play a minor part in world trade. Business investment abroad has tended in the past to shy away from industries working for the domestic market in the underdeveloped areas and to concentrate instead on primary production for export to the advanced industrial centers. With special reference to Southeast Asia, most writers assign the pattern to the commercial design of the colonial powers. Nurkse, however, maintains that it does not reflect any sinister conspiracy or deliberate policy, still less any concerted attempt of the rich countries to exploit the poor. "Exploitation there may have been," he said, "but this pattern of foreign investment by itself does not constitute any proof of it. This pattern can be readily accounted for on obvious economic grounds. The explanation lies, on the one hand, in the poverty of the local consumers in the underdeveloped countries, and on the other, in the large and, in the nineteenth century, vigorously expanding markets for primary products in the world's industrial centers."[28]

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28. Ragnar Nurkse, Problems of Capital Formation in Underdeveloped Countries (Oxford: A. I. Broome and Son, 1953), p. 25.

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Finally, the weakness of the market incentive for private investment in the domestic economy of the low-income countries can affect domestic as well as foreign capital. The first difficulty is that the volume of domestic saving is small, because of the low level of income. But then there is the further trouble that such saving as does take place tends to be used unproductively: it tends to be put into real estate, gold, jewelry, commodity hoards and hoards of foreign or domestic currency. While this unfortunate tendency is usually explained by reference to inadequate financial organization or lack of education, Nurkse suspects that the tendency may also reflect a more deep-seated economic condition -- the deficient inducement to invest due to the poverty of the domestic market.[29]

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Cultural Background of Thai Peasants

Benedict describes Thai characteristics as indolent, unwilling to labor for more than immediate needs, content with their lot, uninterested in money or economic advancement, conservative, and satisfied with a dependent status.[30] These characteristics have led to preference for agriculture, government service, and self-employment in general to other occupations.

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29. Ibid., p. 26.

30. Ruth Benedict, "Thai Culture and Behavior" (an unpublished war-time study dated September 1943, Data Paper number 4, Southeast Asia Program, Cornell University. Ithaca: Department of Far Eastern Studies, 1952), pp. 34-45.

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[81] Until recently, the Thai peasant lived in an underpopulated and fertile land where the requirements for subsistence were modest and easily obtained. Under such circumstances he saw thrift as of limited value and work for its own sake as senseless. In the Thai universe, consumption and enjoyment were the immediate stuff of living itself, never postponed, ultimate ends. The Thai learned to enjoy life and live it in the present; there was no pressure to do otherwise.[31]

The Thai peasant had no place in an historical continuum of kin. He did not even use a surname.[32] Immediate ancestors were honored by cremation (which was in part an honor to the sponsoring descendant himself) and then were usually forgotten. There was no ancestral cult and no kin responsibility outside the immediate or extended family. His religion, the Hinayana Buddhism, emphasized individual merit-making and salvation, and condemned as worldly any excessive concern for the material advancement of self and family.

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Values for the Thai masses were not elite-centered. The Thai peasant could obtain prestige and come closest to achieving his spiritual ends by entering the Buddhist priesthood, a step which in itself involved no upward mobility.

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31. Skinner, op. cit., p. 112.

32. Surnames were officially adopted during Vajiravudh's reign (1910-25), but were rarely used in the countryside.

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182 433 463 Finally, the institutionalized status of the masses precluded the personal freedom and geographical mobility necessary for competition in new economic ventures. The system discouraged even the further development of Thai craftmanship and special skills. Agriculturalists had fewer obligations and a less coerced life than the artisans. Under these circumstances, as mentioned earlier, Thai initiative and creativity were stifled.[33]

Commercialization of Rice Growing

115 178 *243 433 439 The Bowring Treaty (1854), the opening of the Suez Canal (1869), the abolition of slavery (1874-1905), and the abolition of the corvee system (1899); all occurring in the second half of the nineteenth century, may be considered as the four major events that directly or indirectly contributed to the revolutionary changes in Thai society in the early modern period. The gaining of freedom of the Thai masses, the free trade opportunity opened to the Westerners, and the improved transportation facilities had resulted in the tremendous expansion of rice cultivation and phenomenal growth of rice export.

[311] In 1850, the total area planted to rice was estimated at 5.8 million rai. The area had risen to 8 million by 1905, and it steadily rose to a peak of 34.6 million 1950. On the export side, the average annual export of rice during 1857-59 was 990,000 piculs. After a slow erratic rise up

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33. Skinner, op. cit., p. 118.

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175 to 1870-1874, the volume rose rapidly to a peak of 25.7
178 million piculs in 1930-34. This 25-fold increase over the
*243 probable maximum volume at the time of the Bowring Treaty
433 which took place while the population doubled itself repre-
433 sented the major economic change in Thailand since 1850.
To be sure, some rice was being exported prior to the Bowring Treaty, but the fact that such exports did exist does not detract from the importance to Thailand of the growth of rice exports since then.[34]

178 This marked growth of exports was accompanied by a
*243 comparable growth in total imports as the population of Thai-
433 land tended to specialize more and more in the production
[439] of one single crop -- rice. Thus money came to play an
(436) important role in an economy in which it had formerly been of but minor significance. As villagers turned to the production of money crops, the household crafts were forgotten.
[243] Cotton fields, prominently mentioned in the classics produced during the golden age of literature in the reign of King Rama II (1809-24), were perhaps used for rice or abandoned in favor of land suitable for rice.

[654] This vast extension of rice cultivation was carried on almost entirely by the Thai themselves and by individuals acting on their own initiative, not to any significant extent by government or private resettlement programs. The land

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34. James C. Ingram, Economic Change in Thailand since 1850 (Stanford: Stanford University Press, 1955), pp. 37-40.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai
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The land most accessible to transportation was the first to be taken up. During the second half of the nineteenth century this meant the Central Plain where the existing network of canals and streams provided a cheap and convenient means for transporting rice and paddy to Bangkok. Since the areas along the banks of the rivers had already been settled under the self-sufficing economy long before the advent of commercialization and during which time the problem was one of labor shortage rather than population pressure, new rice fields had to be cleared out of the hinterlands eastward and westward from the rivers which run from north to south. This was made possible by the extension of the government sponsored canal construction program during the period. Furthermore, the irrigation projects initiated in the first decade of the twentieth century also brought much of the submarginal land into productive use. It may be assumed, however, that these newly cleared areas were less fertile than the long settled flooded areas along the river banks where soil fertility was replenished each year by the annual flood.

Against the background which has just been described we are now in a position, from the next chapter on, to confine out study to one rice producing village which has been recently settled, using it as a model for discussion of economic problems of Thai farmers and Thai agriculture in a changing world.

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PART I

000 THE COMMUNITY AND COMMUNITY ECONOMY

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CHAPTER I

METHODOLOGY

Since 1947 Cornell University has been sponsoring
121 a number of studies in community development in various parts of the world. "All of these studies are multiple approaches to a central problem: What are the basic factors involved in the process of cultural change? In the Cornell studies of changing human behavior it is postulated that in any society no one element of change can be clearly understood except in relation to other elements. Biological factors -- birth rates, disease, malnutrition -- must be investigated in relation to the physical environment and the total culture of the society in which they occur. Functional aspects of culture -- family life, economy, education, religion -- must be studied in relation to each other rather than simply as isolated segments of group life."[1]

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114 This study of the economy of a rice growing village in Central Thailand is a part of the Cornell University Thailand Project which includes studies carried on by a group of research workers representing a variety of disciplines. The field work was begun in 1948-49 and was resumed in 1952-54.

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1. Alexander H. Leighton and Lauriston Sharp, "Notes for Field Research Workers" (Department of Sociology and Anthropology, Cornell University, New York, 1952), p. 1. (Mimeographed.)

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Reasons for the Choice of the Field Site

After an extensive survey of a number of possible sites in the Central Plain, the community of Bangchan, some twenty miles northeast of Bangkok, was selected for intensive study. Among factors leading to this choice were the following: (1) accessibility from Bangkok, about forty minutes by car with optimal road conditions, and about two and a half hours by launch -- an important advantage because it was desired to maintain contact with events in the capital, to utilize research and other facilities there, and to work in a community which Thai from Bangkok or vicinity could easily reach should they participate in the research; (2) availability of a fairly concentrated population of over 1,600 almost entirely engaged in rice production; (3) production of a large surplus of rice sold to nearby Chinese millers for export; (4) local use of two alternative methods of growing rice -- transplanting and broadcasting; (5) presence of an active religious institution or wat; (6) presence of a large government primary school; (7) artificial division of the community between two administrative units or amphur, providing an exceptional opportunity for comparative study of local government; (8) presence of a small number of Moslem Thai, permitting study of this important minority group; (9) almost complete absence of Chinese residents, but dependence upon outside Chinese itinerant vendors or nearby traders and millers, permitting study of Thai-Chinese relations; (10) a wide range of variation with respect to individual

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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121 experience outside the community, from persons who had
621 never before seen any foreigner to others familiar with Bangkok or smaller centers of modernizing influence; (11) prospects of a fair degree of physical security from robbery or other violence during the study; and (12) the promise of excellent cooperation on the part of both peasants and officials of the region.[2]

121 A majority of the sites visited or heard about during the preliminary survey proved unsatisfactory for one or more of the following reasons: (1) they were too specialized (fruit or truck gardening, brick or pottery making, proximity of a naval establishment, preponderance of non-Thai or non-Buddhist groups); (2) they consisted of amorphous groups of sub-marginal tenant farmers exhibiting marked signs of social disorganization; or, most commonly, (3) they were decentralized and the dispersal of homesteads along canals would have required an inordinate amount of research time spent in moving about in order to communicate with the people.[3]

121 Although caution has been exercised to select a com-
184 munity most closely approximating a representative village
*213 of the Central Plain, we do not purport that economic conditions described in Bangchan are identical with those of other villages in the region. Bangchan's representativeness

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2. Lauriston Sharp, "First Progress Report on Cornell Thailand Project, August 1-November 1, 1948", p. 2. (Mimeographed.)

3. Ibid., p.2.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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121 184 #243 can later be checked through studies in a nearby control village and by comparison with results of the 1953 agricultural census. Nevertheless most of the problems of rural rice growing communities in central Thailand undergoing technological changes are expected to be found in Bangchan. We are confident, therefore, that the community is an appropriate model for locating agrarian problems and is a good site for a pilot study which is to serve as a base-line for further researches in agricultural economics and other social sciences.

Techniques for Establishing Rapport

123 Our first contact with Bangchan residents was made on September 1, 1948, when Professor Lauriston Sharp and the author were driving home from Minburi. We stopped over at a farm house on the side of Minburi Road two miles from the market town and introduced ourselves to a small gathering of farmers. We told them that we were both teachers, Sharp teaching in the United States and Janlekha in the nearby Kasetsat University, and that we were looking for a typical village where "Professor Sharp might study the real life of Thai farmers so that he could tell his American students how we live and work."

The place where the conversation was taking place was on the periphery of Bangchan village -- the western tip of Hamlet 4, Bangchan Commune. While one of the farmers was explaining the general condition to us, he was interrupted

123 by another farmer who was identified as Headman Weg of Hamlet 6 of the same commune. Weg said his hamlet has more people and more buffaloes, and invited us to his home which is on the other extremity of the village. Arrangement was made for a boat to carry us there on the appointed date two days later. Thus we were invited into the village by one of the leading residents who took pride in the possibility of a study of his village by an American professor.

124 At the beginning, we sought from the villagers only simple information. After the first month, when it became clear that confidence had been won, more intimate questions concerning economic matters were raised. Thai peasants do not take questions about family relationship or age as intimate questions; they even enjoy answering them. It was noticed, however, that some types of questions brought better response than others. We did not attempt to get all the information we needed at the first interview, and only the topics which appeared to interest the respondent were pursued. We did not set any rigid rule on the length of an interview period but left it up to the apparent disposition of the interviewee. It was observed, however, that normally distraction began to set in after the first half-hour. We usually stopped at this point. If the conversation had to be continued, we made it apparent that business was over by laying aside our pencil and notes. In every possible way we tried not to offend respondents. Not infrequently we brought an interview to an end within the first few minutes

124 when only a slight sign of distraction was noticed. Our daily visits to this small concentration of population gave re-interviewing a much higher advantage over a prolonged interview. Experience with Bangchan people revealed that occasional non-response was not due to the subject matter but rather to the approach and circumstances. With a more tactful approach and under a slightly different circumstance in a subsequent interview, we were able to obtain most of the information we sought but did not get in the previous interview.

123 To return the hospitality rendered us we offered small personal services like a lift or taking the sick to Bangkok hospitals. We tried to avoid monetary gifts to individuals which might lead to distorted information intended to please us, but we did give monetary gifts to public institutions like the school at an opportune time. We were particularly anxious to help the community as a whole especially in the fight against epidemics. Incidentally, Bangchan will always remember our active part in bringing the veterinarians to the village in time to check the spread of rinderpest in the end of 1948. From then on the villagers tended to think of us as a most effective means to communicate with high officials in Bangkok. This conviction was reinforced by subsequent visits of top level officials to the village which were unprecedented. In the second period of study in 1952-54, we were able to render medical aid and advice. We also played a significant role in the campaign

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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123 to get government support for the new school building.

Our non-official status relieved us from the responsibility of direct action and thus gave us the immunity from any criticism when sought help had not been responded, while in any event we enjoyed the privilege of the contact men. In the eyes of Bangchan villagers, we were equated with high officials and were given due respect. At the same time, as willing contact men, we were also thought of as good friends of Bangchan.

We did not, for a moment, seek to be admitted as if we were local people, which would appear to be artificial and which might be interpreted as insincerity. It seemed to us, nevertheless, that our sincere treatment of the villagers with some reservation as our equals -- a rare privilege in their experience -- was the most important factor militating in favor of our good rapport with Bangchan.

Techniques for Gathering Informations

12 Various techniques were used in securing information, each adopted with a view to procuring the best possible result under different circumstances. In general, information may be classified according to the methods used in obtaining it as follows: (1) structured questionnaires and check lists;[4] (2) informal interviews; (3) daily records of research workers; and (4) supplemental written records made by local residents.

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4. See Appendix B.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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12 Normally four daily visits were made to the village in each week with occasional overnight stays of two to four days. A field office was established in a house of one of the village headmen, who generously let us have free use of one of his buildings situated in the heart of the community. We usually slept here during an overnight stay, but some dozen other places were also available to us for the purpose including the temple, and we did actually have occasion to utilize each of these in order to get acquainted with as many families as possible.

All of the questionnaires and check lists were constructed in the field after a succession of talks with different informants about the same topic. The check list for household consumption, for example, was made in the following manner. The author approached one family head, preferably the one most intimate with him, and talked with him about various items which his family normally consumed. Kinds and quantities were recorded. Questions were also asked about the amount produced by the family and the amount purchased as well as the price of each of the purchased items. There were usually different ways of expressing rates of consumption of different items, and the informant was encouraged to use the ones he pleased. Rice consumption, for example, was commonly expressed in so many tang (a can of 20 liters) of paddy per year, while fish-sauce consumption was more easily expressed in how long a bottle would last. After the first interview was completed, four more family

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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12 heads were similarly approached. Results from these five interviews were then compared, and a pattern of consumption was established. With this combined result the author went to the coffee shop, which was a sort of men's club, and got the talk started about the topic. A few more items of consumption were added to the list this way. After the final check list was constructed, the five family heads were re-interviewed. All admitted that they had skipped the missing items.[5]

The author himself administered all, except one, of the whole enumerating jobs, the exception being the work on household and farm inventory. After he had tried to take such inventory of a few farm families, he realized that his sense of observation and his ability to appraise the value of household and farm equipment was far inferior to even the most humble of the local farmers. This was to be expected, since unfamiliarity with the local scene is a heavy handicap to that kind of work. Two bright young men, both local residents, were then hired as field assistants to do the work jointly, each checking the other.

Evaluation of Data

Since various techniques were used in securing information and an individual was approached several times for different types of information, relative merit of data varied according to their nature as well as the technique adopted

5. For check list of household consumption see Appendix B.

12 in gathering them. An over-all evaluation of data, therefore, cannot be made. Evaluation will be attempted, however, each time a new set of data is introduced as we go along.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

CHAPTER II

THE COMMUNITY

Geography

131 The community of Bangchan is situated some twenty road-miles northeast of Bangkok in the heart of the economically all-important commercial rice growing area of central
361 Thailand. Surrounded by their rice fields, the population
[161] of about 1,600 persons lives on some three hundred small
[503] family homesteads scattered along a half dozen connecting
*[243] canals. The community occupies an area of 6,500 rai,[1] or 2,600 acres, all of which, with the exception of about 300 rai of homesites and narrow strips bordering canals, is given over to the production of wet rice.

134 The soil of Bangchan area is heavy dark clay with
*243 an impervious layer at a depth of about six to eight inches and is suited only to rice growing.

133 The area is essentially flat, rising slightly toward
312 the north. It receives, in addition to rain water, irrigation water channeled into it through the Saen-saeb Canal one mile to the south, Samwa Canal one mile to the east, and Khlong-song Canal one mile to the north.[2]

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[804] 1. One rai is equal to two-fifths of an acre.

2. See map on page 162.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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The monsoon climate of the region in which the village lies gives the area an annual rainfall, averaged over a recent ten year period, of about fifty inches; the effective rainfall, for the critical months when the rice is in the ground, is about forty inches.[3] The minimum precipitation requirement for wet rice is about seventy inches a year. This rainfall deficiency in the central plain of Thailand is made up by direct flooding from the rivers which flow in from the mountains and plateaux on the northeast, north, and west, the run-off rate fortunately being low because forests still cover much of these uplands. The whole plain is channeled for simple distribution of the spate of these rivers which occurs during October, November, and December, just before the harvest of rice. Because most fields are fed by gravity without an artificial head of water, or with only small heads impounded behind water gates, the depth and duration of flooding cannot be wholly controlled. As a result, variable water supply produces a wide variability in harvests and crop risks may be considerable. For 117 years between 1831 and 1948 the ministry of Agriculture records four major damaging floods (1831, 1879, 1917, and 1942), four years of extreme drought, thirty-five years of severe drought, and twenty-one years of moderate drought, leaving only fifty-three years of optimal supply of water.[4]

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[175]
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3. Central Service of Statistics, Statistical Yearbook of Thailand, No. 21, 1939-40-1944. Bangkok, 1950.

4. Ministry of Agriculture, Thailand and Her Agricultural Problems (Bangkok, 1950).

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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The normal distribution of rain in the region, however, is almost ideal for single crop rice production. Heavy rainfall in May and June softens the soil for easy plowing and harrowing. During July and August, when the young plant does not require much water, the rainfall moderates. Again there is heavy rainfall in September and October when the maturing plant needs rising water as it shoots upward. Finally, during the harvesting season of December and January there is a minimum of rainfall. It is in terms of rainfall that the people divide the year into three seasons: (1) the rainy season of late May to November; (2) the cold season, December into early February; and (3) the dry hot season from late February to early May.

Vegetation

Of the 6,404 rai privately owned in Bangchan 6,106 rai is devoted to rice and 298 rai to homelots. During the rice season the village is seen as a vast rice field interspersed with bamboos and fruit trees on the homelots which string along the half dozen canals of the village. In the dry season only stumps of rice stalks are left in the field. Some of these may be removed by burning. With the coming of rains, which usually fall once or twice in March and four or five times in April, a variety of grasses begin to appear and the rice field is gradually transformed into a grass field, providing a pasture for the buffaloes until the next planting season when the size of the grass field available

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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#243
132
137 to the buffaloes will be gradually reduced by the process
231 of land preparation.

The homelot is usually surrounded on all sides,
244
245 except the one facing the canal, with bamboos which serve
351 to protect the farm home from strong wind. Within this compound there always is a kitchen garden where a variety of plants and vegetables for everyday use are grown. If the homelot is large, there may be enough room at the backyard for an orchard where fruit trees may be grown. In some case aquatic plants are cultivated in the canal in front of the house.

137 In addition to cultivated plants, there are to be seen also wild shrubs and vines which are more or less restricted to small strips of land along the banks of the cana Wild aquatic vegetables, especially the morning glory, are always seen in these canals, making them appear narrower than they actually are.

Livestock

231 Buffaloes: As in most of the rice producing areas of the country, so in Bangchan buffaloes are used in all kinds of farm work where the help of draft animals is needed. Since the village is without land which can be grazed the year-round, buffaloes are not locally bred but are brought in from the northeast and other parts of the kingdom. To be sure, there are some local-born buffaloes, and these are considered to be stronger and to live longer than the importe

231 ones, but limited grazing areas and the burden of work imposed on them have been a factor militating against their reproducing themselves. During the first half of the rice year (April-September) buffaloes feed on green grasses, direct in the field which has not yet been plowed or cut for them by the farmers. During the second half of the year when the supply of green grasses is reduced to the minimum, they feed on straw which normally lasts until new grasses become available with the coming of rains. Buffaloes are used only for farm work and never for milking purposes.

235 Chickens: Practically every family in Bangchan raises chickens which are second only to rice as a source of cash income. Many breeds are found in the village. Most common are the native mixed breed and the imported Rhode Island Red. These chickens are raised "naturally" -- although the farmers feed them with paddy once in a while, most of the time they help themselves to paddy in the mat bins and in addition scavenge for a part of their feed. The size of the flock averaged 8.6 laying hens per family according to the 1949 survey. The same survey showed an average rate of production of 143 eggs per laying hen per year.

Ducks: In 1949, only one-half of Bangchan residents raised ducks but the size of the flocks was slightly larger than that of chickens, averaging 11.7 laying ducks per family raising them. The annual rate of production, too,

235 was slightly higher than that of chickens, averaging 155 eggs per laying duck.

173 271 Hogs: In 1949, two families were raising hogs which according to our observation did not seem to be well fed. When we returned to the village in 1952, not a single hog remained in Bangchan.

Fish

262 443 434 After rice, fish (and other marine animals) are by far the most important ingredient in the diet of Bangchan. More fish are bought from the outside than the very small amount that is exported from the village mainly by one or two very poor families who have availed themselves of this means of augmenting their income.

221 226 The villagers' annual cycle for fish-taking varies somewhat with the particular method used, and with the annual rice and ceremonial cycles: yet the maturation cycle of the principal types of fish is also a factor, and one which tends to give an overall orderliness to the annual cycle for fish in general. There is no time in the year when at least some fish are not available, nor is there any time in the year, even the busiest, when the family does not want fresh fish for its menu. For this reason, there is fishing the year round, at least in the form of the housewives simply setting nets in the canal and then tending them according to some schedule or whenever the noise of caught fish sloshing about in the water is heard. When a lull from the pressure of

7: Jamlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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221 other activities permits, members of the family are likely
226 to be seen fishing.

The period of late December through February is the period in which the canal fish are mature and most delicious to eat. Notwithstanding that this is the busy harvest time, it is also the busiest catching period, because it is at this time that many of the more important varieties of marine animals mature. Shrimp, for example, is available for only about twenty days during January. While this period is correctly described as the rice harvest time for the community as a whole, almost all individual families are likely to have lulls of a few days between the maturation of one rice variety and another. Such lulls are devoted to intensive fishing.

There is less urgency in the "harvesting" of fish by pool-draining methods than there is in fish-catching. The first pool-draining might occur as early as February, or as late as May; a second and even a third draining might occur later in the year. There are biological factors underlying this, such as the presence on the banks and bases of the pools of a longer-lasting supply of plant food for the fish than is available in the canals, especially since the canals tend to recede more and more as the dry season progresses until, in the higher northern section of the village, they dry up completely well before the onset of the rainy season.

T 63 Place of Bangchan in the Administrative Area

In the highly centralized system of Thai administration, the whole country is divided into 9 circles (pharg), 71 provinces (changwad), 414 districts (amphur) and 77 sub-districts (king-amphur), 3,650 communes (tambol), and some 50,000 hamlets (muban).

CT 621 634 121 In the section on reasons for the choice of the field site (page 32) mention was made of an artificial division of Bangchan between two administrative units. By that we mean one part of our "natural" or "functional" Bangchan village administratively belongs to one amphur and the other part belongs to another amphur. The situation will become more vivid when we discuss our "natural" Bangchan village.

CT 621 121 Our "Natural" Bangchan Village

In this study we are not interested in an administrative unit which is often an artificial division, but rather in a "natural" or "functional" village which may be operationally defined as a geographical area inhabited by a conglomeration of people having one or more common social centers.

CT 621 794 872 Bangchan people patronize an active Buddhist religious institution popularly known as Wat Bangchan, and an adjacent government primary school, both centrally located in the community.

CT 621 *128 For practical reasons for ease in statistical manipulation, we assume that the smallest administrative unit --

[Erretum: this should read "page 36"---Analyst]

621 *128 the hamlet or muban -- is indivisible, although as a matter of fact a Thai hamlet is actually made up of individuals and families. We proceeded, then, to draw the boundary line of our natural village by first selecting Wat Bangchan as the social center and defining the natural village as composed of all hamlets whose headmen and the birth of whom population patronized this wat. The hamlets thus included were found to be Muban 4, Muban 5 and Muban 6 of Tambol Bangchan, Amphur Minburi, Changwad Phra-nakorn, and Muban 5, Muban 6, Muban 7 and Muban 8 of Tambol Kannayao, Amphur Bangkapi, Changwad Phra-nakorn. For the sake of brevity these seven hamlets will henceforth be referred to as BC4, Bc5, BC6, KY5, KY6, KY7 and KY8 respectively.

[772] We then checked the list of students enrolled in the primary school which is adjacent to the wat and found that most of the families residing in the seven hamlets sent their children to this school and that only a negligible fraction of the student body consisted of those from other nearby hamlets.

Our "Bangchan Village" may thus be defined as an area within the composite boundary line of BC4, BC5, BC6, KY5, KY6, KY7 and KY8. This is an area of about 6,500 rai (of which 6,404 rai are privately owned), assuming a somewhat circular shape and having as its centers Wat Bangchan and the adjacent Bangchan Primary School (see Map I).

361 Across this "Bangchan Village" and through its center
512 runs a main canal, the Bangchan Canal, in a northeast-southwest

direction dividing it into two halves, the Bangchan half consisting of BC4, BC5, BC6, and the Kannayao half consistingoof KY5, KY6, KY7 and KY8.

As mentioned earlier, our functional Bangchan village is under two different administrative authorities, the Bangchan half consisting of part of Tambol Bangchan which is in turn part of Amphur Minburi in Changwad Phra-nakorn (Bangkok) and the Kannayao half consisting of part of Tambol Kannayao which is part of Amphur Bangkapi in the same Changwad Phra-nakorn.

History of Settlement

No official records on the history of the settlement of Bangchan could be discovered, but evidence from genealogies provides a few clues on the subject. Following the digging of Saensaeb Canal some one hundred and twenty years ago, settlement was made along the banks of this important canal which provides one of the few connections between the Menam and Bangprakong rivers. It was not, however, until the 1870's, apparently, that people found it necessary to move onto the land away from the canal. At that time, according to one of our older informants, her father was born in what is now Bangchan, his father and mother having come out from Bangkok as a young married couple to take up farming where plenty of land was available from the Crown. These people and their followers, usually kinfolk or friends, cleared off scrub jungle areas in which, it is claimed, tigers and

175
621 elephants still roamed. They thus opened up to commercial rice production a new region lying behind the thin fringe of population already occupying all land bordering Saensaeb Canal.

The genealogies suggest that it was not until the 1880's that any major settlement occurred in Bangchan. There is doubtless a correlation between the rapid development of the community from then on and the increasing national and international demand for rice. Many of the settlers of this period were persons displaced from a southern and a northern section of Bangkok who were uprooted by the government which forced purchase of their land for the first Thai railroad and a large munitions factory. The Thai Islam or [173] [794] Moslem group in Bangchan claims descent from Patani Malays who were sent north by the Thai government in the course of wars during the 1830's and 1840's; many of their families settled in Donburi or along Saensaeb Canal before moving into the Bangchan area. Another element came into the region in the 1890's when some Lao Thai were encouraged to settle here after having fled their countryiin the northeast when the French occupied it in 1893.

By 1895 the Bangchan population was sufficiently numerous to support its own wat, which was established and officially recognized about that time and has flourished ever since.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Population

161 A census covering all households of the seven hamlets defined as constituting the Bangchan village was made during the late months of 1948 and the early months of 1949 and was finally corrected and established for May 23, 1949. On this date there were 1,582 persons residing in Bangchan.[5] In a subsequent census made in 1953, the population rose to 1,694, giving an increase of 112 persons during the four elapsing years. Table 1 shows that there was not only an increase in the total population but also in the average size of the family.

While figures in Table 1 indicate an annual compound rate of increase in population of 1.7 per cent and an annual compound rate of increase in the size of the family of 0.5 person, these annual rates should not be accepted at face
161 value. It was observed that population moved freely between
162 Bangchan and the bordering villages. The extent of migration to and from Bangkok is also quite large. Moreover, the size of the family depends on a number of factors, some of which are of temporary influence.

The preliminary study based on the village census of 1949 indicates that Bangchan was not troubled with a burgeoning population. According to that study, "Children

5. The population figure of 1,608 was reported by Lauriston Sharp, Hazel M. Hauck, Kamol Janlekha, and Robert B. Textor in "Siamese Rice Village -- A Preliminary Study of Bangchan, 1948-49." This new figure was arrived at after obvious errors such as duplications and omissions in the original census had been detected.

TEXT CONTINUED ON PAGE 69

TABLE 1

POPULATION OF BANGCHAN IN 1949 AND 1953

161
162

Hamlet	May 23, 1949 Families	Persons	May 23, 1953 Families	Persons	Increase Families	Persons
BC4	43	250	40	236	-3	-14
BC5	27	136	28	136	1	0
BC6	44	251	47	270	3	19
KY5	54	305	63	356	9	51
KY6	28	156	31	168	3	12
KY7	43	231	42	250	-1	19
KY8	49	253	47	278	-2	25
Total	288	1,582	298	1,694	10	112
Av. fam. size		5.5		5.7		0.2

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 2

DISTRIBUTION OF POPULATION BY AGE AND SEX
Bangchan, Thailand, 1953

162

Class Interval Years of Age	Frequency			
	Male	Female	Total	Per Cent
Young	(327)	(317)	(644)	(38)
0- 4	115	107	222	13
5- 9	98	107	205	12
10-14	114	103	217	13
Adult	(431)	(449)	(880)	(52)
15-19	84	102	186	11
20-24	87	77	164	10
25-29	57	68	125	7
30-34	45	51	96	6
35-39	37	43	80	5
40-44	41	45	86	5
45-49	44	34	78	5
50-54	36	29	65	4
Old	(85)	(85)	(170)	(10)
55-59	27	29	56	3
60-64	25	24	49	3
65-69	17	12	29	2
70-74	8	7	15	1
75-79	7	7	14	1
80-84	0	5	5	0
85-89	1	1	2	0
Total	843	851	1,694	100

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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161 in the age group 0-4 years constituted 17 per cent of the
162 total Thailand population reported in 1937, yet this age group is only 10 per cent of the present /1949/ Bangchan population. The estimated crude annual birth rate -- 1/5 x children 0-4 years divided by total population x 1,000 -- is 20.3. This figure is slightly lower than the actual rate because infant mortality is not taken into account, but it may be compared with the following crude rates: Burma, 32.3; India, 33.0; Philippines, 32.4; United States, 17.9, all for 1939; and Federal Malay States, 39.7, for 1940. The Bangchan fertility ratio -- children 0-4 years divided by females 20-44 years multiplied by 1,000 -- is 620, actually less than the fertility ratio of 752 for the United States rural native white population in 1950.*[6] This somewhat optimistic picture fades, however, in the light of the data of the 1953 census of the same population taken only four years later. From Table 2 the crude birth rate as of this later date may be estimated at 26.2, approaching those of prewar Burma, India and Philippines, while the fertility ratio has now become 779, a gain of 159 placing it higher than that of the 1950 United States rural native white population. These abrupt increases in the figures for birth rate and fertility ratio in themselves are not of much statistical significance, since the population is small and infant mortality and migration factors are not considered.

6. Lauriston Sharp, Hazel M. Hauck, Kamol Janlekha, and Robert B. Textor, Siamese Rice Village -- A Preliminary Study of Bangchan, 1948-49 (Bangkok: Aksoniti Printing Press, 1954), p. 25.

7: Janlekha X-4.5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

The Family

592 Although the family is the smallest of social institutions, it occupies first rank in importance. For the purpose of this study family is defined as a group of persons who form a household under one head including parents, children, servants and other dependents. It is a social unit for both consumption and production. In Bangchan, members of the same family, with the possible exception of piece-workers who have the privilege of eating with their employers only during periods of certain kinds of work, usually share the same meal although not necessarily at the same time. Physically able members are expected to contribute to family work although some may also do extra jobs for their own pocket money. In all cases family work has priority over the extra job, and in most cases members turn over all or part of the earning thus realized to the family head. Although most families have separate dwellings, there are instances of two families sharing the same dwelling but having separate cooking arrangement. Such cases are rare, however. According to our operational definition, then, a member of a biological family who has hired himself out as regularly hired laborer ceases to be a member of his own biological family and becomes a member of his employer's family. Piece workers, on the other hand, although they may occasionally eat with their employers, still retain membership of their biological family if they still live with them. Finally, people who live in the same dwelling may not belong to the same family if they

592 do not share the same arrangements for preparing and consuming food.

621 The 298 families living in Bangchan on May 23, 1953
59 may be grouped into five categories: (1) "One-person house-
[192] hold" consisting of a lone man or woman /for ease in typological manipulation we arbitrarily consider this as a family, although strictly speaking a one-person household is not a family/; (2) "Nuclear family" consisting of a man and wife and their unmarried children; (3) "Limited extended family" consisting of a man and wife, either or both their sets of parents, and their unmarried children; (4) "Extended family" consisting of those included in "limited extended family" plus married children and children of the latter, plus any collateral relatives of any generation; and (5) "Ecclesiastical family" consisting of Buddhist priests, novices, and temple boys, all males, living together in the temple under the Headpriest's supervision. The distribution of these different types of families so defined is shown in Table 3.

592 Further explanation is perhaps necessary with respect
596 to the "extended families" in Table 3. It must be pointed
621 out that the term 'extended' is here used for the sole purpose of defining types of families which include dependent married couples as differentiated from the ordinary independent nuclear family. It will be seen in the next section, however, that there is no permanency in this inclusion of married couples whose intention is always to establish an independent family of their own. The so-called 'extended' family in

[TEXT CONTINUED ON PAGE 63]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 3

DISTRIBUTION OF TYPES OF FAMILY
Bangchan, Thailand, 1953

59
621
[792]

Family Types	Frequency	Per Cent
One-person household	16	5.4
Nuclear family	177	59.4
Limited extended family	24	8.1
Extended family	80	26.8
Ecclesiastical family	1	0.3
Total	298	100.0

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

592 Bangchan is thus not a counterpart of the Indian or Chinese
596 extended family and should not be conceived as such. Its
621 outlook is definitely that of the nuclear family. Its assumption of an extended family structure does not indicate an intended role of the conventional extended family but does rather demonstrate the inability, temporarily at least, to provide for an establishment of a new family for the newly
[511] wed members. Most of the 80 'extended' families existing in Bangchan at the time of the second census in 1953 cannot be regarded as well to do, and some are extremely poor, being families of the laboring group without any assured regular income.

592 All of the sixteen one-man families were poor, ran-
621 ging from destitute old people who had been deserted by their kin to small farm operators who had to make the most out of their under-sized farms.

592 There were some 53 dependent relatives staying with
602 twenty-five families. These relatives do not include parents
621 of family heads and family heads' direct descendants and
[597] their spouses. They also do not include 'adopted' children of family heads, who automatically become members of the family. Records show that most dependent relatives remained in the family only for a brief period of time. Seven relatives, however, were able during the period from 1949 to 1953 to assume the headship of the families of which they had been dependent members.[7]

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7. See section on change of family heads, Chapter II.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

597 621 673 As of 1953 seven adopted children were reported to be living in Bangchan. Since only those mentioned by family heads as their adopted children were so recorded and since some of the information on family members were not given directly by the family heads, it is possible that there might be some more adopted children who appeared in the 1953 census as nephews or nieces. The authenticity of the term 'adopted child' as used in the village is nevertheless rather questionable. There has never been such a practice like legal registration of adopted children in the village, although this is provided by law. Moreover, maltreatment of an adopted child was not unheard of. In 1952 one family head reported that his adopted daughter had "run away" to Bangkok. In 1953 a young widow, an adopted daughter of an operator of a coffee shop in the village, also "ran away". When her whereabouts became known, no effort was made by the foster parents to return to the woman her golden necklace valued at one thousand baht. Later she was forced back home, being beaten all the way in spite of her complaint that she was pregnant. It was also not infrequent that an adopted child left his foster parents and took residence as a dependent relative in another family in the neighborhood. Such incidents points toward the possibility of 'adopted child' being used as a nom de grace for a prospective free family laborer.

162 592 621 Table 4 shows that with the exception of the ecclesiastical family the size of families in Bangchan ranges from one to fourteen, averaging 5.7 persons per family. This

[TEXT CONTINUED ON PAGE 66]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 4

DISTRIBUTION OF FAMILY SIZE
Bangchan, Thailand, 1953

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Family Size	Frequency	Per Cent
One-person family	16	5.4
Two-man family	18	6.0
Three-man family	34	11.4
Four-man family	35	11.7
Five-man family	43	14.4
Six-man family	48	16.1
Seven-man family	38	12.8
Eight-man family	26	8.7
Nine-man family	23	7.7
Ten-man family	10	3.4
Eleven-man family	1	0.3
Twelve-man family	2	0.7
Thirteen-man family	2	0.7
Fourteen-man family	1	0.3
[702] Forty-one-man family*	1	0.3
Total	298	100.0
Mean	5.7	
Median	6	

* Ecclesiastical family.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

162 592 621 average size of family in 1953 is slightly larger than that calculated from the 1949 census.

Disappearance of Some Families from Bangchan

162 178 592 621 When the 1949 and 1953 censuses are paired hamlet by hamlet, appearance of new families and disappearance of some of the old families may be detected. Table 5 shows that during the four years between 1949 and 1953 forty-three families had disappeared from the lists of the seven hamlets constituting Bangchan. This loss was compensated by fifty-three new families, giving a net gain of ten families. In other words, of 288 families existing in 1949, 245 families remained throughout the period. When 53 new families were added to the continuing 245 families, a new total of 298 families was arrived at for 1953. A closer examination, however, will reveal that there were five families which disappeared from one hamlet only to appear in another hamlet of the same Bangchan village. If the seven hamlets are to be considered as one geographical unit, these five families should be deducted from both the disappeared and new families, giving a net disappearance of 38 families and a net appearance of 48 new families, while the number of continuing families becomes 250.

[166] Of 38 families which disappeared from Bangchan, 27 moved out to other villages nearby or afar, while 11 were disintegrated or simply annexed by other families in Bangchan itself.

[TEXT CONTINUED ON PAGE 68]

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 5

CHANGES IN NUMBER OF BANGCHAN FAMILIES FROM 1949 TO 1953

Hamlet	Number 1949	Number 1953	Continuing			Disappeared				New			
			Total	(1)	(2)	Total	(1)	(2)	(3)	Total	(1)	(2)	(3)
BC4	43	40	32	32	0	11	6	0	5	8	3	1	4
BC5	27	28	24	18	6	3	2	1	0	4	1	0	3
BC6	44	47	38	36	2	6	4	0	2	9	4	1	4
KY5	54	63	45	40	5	9	6	1	2	18	13	2	3
KY6	28	31	27	26	1	1	0	1	0	4	0	1	3
KY7	43	42	37	33	4	6	5	1	0	5	3	0	2
KY8	49	47	42	36	6	7	4	1	2	5	3	0	2
Total	288	298	245	221	24	43	27	5	11	53	27	5	21

Explanation

Continuing (1) . . same family head
Continuing (2) . . different family head

Disappeared (1). . moved out of the village
Disappeared (2). . moved to other hamlet in the village
Disappeared (3). . disintegrated or annexed by other family

New (1). . . . . moved into the village from other village
New (2). . . . . moved in from other hamlet of the village
New (3). . . . . separated from other family in the village.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7 Bangchan

592 178 621 Although disintegration and annexation of families have a common feature in that in either case the family loses its entity, they have different connotations as to how the family passes out of existence. In order to have a clear picture of the village economy it is necessary to make a distinction between these two dynamic processes. The best way, perhaps, is to study the eleven families individually.

592 178 621 511 Case 1: A poor laboring family of eleven lived in BC4. The family head was in 1949 an old man of 59, his wife an old woman of 64. The family also included a son, age 29, son's daughters, 16 and 10, son's son, 9, daughter, 35, daughter's son, 18, daughter's daughters, 11, 4 and 1. This was the situation when we were first acquainted with them. When we re-visited the village in 1952, however, we found that only two members remained -- A, the old woman now sick with malnutrition and almost immovable, and B, her granddaughter then age 14 and still in the primary school. Presumably the girl was taking care of her grandmother. Except for the clothes they were wearing and a small old shack which was about to collapse, they did not own anything. B said she worked on a three-fourth-rai parcel and did some fishing or vegetable gathering before and after school time. Actually, she did not get much out of that effort; for the rice crop, 30 tang of paddy or roughly 15 tang of clean rice, was barely enough for a few months' consumption, and fishing 178 592 621 would not be productive unless she had several long uninterrupted hours. In tracing what had happened to the rest of

178 the family members we were informed that A's daughter and
592 her four children had moved out of the village separately
621 to different places which could not be traced, while B's brother and sister went to live with a relative in Lam-loogga, also a rice growing village some fifteen miles to the north. The two chief bread winners of the family, A's husband and B's father, managed successfully to get themselves ordained and are now residing in the village temple. Early in 1953 B went to live with her relatives in Lam-loogga, leaving the sick old grandmother alone in Bangchan.
[592] The arrangement was that the old woman was to quit the old
[621] shack and take refuge in the secular part of the temple where it would be possible for her ex-husband, now a priest, to have two meals delivered to her every day. Just before the 1953 census was taken, however, she was taken to Lam-loogga. The last member of the disintegrating family was thus left out of the 1953 census.

178 Case 2: After the death of his first wife, an old
592 man in BC4 gave his two sons equal shares of his property.
587 He then acquired a second wife and built a separate quarter
736 apart from the main building, thus creating a new family of
621 two. In 1952 he was fatally hit by a truck on the Minburi road. After a few months of unhappy stay with one of her step sons, the widow acquired a new husband and moved out to a neighboring village.

178 Case 3: There was in BC4 a laboring family of three
592 consisting of an old man, his daughter, and her son. After
621
[166]

7: Janlekha X-4.5 (1948-1953)p956 AO7 Central Thai AO7
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178 the death of her father, it was reported that the woman
592 and her son moved to Bangplee, another rice growing village
621 some fifteen miles to the south. After checking with some
[44] of the former Bangchan residents who are now living in that village, the first report was found to be inaccurate. In fact no one in Bangchan seemed to know where they were. The only hint available to us concerning the mother and son was "Family disintegrated. Mother went one direction, son another direction."

Case 4: A woman and her adopted son were operating
[782] a 22-rai rice farm in BC6. After the death of the mother, the man remained in the village alone for a short time and then was conscripted into the army.

Case 5: After the death of the head of a laboring family in BC6, the wife and their four grownup children left the village separately. In the eyes of villagers this was
[146] another case of "family disintegration." The wife's birth place was in KY8, but she could not go back to her old family because there was not enough land to work.

Case 6: An old woman, age 76, was reported in the
[782] 1949 census to be living alone in KY5. Later she moved
[791] into the secular compartment of the temple (she was an aunt of the headpriest) where she died before the 1953 census was made.

Case 7: A man, age 50, was living in KY8 with his older sister, age 60, and their nephew's son, age 6. When the man died, the older sister pursued her brother's farm

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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178 laboring profession, limiting the work to transplanting only
592 Apparently she did not earn enough. During this hard period
621 the young boy left her. The woman continued to live alone for two years. After the collapse of her shack in 1953 she went to live with a young couple in KY5 who are not related to her. In exchange for room and board and a nominal allowance, the old woman agreed to take care of the couple's baby.

178 Case 8: In 1949, a couple, both teachers in the Bang-
592 chan Primary School, were sharing the same dwelling with the
895 wife's mother's family, but having a separate food arrange-
434 ment for themselves and their two young daughters. Thus,
621 they appeared in the 1949 census as a separate family. In local standard, the combined income of these two teachers
[46] was quite high. The family lived well and was the only family in Bangchan that owned a camera. In the 1953 census this family became a part of the wife's mother's family because they had arranged to share the same food. The reason that was given for this new arrangement was that some time earlier the wife's brother, who had been living with his mother, got married and moved out to start an independent family, whereupon the old lady suggested that her daughter move in to fill the vacancy.

178 Case 9: In 1949, a family of three, consisting of
592 a young couple and their six years old daughter, worked as
621 farm hands for the wife's mother for fixed pay on which they
[593] were able to live independently. Two or three years later, the wife's mother asked this family to move into her household

178 because four members of her family had just left her to
592 establish families of their own. The son-in-law accepted
621 this invitation and had since taken over the management of
[593] his mother-in-law's large 60-rai rice farm.

Case 10: In 1949, an old woman was living with two boys, one distantly related to her, the other without any [427] blood relationship. She was operating a small rented rice [792] farm. Some time in the past she had made a generous offer [431] of her own house to the temple which was not acted upon by the receiving party. In 1953, the headpriest contemplated an expansion of one of the temple buildings and approached the woman for the gift. The woman complied with the request, had her house dismantled, saving only the kitchen, and sent all the building materials to the temple. Meanwhile, the two boys had left her; one went to live with his mother in [593] the village, the other went to Bangkok. Later, the woman [437] joined the household of her younger brother, who lived next door, with the understanding that the brother had free use of her buffalo in exchange for her room and board.

Case 11: In 1949, a woman was living in KYB with her aged mother and her baby born of her separated husband [526] who was a policeman. Two years later, the woman married a [527] widower, who lived in the same hamlet, and brought along her mother and son to live with her new husband.

With the exception of Case 6, a lone aged woman who was survived by none after her death, these cases may be grouped according to the nature of acceptance of the families

178 to which surviving elements of the disappearing families
592 were subsequently attached. It was noticed that in the
621 last four cases -- Cases 8, 9, 10, and 11 -- merging with new families was arranged on the basis of mutual convenience and the disappearing families moved en masse into the new ones (with the exception of Case 10 -- a lone woman when arrangement for merging was being made). It may even be said that the initiative came from the receiving families, although the new members may have been more anxious for the union. In the remaining six cases -- Cases 1, 2, 3, 4, 5, and 7 -- there was no element of mutual convenience, and the surviving elements of the disappearing families did not move into new families as a body but as an individual. It seemed in these latter cases that the force of circumstances -- death or extreme poverty -- had prompted either party, usually the disintegrating elements, to seek the union as a quick way out. Because of the purposive nature of the arrangement in the former cases, the process may be called 'annexation'; while for want of a proper term, the process seen among the latter cases will be called 'disintegration'.

[162] None of the eleven cases undergoing disintegration
[325] or annexation owned landed property. Table 6 shows that
[464] six of these were farm laboring families. The five others were distributed among the following occupational groups: farm operator, public servant, and no occupation.

[164] Among the 27 families that moved out of Bangchan, eleven families were known to be living in the bordering

[TEXT CONTINUED ON PAGE 75]

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TABLE 6

DISINTEGRATION AND ANNEXATION OF FAMILIES
Bangchan, Thailand, 1949-53

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Case	Occupation	Landed Property	Immediate Cause	Number of Surviving Elements	Number of Attached Families
Disintegration:					
1.	F. laborer	no	poverty	11	4
2.	Public servant	no	death	1	1
3.	F. laborer	no	death	2	2
4.	F. operator	no	death	1	1
5.	F. laborer	no	death	5	3
6.	no occupation	no	death	0	0
7.	F. laborer	no	death	2	2
Annexations:					
8.	Public servant	no	convenience	4	1
9.	F. laborer	no	convenience	3	1
10.	F. operator	no	convenience	1	1
11.	F. laborer	no	marriage	3	1

178 villages, and six in villages within a distance of from four
592 to fifteen miles from Bangchan. These seventeen families,
621 whose locations were known, were engaged at the time of the
166 study in the same occupations they had been when they were in Bangchan -- either farm operating or farm laboring. Our investigation, however, covered only the whole family as a unit -- that is, we cannot say that every single individual constituting these seventeen families when they moved out of
[464] Bangchan was doing farm work in his new location. Only one case was known in which the family head got a permanent job as a janitor in Wat Makasan Primary School in Bangkok. This man was nevertheless commuting regularly between his farm home in Bangplee and his office in the suburb of Bangkok. His taking up a new job was thus a question of an individual member, not of the family as a whole.

It is not likely that the ten families whose locations were not known to us would take up new occupations in Bangkok. If they did work in Bangkok, they should pay some visits to Bangchan at least during festival time or family re-union occasioned by ordination or cremation, and their presence in the village would certainly be known to us. Besides, we were in constant contact with the core of a group of young men who went to work in Bangkok and who knew one another's whereabouts fairly well, and no information about these ten families was available from this source either. Our impression was that they were doing farm work in some villages not too close to Bangchan.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Appearance of New Families in Bangchan

In the pairing of the 1949 and 1953 censuses against each other the appearance of new families was detected as was the disappearance of some of the old families which has just been discussed. Table 5 shows that there were 53 new families, but five of these were merely cases of reappearance of existing families from other hamlets of the same village. Actually, therefore, there were only 48 families that were really new in Bangchan.

Of these 48 new families, 27 moved into the village from the outside and 21 evolved from existing families in Bangchan. Of the 27 immigrating families, 18 came from the bordering villages and 9 from distant villages in all directions ranging from Lardprao and Samsen, some ten miles to the southwest, to Prachin, over a hundred miles to the east. While the eighteen families from the bordering were accustomed, as expected, to rice growing, not all of the nine families from distant villages had been farmers. A family head of one of these nine families came from a family of fruit growers, while another family head, who apparently had a more spectacular record, had been engaged in international rice trading. This latter man, who knew some English, had worked in a large rice mill in Nonburi which was exporting rice under strict government control after the war. Discovery by the government agent of irregularities of the firm led to the man's flight abroad to Hongkong or Swatow some eight years ago. It is assumed with his

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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178 appearance in the village that the case has been closed.
592 One reason he chose to take up residence in Bangchan after
621 business failure in Bangkok was that his wife owned through
146 inheritance a 17-rai parcel of rice land in the village. Another equally important reason was the relatively low cost of living in the village as compared to the city, which could not be overlooked especially when he had a large family of ten.

162 Of the 21 families evolving or separating from
178 existing families in Bangchan during the period from 1949
592 to 1953, sixteen were young married couples seeking inde-
591 pendent families of their own. Eight of these were married
621 before 1949, and the rest after that year. These sixteen young couples altogether contributed, in the 1953 census, 21 children of age-group 0-4 years or about ten percent of all children of that age-group in the whole village.

This process of separation of young married couples from the old families is normal, in fact a characteristic feature, in areas where the nuclear family system predominates. Although some newly wed couples were able to establish independent families immediately, the pattern was that they remained for a year or more with family of either side, during which time they accumulated capital necessary for future establishment. A separate section will be devoted to this important feature of the village economy.

178 In contrast to the above normal separation from old
592 families, the remaining five of the 21 families underwent
621

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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178 different types of separation which will be described indi-
532 vidually as follows:
621

Case 1: This involved the two sons who inherited landed property from his father described in Case 2 for the disintegration of the family, and in fact this was the first Bangchan family we met in 1948. At that time the elder brother, then age 37, was a widower and was courting a woman in another village along the Minburi Road. His work in road construction and maintenance (the Minburi Road) gave him a good excuse for continued absence from home, leaving his two daughters and three sons under the care of his younger
[527] brother who was the family head. Just before the 1949 census
[464] was made, he married the woman and once again became settled down. Meanwhile the younger brother got a job in road construction. With regular monthly cash income, he took to drinking and established himself as one among the few notorious dipsomaniacs in the village. This was intolerable to the elder brother who finally moved his nuclear family out to their new home just across the road.

Case 2: In 1949, an unmarried woman was living in an 'extended' family headed by a son of her elder sister. The combined landed property of the family was 67 rai of rice land, 40 rai of which was a share of the woman and her aged mother who was also living in the family. Some time before the 1953 census was made the woman and her mother moved out to form a separate household. The reason for the separation was not quite clear. It was assumed, however,

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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178 that these two women were happier living by themselves than
592 with their junior relatives.
621
[586] Case 3: A married couple were living in 1949 with the wife's parents. They were later separated, the husband leaving his former wife with her parents. In the 1953 census the man appeared in KY7 list as head of a one-person household.

Case 4: In 1949, a woman appeared in the census as wife of a family head in KY6. In that same year she left him and lived as wife with another man in KY8. A few years after, she left this second man again. She then appeared in the 1953 census as family head of a family of six including her three children and her aged parents.

Case 5: In 1949, a man of 47 was head of a laboring family of nine in KY, including his wife, three adult off-
[464] spring and four young children. Later in that year he left
[586] the family and hired himself out as a regular laborer to a farm operator with whom he worked for two years. He then left the village for a year after which he returned to work as regular hired laborer for another operator for almost a year and a half. In the 1953 census he appeared as head of a one-person household in KY6. Our records show that he was a diligent worker, excellent fisherman, averse to sweet cookies, but very fond of liquor. When asked why he did not go back to his family in KY8, he replied "The larger the family you have, the more trouble you get. I have more fun living alone."

178 These five cases may be grouped as follows: two
592 cases of relatives of family heads separating from 'extended'
621 families, two cases of one spouse leaving the other, and one case of a family head deserting his wife and children.

Pattern of Establishment of New Families

593 Bangchan offspring customarily continued to live with
592 their parents as long as they were not married regardless of how old they might be. In the eyes of the parents, an offspring is always their child, immature and needing parental supervision, as long as he has not been able to acquire a spouse; and until then the parents-offspring mutual obligations, necessitating living together, must continue to exist. Thus, it was not uncommon to see several unmarried adults crowding in one family providing too large a labor force relative to a small parcel of land on which the family
[58] worked. In this context, marriage serves an important economic function of giving impetus to the start of new producing units in the village. There is no corresponding service in areas where the extended family system predominates such as in China and India.

583 Two distinct kinds of marriage were conceived of in Bangchan: the conventional marriage with the sanction of parents or guardians of both parties which was usually preceded by formal arrangement and accompanied by marriage rites sponsored by the bride's family; and the popular marriage by mutual understanding between the man and wife without

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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583 the sanction of parents or guardians of either party. The latter case took the form of elopement -- the man taking the woman away from her family usually during the night and returning for pardon (normally granted) a few days after-
587 ward. Another intermediate type of marriage was common among independent family heads, usually widows and widowers, in which case the man and woman simply came to live with each other. Marriage between widows and widowers who had been living in their respective families as dependent mem-
583 bers also took this simplified form. Finally there was also marriage by capture, one case of which was reported during 1949-53 when a daughter of a laboring family in BC4 was kidnapped by a group of men who were allegedly helping a friend of theirs take the woman as his wife. Although this dramatic kind of marriage by capture was often spoken of, actually it rarely happened in the village. Even in the single case just mentioned, there was doubt on the part of fellow villagers that the victim was really ignorant of the plan.

583 In our records of major expenses of 96 families of
585 farm operators[8] during the period from 1949 to 1953, three
435 families reported expenses for conventional marriages. These expenses were for 1700, 6200, 7500 and 7500 baht for four sons which were dowries, in gold and cash. They were handed over to the brides' parents on the wedding day. Another family reported an expense of 5,300 baht for the marriage

8. See Chapter 6 as to how sampling for these 96 families was done.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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of their adopted daughter, of which some 300 baht went to bedding materials and 5,000 baht to the wedding feast which the bride's parents alone were supposed to give. It should be noted, however, that in this last case the bride's parents received as dowry from the bridegroom's parents 4,000 baht in cash and two baht[9] weight of gold worth about a thousand baht, and they also received from the guests an aggregate customary contribution of 2,360 baht. Thus, the bride's parents came out with a net gain of 1,080 baht plus the gold which was to be given to the bride.

While the conventional marriage was somewhat costly especially for the bridegroom's party, the popular marriage by elopement was much less expensive. Our records show that in addition to nominal ceremonial materials of white cloth, candles and incense, the bridegroom had to pay a fine of only a few hundred baht to his wife's parents when the couple came to receive formal forgiveness from them.

We do not have comparative figures for the occurrence of conventional marriage and elopement, but the latter appeared very frequently in our daily field notes as against very few cases of the former.

There are two types of establishment of new families after marriage: (a) immediately after marriage, and (b) some years after staying with parents of either party.

It was observed that immediate establishment of new families after marriage was common among couples originating from farm laboring families and families of poor farm operators.

9. One baht weight is equivalent to fifteen grams.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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591 A probable explanation was that the poor had nothing to
184 gain from staying for a few years with parents after marriage. More important still was that with limited working land, presumably rented, the parents also did not get any economic benefit from the couple, whose stay with the family meant extra mouths to feed rather than extra hands to work.

Immediate establishment of new families was also observed in some couples originating from well-to-do families. This was nevertheless rare, because in the present economic condition it was rather difficult to find families rich enough to provide for the immediate establishment of a new family. The general pattern, then, was to let the couple accumulate for themselves while getting the benefit of free board and lodging from the parents. This period of stay with the parents with the intention for accumulation for future establishment may be called the 'nascent period'.

591 Table 7 shows that 30 out of 96 families of farm
178 operators covered by the study were able to establish their
184 nuclear families immediately after marriage. When these 96 farm operators were grouped according to their dates of marriage to the present spouses or last spouses in cases of widowers and widows, the distribution was as follows: those married during the absolute monarchy regime (up to 1932), 54; those married during the democratic regime (after 1932), 37; never married, 4; date of marriage not available, 1. Since 20 out of the 30 families which were able to establish themselves immediately were in the first group, the

[TEXT CONTINUED ON PAGE 85]

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TABLE 7

FREQUENCY DISTRIBUTION OF LENGTH OF NASCENT PERIOD OF 96 SAMPLE-FAMILIES
Bangchan, Thailand, 1953

591
184
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Length in Years	Frequency
0	30
1	16
2	9
3	4
4	4
5	5
6	2
7	0
8	1
9	3
10	2
11-15	3
16-20	1
Not separate*	15
No information	1
Total	96

* These 15 families existed earlier as minor components of the old families. Headship of each family was later assumed by the present family head.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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591 proportion for immediate establishment was 20 out of 54 or
184 37 per cent for those married before 1932, and 10 out of
178 37 or only 27 per cent for those married after 1932. A declining trend was thus observed of the ability to establish a new family immediately after marriage.

591 Table 7 also shows that the 'nascent' period of 50
592 families (that had ones) ranged from one to twenty years,
184 averaging four years, the mode being one year, and the median
178 two years. Among the fifteen non-separating families, eight headships were taken over by offspring while one or both of the parents were still alive (we shall call this 'type A'), four headships were taken over by offspring through the death of parents (we shall call this 'type B'), and three headships were taken over by spouses ('type C'). The last mentioned changing over of family headship (type C) occurred in three ways: through marriage of a man to a female head of a family whereby the husband automatically became the family head, death of the husband, and desertion of the husband.

591 The changing over of the family headship of the type
592 B in Table 7 was a natural process of inheritance. In type
184 A, it was found that senility accounted for seven out of
428 eight cases of the changing over, the one exception being
587 the case of a widower who wanted to have a second wife and who thought that the family assets originally belonged to his first wife's biological family and therefore an outside woman should not lay a hand on the 300,000 baht property.

591 A factor that should also be taken into account was that he
592 had a regular income of 450 baht a month from his job in the
434 Highways Department, which by the village standard was more than enough for him to live comfortably with his second wife.

591 Historical records of the 96 farm operating families do not contain information as to how the 50 families passing through nascent period were divided into those staying with wives' families and those staying with husbands' families. The 1953 census, however, reveals that of 48 married couples then living in 42 families of parents of either side (four such families included two couples and one family three couples), 23 were with husbands' parents and 25 with wives' parents. The proportion may thus be estimated at about one to one.

59 During the nascent period, the couple ordinarily
434 received from the parents they were staying with a kind of
[431] annual bonus locally called lampai which varied according to the economic status as well as generosity of the parents. Lampai took several different forms. Thus, a couple might receive all the paddy harvested from a specified area of the field of three, five, or ten rai; they might be given a fixed quantity of the crop -- say 50 or 100 tang; they might receive cash -- say 500 baht or any other varying amount. In some cases, the couple were expected to earn their lampai outside the family farm after obligation to family work had been fulfilled. This took the form of piece-working or trivial trade.
59 If no lampai was given, the parents might give some gold in
[431]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7 Bangchan

59 [431] the form of a necklace as a token of appreciation. During this time, no matter how old they were, the couple should ask permission before going out or at least let the parents know where and why they wanted to go, and they were expected to help without having to be asked to in the family's field and in general housework.

Opinions of the villagers themselves on the advantages and disadvantages of the nascent period varied. On the one hand, staying with parents was viewed as a prolongation of a morally compulsory service to the old family which was economically disadvantageous to the newly wed couple. This was implicit in the following statement made by one villager concerning the length of the nascent period.

> There are many factors which determine the length of the nascent period:
>
> 1. Availability of family labor. If younger siblings are old enough to help the parents, the couple will spend only a short time with the old family.
>
> 2. Greed on the part of the couple. They want to have a share of the product of their labor. If they stay with parents, they are not supposed to get any unless the parents are willing to give it to them. They think, 'If we have a child, what would we have for him?' So they try to move out as soon as possible.
>
> 3. Lack of self-confidence on the part of the couple. This leads to a prolonged stay. Even when younger siblings are old enough to help the parents, the couple still may feel more secure to stay with the parents, for they do not want to take care of themselves.
>
> 4. Pride. Nang A married Nai B and continued to live with her parents. One day A was criticized for being sharp (she was accused of keeping part of the crop for her own). So A and B got together and planned to move out with the intention of building

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7 Bangchan

59 themselves up ; financially to compete with A's parents.

The same informant said further, however, that usually it was up to the couple themselves to decide when to leave the old family. Parents, in his words, "rarely drive the offspring out. They also rarely resist the couple's decision to leave. The most they can do in case labor is badly needed is to ask the couple to stay a year or two longer."

591 494 On the other hand, a second informant, a headman as was the first, indicated that the five-year period he and his wife spent with his wife's parents immediately after their marriage in 1922 was their most prosperous time. As [431] lampai the couple were given the harvest from a 5-rai parcel each year. When he married, he already had five baht weight [426] of gold. With surplus income, he was engaged in lending for interest. Accumulation during their five years' stay with the parents included timber enough to construct the new home when they moved out, one hundred tang of paddy, and forty baht weight of gold.

As a matter of fact, there are several factors that should be taken into consideration in evaluating the advantages and disadvantages of a newly wed couple undergoing the nascent period. These are the lampai arrangement, willingness of the parents to let the couple earn extra income from sources outside the family, current wage rate and job opportunity, and, most important, the current profitability of the farming business which is assumed to be the alternative

591 if the couple do not choose to stay with the parents. In
434 any event, the fact that the couple are more or less free to leave the old family provides an opportunity for the couple to escape all the disadvantages that might be imposed upon them, leaving all the advantages to be acquired.[10] As for those who apparently discounted the merit of the nascent period, the author suspects that they neglected to consider the expected net income from farming and that they were unrealistic in thinking only of wage rate and in underestimating the more crucial problem of job opportunity.

59 In addition to their own wealth accumulated during
431 the nascent period, gifts in the form of farm equipment,
434 paddy and land were usually given to the couple by their parents at the time they left them to establish an independent family. Of 80 separating families (Table 7), however, 17 reported that they received nothing whatsoever from their parents. Among the remaining 63 families that received something, there was a wide variation in the kind and the amount of the gift, ranging from a single buffalo with an incomplete set of farm equipment to 228 rai of rice land with a complete set of farm equipment as well as a stock of paddy to last the new family until the coming harvest. Parental gifts to newly established families are shown in Table 8.

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10. At least two cases were known where the couples, not ready to start a family of their own, left the old families and moved into families of the other spouses.

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TABLE 8

PARENTAL GIFTS TO 63 NEWLY ESTABLISHED FAMILIES
Bangchan, Thailand, 1909-48

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Items	Number of Families Receiving	Range of Individual Gift	Total	Average for Those Receiving
F. implements*	63	1 set	63 sets	1 set
Buffalo	47	1-4 heads	73 heads	1.5 heads
Land	37	6-228 rai	1112 rai	30 rai
Paddy stock	32	40-1000 tang	4495 tang	140 tang
Building	12	1-2 bldg.	16 bldg.	1.3 bldg.
Cash	4	80-400 baht	760 baht	190 baht
Boat	3	1 boat	3 boats	1 boat
Gold	2	2-20 baht**	22 baht**	11 baht**

* Only basic items were included -- plow, harrow, sickle, etc.

** One baht weight of gold is equivalent to fifteen grams.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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593 There was one item of parental gifts which is not
431 shown in Table 8 -- the household equipment. Two of the
415 63 families reported that they received a complete set of kitchen utensils, and two included jars in their gift lists. After checking the result of this survey with some informants, however, many admitted that they did not include these kitchen utensils in the list because they were obvious items. Nevertheless, there was no basis on which it could be inferred that every newly established family received a set of the kitchen utensils. It was therefore decided to omit the household equipment from the table.

593 Another form of parental gifts was the practice,
427 if the parents had enough land to spare, of letting the
423 couple work on some ten or twenty rai free of charge for the first two years. Rent might be charged after that, but there were also cases in which the couples continue to work on the parcel without paying any rent to their parents and finally took it for granted that the parcels belonged to them.

Economic Significance of the Family

59 Much space has been devoted to discussion of the family because of its significant role as the only organized producing unit in the village economy. Another important function of the family was mentioned in previous sections -- through privileges extended to the majority of newly wed couples during the nascent period, the old family facilitated

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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59 the establishment of a new family, virtually a new farm. It must be noted in this connection, however, that not all new families started out with financial resources. There are circumstances like incongenial relationship between the dependent couple and their parents or other members of the family, tight financial situation of the old family, or extreme optimism on the part of the young couple themselves that brought about premature fission.

243 433 59 [423] The role of the family becomes more outstanding when the following features of rice farming are considered:

1. In Bangchan, as elsewhere in the rice producing areas of Thailand, a farm means rice land available for the family to till because farm income depends more on rice acreage than anything else.

2. An operator is generally not in a position to reallocate his resources in order to obtain higher income. Usually he does not, for example, put in more labor to get a better crop, for crop under existing technology would not increase with more labor than normally used. He does not put in fertilizer, for it is not certain, in his thinking, that profit is assured in so doing. He does try to improve his rice strains for greater yield, however.

[444] 3. The only way to increase income from rice with no change in technology (other than improving strains), then, is to increase acreage utilizing the same amount of family labor. This is the case, as we shall see in a later chapter on farm organization and management, because of the existing under-employment of family labor.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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*243
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sq
[429]

4. The operator may increase his acreage by renting in more rice land. It is highly improbable that the extra parcel would be one adjacent to the old parcels. This involves extra cost of irrigation and drainage and a buffalo shed. Yet the most important problem is how to lay a hand on the extra parcel, since the practice of most landowners is to rent their land out to their former tenants. When all cultivated land in the village has been tilled, an extra parcel to one naturally means a reduction of the same to another.

5. With limited land which has no prospect of intensification as far as rice production is concerned, the size of the family becomes the limiting factor of the level of living. This is rendered more acute by the customary practice of offspring continuing to live with their parents regardless of their age. When they get married, either spouse's parents are likely to suffer another mouth to feed, and in many cases the babies that will eventually arrive.

It is seen, then, that discussion of rice farming which is the core of the village economy cannot be separated from the context of the family.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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CHAPTER III

COMMUNITY ECONOMY

#122
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Occupational Structure in Bangchan

At the completion of the 1949 census, by which time we had spent nine months in the village, we categorized Bangchan's 288 families primarily on the basis of the principal source of income of the family head. Though the categories derived suffered from some overlapping and ambiguity, we found them useful for survey and other purposes. The descriptions of each occupational category, as found in Tables 9, 10 and 11, appear on pages 111 through 113 of the primary report.[1] As they will be constantly referred to, they will be summarized here:

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1. Farm operator. Main income from growing rice on his own or rented land.

2. Farm laborer. Main income from working on local farm operators' farms, as regularly hired laborer for an entire rice season or at casual farm jobs for which wages are contracted on the basis of piece-work or days worked, for example, transplanting or harvesting rice, digging ditches, or deepening fish pools. Some families in this category supplement their real income with rice which they cultivate

1. Sharp, Hauck, Janlekha, and Textor, op. cit., pp. 111-13.

[TEXT CONTINUED ON PAGE 98]

7: Janlekha X-4,5 (1948-1953)p916 AO7 Central Thai AO7 Bangchan
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TABLE 9

OCCUPATIONAL DISTRIBUTION BY FAMILY
Bangchan, Thailand, 1949*

Occupation	BC4	BC5	BC6	KY5	KY6	KY7	KY8	Total
F. operators	25	25	38	37	25	37	42	229
F. laborers	7	1	2	10	1	-	6	27
Traders	1	-	2	1	-	2	1	7
Investors	3	-	1	-	-	-	-	4
Professional	2	-	-	1	-	-	-	3
Public servants	2	-	-	3	-	-	-	5
Home enterprisers	2	-	-	-	1	1	-	4
Priest or novice	-	-	-	1	-	-	-	1
Miscellaneous	1	1	1	1	1	3	-	8
Total	43	27	44	54	28	43	49	288

* Some figures in this table differ slightly from those reported on pages 114-5 of the preliminary study (Sharp, Hauck, Janlekha and Textor, Siamese Rice Village) because errors such as duplications and omissions in the original census have been detected and corrected.

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TABLE 10

OCCUPATIONAL DISTRIBUTION BY FAMILY
Bangchan, Thailand, 1953

Occupation	BC4	BC5	BC6	KY5	KY6	KY7	KY8	Total
F. operators	26	19	33	42	28	31	37	216
F. laborers	6	3	8	7	2	5	7	38
Traders	4	4	2	6	1	2	2	21
Investors	2	1	-	1	-	1	-	5
Professional	1	-	-	-	-	-	-	1
Public servants	-	-	2	4	-	1	-	7
Home enterprisers	-	-	1	-	-	-	-	1
Priest or novice	-	-	-	1	-	-	-	1
Miscellaneous	1	1	1	2	-	2	1	8
Total	40	28	47	63	31	42	47	298

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 11

CHANGES IN OCCUPATIONAL STRUCTURE
Bangchan, Thailand, 1949-53

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Occupation	Distribution				
	Actual		Per Cent		
	1949	1953	1949	1953	Changes
Farm operators	229	216	80	72	-8
Farm laborers	27	38	9	13	+4
Traders	7	21	2	7	+5
Investors	4	5	1	2	+1
Professional	3	1	1	+	-1
Public servants	5	7	2	2	
Home enterprisers	4	1	1	+	-1
Priest or novice	1	1	+	+	
Miscellaneous	8	8	3	3	
Total	288	298	100	100	

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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*243
434 on a small plot that they own or rent, but all families
463 in this category derive their main income from wages.

3. Trader. Main income from the more or less regular sale, not production, of rather considerable amounts of goods. Perhaps somewhat arbitrarily, we have not included in this category those very few families who derive their main income from production of cookies or the like, even though such families might themselves perform the selling of their products to local consumers; such families are included in the 'home enterpriser' category below.

[426
427] 4. Investor. Main income from land rent, interest on loans, and/or speculative gain.

5. Professional. Main income from such specialties as midwifery or dramatic entertainment.

434
647 6. Public servant. Main income from, or majority of
463 working time spent in, government employment. This is the only category in which we had to add the additional criterion of "majority of working time"; government pay is rather low, and one person who works full time in the employ of the government actually receives more income from other sources.
[875 This category includes regular government officials, teachers
622] and school janitors. The hamlet headmen are not included, however, as their main incomes are otherwise derived and their remuneration from the government is extremely low. They maintain no daily routine as public servants. The headmen are all farm operators, except one who is an investor.

434 463 7. Home enterpriser. Main income from food or handicraft articles produced at home.

434 792 463 8. Priest or novice. Though priests and novices do not receive salaries or wages, their maintenance, which comes from the temple and directly from the people in the form of contributions, is their main income. This category includes only permanent priests and novice personnel. Excluded here are all residents who enter the priesthood more or less perfunctorily for just a few months. Since sexual abstinence is demanded of all monastic personnel, no wives or offspring are found in this category.

434 9. Miscellaneous. The main income source for the eight families in this category is obscure. The heads of these families are not known to have any steady occupations.

178 463 621 Table 9 shows the occupational distribution of Bangchan families as of 1949. It may be observed that some of the figures in this table differ slightly from those reported in the preliminary study previously cited. This is because errors such as duplications and omissions in the original census have been detected and corrected.

Table 10 shows the same distribution as of 1953, and Table 11 the change in the occupational structure of the village that took place during the four intervening years. In 1949, 80 per cent of Bangchan families were farm operators. Four years later, the figure was reduced to 73 per cent. While there was no percentage change in the figures for public servants, miscellaneous, and priest or

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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179 novice; there was noticeable increases in those for farm
463 laborers and traders, and a slight increase in that for
621 investors, which were offset by a marked decrease in figures for farm operators and slight drops in those for the professional and home enterprisers. In order to understand these changes in the occupational structure of the village, more information on some of these occupation than that given in our operational definitions at the beginning of this chapter is necessary.

243 Farm operation is a traditional way of life in the
434 village. The primary motive is to secure enough rice for
463 consumption. A secondary motive is to have cash from sale of surplus rice to buy goods that are not produced locally.

243 Farm laboring as a profession is limited to the poor.
464 Farm laborers, occupying the lowest status in the village,
554 are the most unstable and socially disintegrated group.
621 They are not fully employed even during the work seasons
463 of the year because there are too many of them in the locality. Thus, they exist in the village not because of demand for their work but because they have no opportunity for other occupations.

621 There were twenty-one families that were classified
463 as traders in 1953. Of these, nine were permanent store-
443 keepers, and twelve were peddlers selling food stuffs from door to door. Stores were situated at strategic places in the village -- two at the crossing of Minburi Road and Bangchan Canal which is the natural entrance into the village,

621 four in the immediate neighborhood of the temple or on the
463 temple ground itself, and three on the banks of up-canal
443 Bangchan. These stores varied in the size of business but the goods sold were almost identical. To be found in each store were inexpensive articles of daily use, mostly dry foods, cookies, tobacco, betel, areca, lime, toilet articles, matches, kerosene, and farm materials like ropes. Most of these stores also sold hot coffee, soft drinks, and liquor. It should be noted in this connection that the market town is only two miles away. This nearness to a large market adversely affects the nature and volume of business of local traders in two ways -- villagers bypass local stores and go to the market town for varieties and large purchase, and the village is daily invaded by a number of peddlers from the town selling perishable foods.

443 While local stores operated the whole year round, the
463 activities of twelve other trader families classified as peddlers were highly seasonal subject to local water condition, seasonal demand for purchased food, seasonal supply of cash, and alternative income on the part of the peddlers themselves. These peddlers sold small quantities of vegetables, fruit, and the cheap salt water platoo fish (Rastrelliger chrysozonus), receiving in exchange from buyers cash, [426] eggs, or paddy. Extension of credit was necessary for villagers did not have cash especially during the period from July to November. The following passages in the author's daily note dated January 12, 1953 gives an idea as to how

443 peddling was conducted by a local resident of Bangchan.

"With a capital of 600 baht Nang A began to engage
443 in peddling on December 4, 1952. The first day she spent
43 150 baht on goods, mostly vegetables which she bought from Minburi. She made two rounds that day. At the end of the morning round she got 25 baht cash and 150 baht on credit. The rest of the vegetables were sold out in the afternoon round in which she received 8.50 baht cash and 29 baht on credit. This was the only time she bought goods from Minburi. From then on she took the 5 a.m. bus to Bangkok and returned to Bangchan with the goods about noon.

"Later she also dealt in pork, and her daily outlay rose to 220 baht. Out of this, she received 150 baht cash and 150 baht on credit. To date her credit accounts total 750 baht. Yesterday she was able to collect 150 baht cash and six tang of paddy (worth 54 baht) from her debtors. She said she expected to do the peddling for fifteen more days, after which the water level would be too low. She would then quit and start the same business next rice year, but she intended to start as early as the transplanting season (August-September).

"She took 200-300 chicken eggs to Bangkok every day. She sold these at a wholesale price of 55 satang each. Sometimes she sold them direct to Bangkok coffee shops and got a higher price of 65 satang a piece. 'If you are a peddler,'
443 she said, 'you must also deal in eggs.' She took time off today because 'shrimps are plentiful' in the canal. Besides,

443 she wanted to spend more time collecting debts."

221 433 434 443 261 262 It should be noted that A's brief duration of peddling started in the harvesting season. During this time the village cash supply was high, resulting in demand for such a delicacy as pork which normally constituted a negligible fraction of the diet of Bangchan people. This is a good business period for the peddlers. Another good business period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this letter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

443 It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

427 434 454 621 463 426 Five families were classified as investors in 1953. All these families lived on rents from land, interest on loans, and income from speculative sources such as buying paddy when the price was low and selling it at high prices. Actually, most of these five families were not among large land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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427 the combined land of five leading farm operators of 693
434 rai, averaging 139 rai per operator and ranging from 83
454 to 235 rai. It must be remembered that our operational
621 definition of occupations was based on the main source of
463 income and that many of the villagers had more than one
426 source of income. Investors as an occupational class in Bangchan should not be pictured as large landlords and large money lenders, possessing financial influences over their tenants and debtors. Rather, they were humble fellow villagers whose incomes were mainly derived from rents of small parcels of land or interest on small loans. To cite an extreme case, one aged woman was classified as an investor. She had only 17 rai which she rented out to her own son. She was living alone in an old shack and was too old to do any kind of work. She received as rent about a hundred tang of paddy a year which is equivalent to an annual income of only 800 baht. Thus she was considered one among the poor in the village.

178 There were three families whose occupations were
463 classified as professional in 1949. The number was reduced
621 to one in 1953. The head of this family was a Chinese car-
322 penter who derived his income primarily from boat building. Again, it must be pointed out that reduction of the number of families primarily engaged in professional services does not mean that professional services had been declining.
[308] On the contrary, they had been increasing. There were three barbers in 1953 as against only one in 1949. More traditional

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778 463 621 doctors were practicing in 1953 than in 1949, while there was no change in the number of midwives. In most cases, however, these professional services had ceased to be the main sources of income of the families engaging in them.

621 434 463 647 [875] In 1953, occupation defined as public service included the jobs of an educational supervisor, one teacher, two school janitors, two workers in the government-owned Bangkok Wharf, and one policeman. Actually, there were five Bangchan residents who were teaching in 1953. Only one of these, however, was a family head. Two of the other four teachers were husband and wife living with the wife's mother who was classified as an investor -- the most prosperous of the investors mentioned earlier in this section. Another teacher, a wife, was also living with her mother who was also an investor. The last teacher, also a wife, was living independently with her husband who was operating a rice farm, and the occupation of the family was thus classified as farm operating. With the possible exception of the policeman, all these public servants were well paid in the village standard, ranging from some four hundred baht a month for a janitor to eight hundred baht for the educational supervisor. After the 1953 census was taken, more regular jobs were opened to Bangchan residents by the Highways Department, and also more people took up regular jobs of a public service nature in Bangkok while retaining residence in Bangchan by commuting daily between the village and their offices. Thus, [178] although the percentage figures remain constant during

178
434 1949-53, in actuality public service as an occupation is
463 increasing in Bangchan.
621
647 There were four home enterprisers in 1949, mostly
434 engaged in making cookies. As in case of the professional,
443 this activity still existed in Bangchan, but by 1953 it had
463 degenerated into a secondary income, leaving the lone case
621 of basket making in the home enterprise category.
285 Only one family head was classified in 1953 as a
home-enterpriser. The family was engaged in making takraw
-- a cane utensil used in picking mangoes from the tree.
On January 27, 1953 we met A, the head of this family, who
was taking 103 takraws of various sizes to sell in Bangkok.
[435] A gave the amounts and prices of these takraws as follows:
56 large size, @ 3.00 baht; 31 medium size, @ 2.50 baht;
16 small size, @ 2.00 baht. A said he and his wife worked
on these 103 takraws alone, and finished them in twelve
days, using 50 baht worth of materials including cane, wood,
and binders. Ordinarily, they started making takraws in
December and continued through May. They were able to make
about 3,000 baht within this period. They also made other
things like baskets, but takraws were their main source of
income. In rice growing season, they also did some piece
working. They did not operate a farm. Piece working and
basketry during rice growing season brought them a combined
income of about 2,000 baht. The amount of each kind of
621 basketry they made was not as constant as takraws. It de-
434 pended more on which paid best. Their total annual income
463

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434 amounted to somewhere around 5,000 baht, which was about
469 four times as much as the labor earnings of an average rice
621 farm operator as we shall see later.

178 The present occupational situation and accounts of
465 the changes in the past few years alone may not be enough to give us a complete picture of occupational development since the beginning of the history of Bangchan. Fortunately, however, since settlement in the village in a considerable scale took place only some eighty years ago, evidence from genealogical studies has provided us with ample materials on which a reconstruction of the past development may be made.

[175] When Bangchan was being settled in the 1870's, as a probable consequence of the increasing national and international demand for rice and the revolutionary change in Thai society, every family was naturally a farm operator family. As long as there was land available for clearing, opportunity would be open for every new family, either branching off from the old ones or moving in from the outside, to operate a rice farm.

[161] Eventually, population grew up to a size large enough
[494] to support a temple in 1895. Population growth and the
[176] emergence of a village center at the temple prompted occupational specialization. At the beginning, investing, trading, professional servicing, and home enterprising probably took the forms of secondary occupations, while farm operating remained the primary occupation throughout. In time, these secondary occupations became more and more specialized and

178 finally, for a few families, took precedence over rice
463 growing. The relative importance of these new occupations remained low, however, since only a few families were needed to meet the village requirements for such services.

434 The establishment of the primary school some thirty
647 years ago opened up new jobs as teachers and janitors for
875 some educated villagers who were given preference over out-
[272] siders. It should be noted, nevertheless, that at the beginning the primary school teachers were not considered as regular officials and their pay was as low as six baht a month during the prewar years. Even during the war, they did not get as proportionately large a cost-of-living raise as did other regular officials. It was only after the war that they were made regular officials and that their pay rose almost a hundred times to 400 to 550 baht a month with provision for a steady raise to more than one thousand baht
[48] a month. This new occupation in public service also increased with the extension of the central government employment into the rural areas and with improved transportation facilities which permitted an individual to commute daily between his office in Bangkok and his home in Bangchan. Thus, a Bangchan resident is now serving as an educational supervisor in the nearby Nonburi District and a few others are on the regular payroll of the government-owned Bangkok Wharf.

*243 With the background knowledge of the situation of
464 Bangchan farm laborers previously described in mind, we may
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T: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7 Bangchan

243 464 621 463 hypothesize that the presence of farm laborer families in a rice growing village indicates a condition of land scarcity. This is to be distinguished from the presence of farm laborer families in intensive farming areas such as the truck gardening villages along the Damnernsaduag Canal and plantation villages in Cholburi where the marginal product of labor, even with the same crude implement, is much higher than that in the non-intensive rice growing areas. Usually, there are farm laborers in any commercial rice growing region, but they consist of members of farm operator families with excess family workers who work for their own luagai. With low marginal product of labor, the demand for extra labor outside the family is not great and is highly seasonal in rice growing villages, resulting in extremely low total income for farm laborers. Piece-working is thus only good as a subsidiary income for an under-employed farm operator family, and certainly not as the main source of income for any family. Farm laborer families such as those existing in Bangchan are indigenous and are the outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent in any land. These people prefer to remain in the home village, willing to accept meager income from piece-work which is perhaps the only type of job they could get in the village, in the meantime trying to eke out as much as possible from what nature has to offer in the form of fish or uncultivated aquatic plants. The abrupt rise of farm laborer families in Bangchan from nine

[161] [198]

7: Janlekha X-4.5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

per cent in 1949 to thirteen per cent in 1953 suggests that the problem of population pressure on land has become more acute, although it may also indicate changes in the cost structure of rice production which will be discussed in Chapter VI.

Concluding the discussion of this section, we may say that rice growing is the core of the occupational structure of Bangchan around which other occupations rotate. It is not uncommon that one family has several occupations, and in addition to income from these most families get "free" food in the forms of fish and uncultivated aquatic plants. This is the principal reason why families with apparently no cash income still thrive.

It is conceivable that in years of poor rice crop the family put more effort in the secondary occupations; when such an attempt does not work out well -- for example, no work for manual labor and no capital for trivial trade -- an effort is made to obtain subsistence directly from nature.

In any event, every family in the village is engaged in fishing in varying degree. It is because of this fact coupled with the fact that the village fish supply is decreasing that the problem of fish conservation is very important.

Finally, the dynamic nature of rice farming, with varying efforts on getting extra jobs and securing free food outside the farm depending upon the increase and decrease of the rice crop, suggests that the economy of any rice

#243 growing village could not very well be studied in a brief period of only one rice year. Rather, the field study should be extended to cover years of good as well as poor crop.

Land Utilization

Official records show that the area of land privately owned in the seven hamlets comprising Bangchan is 6,404 rai. [SW] When an estimated area of 100 rai of public land occupied by the half dozen canals is added to the private land area, the total area of the village may be figured at about 6,500 rai.

#243 951 423 911 621 The area of each of the 298 homelots in Bangchan varied. It is rather difficult to get accurate figures for these homelot areas. We may, however, give an allowance of one rai for each homelot on the basis of crude estimate. This would include space for buildings and all of the home compound including family pools as well as kitchen garden, and in some cases area devoted to fruit trees. Since all of the land area in Bangchan other than homelots is devoted to rice growing, we may estimate the land available for rice production by simply deducting the homelot area from the total area of land privately owned in the village. This was found to be 6,106 rai in 1953 (Table 12).

#243 311 423 621 It should be noted that not all of this area of 6,10 rai was tilled by Bangchan residents, and that some of the villagers also worked on rice fields outside our arbitrary

[TEXT CONTINUED ON PAGE 113]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 12

LAND AVAILABLE FOR RICE PRODUCTION
Bangchan, Thailand, 1953

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Hamlet	Land Privately Owned	Allowance for Hamelet	Land Available for Rice Production
	rai	rai	rai
BC4	930	40	890
BC5	809	28	781
BC6	900	47	853
KY5	891	63	828
KY6	916	31	885
KY7	939	42	897
KY8	1,019	47	972
Total	6,404	298	6,106

village boundary. Table 13 shows that Bangchan residents worked on a combined area slightly larger than that available to them in our arbitrary village limits. This situation of a village resident working on a field outside the village boundary should not be perceived as one in which the farmer in one village had to walk a few miles to work in another village, for in all cases the fields involved were in the peripheral areas.

Since the approach adopted in this study was one through the people rather than through land, for ease in statistical manipulation we shall use the area worked by Bangchan residents to represent our natural Bangchan area. Thus, when we say that 64 per cent of the rice area in Bangchan are owned by operators, we refer to the 4,314 rai of the 6,722 rai worked by Bangchan residents, not the 3,908 rai of the 6,106 rai which is the actual rice area of the village.

In Bangchan, as elsewhere in the country except in limited areas in part of Chiengmai and Lampoon provinces in the north, a single crop of rice is grown without any crop rotation practice. The rice season starts in late May or early June depending upon the actual arrival of the rainy season, and lasts until the harvest of late varieties in the first half of February. At the beginning of the season, the field work is concentrated in the seedbed which is about one-twelfth of the total planting area. Most of the field, then, is not occupied by the crop until transplanting time

[TEXT CONTINUED ON PAGE 115]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 13

RICE LAND WORKED BY BANGCHAN RESIDENTS
Bangchan, Thailand, 1953

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Hamlet	Land Available for Rice Production	Land Worked by Residents	Net Area Outside, Worked by Residents
	rai	rai	rai
BC4	890	801	- 89
BC5	781	497	-284
BC6	853	1,102	249
KY5	828	1,295	467
KY6	885	850	- 35
KY7	897	1,016	119
KY8	972	1,161	189
Total	6,106	6,722	616

#243 well into August and September. Thus, it would appear that the rice field is utilized for only six months of the year, leaving much to be desired for an economic use of it during the other half-year.

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911 If consideration is given to the nature of buffalo raising, however, it will be realized that these six months are not actually wasted. In the dry season following rice harvest, buffaloes feed freely on rice stumps in the fields and on supplementary straw accumulated in the homelot during threshing. After the first few showers of rain in April, the fields are gradually covered with noncultivated grasses and the buffaloes enjoy this green feed all the more. Even when the fields are wet enough for plowing in June, the early field work is concentrated on the seedbed, leaving the greater part of the fields which have not yet been plowed to the buffaloes to graze usually during their 10 a.m. to 2 p.m. recess from work in the seedbed. When the farmer starts working on the fields other than the seedbed, the grazing area is gradually reduced and the buffaloes are now partially fed with green grasses which grow wild in limited areas between rice fields and canals to which the farmer has customary right. As the grazing area is further reduced, more and more grasses are given. By the time all the fields have been plowed, the buffaloes are totally fed with the green grasses. This total green grass feeding lasts until the next harvesting season when straw becomes available to supplement green grasses which now become

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7 Bangchan

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311 more scarce as the dry season creeps in, thus completing the annual buffalo feeding cycle.

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231 Double cropping has been suggested as a means by
311 which farm income may be increased. To this suggestion
[312] several obstacles have been mentioned, most important of which center around the lack of ample water supply and water control and an envisaged severity of pests predatory on an early crop.[2] In the light of the discussion in the previous paragraph, the inevitable reduction of grazing area and the consequent loss of feed supply may be added to the list of obstacles to double cropping. It is rather unfortunate that little attention has been paid to this all important problem of buffalo feeding. The general idea seems to follow the line that there is no problem of feed and that the only problem concerning draft animals lies in the control of diseases. If this negligence persists, there is danger that the uncultivated grasses which are the least expensive buffalo feed might be depleted. Because of limited grazing area, buffaloes in most commercial rice growing villages in the Central plain are already not reproducing themselves rapidly enough to maintain their number. This is evident in the annual importation into the region from the northeast of inferior stock which is less strong and has shorter life. Without grass conservation, it would not be long when Thai farmers will have to deliberately "grow grass" for their

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2. Janlekha, op. cit.

243 buffaloes heretofore undreamt of and will have to bear
231 the consequent burden of increased cost of producing rice.
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Some description of the homelots which constitute
311 almost five per cent of the land area of Bangchan has already
351 been given in the section on vegetation, Chapter II. From
[241] the standpoint of land utilization, functions of the homelot
[245] other than providing standing room for the living quarters
[244] may be mentioned as follows:
[245]
[224]

1. It provides space for threshing and for storage of rice and farm equipment including buffaloes.
2. It provides room for chicken or duck raising.
3. It provides land for a kitchen garden, and for fruit and vegetable growing.
4. It provides space for fish trapping by the draining method.

To serve these functions, homelots in any rice growing village, where the fields are submerged under water during the entire life of the rice plant, must be high above water level during the flood season, must be well drained, and must have pools with ample shade.

243 Rice land in its natural state does not meet these
311 requirements for a homelot. In the first place its level is too low. Second, the impervious layer of clay characteristic of rice land does not permit soil drainage. To make a homelot out of rice land, it is necessary that the prospective site be mounded up to a level two or three feet higher than the level of the surrounding fields. The hole from which

#243 earth has been removed for the purpose of raising the yard
911 becomes a fish pool simply by the construction of a ditch connecting the hole with the canal, thus partially giving the last mentioned requisite of a homelot. Again, in the
312 process of mounding up the homelot the soil may be made well
957 drained by skillful handling of the earth. The technique adopted by the Chinese experts in the famous truck gardening area of Damnernsaduag is to remove the top soil first from the strip intended to be the ridge of the prospective vegetable garden. Then the top soil of the adjacent area intended to be the pool is also removed, and these top soils from the two adjacent strips of land are put together in one pile. Next, the tough subsoil of the pool strip is dug up and placed over the bare subsoil of the ridge strip. Finally, the subsoil ridge thus elevated is covered with the topsoils from the mixed pile. By this manipulation the depth of the top soil of the newly created ridge is greatly increased from the original depth of about 8-10 inches to perhaps 16-20 inches. The presence of the pool, also newly created, along the ridges further enhances the draining quality of the strip. Unfortunately, this technique was unknown in Bangchan, and mounding of the homelot was done by simply dumping the earth dug out from the strip intended to be the pool all over the land area of the prospective homelot. With the presence of the pool which served as a receptacle for water and with constant hoeing of the garden area, the soil depth also was increased and the draining quality improved.

7: Jamlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7 Bangchan

Rice Production

*243 433 434 Rice is the single major crop of Bangchan. As of 1953 eighty-five per cent of Bangchan families derived their main source of income from rice production either as farm operators or as farm laborers (Table 11). Furthermore, rice was grown not only by farm operator and farm laborer families but also as a side line by families reporting other occupations. In Bangchan, as in all other rice growing villages, it can be said that rice is the source, direct or indirect, of income for every family. As earlier mentioned, rice growing is the core of the occupational structure around which other occupations rotate.

Table 14 shows that the village average yield, computed from crops of a sample of 96 rice farms during 1949-52, was 28.8 tang per rai.[3] On the basis of this figure, the village total rice crop from 6,722 rai of land worked by Bangchan residents in 1953 may be estimated at 193,594 tang or about 2,130 tons of paddy.[4]

*243 433 In order to determine rice surplus in Bangchan, village rice consumption must be computed first. There are three principal uses of paddy -- as human food, poultry feed and as seeds. The village paddy consumption is shown in Table 15.

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3. See Chapter IV for the sampling technique.

4. One tang of paddy grown in Bangchan weighs approximately eleven kilograms.

[TEXT CONTINUED ON PAGE 122]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 14

VILLAGE RICE ACREAGE, CROP, AVERAGE YIELD, AND CROP INDEX BY YEAR, 1948-52

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Year	Area Planted to Rice	Total Crop	Av. Yield Per Rai	Crop Index*
	rai	tang	tang	
1948	3,384	108,760	32.1	111.4
1949	3,130	77,692	25.0	86.8
1950	3,102	99,225	32.0	111.1
1951	3,039	89,698	29.6	102.7
1952	3,046	76,670	25.2	87.5
Total	15,701	452,445	--	--
Average	3,140	90,489	28.8	100.0

* Average yield during 1948-1952 as 100.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 15

VILLAGE PADDY CONSUMPTION
Bangchan, Thailand, 1953

Item	Units of Consumption	Rate	Total Consumption
		tang	tang
Food	1,372 man equivalent	38.3	52,548
Feed	5,066 chicken equiv.	4.0	20,264
Seeds	7,682 rai equivalent	1.0	7,682
Total		--	80,494

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

In Table 15, units of consumption of paddy are arrived at by the following procedures

1. Food. Children age 14 and under are considered to have one-half of the rate of consumption of adults and the old. Thus, 644 children in Table 2 comprise 322 man equivalent units of consumption. When 1,050 people over 14 years of age, each having one man equivalent unit of consumption, are added, a total of 1,372 units is obtained.

The rate of consumption of 38.3 tang per man equivalent was obtained from our consumption study of 106 families in 1953.

2. Feed. Due to the lack of adequate data for 1953, figures obtained by the poultry survey conducted in 1949 were used in the calculation for feed. Items in that survey include roosters, hens, chicks, and ducks. Information on poultry feed consumption was obtained from Luang Suwan, the poultry expert of Kasetsat University, Bangkok, who gave the following figures: roosters, hens and ducks, naturally raised, consume four tang of paddy per head per year; and a chick's paddy consumption, negligible at the beginning but gradually increasing with its age, is about three tang per year. Most of these chicks were disposed of at the age of seven months when each had consumed about one tang. One chicken equivalent is therefore assigned to each head of roosters, hens and ducks, and one-fourth chicken equivalent to each chick. On the basis of a stock of 17 chicken equivalents per family, which was found to be the case in 1949,

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

a total of 5,066 chicken equivalents was estimated for 1953.

3. Seeds. Since broadcast and transplanted rice require different amounts of seeds per rai, the total rice area planted to broadcast and transplanted rice must first be reduced into comparable figures -- the rai equivalent, or an area of one raidfor transplanted rice and two rai for broadcast rice. We do not know the actual proportion of broadcast area to transplanted area in 1953, but the proportion figure of 497 1/4 to 3,030 or roughly one to six for 1949 may be assumed.[5] Thus, the total area of 6,722 rai for both broadcast and transplant rice is changed into 7,682 rai equivalent for the purpose of estimating the amount of seeds required. It was found in 1949 that one tang of seed was used for each rai equivalent of rice field. This figure is used in the present calculation.

Table 16 shows that an annual surplus of 113,100 tang of paddy, or about 1,244 tons, was estimated for 1953 on the basis of past performance. This is about 58 per cent of the crop.

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5. Sharp et al., op. cit., pp. 145-46.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 16

ESTIMATED VILLAGE PADDY SURPLUS
Bangchan, Thailand, 1953

Paddy Production		193,594 tang
Paddy Consumption		
As food	52,548	
As feed	20,264	
As seeds	7,682	
Sub-total		80,494 tang
Paddy Surplus		113,100 tang

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

Other Food Production

235 433 Other food products which are produced in a considerable amount in Bangchan include chicken eggs, duck eggs, and fish. To a lesser extent, fruit and vegetables are also produced locally.

Practically every family in Bangchan raises chickens, and half raise ducks. In April, 1949, the author conducted a poultry survey covering 46 families whose homes were on the banks of Bangchan Canals. Of these, 45 families were found to be raising chickens and 23 families raising ducks.

Of 45 families raising chickens, 38 families from which data were available reported rates of egg production showing that for these families 53,750 eggs were produced annually from 376 laying hens, averaging 143 eggs per hen. [146] [438] Of 31 families who gave information about sales, five consumed all 2,260 chicken eggs produced; the other 26 families sold 31,040 eggs and consumed 5,590. The proportion of consumption to sale was thus 7,850 to 31,040 or approximately one to four.

There were 393 laying hens in the yards of 45 families, averaging 8.6 hens per family. Chicken egg production [434] was estimated at 1,230 per family. Assuming that four-fifths of these were sold at three for one baht, which was the local price in 1949, average cash income for these families from sale of chicken eggs was estimated at 326 baht annually. [415] With a higher price in 1953 of fifty satang a piece, the estimated income from sale of chicken eggs rose to 492 baht per family.

235 Of the 46 families covered by the survey, 23 or one-
439 half raised ducks with an average annual production of 155
434 eggs per duck, and an average of 11.7 ducks per family raising them. Egg production for each of these families thus averaged about 1,800 per year. Of these, 1,350 were consumed by the family and 450 sold at the same price as chicken eggs. It was estimated, then, that from duck eggs alone, the average cash income in 1949 was about 150 baht per family raising ducks.

226 After rice, fish were by far the most important
262 ingredient in the diet of Bangchan. In contrast to poultry,
413 however, fish did not constitute a source of cash income of
[434] the villagers. As a matter of fact, more fish were bought from the outside than the negligible amount that was exported from the village mainly by one or two very poor families who had availed themselves of this means of augmenting
[435] their income. From our consumption study of 106 families in 1953, it was found that of an aggregate amount of 17,786 kilograms consumed by these families in the previous year 16,027 kilograms were caught by the families while 1,759 kilograms were bought at five baht per kilogram. The rate of fish production may thus be estimated at 151 kilograms annually per family, or 44,998 kilograms for the entire village.

262 The same consumption study shows that the 106 fami-
244 lies consumed in 1953 a total of 18,402 kilograms of vegetables
433 all of which were produced or acquired by the families.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

averaging 174 kilograms annually per family. It should be noted here, as will be elaborated in the section on consumption in Part II of this study, that while most respondents could fairly well estimate their rates of consumption of such items as rice and fish sauce which were somewhat constant, they were not as good in estimating their consumption of vegetables. Furthermore, while admitting that they did buy some vegetables during the year, they were reluctant to give any estimate of the purchase for fear of too much inaccuracy. At most, they were willing only to say that the amount of vegetables purchased was only a small fraction of what they produced or acquired freely from the canals.

Fruit production was even more difficult to estimate than vegetable production, and we had to be content with only qualitative information which appears in the section on vegetation on pages 42-43 of this study. Our records show that a few families reported nominal incomes of some forty or fifty baht annually from sale of fruit to neighbors.

Table 17 shows estimated village production and surpluses of farm products other than rice, namely, chicken eggs, duck eggs, fish, vegetables, and fruit. The estimates are based on the poultry survey of 1949 and the consumption study of 1953.

While the methods of selling and storing paddy enable the farmer to know the exact amount of his crop, which condition leads to our confidence in the accuracy of our estimate

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T: Jealabha X-4.5 (1948-1951)1956 AO7 Central Thai AO7
Bangchan
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TABLE 17

ESTIMATED VILLAGE PRODUCTION AND SURPLUSES OF SECONDARY FARM PRODUCTS
Bangchan, Thailand, 1953

Items	Production	Consumption	Surplus
Chicken eggs	366,540 eggs	73,308 eggs	293,232 eggs
Duck eggs	268,200 eggs	201,500 eggs	67,050 eggs
Fish	44,998 kg.	59,943 kg.	-4,945 kg.
Vegetables	51,852 kg.	51,852 kg.	--
Fruit	not available	not available	not available

of village production and surplus of paddy (Table 16) there were no comparable basis for our estimate of the other crops. Our estimates of these other crops should therefore be considered as crude estimates.

Tables 16 and 17 show that in 1953 Bangchan had surpluses of 104,756 tang of paddy, 293,232 chicken eggs, and 67,050 duck eggs, and a deficit of 4,945 kilograms of fish. Using the 1953 farm prices of 9 baht per tang of paddy, 0.40 baht per chicken egg, 0.50 baht per duck egg, and 5 baht per kilogram of fish, village exports may be estimated at 942,804 baht for paddy, 146,616 baht for chicken eggs, and 33,525 baht for duck eggs, and village import of fish may be estimated at 24,725 baht.

Land Tenure

Table 18 shows that Bangchan residents owned an aggregate area of 4,315 rai. Since their combined area planted to rice was 6,722 rai, the balance of 2,407 rai had to be provided by absentee landowners. In fact an area larger than 2,407 rai had to be rented in because part of the area owned by local residents had to be used as homelots. Actually, the net area rented in was 2,438 rai (total area rented in of 3,641 rai minus total area of 1,203 rai rented out). It is not to be expected, however, that this extra area of 31 rai (an excess of 2,438 over 2,407 rai) is enough to accommodate the 298 homelots in the village. Inaccuracies might have arisen in cases of joint ownership of certain

[TEXT CONTINUED ON PAGE 1511]

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T: Janlekha K-4.5 (1948-1953)p936 AO7 Central Thai AO7
Bangchan

TABLE 18

RICE AREAS WORKED, OWNED, RENTED IN, AND RENTED OUT
Bangchan, Thailand, 1953

Hamlet	Total Families	Total Population	Area in Rai			
			Worked	Owned	Rented In	Rented Out
BC4	40	236	861	849	413	450
BC5	28	136	497	306	261	65
BC6	47	270	1,132	576	531	—
KY5	63	354	1,295	963	834	487
KY6	31	168	850	585	354	95
KY7	42	250	1,016	597	527	108
KY8	47	278	1,161	440	721	—
Total	298	1,694	6,722	4,315	3,641	1,203
Areas per family			22.4	14.5	12.2	4.0
Areas per man			4.0	2.5	2.1	0.7

243 parcels by siblings who failed to include their share in
423 those parcels in the reporting of areas owned. For want
427 of a proper basis for adjustment, we chose to let the figures
128 stand as they were reported.

Table 19 shows that the combined area in rice of all the 216 farms in Bangchan was 6,638 rai, or almost 99 per cent of total area planted to rice by the residents, the balance of 84 rai being worked on by residents whose occupations were those other than farm operating. Of these 216 farms, 48 were classified as all owned, 88 part owned, and 80 all rented.

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The conventional system of classifying farms according to land tenure into all owned (owner-operator), part-owned (part-owner), and all rented (tenant) should not be used without modification as a classification of economic or social status in population pressure areas where an efficient size farm is usually an exception rather than a rule. In these areas, it does not hold, as it seems to imply, that an owner-operator has a superior economic status than a part-owner and that a part-owner is still in a better economic position than a tenant. There is a wide range in size of farm operation and hence of incomes within these categories.

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Within the category of owner-operator, there are major differences in size of operation and hence economic and social status. If a farmer -- to cite a specific case, Farmer A in BC4 -- owns the large area of rice of 235 rai,

[TEXT CONTINUED ON PAGE 131a]

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TABLE 19

DISTRIBUTION OF 216 FARMS ACCORDING TO LAND TENURE, BY CONVENTIONAL CLASSIFICATION
Bangchan, Thailand, 1953

Land Tenure	Number of Farms	Working Area				Average Number of Rai Operated
		Rai Owned	Rai Rented*	Total Rai Operated		
				Actual	Per Cent	
All owned**	48	1,589	--	1,589	23.9	33.1
Part owned	98	1,511	1,583	3,094	46.6	35.2
All rented	80	--	1,955	1,955	29.5	24.4
Total	216	3,100	3,538	6,638	100.0	30.7

* In cases where an operator both rents in and rents out some land, the net area rented in is used.

** Figures include only land owned and operated, land rented out is not included.

7/ Jantaboon X-4-5 (1948-1953)p956 AO7 Central Thai AO7 Bangchan

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7: Jantebha X-4.5 (1948-1953)1956 AO7 Central Thai AO7 Bangchan

TABLE 20

DISTRIBUTION OF 216 FARMS ACCORDING TO LAND TENURE, BY SUGGESTED METHOD OF CLASSIFICATION
Bangchan, Thailand, 1953

Land Tenure	Number of Farms	Working Area				Average Number of Rai Operated
		Rai Owned	Rai Rented*	Total Rai Operated		
				Actual	Per Cent	
Landlord-operator	11	517	—	517	7.8	47.0
Owner-operator	79	2,131	513	2,644	39.8	33.5
Part-owner	23	227	325	552	8.3	24.0
Tenant	103	225	2,700	2,925	44.1	28.4
Total	216	3,100	3,538	6,638	100.0	30.7

* In cases where an operator both rents in and rents out some land, the net area rented in is used.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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he may rent out some and retain only the part he can operate well. In this case he chose to operate 65 rai in 1953, renting out the balance of 170 rai. On the other hand, another farmer -- Farmer B, also in BC4 -- who owns only a small parcel of nine rai may not be able to rent in additional land to make an efficient size farm. In this case, B was not able to rent in any land and had to work on only nine rai of his own in 1953. In an area of relatively low population pressure, the probability of failure to rent in some more land may be small, but it is not so small in the relatively high population pressure areas such as Bangchan. The difference between farmers owning a small area of land and a large area is so great from the standpoint of economics and social position as to warrant having two sub-divisions of the conventional "owner-operators".

Small "owner-operators" may increase their size of operation by renting in some more land and thus becoming part-owners. These farmers actually improve their socio-economic status if they are able to move from the group of owner-operators into the group of part-owners. To use another concrete example, Farmer B, mentioned in the preceding paragraph, who worked on the nine-rai parcel of his own, does not earn more farm income than Farmer C, also in BC4, who owned 20 rai and still rented in 30 more rai in order that his four family workers including himself might be fully employed with a 50-rai farm.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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[444]

It is seen, then, that the conventional system of land tenure classification is of very limited usefulness in areas where under-employment of farm labor is the general pattern. In an attempt to increase its usefulness mentioned above, a new classification system for land tenure is suggested in which the "owner-operator" category of the conventional system is sub-divided and arbitrary limits set to partially solve the problem of the third type of confusion.

The emphasis of the suggested method of classification lies in the functional aspect of each category. Thus, operators who own all the farm land they operate and still have some more land to rent out, an indication that they really have more than enough land for their farm operating occupation, are grouped under the landlord-operator category. This group resembles the conventional "owner-operator" in that in both the farmers do not rent in any more land, but differs from the latter in that they are really land saturated farmers while the latter may or may not be land saturated. Generally speaking, therefore, the new landlord-operator group are economically more secure than the conventional owner-operator group.

Operators who own all the farm land they operate but do not have any more land in the village or close neighborhood to rent out are grouped under the owner-operator category. To avoid confusion of the second two adjustments are made: (1) if a farmer owns two-thirds or more of his working area, he is included in this category; and (2) he

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*129
423 is also included in the category if he owns 20 rai or more
427 of his working area regardless of how much land he rents in. It may be noticed that the non-renting section of this group resembles the conventional "owner-operator" and the renting section resemble the most affluent section of the conventional "part-owner". Generally speaking, however, the whole group represents farmers who own the majority of their working area, or, in cases of those operating fairly large farms, own at least 20 rai of the working area -- a moderate size which may well place them in the middle third of the conventional "owner-operator" group if they should choose not to rent in any land.[7]

Operators whose working areas are more or less equally split between their own lands and rented lands are grouped under the part-owner category. Arbitrarily and more specifically, these include all operators who own one-third to almost two-thirds of their working areas with the exception of those owning 20 rai or more who are already grouped under the new owner-operator category.

Finally, operators whose working areas are predominantly rented lands are grouped under the tenant category. More specifically and also arbitrarily, these include all operators owning less than one-third of their working areas with the exception of those owning 20 rai or more.

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7. Of a total of 136 operators owning land in Bangchan, there were 66 who owned less than 20 rai (Table 21).

*128 423 427 While this "functional" classification of land tenure does not eliminate all of the shortcomings of the conventional method which have been accentuated by land scarcity, it evidently helps to bring about a clearer economic picture of the farm. If the primary purpose of land tenure classification is merely to establish a plain typology of the land holding situation for its own sake only, the conventional method might suffice even in farm labor underemployment areas. On the other hand, if we want to probe further into the business aspect of the farm, as we propose to do in Part II of this study, then a more revealing system of classification is perhaps necessary.

*243 423 427 463 621 It has been mentioned earlier in this section that of 6,722 rai planted to rice by Bangchan residents a total of 4,315 rai was locally owned (Table 18) and that a total area rented in from outside renters was some 2,407 rai. Since the net area rented out by local renters was 1,186 rai (Table 21), the proportion of outside renters to local renters was roughly two to one. Table 21 shows that there were 21 local renters whose main occupations were distributed among landlord-operators, trader, investors, and public servants, and that an average area rented out by each local renter was 56.5 rai.

Table 22 shows a frequency distribution of land owned by operators, and Table 23 shows a frequency distribution of land owned by non-operators.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 21

NET AREAS RENTED OUT BY VARIOUS OCCUPATIONAL GROUPS
Bangchan, Thailand, 1953

Occupation	Number	Total Area	Ave. Area	Rang
		rai	rai	rai
Landlord-operator	10	683	68.3	5-17
Trader	5	189	37.8	17- 8
Investor	4	149	37.3	17- 7
Public servant	2	165	82.5	5-16
Total	21	1,186*	56.5	5-17

* This figure is slightly less than total area rented out of 1,203 rai in Table 18 because net figures are used here.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 22

FREQUENCY DISTRIBUTION OF LAND OWNED BY OPERATORS
BY SIZE CLASSES
Bangchan, Thailand, 1953

423
C21

Size Class	Frequency
rai	
0- 9	12
10-19	54
20-29	28
30-39	14
40-49	13
50-59	6
60-69	0
70-79	0
80-89	2
90-99	0
100-149	4
150-199	2
200 and over	1
Total	136
Mean	31.0 rai
Median	20.8 rai

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 23

FREQUENCY DISTRIBUTION OF LAND OWNED BY NON-OPERATORS
BY OCCUPATIONAL GROUPS
Bangchan, Thailand, 1953

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Class	Frequency	Total Area	Ave. Area	Range
		rai	rai	rai
Farm laborer	2	8	4.0	2- 6
Trader	8	184	23.0	3- 86
Investor	5	164	32.8	10- 76
Public servant	2	167	83.5	7-160
Total	17	523	30.8	2-160

7: Jamlekha X-4.5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

Rent of Rice Land

*128 178 427 Tables 24 and 25 show different rental methods in 1948 and 1952. Figures in Table 24 were obtained from our records of the sample of 104 farms in operation in 1948, and figures in Table 25 were obtained from the same sample reduced in 1952 to 96 farms which had been continuously in operation until then, the other eight farms having ceased to operate by 1952.[8]

427 *243 178 It is seen that with the exception of a single case of share-cropping there were two rental methods in 1948, in kind and in cash, the proportion of areas involved being fifteen rai of rent in kind to every rai of cash rent. In 1952 rental methods remained more or less the same, consisting principally of rent in kind and cash rent, the proportion of areas involved being slightly increased to nineteen rai of rent in kind to every rai of cash rent.

*243 178 427 435 There was, however, a rapid rise in rent rates within this period of four years. It is seen that the average rate of 6.2 tang per rai in 1948 has risen to 8.1 tang per rai in 1952, an increase of 31 per cent in four years.

[433] It is interesting to note that an increased rent rate was charged in spite of the decline in yield of 32.1 tang per rai in 1948 to 25.2 tang per rai in 1952, or from the record crop index of 111.4 in 1948 to 87.5 in 1952 (Table 14).

[434] Another equally interesting point is that the increase in rent rate was charged in spite of the increases in the

8. See Chapter IV of the sampling technique.

[TEXT CONTINUED ON PAGE 143]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7 Bangchan

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TABLE 24

DIFFERENT RENTAL METHODS
Bangchan, Thailand, 1948*

Rate Per Rai	Rate in Tang Equivalent	Number of Parcels Reported	Total Area	Total Rent**
Kind			rai	baht
3 tang	3.0	1	11	259.38
5 tang	5.0	29	623.75	24,513.53
5 1/2 tang	5.5	1	15	648.45
6 tang	6.0	22	390	18,392.40
7 tang	7.0	15	313.50	17,248.77
8 tang	8.0	28	495.50	31,157.04
Cash				
12.50 baht	1.6	1	8	100.00
30.00 baht	3.8	6	91.50	2,745.00
41.38 baht	5.3	1	14.50	600.00
50.00 baht	6.4	1	6	300.00
Share				
50% of crop	--	1	10	--
Unspecified	--	1	20	--
Total	--	105	1,998.75	95,964.57
Average	6.2	--	1	48.89

* From the preliminary study of Bangchan, page 149.
** The 1949 farm price of 7.86 baht per tang was used.
-- Not available.

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S42

TABLE 25

DIFFERENT RENTAL METHODS
Bangchan, Thailand, 1952

Rate Per Rai	Rate in Tang Equivalent	Number of Parcels Reported	Total Area	Total Rent*
Kind			rai	baht
6 tang	6.0	5	75	4,050.00
7 tang	7.0	14	253.50	22,270.50
8 tang	8.0	39	676	63,072.00
9 tang	9.0	3	39	3,159.00
10 tang	10.0	6	113	10,170.00
Cash				
40 baht	4.4	1	46	1,840.00
50 baht	5.6	3	15.50	775.00
70 baht	7.8	1	16	1,120.00
Free	--	4	(84)	--
Total	--	78	1,534	106,456.50
Average	8.1	-	1	72.66

* The price of 9 baht per tang was used. It should be noted, however, that while the farm price of 7.06 baht per tang used in Table 24 was a result of a day by day record of actual sales during the first selling period (December-March) comprising about two-thirds of marketable paddy of 104 operators studied in 1948-49, this price of 9 baht per tang was not as systematically arrived at because we could not afford as much time in the 1952-53 study. This 9 baht was simply a rounded model price during the first selling period of the 1952-53 rice year (December 1952-March 1953).

T. Jantakha X-4.5 (1948-1953)/956 AO7 Central Thai AO7
Bangchan

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243
178 other items of cost of producing paddy -- in other words,
427 in spite of a decline in profit (a great decline when a
434 reduced yield is also considered). In the preliminary study
435 in 1948-49, it was found that the average cost of producing
a tang of paddy was 5.88 baht, all costs included except
value of operators' labor.[9] When the value of the operators'
labor of 1,000 baht for those operating ten rai or over and
of 500 baht for those operating less than ten rai was included
in the calculation, the cost of production was found to be
6.76 baht per tang, including 1.52 baht for rent, 3.46 baht
for labor (values of operators' labor and family labor in-
cluded), 0.38 baht for seeds and materials, 0.65 baht for
depreciation, and 0.75 baht for interest on investment. As
we shall see in the section on cost of producing paddy in
Chapter VI, an estimate of cost using the 1952 prices, for
time and opportunity did not permit a second cost of produc-
tion study during our second period of field work in 1952-
53, points toward an increase in every item of the cost of
producing paddy in Bangchan.

An explanation for this abrupt rise in rental of rice land in Bangchan lies in the nature of the demand for and supply of rice land. Although rents may be surpluses

*[128] 9. Sharp et al, op. cit., p. 171. In this preliminary study, the cost of family labor was imputed (at going wage rate) from labor requirement based on acreage, the cost of the use of the operator's own land was imputed from going rent rate, and the depreciation cost was calculated by dividing the original cost of equipment by their respective expected length of service.

7: Janiekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

#243 178 427 434 435 from certain points of view, or for certain purposes, or subject to certain interpretations, they are to the individual producer no different from any other money expense. They do not arise as a surplus from his own operations; they are a cost rigidly imposed upon him by the competition of his rivals for the use of the rent-yielding property. They figure in the same way as do wages of labor and the interest of capital in his computations as to the most advantageous proportion between the factors and as to the most #[128] advantageous scale of operations.[10] Naturally, we are now dealing with contractual rent, which is the actual sum paid by the tenant to the landlord for the use of the land, not the hypothetical economic rent of the classical economists.

#243 464 The preliminary study revealed that there was in 1948 under-employment on some Bangchan farms in terms of rai worked per worker. This was shown by comparing the number of rai worked per worker on 94 farms employing no #[128] hired laborer with the number of rai worked per worker on 10 farms employing one or more hired laborers. On the farms where only family labor was used, the figure was 9.4 adjusted rai per worker; while on those farms which used regularly hired laborers along with family labor, the figure was 13.4 adjusted rai per worker. (Each rai of transplanted rice was counted as one adjusted rai, while each rai planted by the less-labor-requiring broadcast method was counted as one-half of an adjusted rai.) An assumption was made that

10. Edward Chamberlin, The Theory of Monopolistic Competition (sixth edition; Cambridge: Harvard University Press, 1950), p. 22.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 farm operators who hired regular laborers did so because
464 full utilization of the effort of all the family workers was not adequate. This assumption would seem to be reasonable in view of the rather high cost of hiring such laborers. It was concluded, then, that some farms in the community were below optimum size for the number of workers in the family.[11]

243 This condition of farm under-employment is our basic
464 assumption in discussing rent rates in Bangchan. With an
161 increase in population in an area where farm operating is
178 the core around which other less important occupations rotate, it may be reasoned that the aggregate demand for rice land in 1952 was at least as high as that in 1948 if not greater. As for the extent of under-employment of farm labor, it is interesting to note that the number of families directly engaged in rice farming, the farm operating and farm laboring families, was 256 in 1949 and 254 in 1953. With a constant supply of land (in the popular sense of the term), this more or less constant number of families directly engaged in rice farming indicated that the extent of farm under-employment in 1952 was just about the same as that in 1948. Although the average size of the family was found to be slightly smaller in 1953,[12] that slight decrease was certainly not large enough to materially affect the situation.

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11. Sharp et al., op. cit., p. 158.

[162] 12. The average size of the family was 5.7 in 1949, and 5.5 in 1953.

243 434 464 As long as farm under-employment prevails and as long as limited opportunity for an alternative occupation is open to farm operators and farm laborers, we have reason to believe that the demand for rice land is rather inelastic. Another important factor contributing to this belief is the operator's concept of cost of producing paddy which seemed to include only explicit rent (actual amount paid to the [435] landlord) and cash operating expenses. Thus, while our calculation shows that the cost was 6.76 baht per tang or 215 baht per rai in 1948, the figure would be only 1.71 baht per tang or about 55 baht per rai according to the operator's concept of the cost.

243 427 464 178 435 Under the conditions of farm under-employment, a tenant, part-owner, or even owner-operator is willing to pay high rent for an additional parcel because a larger worked area would cost him only the additional explicit rent and a small increase in seeds and materials. Unless the extra rented parcel is so large that extra labor must be sought outside the family, he does not have to pay any explicit wage at all for rice production in this additional parcel. Landlord-operators, on the other hand, are under a different situation, for they may rightly be considered land saturated and fully employed. Hence, the individual demand for working land on the part of a landlord-operator is relatively more elastic than those of the other farm operators. As rent rose from 6.2 tang per rai in 1948 to 8.1 tang per rai in 1952, it was observed in Table 26 below that

243 427 435 178

[TEXT CONTINUED ON PAGE 148]

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7 Bangchan

TABLE 26

RELATIVE SENSITIVITY TO CHANGE IN RENT RATES OF LANDLORD-OPERATORS AND OTHER GROUPS

Category	Area Operated					Decrease, 1948-52	
	1948	1949	1950	1951	1952	Actual	Per Cent
	rai	rai	rai	rai	rai	rai	
Landlord-operator							
Farmer A	110	100	80	70	65	45	41
Farmer B	80	80	50	8	8	72	90
Farmer C	75	75	75	75	75	0	0
Farmer D	65	70	60	70	60	5	8
Farmer E	47	47	47	47	47	0	0
Farmer F	26	26	26	5	5	21	80
Farmer G	24	0	0	0	0	24	100
Sub-total	427	398	338	275	260	167	39
Other groups of farm operators	2,981	2,732	2,764	2,764	2,786	195	7
All 104* operators	3,408	3,130	3,102	3,039	3,046	362	11

* The sample consists of 104 operators in 1948, 103 in 1949, 98 in 1950, 96 in 1951, and 96 in 1952.

*243
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427 landlord-operators were more sensitive to the change in
435 rent rates than were the other groups of farm operators.

Limited opportunity for an alternative occupation
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621 was mentioned in the preceding paragraph as one of the factors contributing to the inelastic nature of demand for working land. It was also mentioned in the section on the occupational structure of Bangchan that farm laboring families as existing in the village were indigenous and were an outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent
[443] in any land. Limited opportunity for an alternative occupation in the village was also suggested in the same section when it was mentioned that the only possible alternative -- petty trading which was actually taken up by some former farm operators -- was limited by the fact that villagers bypassed local traders and went to the nearby market town of Sinburi for major purchases and variety goods.

Limited opportunity for an alternative occupation
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465 outside the village, however, needs elaboration. It cannot
569 be denied that wages in Bangkok, only twenty miles away and easily accessible through good road and bus services, were higher on the average than corresponding returns for labor in the village. It is important to note, however, that what will attract a villager to seek a job in Bangkok is not a higher average wage level in the city but a higher marginal wage there. Regarding the marginal wage, it is highly doubtful that a better condition exists in Bangkok.

369 It should be noted also that once a villager has moved
167 into Bangkok he will be deprived of the privilege to
162 acquire free food from nature -- an important economic advantage of living in the village which counts heavily when emigration to the city is being seriously contemplated.

427 It is seen, then, that the demand for land on the
423 part of land-thirsty operators -- the tenants, part-owners, and owner-operators -- was high and inelastic, while the demand for land on the part of land-saturated landlord-operators was low and elastic. Since the combined demand of all landlord-operators constituted only a small fraction of the total demand (Table 20), it may be safely concluded that the aggregate demand for land in Bangchan at the period we are dealing with was high and inelastic.

311 Let us now consider the supply side of land. For
423 the purpose of this discussion we may differentiate four
427 sources of supply of a total of 6,722 rai considered to
463 represent our natural Bangchan area. They are:

1. Land-thirsty operators -- all for implicit rent.
   a, Owner-operators 2,131 rai
   b, Part-owners 227 rai
   c, Tenants 225 rai
   Sub-total 2,583 rai

2. Land-saturated operators (landlord-operators).
   a, For implicit rent 517 rai
   b, For explicit rent 683 rai
   Sub-total 1,220 rai

3. Local non-operators -- all for explicit rent.
   a, Traders 189 rai
   b, Investors 149 rai
   c, Public servants 165 rai
   Sub-total 503 rai

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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4. Non-indigenous landlords 2,416 rai (all for explicit rent).

To understand the working of the supply forces, it is necessary to break the non-indigenous landlords down into those living in the neighborhood of Bangchan, which we shall henceforth call the neighboring landlords, and those living far away, which we shall call the absentee landlords. It is regrettable that accurate figures for these breakdowns were not available, but it may be estimated on the basis of some known cases that they were roughly of the same proportion, that is, some 1,208 rai in this category were owned by neighboring landlords and the same amount by absentee landlords. On the basis of the same known cases, it may be generalized that the area of land owned by an average absentee landlord was larger than that owned by an average neighboring landlord.

It is obvious that the individual supply of land varies according to the type of the people who have command over it. Generally speaking, land-thirsty operators who supply part of their own working areas should provide an inelastic supply of land, for they will continue to offer to themselves all the land they own regardless of how the rent rate may change. All lands owned by land-thirsty operators yield only implicit rents, for if they are rented out for explicit rents, the landowners of the parcles in question would have changed their status to landlord-operators.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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427 Inelasticity of supply for land among land-thirsty operators also varies with different sub-group (tenant, part-owner, or owner-operator) depending upon the degree of land thirst. Thus, supply for land among the tenants would be more inelastic than that of part-owners, and supply for land of part-owners would be more inelastic than that of owner-operators.

427 434 Landlord-operators, on the other hand, are sensitive to changes in rent rates which directly affect their incomes part of which are derived from rents. Although they will have to offer all of their lands either to themselves or to others, the proportions offered vary according to rent rates. If rent is low, they may increase their own working areas for the reason that incomes deriving from farm operation may be higher than prospective incomes from renting out the same parcels. If rent is high, they may reduce their own working areas since they may figure out that incomes from renting out those parcels are higher than the prospective incomes deriving from working on them. It is due to this capacity to adjust the proportion of working area and area rented out that landlord-operators' bidding power may be considered very strong. Other local landlords who are non-operators do not have this same capacity to increase or decrease areas offered for explicit rent. If rent is too low and they want to operate their lands instead of renting them out, they are still not as ready to do as the landlord-operators who already have the facilities for farming. The

427 neighboring landlords are under the same situation as the
434 non-operator landlords. Yet these two groups are in a better position than the absentee landlords, for they are already in the locality. They are used to farming, and at least they do not have to invest on housing if they should choose to operate their own lands instead of renting them out at low rent.

427 It was observed in the preliminary study that rent
[435] rates charged by local landlords were higher than those charged by the absentee landlords, the former ranging from six to eight tang per rai while the latter was only five tang per rai.[13] The discrepancy was assigned to the fact that local landlords were in a better position to sense the competition for land among farmers desirous of obtaining more land than were landlords who lived in the city. Local landlords were thus quicker to adjust rent rates to their own benefit.

Another advantage of renting land from absentee landlords was pointed out by a Bangchan tenant who said that he preferred absentee landlords to local landlords. "If you don't want to pay too much rent," said he, " you may report to the absentee landlord that you got a poor crop even though it was the best crop you ever had. You cannot do so with a local landlord, for he knows as well as we know by a glance at the parcel how many tang of paddy we are going to get." "Besides," the man continued, "local landlords often make request after request for your free

13. Sharp et al., op. cit., p. 148.

427 labor which is rather difficult to decline. There are many occasions for such request, for example, draining a pond, clearing a garden, and building and dismantling a house."

So far the arguments seem to point toward the relative leniency of absentee landlords. Condemnations of absentee ownership of land would seem, therefore, to fall
427 wide of the mark from an equity standpoint. There is still
434 another important point, however, that should be considered. Although we do not at present have accurate supporting data, our impression was that rents of rice land do not constitute a significant part of absentee landlords' income while they were a major consideration of the local landlords. If this impression is true, two diametrically opposite ramifications seem to follow. First, absentee landlords accept rents as they come to them and the rents tend to be lower than those accrued to local landlords' land. Second, since some absentee landlords can afford to offer their land at high rent at the risk of having no tenant to work on their land, the rents charged by these absentee landlords tend to be high. In this latter case, high rent rates on absentee landlords' land will induce a raise in the general rent rates in the village. We are now confronted with a rather difficult situation, for the actual outcome seems to depend entirely on the individual compunction of the absentee landlords.

427 Stories about both kindness and maliciousness of absentee landlords were heard in the village. On the one hand, they were looked up to as the people whose help can

427 be relied upon in time of financial crises or other sudden needs. On the other, they were pictured as a Shylock type of relentless money lenders who never let an opportunity to make a capital gain out of the villagers slip away. Our records show several cases where Bangchan tenants took the sick first to allandlord's home in Bangkok before sending him to the hospital. It was assumed that the landlord would provide food and medical care while the patient was waiting to be admitted into the hospital, and it was assumed also that the hospital bills would be paid by advances from the 427 landlord. Only one case of an unscrupulous absentee land- 656 lord was mentioned by Bangchan residents. This man is a nationalized Chinese who roamed around Bangchan some thirty years ago as a professional gambler. He enhanced his gains from gambling by lending money at high interest rates to the villagers on mortgage term and occasionally adding a zero to the amounts in the paper. Villagers said the he never hesitated to make good a foreclosure when the specified time expired, and as a result he is now in possession of about one thousand rai of land in the neighborhood of the Upper Bangchan Canal. Although he owns some land in our arbitrary Bangchan Village, the majority is out of our village limits, and thus the rent rate charged by him was not included in our rental investigation in the preliminary study. The villagers' account of this man's activities was confirmed by our Bangkok source of information who was a relative of the landlord. Surprisingly enough, it was the

427 author's father who gave this man an initial capital of 600
556 baht when he made his start in Bangchan some thirty years ago. He is now a millionaire and a father-in-law of a former top military officer.

427 Again it is the author's impression that, from the viewpoint of the villagers' best interests, the good side of absentee landism seems to outweigh the bad side.

427 Going back to the forces of demand for and supply of
434 rice land, it should be noticed that, as was so often the
435 case, free competition in the classical economist's sense did not exist in Bangchan where rents were often sticky. There was a wide range of different rent rates for fields of almost homogeneous nature as far as agronomic properties were concerned. Preference for prospective tenants was observed to have a personal rather than economic basis even on the part of the local landlords who were found to be most sensitive to rent rates. When a new higher rent rate was to be charged, it was observed that the most plausible excuse had to be found and presented to the tenants by the landlord. An example was the general raise of rent in 1953 when the new land tax was raised from 0.30 to 4.00 baht per rai, whereupon most local landlords immediately raised their rent from seven tang to eight tang per rai. One tang of
[651] paddy, however, was worth nine baht. It is seen, thus, that as a result of an increase of the government revenue of 3.70 baht per rai the local landlords also received an extra 5.30 baht per rai from their tenants who alone had to suffer an increase cost of nine baht per rai.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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In discussing the forces of demand for and supply of land in the few preceding pages, it is not the purpose of the author to quantify these forces and attempt to predict rent or the price paid by the tenant for the control of net income deriving from the use of the productive powers of the soil. Rather, the purpose is to confirm in this specific case Chamberlin's general notion that "the equilibrium of economic forces has been wrongly identified with an equilibrium between demand and supply. The latter is merely a special case of the former. Curves of demand and supply tell nothing, either by themselves or by their intersection, as to what price will be established, until other conditions are known."[14]

Prices of Land

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One of the most significant phenomena during the period covered by this study, from 1948 to 1953, is the rise of prices of land in Bangchan.

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*[123]

Records of major receipts and expenses of 96 farm operators who have been continuously working on an average area of 3,140 rai, or 47 per cent of the total area worked by Bangchan residents, show that during this six-year period two operators sold two parcels of land and ten operators bought eleven parcels of land. Since none of these involved transaction between one and the other in our sample of 96 operators, it can be said that there was a total of thirteen

14. Chamberlin, op. cit., p. 15.

423 purchases (or sales) of land involving operators in our
432 sample as either sellers or buyers. The price and size as well as the time of sale of each parcel is shown in
178 Table 27. Using the highest of each year as the basis,
435 it is observed that land price in Bangchan has been rising
423 steadily from 350 baht per rai in 1948 to 700 baht in 1949, to 1,100 baht in 1950 and 1951, and then rose skyhigh to 11,000 per rai in 1953. To be sure, this spectacular rise, especially from 1951 to 1953, was largely due to the changing over of former agricultural to residential land. Nevertheless, when residential land is excluded from consideration, it is seen that the average rise in agricultural land prices was 560 per cent during the period from 1948 to 1953 (Table 28).

Perhaps a case of one large parcel in "Thung Nai Sab" in KY5 may serve to illustrate the way land prices rose in Bangchan during these past few years. The area of this parcel, which was owned by Lady Phung of Bangkok, was 100 rai. Our informant's father, Hajji Sa-ard of Bangchan Mosque, was interested in this parcel of land because it was adjacent to his land which was not far away from his home. In 1946, Lady Phung was willing to sell it at 300 baht per rai, but Sa-ard was reluctant or not quick enough to accept this offer for sale. In 1947, the lady raised her price to 350 baht and Sa-ard was ready to buy. This time it was hesitancy on Phung's part that prevented the proposed purchase from being consumated. In 1948, our

[TEXT CONTINUED ON PAGE 160]

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TABLE 27

PRICES OF RICE LAND ACTUALLY SOLD OR PURCHASED
Bangchan, Thailand, 1948-53

Year	Parcel Size	Price Per Rai	Highest Price of the Year	Average Price of the Year
	rai	baht	baht	baht
1948	11	350	350	223
	12	180		
	16	138		
1949	10	700	700	700
	10	700		
	10	700		
	10	700		
1950	1	1,100	1,100	850
	10	600		
1951	19 1/2	1,100	1,100	721
	10 1/2	1,000		
	19 1/2	250		
1952	--	--	--	--
1953	1	11,000	11,000	11,000

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 28

ESTIMATED PRICES OF BANGCHAN LAND BY ZONE
SHOWING PRICE CHANGES FROM 1948 TO 1953
Bangchan, Thailand, 1948-53

Zone*	Location	1948-Price baht/rai	1953-Price baht/rai	Increase baht/rai	Increase Per cent
Residential:					
1	Roadside** (200 m. depth)	300	12,000	11,700	3,900
Agricultural:					
2	"Thung Kai Sab"-	270	1,500	1,230	456
3	"Thung Kai Pho"	280	1,800	1,520	543
4	"Thung Kl. Kred"	250	2,000	1,750	700
5	Kl. Kred - Kl. Bangchan	230	1,500	1,270	552
6	Kl. Krached-Kl. Bangchan	210	1,500	1,290	614
7	Kl. Bangchan-Kl. Kralog	200	1,200	1,000	500
	Av. for ag. land	240	1,583	1,343	560

* See Map I.
** In 1948, this zone was still considered agricultural land -- not residential land as it was in 1953.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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435 informant said that some of the lady's tenants who had been renting the parcel told her that she should not let it go under 500 baht per rai. Our informant thought that these tenants did not want to see any transfer of the ownership of the parcel for fear that it might adversely affect their prospective tenure. Lady Phung therefore raised her price to 550 baht. At this price Sa-ard gave up his intention of buying the land. In 1949, four tenants (all are included in our sample of 96 farm operators, hence the purchases are shown in Table 27) jointly purchased 40 rai of this parcel, and one Mai Ma of Klong 13 bought the remaining 60 rai of the 100-rai parcel at 700 baht per rai. The four tenants divided the land equally among themselves (10 rai each) and paid 7,000 baht each with borrowed money. In 1952 an offer to buy at 1,000 baht per rai was made for the same parcel but none of the new owners wanted to sell any of his land. In 1953 the price rose to 1,500-2,000 baht per rai and again none of the owners contemplated selling his land. Of the four tenants, Farmer A was luckiest because his share was attached to the Minburi Road and the price of this specific portion has risen to somewhere around 12,000 baht per rai.

The case just mentioned shows one significant point regarding the price of land in Bangchan other than the steady rise -- that nearness to the road was not a factor of price distinction until after 1949, for if it was, there would certainly have been some difficulty in dividing the 40-rai piece among the four tenants.

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Table 28 shows estimated prices of land in Bangchan in 1948 and in 1953. These prices are estimates made by our informant who is a son of Hajji Sa-ard mentioned in an earlier paragraph. He is one of the best informed persons in the village, has visited Mecca, and has received a higher education than any other person in Bangchan with the possible exception of one store-keeper who had spent a few years in the Military Academy in the 1910's.

Our informant, who will henceforth be called by his real name -- Hajji Direg, based his estimates of land prices in Bangchan on what he was willing to pay. He was aware of locational variation in prices of land in the village. Strictly speaking, this is not contradictory to our assumption of homogeneous nature of soils in Bangchan, for slight variation in Direg's estimated prices was due, according to him, to differences in the land levels which affected the cost of irrigation and drainage. Direg divided Bangchan into seven land-price zones (Table 28 and Map I). It is seen in this table that the 1948 price ranged from 200 baht per rai in Zone 7 to 300 baht per rai in Zone 1, averaging 249 baht per rai.

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Table 28 shows that the average price of agricultural land in Bangchan rose from 240 baht per rai in 1948 to 1,583 baht in 1953, an increase of more than five times in six years. Most remarkable was the increase of the price of land in Zone 1 from 300 baht per rai to 12,000 baht per rai. The increase in the price of land in Zone 1 shows that land

[TEXT CONTINUED ON PAGE 163]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

MAP I

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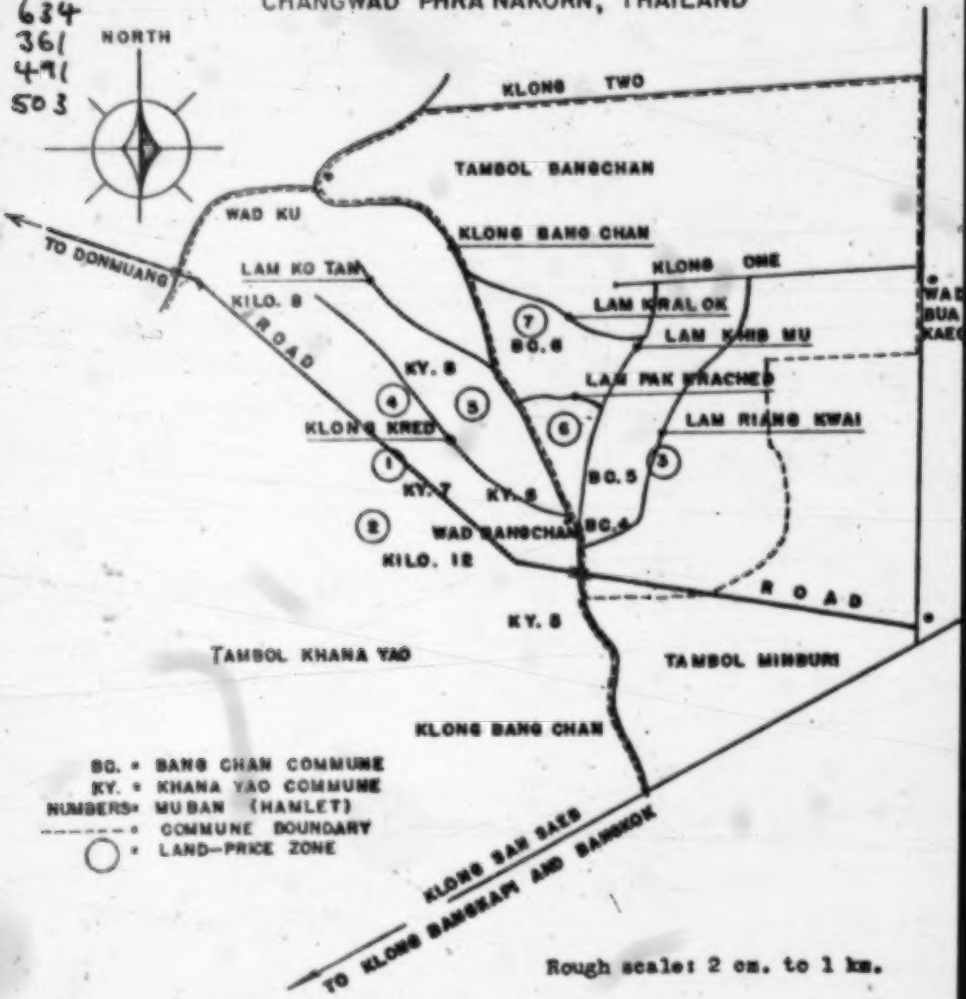
SKETCH MAP OF TAMBOL KHANA YAO, AMPHOE BANGKAPI AND TAMBOL BANGCHAN, AMPHOE MINBURI CHANGWAD PHRA NAKORN, THAILAND



Rough scale: 2 cm. to 1 km.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

178 in this zone has since been considered as residential land
423 although there has not been any apparent change in land
435 utilization.

178 It should be noted in this connection that during
423 the same period of 1948-53 there has been a steady rise in
435 the price of residential land in Bangkok at a highly varying rate depending upon location. For the purpose of our discussion, we may consider only the price of land in the northern suburb of Bangkok, on each side of Paholyotin Road (the popular Bangkok-Donnuang Road) which branches off at Kilometer 20 into Minburi Road which cuts across Bangchan Canal at Kilometer 13 (Crossing of Paholyotin and Minburi Roads as Km.0). It has been observed that the price of land on each side of Paholyotin Road has been increasing rapidly: a parcel at Km. 11 which was valued at 50,000 baht per rai in 1952, for example, was sold at 150,000 baht per rai in 1954. It has also been observed that price of land in this section of the Bangkok suburb declines with the distance from Bangkok proper: the 1954 price was 150,000 per rai at Km. 11, and 50,000 baht per rai at Km. 20 where the Minburi Road begins. If the Minburi Road is considered as a continuation of Paholyotin Road, it is only natural that the price of land would gradually decline to 12,000 baht per rai at Km. 13.

182 It is conceivable that the recent increase in Bangkok
423 population is one among several factors causing the rapid
435 rise of residential land prices. When the rapidity of the
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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

182 423 435 369 rate of increase in land price is considered, however, it is reasonable to believe that population increase is certainly not the only factor.

[121] It is not the purpose of this study to deal with the price of urban land. Neither the problem of land utilization nor the whole economy of Bangchan can be clearly understood, however, without some account of the rapid building up of urban land prices in recent years. It is thus necessary to digress at this point into some factors accountable for this rapid rise.

369 454 423 435 178 182 It has been observed that the volume of domestic saving in Thailand is small because of the low level of income, and that such saving as does take place tends to be put into real estate and gold and jewelry. Concentration of income resulting from the postwar phenomenon of shifting of political and economic power into the hands of few people, however, has somewhat increased the proportion of saving; but this is again used largely to purchase real estate. The natural result is the boosting up of urban land prices especially in the suburban sections where there has been a relatively high degree of improvement in road construction since the war.

423 45 178 369 182 This investment in land purchase has more than ever before assumed a speculative nature. This is largely due to the experience of inflation initiated by World War II whereby huge and easy profits could be made from buying and selling of land. Corruption in the sale and purchase

423 of government real estates has no doubt increased these
45 speculative activities. The process has also been greatly
178 accelerated by an enormous increase since the war of banking
369 facilities, which traditionally extend loans on mortgage of
182 real estate. It should be noted in this connection that the demand for loans in Bangkok has been so great as to allow most commercial banks to adopt a highly discriminating policy of extending loans only to their favored customers who are often willing to give as much as five per cent of the loan sought to bank officials as a customary "tea-money".

182 A third factor is that some organized financial
423 institutions have actively been engaged in deliberate at-
435 tempts to boost up land prices for their own speculative
455 gains. This was the immediate cause of the rise of land
178 price in Zone 1 from 300 baht per rai in 1948 to 12,000 baht
369 per rai in 1953. According to several informants in Bangchan, a representative of an insurance company in Bangkok came to the village in 1952 and offered to buy land on each side of Minburi Road at 10,000 baht per rai. This man was able to buy 20 rai of land at Km. 8, Minburi Road, which is in the immediate neighborhood of our arbitrary Bangchan Village, at his offered price of 10,000 baht per rai. At the time of the signing of the purchase contract, he made a 10 per cent down payment of 20,000 baht. Although the balance of 180,000 baht was not paid and the contract was later forfeited, the proposed purchase immediately pushed land prices in Zone 1 up to 10,000 baht per rai or over. According to

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423 cur informants, the insurance company owned hundreds of
435 rai of land in the vicinity. By spending only 20,000 baht
456 in boosting up land prices, the company thus set the stage
178 for making a large profit through sale of their own land
367 at inflated prices.

178 While the increase in land prices in Zone 1 was
423 attributable to the sudden assumption of residential land
435 prices, this explanation does not apply to the increases in land prices in the other zones which have remained agricultural throughout. Although less spectacular than the case of Zone 1, the rise in land prices in these six zones was also quite abrupt, averaging 560 per cent for the five-year period from 1948 to 1953 (Table 28).

423 Capitalized valuation of these farm lands (Zones
434 2-7) may shed some light on the situation, although there
427 is limitation especially to the cost concept. There are two ways by which a capitalized value of farm lands may be obtained: (1) by capitalizing income from the farm operation left after payment of all factor costs except land, and (2) by capitalizing income deriving from explicit rent of the land.

*243 Receipt from one rai of rice land in 1948 may be tal-
435 culated from the crop of 32.1 tang at 252 baht, using that
434 year's average farm price of 7.86 baht per tang of paddy.
423 When the cost, including an imputed return to all labor but
427 excluding rent, of 166 baht per rai is deducted, a residual return to land of 86 baht per rai is obtained for the year.[15]

15. For want of sufficient data, it is assumed that the cost items other than rent remain the same.

243 In 1953, figure for the size of the crop was not
423 available, but we may use the 1948-52 average of 28.8 tang
434 per rai. With the year's farm price of 9.00 baht per tang,
435 receipt may be calculated at 259 baht per rai. Using the
427 same cost, again excluding rent, of 166 baht as in 1948, a residual return to land may be estimated at 93 baht per rai.

Capitalized value of land may be calculated from the formula $v = \frac{a}{r}$ where 'v' stands for capitalized value of land, 'a' for income from the land, 'r' for the rate of interest prevailing in the locality.[16]

When the calculated residual return to land is used, the capitalized value of farm land in Bangchan (Zones 2-7) is found to be 573 baht per rai in 1948, and 620 baht per rai in 1953. When income deriving from explicit rent is used in the calculation, however, the capitalized values become 327 baht per rai in 1948 and 487 baht per rai in 1953.

178 It is interesting to note that capitalized values of
423 land computed from these two different types of income were
434 closer to each other in 1953 (487 baht computed from income
427 deriving from explicit rent as against 620 baht computed
435 from the calculated residual return to land) than in 1948 (327 baht computed from income deriving from explicit rent as against 573 baht computed from the calculated residual return to land). In other words, landlords are now receiving a larger proportion of the residual after payment of all

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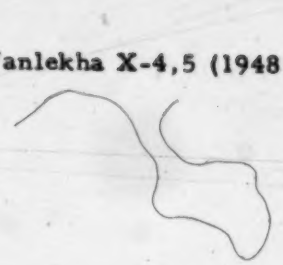
[426] 16. The rate of interest of 15 per cent per year is used. This is the minimum going rate with security. Without security, the rate may be as high as 30 to 50 per cent per year.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

178 423 434 427 435 factors, except land, at the going rate of return. A more interesting point to note is that the capitalized value of land in 1948 (327-573 baht per rai) was substantially higher by either method of calculation that the average price of farm land in that same year (240 baht per rai), while the capitalized value of land in 1953 by either method of calculation (467-620 baht per rai) was far below the average price of farm land in that same year (1,583 baht per rai).

The situation in 1953 indicates that the price of farm land in Bangchan has been bid up too high. The stickiness of rent rates in the locality mentioned earlier together with the fact that landlords are now receiving a larger proportion of the residual after payment of all factors, except land, at the going rate of return have led us to the belief that the proportionate share of the landlords will be increasing in the near future.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan



PART II

000 BUSINESS AND LIVING ASPECTS OF THE FARM

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

CHAPTER IV

FARMING POPULATION

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It was indicated in the section on occupational structure in Bangchan, Chapter III, that there were two groups of villagers whose main incomes were directly derived from farming -- the farm operating and farm laboring families. These two groups constituted 254 out of a total of 298 families in the village in 1953 (Table 10). It should be noted, however, that Table 10 was constructed on the basis of the principal source of income of the family heads, and that the family was taken as a unit.

When individual farm workers are considered, four groups may be differentiated: (1) Farm operators; (2) Family workers; (3) Hired laborers; and (4) Piece-workers.

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Farm operators are those who are assumed to actively manage the farm. Actually, it has been observed that some wives did direct the farm work while their husbands assumed only a passive role. It is rather difficult, however, to point out among some one hundred couples which spouse actually manages the family farm. To save time, and perhaps embarssment, it was assumed that, where both husband and wife were involved, the husband -- the official family head --was the farm operator regardless of his actual role.

*243 59 46 [957] Family workers are members of farm operating families other than the farm operators themselves who regularly participate in the farm work of the families. These do not include children of school age who occasionally help in the farm work especially during the busiest period.

*243 46 592 Hired laborers are farm laborers who are hired for all or part of the work season for more or less fixed wages in kind or in cash. These hired laborers have in addition to their yearly wage a privilege to board and lodge freely at their employers' home, and thus become part of their employers' household. The contract, usually verbal, is on a one year basis.

*243 46 Piece-workers are farm laborers who receive wages on a piece-work basis for such short-term tasks as uprooting the seedlings, transplanting, and harvesting. Payment for piece-work is made at the end of the day at going rates. It has been observed that most of the extra work in Bangchan is done by piece-workers, and that very few farms engage hired laborers. Piece-workers may be called independent workers, for they have no obligation other than finishing the day's task agreed upon. They may work whenever they please and may stop working altogether if they have enough money. The disadvantage of piece-workers is that they do not have, as hired laborers do, the guarantee of a job. This is quite crucial especially if under-employment of farm labor exists.

#243 466 Difficulty arises when farm workers are classified individually because of duplication. It was mentioned in Chapter II that family members might work for their lampai after they had fulfilled their obligation on the family farm work. It is seen, then, that a family member may be considered as both family worker and piece-worker. Even the farm operator himself may earn extra income from piece-working and thus becomes also a piece-worker. In fact, most farm operators who had only a small area to work did have time to earn extra income this way. It is only the hired laborer that could not earn extra income from piece-working because he is bound by contract to devote all his time to his employer's farm and household work. It is considered unbecoming for a hired laborer to take time out, even at night, to fish for his own biological family.

Sampling Technique

*128 621 So far we have been dealing mostly with the universe of our study -- the total population of our "natural" Bangchan Village as defined in Chapter II; although occasionally, it might have been noticed, reference has been made to a sample of 104 farm operators and of 96 continuing farm operators.

[121] [161] Our primary attempt in this community study is to cover the entire village. It is obvious, however, that all relevant information cannot be gathered on some 300 families comprising this village of about 1,700 people. We may, for

*128 example, make a direct count of all the families and the
621 people living in the village. We may proceed to get the data of family composition, of land tenure, and of the main occupation for all these families. But we certainly would have neither the facility nor the time to study the business aspect of some 220 farms operated by Bangchan residents. In the study of labor utilization, where daily records of labor employed by the hour is necessary, we first tried two farms but later had to be content with records from only one farm.

It would appear that, while certain aspects of this study involved data from the universe, other aspects might be more efficiently carried on by sample study.

*128 There were, however, a series of technical problems in sampling. It must be recalled that we first went into Bangchan in September, 1948 with almost no basic economic information except the commonsense knowledge that it was a rice growing village which appeared to meet our basic requirements for a field site for a preliminary community study. After checking with the district office and subsequently with Bangchan headmen, it was found that even the latest official census for the village was both inadequate and inaccurate, although it did serve as an invaluable benchmark for the 1949- and 1953-censuses made entirely by our staff. As indicated in the chapter on methodology (pages 36-43), the nature of our area approach study by researchers of different disciplines had given top priority to our

*128 rapport with the villagers even at the expense of certain much needed information, only very informal interviews were made in the first few months during which time no attempt was made at any businesslike questioning. As a result, it was not until May, 1949 that the first of our Bangchan censuses was completed.

125 With scanty background materials, we had, nevertheless, decided to concentrate our effort on the farm operating group at the very beginning. The reason for this approach is simple: it was readily seen that this group was the core of the community.

Since we had only one year for the preliminary study, the pressure of time led us to conduct the farm survey even before the first census materials were available. Simple random sampling, therefore, could not be made, because the population was not yet known. By that time, however, we had already defined our geographical area of the village (page 53), and were thus in a position at least to adopt the block sampling method.

We decided to cover all farms on which operators lived on both sides of Bangchan Canal in the immediate neighborhood of Wat Bangchan. This included all farms operated by residents of hamlets BC4 and KY5, and a few farms operated by residents of KY6. It may be seen in the sketch map on page 162 that BC4, KY5, and KY6 form the nucleus of our natural Bangchan Village, the outer zone consisting of BC5, BC6, KY7 and KY8.

125 These two selected blocks on each side of Bangchan Canal included some 80 homes of Bangchan operators, 25 in BC4, 37 in KY5, and 18 in KY6; and we actually covered 76 farm operators living in these two blocks, or 95 per cent of the total.

A technical problem then arose: should we or should we not limit our sample of these 76 farms?

There appeared to be two advantages of limiting our sample to 76 farms: (1) by so doing we had almost a 100-per-cent sample of farms operated by Gangchan residents who lived in the immediate neighborhood of Wat Bangchan; and (2) since these 76 farm operators were most accessible to us (our field office was on the BC4 bank of Bangchan Canal opposite the temple), much time could be saved in contacting the operators.

The disadvantage of limiting the sample to these 76 farms was that we would not have any representation from operators living in the outer zone of our natural village. This was a serious disadvantage when the primary purpose of our study was one of problem locating rather than one of mere description. To partially solve this problem, we decided to include in our sample also farms operated by residents of the other hamlets, namely, BC5, BC6, KY7, and KY8. Since time and other considerations did not permit an equally large proportion, quotas were allotted for these four hamlets.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 29

REPRESENTATION OF 104 SELECTED FARMS IN THE TOTAL FARM POPULATION, BY HAMLET
Bangchan, Thailand, 1948

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Hamlet	Number of Selected Farms	Village Total	Per Cent
BC4	25	25	100
BC5	7	25	28
BC6	7	38	18
KY5	35	37	95
KY6	16	25	64
KY7	9	37	24
KY8	5	42	12
Total	104	229	45

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

125 It is seen in Table 29 that seven farms were selected from BC5, seven from BC6, nine from KY7, and five from KY8. At the beginning a quota of seven farms was arbitrarily chosen. The reason for the choice of seven farms was that one might make seven short visits to farm operators in the outer zone in just one trip. This is an important consideration in our type of survey work where constant visits for additional information and checking were necessary. In actual practice, the number of selected farms in KY8 was reduced to five because this hamlet was farthest from our field office, and the number for KY7 was increased to nine to include all farms operated by KY7 residents who lived on the eastern side of the Minburi Road which were naturally easiest for us to reach.

Thus, the sampling technique adopted in choosing 104 farms was a combination of block sampling and quota sampling methods, both being under a more inclusive category of judgment sampling as distinct from random sampling.

Effect of Time Element on the Size of the Sample

After the 104 farm operators living in the seven hamlets were chosen for our sample, records of their business and living aspects were made to cover continuously the period from 1948 through 1953. With the progress of time, it is natural that the size of the sample has tended to decline, since some of these farm operators have died, moved out of the village, or changed their occupation from farm operating to others.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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Table 30 shows that the size of the sample has continuously decreased from 104 in 1948 to 103 in 1949, 98 in 1950, 96 in 1951, 96 in 1952, and finally 87 in 1953.[1] It should be noted, however, that we re-visited the village in 1952 and that most of our materials on business and living aspects of the farms were gathered from the sample-farms existing in that year; hence we occasionally referred to the sample of 96 continuing farms.

One way of minimizing the problem of declining size of the sample is to include in the sample new farm operating families which have branched out from the original sample-families. It was found that there were ten such families when we re-visited the village to continue the study in 1952. If this method were adopted, it would mean that the size of our sample would then be 106 farms, a figure which does not differ very much from the original size of 104 farms in 1948.

Another way of solving the problem is to abolish the continuing operator approach entirely in favor of the re-sampling approach -- that is, a fixed sample size is chosen and new sampling is done every time a new survey is to be conducted. This approach, however, has the drawback that

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[243] [178] [433] [463] [182] 1. According to Table 14, crop indices were as low as 86.8 for 1949, and 87.5 for 1952; while those for 1948, 1950 and 1951 were 111.4, 111.1 and 102.7 respectively. It is worth noting that a relatively large number of farm operators changed their occupation (or moved out of the village) in 1950 and 1953. When Table 14 is studied together with Table 30, it is seen that there is a close correlation between change in occupation (or change of farming place) and crop failure in the preceding year.

[TEXT CONTINUED ON PAGE 180]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 30

CHANGES IN OCCUPATION OF 104 SELECTED OPERATORS*
Bangchan, Thailand, 1948-53

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Occupation	1948	1949	1950	1951	1952	1953
Farm operator	104	103	98	96	96	87
Farm laborer	-	-	-	-	1	3
Trader	-	-	-	-	-	2
Investor	-	1	1	1	1	3
Professional	-	-	-	-	-	-
Public servant	-	-	-	-	-	-
Home enterpriser	-	-	-	-	-	-
Priest or novice	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	1
Disappeared	-	-	5	7	6	8
Total	104	104	104	104	104	104

* Explanation for those changing occupations:

1949 A became an investor.

1950 B moved out to unknown locality.
C moved out to Lam Kralog.
D moved out to Sai Kong Din.
E moved out to Bang Plee.
F moved out to Bang Plee.

1951 G died, and family moved out to unknown locality.
H moved to Bangkok.

1952 H moved back from Bangkok into the village, became farm laborer.

1953 I moved to Lard Krabang.
J stopped farming, became an investor.
K stopped farming, became an investor.
L stopped farming, became a trader.
M stopped farming, became a farm laborer.
N stopped farming, became a farm laborer.
O's occupation became obscure (under miscellaneous).
P stopped farming, became a trader.
Q's family lost its identity, was annexed by a farm operating family not in the sample.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

125 it would deny any benefit that would arise out of continuous observation of each farm and farm operator through a series of years. With a view to retaining this benefit of continuity, we decided to adopt the first method -- that,is, we included in the sample the ten new families branching out from the original sample-families. Thus, in our subsequent study in 1952 the size of our sample became 106 farm operating families.

There were, however, some types of data which involved records in the past four or five years, such as harvested crop during 1948-52, accumulation of wealth, major receipts and expenses during the same period. In these cases we naturally used the continuing sample of 96 families.

*243 162 592 Composition of Farm Operating Families

Table 31 shows that the size of the farm operating family decreased from 6.3 in 1948 to 5.7 in 1952. It also shows that, while the number of adults remained more or less constant, the decrease in the size of the family was due almost entirely to the decrease in the number of the young from 2.5 in 1948 to 2.0 in 1952.

*243 162 592 182 178 [582] A possible explanation for this lies in the economic consequence of the war. Strict government control of the price of rice and of the internal movement of paddy during the war and also in the immediate postwar period has so adversely affected the economic condition of rice farmers that marriage has often been postponed. In cases where

[TEXT CONTINUED ON PAGE 182]

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 31

COMPOSITION OF FARM OPERATING FAMILIES
Bangchan, Thailand, 1948 and 1953

Year	Number of Families	People Included			Average Family Composition		
		Young*	Adult**	Total	Young*	Adult**	Total
1948	104	256	398	654	2.5	3.8	6.3
1952	106	215	391	606	2.0	3.7	5.7

* Age 14 years and under.

** Age over 14 years.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 marriage did take place, the couple were usually obliged
162 to stay with the parents of either the husband or the wife.
178 It is reasonable to believe that the nascent period was
592 prolonged during this period of hard times. Thus, the
182
[582] family size tended to be larger than it normally is. This is especially true for rice farming families where there always is some work for members able to work. It is not surprising, then, that the average size of farm operating families in Bangchan was 6.3 in 1948 while the average size of all families was 5.7 according to the 1949 census. A steady rise in the price of paddy after the war has improved the economic condition of rice farmers. The increased income, however, had to be spent first on replacement of equipment and housing facilities which had been long overdue.
[792] Finally, the bumper crop of 1948 with an ever-increasing price put an end to farm misery, and the following dry season saw a record number of newly ordained priests and
[591] merit making activities. From then on proportionately more marriages took place and there were fewer economic obstacles to keep newly wed couples from starting out independently. The combined effect of termination of prolonged nascent period and freer establishment of new families was that the size of the farm operating family was considerably reduced.

16 It may seem strange that more marriages should bring about a drop in the number of the young from 2.5 per family in 1948 to 2.0 in 1952. By the young is meant, however,

16 all children up to the age of 14 years. So it is only a fraction of these children, probably those in the age group of 0-3 years, that was contributed by marriages after 1948. While it is true that this contribution was quite considerable, since the proportion of children in the age group of 0-4 years rose from 10 per cent of total population in 1949 to 13 per cent in 1953, yet it was not enough to offset the effect of the decline in birth rate resulting from the war. Another factor to be considered is that children born during 1935-38, who were included as the young in the 1949 census, became adults in the 1953 census. Since these children were born before the war which did not affect their proportionate percentage in the total population, their removal from the young category in 1953 was not compensated by the entry into that category of children born during 1950-53. Finally, it was observed that among people who emigrated during 1949-53 small nuclear families consisting of young husband and wife and two or three children in the age group of 0-14 years predominated. Since the proportion of the young in these families, which had existed in Bangchan independently or more likely as a part of the extended families, is larger than the village figure, emigration must also be considered a factor responsible for the decline in the proportion of the young from 2.5 per family in 1948 to 2.0 in 1952.

#243 592 178 #128 It was found in the preliminary survey in 1948 that of 398 adults in the 104 sample-families 319 or 80 per cent were working members of the family. Unfortunately, we did

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not obtain comparable figure for our 106 sample-families in 1952. The question is whether or not we might assume that 80 per cent of the adult members of the 106 sample-families in 1952 were working members. It should be understood that working members of the family were those who participated in the family farm work, but they did not have to be fully employed. If the family farm is rather small, say only 10 rai, and there are as many as four able members of the family, naturally the four members will take turns in the farm work although the whole job can be easily done by two family workers or even one. In this case, we still consider that there are four working members of that family, for it is inconceivable that two able members of the family without help from the other two, would do all the farm work for the whole season.

What about the other 20 per cent of adult members? It was observed in 1948 that these adult members of farm operating families did not participate in the family farm work because they were too old to work, they were nursing mothers, sick (including pregnant), still incompetent in farm work (especially young people at the age of 15-16 years), or they were tied up with other jobs. All these factors except the last one may be considered natural factors which occur in a somewhat constant proportion regardless of time. It would seem, then, that we might reasonably assume that 80 per cent of adult members of our sample-families in 1952, or 313 out of the total of 391 persons, were working members,

*243 except for the question of some of these adults being tied
178 up with other jobs. Nevertheless, when limited job oppor-
592 tunity was considered, it was unlikely that this last
*128 factor would appreciably affect the estimate. It was assumed, therefore, that 313 out of the total of 391 adults in our 106 sample-families, or an average of 3.0 persons per family, were working members in 1952.

[162] Table 32 shows that the size of farm operating families in 1952 ranged from one to thirteen, averaging 5.7, the median being 6. Eighty-six of these 106 families, or 81 per cent, had a size between three and eight.

Training for Farm Work

*243 Every adult in the village of both sexes is expected
462 to be able to do farm work. This includes the ability to perform the following jobs.

Minimum standard: Every step of rice production except uprooting of rice seedlings which is performed only by adult males (for various steps of rice production, see the chapter on farm technology); digging and mounding; paddling and rowing; hauling except a heavy load like gas engines; tending the buffaloes and livestock; gardening; pounding of cargo rice for consumption during the work season; fishing by line-and-hook, dipping net, and trap; food preparation.

In addition to the minimum standard listed above for both male and female adults, male adults are expected to be able to perform the following jobs: Uprooting of rice

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TABLE 32

DISTRIBUTION OF FAMILY SIZE 106 FARM OPERATING FAMILIES
Bangchan, Thailand, 1953

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Family Size	Number of Families
1	2
2	4
3	15
4	16
5	17
6	12
7	14
8	12
9	8
10	4
11	1
12	0
13	1
Total	106
Mean size	5.7
Median size	6.0

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243 seedlings; hauling heavy loads; fishing by throwing net
462 and by spearing; setting up and starting the windmill; starting the engine; simple carpentry work; most parts of house construction except the most technical parts like leveling and planning where the "professional" carpenters are often called in for advice; simple repairing of tools and equipment; guarding of the buffaloes and irrigation equipment left in the field when somebody must stay overnight at the temporary watch-house.

243 In order to be competent for these various farm jobs,
861 the young were gradually trained, starting at a rather early
868 age of 5-7 years. At the beginning they were not forced, but allowed to participate in some simple farm work like light hauling and removal of weeds which have been turned over by harrowing. Mild pressure is applied when they grow older to the age of 8-12, and they are expected to participate in more complex and heavier jobs. More and more discipline is observed with the progress of the age of the young. The outline of training schedule which we have tried to reconstruct in collaboration with some elderly Bangchan informants is given below.

Age	Method	Kinds of Farm Work
5- 7	Not forced, but allowed or induced to work if they want to.	Light hauling, removal of weeds which have been turned over by harrowing.
8-12	Mild pressure.	Light hauling, removal of weeds which have been turned over by harrowing, some household work, and help in the kitchen (girls only).

Age	Method	Kinds of Farm Work
13-14	Moderate pressure.	Hauling, weeding, buffalo tending, transplanting, chicken feeding, fishing, household work.
15-16	High pressure.	All kinds of farm work. Harrowing, harvesting, and uprooting (boys only) are started at this age.

By the time the young are 16 years old, they are already reliable farm hands, although they are still not considered competent enough to participate in the cooperative work to which only the best family workers are expected to be sent. By the time they reach 18 years of age, all males and females should be well trained in all kinds of farm work.

According to the Primary Education Law, parents are responsible for sending their children to school at the age of eight. These children are to remain in school until they are over fourteen years old, or until they have passed Pratom IV.[2] Since school hours start at nine and last until three in the afternoon, children of school age are still able to participate in the farm work before or after school hours. Moreover, most rural primary schools including the Bangchan Primary School have adjusted their vacation recesses to the periods when rice farm labor is needed most -- from August 16 to September 15 which coincides with transplanting period, and from December 16 to January 15 which coincides with harvesting period. It is during these vacations that the upperclass children are expected to contribute their

2. Primary education is divided into four academic years -- Pratom I, II, III, and IV.

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243 857 872 labor to the family farm work. It is also the time for children of families of other occupation to earn their small lampai from piece-working.

872 871 We have devoted a few pages to this topic of training the young for farm work because we think it is relevant to the study of the village economy. While the standard of teaching is generally poor in most primary schools in Thailand and consequently farm children receive rather poor academic education, it has been observed that their training in the farm work given by the family is exceedingly thorough. With the exception of a few bright children who are able to finish Pratom IV in four years and thus are able to leave the primary school at the age of 12, most farm children are kept in the school until the age of 14 because they usually fail in the examination at the end of each academic year and have to repeat once, twice, and even thrice. A good many are obliged to leave school at the compulsory age of 14 without passing Pratom IV. Urban children, on the other hand, usually pass Pratom IV at the age of 10 and are able to proceed on their secondary education at the standard age of 11 when they start their Matyom I. This is because they went to school at an early age and had better teachers at the Pratom level. Thus, farm children usually lag behind urban children in academic achievement. The situation is aggravated by the city secondary schools' practice of using students' achievement by age as the basis for admission decision. As a result, farm children do not

369 87

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369 have an opportunity for secondary education although some
87 of them have adequate financial support. This has a tre-
[464] mendous effect on job opportunity for farm people, for most firms and Government departments set Matyom VIII as minimum standard for even the lowest clerical job.

*243 While farm children have a poor academic education,
369 they are compensated by a high degree of farm training which
464 includes not only the technique of rice growing but also the
868 use of basic equipment for manual labor and simple construction work. It has been observed that farmers are better qualified to do manual work than urban people. This aptitude, however, does not to any considerable extent minimize the farmer's disadvantage in making a living other than by farming. In the first place, compensation for manual work is generally lower than the pay for clerical jobs. Second, there are in the city more job opportunities for clerical work and other white-collar types than there are for manual work. Third, the white-collar jobs tend to be more or less permanent while the manual jobs tend to be somewhat seasonal, and the manual worker seldom has a "position" in the firm as does the white-collar worker.

To the extent that these three conditions remain true, it may be assumed that the type of academic education and practical training being given to Bangchan children will serve only to confine them to farming life rather than to give them opportunity for alternative occupations.

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Remunerations for Farm Work

*243
434 At the beginning of this chapter, four groups of farm workers were mentioned -- the farm operators, family workers, hired laborers, and piece-workers.

The farm operator receives his remuneration for the farm work mainly in the form of farm income, which is the difference between total farm receipts and total farm expenses. It is the reimbursement of the farm operator and owner of the capital for labor and management and the use of capital.

There are several other ways of measuring the operator's remuneration. Net cash return, for example, is the difference between cash farm receipts and cash farm expenses. Here, increase and decrease in inventory are not considered, and neither is the unpaid labor. Averaged over a long period, the difference between farm income and net cash income due to including inventory items in one and not in the other would tend to disappear.

Two most widely used measures of the operator's remuneration, however, are labor income and labor earnings. Labor income is what a farmer receives for his year's work after paying all farm business expenses and interest on the capital invested, and in addition he has a house and farm products used in the household. Labor earnings is labor income plus the value of housing privilege and farm products used in the household.

In the American experience, it is rather difficult to estimate the value of farm products used in the farm

*243 household. Although labor earnings is a truer measure of
434 a farmer's return, it is less widely used than labor income because no such estimation is involved in this latter measure and because prequisites are much less important in the United States. On Thai rice farms, however, it is not as difficult to estimate the value of farm products used in the household because generally only one kind of farm product -- rice -- is involved and the consumption of rice, although in large amount, can be precisely determined. To a much lesser extent poultry products may be used, but it is also fairly easy to estimate.

593 In theory, the remuneration for family workers'
465 effort is imputed at the going wage rate on their actual contribution in the farm work, when labor earning is calculated. In practice, however, Bangchan family workers receive in addition to board and lodging a certain amount of cash from their family head who is also the farm operator and who pays this amount from farm net cash return. The amount an individual family worker receives varies according to individual need and often to the whim of the family head. To be sure, there is no such thing as a fixed allowance because yearly fluctuation of farm income does not permit
593 such arrangement. One Bangchan farmer put it this way,
434 "Hired labor is usually more expensive than family labor
465 except in good years, for you can't help giving generous gifts to the family in a good year. This year (1949, the year following a bumper 1948-49 crop) I gave my two daughters

434 300 baht for clothing, 500 baht which they spent mostly
465 on a pilgrimage to the Temple of Buddha's Footprint, and
593 670 baht for two gold necklaces. That's a total of 1470 baht for the two of them. My wife alone took 1,100 baht received from the sale of the early variety, and I don't want to take the trouble to ask where the money went."

It has been observed that farm income varies greatly from farm to farm as well as from year to year. Farm household expense, on the other hand, has been observed to be less variable. Although the remunerations for farm operators and family workers are directly related to farm income, it would seem unwise to discuss farm income without bringing in first the discussion on farm technology and farm organization and management. We propose, therefore, to limit at the time being our discussion of the remunerations of farm operators and family workers to indicating their respective sources only. We shall have occasion to deal with their patterns and magnitudes in Chapter VII, which will be exclusively devoted to income and consumption of farm operators.

465 The hired laborer receives his remuneration for the
178 farm work in the form of annual wage which is paid by his employer, the farm operator, according to the provision of the oral contract made before each working season. It was found in 1948 that this annual wage was paid in either cash or kind, and in addition the laborer received free board and lodging and one or two working suits. Of 13 hired laborers covered by the 1948 survey, five were paid a cash wage

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465 178 ranging from 250 baht to 800 baht annually, and eight were paid in kind. There were two types of wages in kind, the fixed and the variable types. In the fixed type, which involved two laborers, each laborer was paid a fixed amount of 100 tang of paddy. In the variable type, which involved six laborers, one laborer received the product (paddy) from 3 rai specified at the beginning of the season, four received the product from 5 rai, and one from 6 rai.[3]

#128 464 178 In 1953, a farm hired laborer survey was made to include people in Bangchan who were known to have been hired laborers and who could be located at that time. The survey was intended to serve as a benchmark for a subsequent study of farm laborers in 1956-57. The work done in 1953 was therefore only preliminary and was concentrated in locating the hired laborers and recording such basic informations as age, sex, and their jobs and remunerations during the previous five years from 1949 to 1953. Materials on life history were also gathered, but they were still incomplete. Nevertheless, information thus received about their jobs and remunerations have shed much light on wage rates of hired laborers in the village, and these are shown in Table 33.

A few points must be made clear, however, before any generalization can be made from the figures in Table 33. First, the survey included 34 persons who were known to have been hired laborers in Bangchan during the period from 1949 to 1953. Second, the survey covered only the people who were living and could be located in Bangchan in 1953; thus

3. Sharp et al., op. cit., p. 157.

[TEXT CONTINUED ON PAGE 196]

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TABLE 33

ANNUAL WAGES OF HIRED LABORERS IN BANGCHAN AND ITS IMMEDIATE NEIGHBORHOOD
Thailand, 1949-53

Year	Type of Wages*	Number of Laborers Reporting	Total Wage	Range	Average
1949	Cash wage	2	1600 baht	600-1000 bt	800 bt
	Kind, fixed	3	300 tang	100-100 tg	100 tg
	Kind, variable	2	9 rai	4-5 rai	4.5 rai
1950	Cash wage	4	3350 baht	400-1350 bt	838 bt
	Kind, fixed	7	600 tang	60-100 tg	86 tg
	Kind, variable	3	12 rai	3-5 rai	4.0 rai
1951	Cash wage	6	4400 baht	300-1200 bt	733 bt
	Kind, fixed	8	660 tang	50-110 tg	83 tg
	Kind, variable	3	12 rai	3-5 rai	4.0 rai
1952	Cash wage	10	8400 baht	600-1300 bt	840 bt
	Kind, fixed	7	630 tang	50-120 tg	90 tg
	Kind, variable	3	13 rai	3-5 rai	4.3 rai
1953	Cash wage	14	12000 baht	250-1150 bt	857 bt
	Kind, fixed	2	250 tang	100-150 tg	125 tg
	Kind, variable	2	6 rai	3-3 rai	3 rai

*Cash wage -- wage was paid in cash.
Kind, fixed -- wage was paid in fixed amount of paddy agreed upon at the beginning of the season.
Kind, variable -- wage was paid in paddy harvested from a specified area agreed upon at the beginning of the season.
In all these cases, laborers received in addition free board and lodging and two working suits, one at the beginning of the period of breaking the soil and another at the beginning of the harvesting season.

*128
464 some hired laborers who had left the village before the
178 survey was started were not included, and so were some former hired laborers, especially those working as such in the earlier years, who might be living in the village but were not identified as former hired laborers. Third, of the 34 cases covered by the survey nine were persons of 20 years old or younger as of 1953. Naturally, these persons would not be considered as hired laborers in 1949 or even in 1950, for they would be too young then for the job. Besides, it was not necessary that all hired laborers should begin their job as soon as they had attained the proper age of say 18 years, for there were many factors militating against taking up the job at an early age, one of which was obligation to the family. As a matter of fact, two among our 34 laborers were obliged to quit their jobs because their parents wanted them to go back to the family and help in the farm work. One of these two laborers remained with the family for a yearin 1951, went back to work with his former employer in 1952, then emerged as a farm operator in 1953. The other quitted the job in 1952 and had since remained a family worker on the family's rented farm. Fourth, these 34 laborers varied in sex, age, farming experience,
464 and working ability. Fifth, the employers of these hired
466 laborers also varied in the degree of generosity exemplified by the amount of wage they agreed to give their employees and their relative willingness to observe the oral contract. This last point was important in Bangchan where the supply

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464 for labor exceeded the demand for it. Some employers were
466 known to have been in the habit of cheating their employees. To cite an example, in March 1953 A, a young man of 16 who was known to be one of the best transplanters in the village, was hired by Operator B at 50 baht a month. After working for B for three months, A quit the job because his employer had paid him only his wage for the first month and there was indication that he would not receive any more for his labor from his employer. The author was informed about this whole business by A's father, Laborer C, who complained bitterly against B. That happened just before the beginning of the 1953 rice growing season. It was rather surprising that the author discovered that a month later Laborer C was hired by his son's former employer -- Operator B. Three months later, the author saw Laborer C working not on B's field but on some body else's farm on August 19. Upon inquiry, it was found that history had again repeated itself -- Operator B had just fired Laborer C and refused to pay him for his three months' work. "He ate more, but worked less, and always found asleep," complained Operator B, "Besides, he was in the habit of criticizing me behind my back."

*128 These five points were brought up in connection with
464 Table 33 in order to caution against two generalizations
178 that might be made from a glance at the table. First, the number of laborers which appears to increase progressively from 1949 does not in any way indicate that more and more hired laborers have been employed in Bangchan. The figures

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*128 of the number of hired laborers represent only the case
464 study of hired laborers who were located in 1953 and were
178 interviewed on their past records. Statistically, therefore, it would be misleading to infer the actual employment of hired laborers in each year from those figures. Second, since the same population of hired laborers was used throughout, the effect of increasing age on individual wages must be considered. This does not mean, however, that there was a tendency for the average wage in our sample to rise with the years in relation to the standard wage; because not all of the 34 hired laborers started to work in the same year, rather some started before 1949, some started in 1949, and a good many started in each of the following year. There was also the effect of the generosity of the employer which is to be considered in relation to the wage level.

It would appear, nevertheless, that employment of hired laborers in any specified year can be measured by actual counting or simple random study done in each specified year. Although this is possible now that we have fairly well established our universe, there is still the problem of the hired laborers quitting their jobs before the end of the rice season
*128 which had occurred not infrequently. The problem of varying
464 wage rates due to working ability of the laborer on the one
465 hand and to the scrupulousness of the employer on the other may, however, be partially solved by using the maximum wage of each year as the basis for generalization. It is with such cautions that the figures as presented in Table 33 might

*128
464 be of any help in the understanding of the hire laborer
465 situation in Bangchan.

Let us now turn to the last group of farm laborers
*243 -- the piece-workers. These laborers receive their remunera-
46 tions in the form of cash paid at the completion of each job contracted. Four types of farm work were observed to have involved the utilization of piece-workers -- uprooting of rice seedlings, transplanting, harvesting, and digging earth and mounding. Uprooting, the heaviest of all rice growing steps because seedlings must be pulled up in budle and smashed against the shank of the worker, was limited to adult male workers. Transplanting, on the other hand, was the lightest of all these steps involving the itlization of piece-workers and may be done by all kinds of workers including the young. Harvesting and digging and mounding are too heavy for the young but not for the adult female workers to participate, so they are usually performed by adult workers of both sexes.

*243 It was found in the cost of production study in 1948
621 that 104 farm operators in Bangchan spent a total of 4,434
433 baht on uprooting done by piece-workers, 7,951 baht on trans-
[435] planting, and 13,310 baht on harvesting, or an average per farm of 43 baht for uprooting, 76 baht for transplanting, and 128 baht for harvesting. Although digging and mounding is generally considered a part of farm work since it is done primarily in order to keep the buffalo shed above the water level as well as to improve the home garden; it is not

243 621 433 included in the items of cost of producing paddy, and therefore we do not have the figure for this item of farm expenses.

It was earlier mentioned in the section on occupational structure in Bangchan that most villagers regardless 434 464 621 463 of their main occupations did perform some piece-work for either main or subsidiary incomes. It is almost impossible, then, to give an exact figure of the number of piece-workers in any one year. For the purpose of this study, however, we may arbitrarily differentiate between the "professional" and the "non-professional" piece-workers. Here, the classification suffers much overlapping -- even more than does the classification of the occupation of the villagers, for we cannot even use the concept of the main source of income as a criterion in this connection. It was mentioned that farm laborers existed in Bangchan not because of demand for their work but because they have no opportunity for other occupations (page 100). Thus, if the main source of income was used as the criterion for differentiating the "professional" piece-workers, this group would include, for example, the old woman described in Case 7 page 69, who after having been left alone had managed to get a small income from transplanting which was the only type of farm work she could perform. The main source of income was also not a good criterion considering the fact that most piece-work was done by family members after their obligation to the family 467 farm had been fulfilled. In a desperate attempt to differ- 463 entiate the professional from the non-professional piece-workers

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463 we finally settled on an arbitrary definition: a profes-
464 sional piece-worker was one who was ready most of the time to be called upon to perform piecework. This automatically eliminated the school children who were able to work only during the school recesses, the poor aged people who had to make a living in one form or another but who were able to perform only the lightest kind of piecework -- transplanting, and members of the well-to-do families who did some piecework for a small amount of pocket money only.

Adopting this arbitrary operational devinition, it may be assumed that professional pieceworkers include all members of the laboring families, small farm operating families, and other families of various occupations not financially well off, who are old enough yetnot too old to work and who are not currently engaged in some other kinds of work.

178 Table 34 shows work records of the 34 farm laborers
463 earlier mentioned. It is seen that of these 34 laborers,
465 only six had remained hired laborers throughout the periods of their farm work. These were Laborers 8, 9, 11, 22, 27, and 28. The other laborers were observed to have assumed various other statutes in the course of the five-year period from 1949 to 1953, namely, farm operator, pieceworker, family worker, and transient family worker. When these laborers were interviewed, they also gave estimates of their earnings from pieceworking as far as they could remember. In 1949, for example, piecework earning figures were available from

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TABLE 34

WORK RECORDS OF 34 SELECTED FARM LABORERS
IN BANGCHAN AND ITS IMMEDIATE NEIGHBORHOOD
Thailand, 1949-53

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Laborer Number	Age in 1953	Working Status				
		1949	1950	1951	1952	1953
1	23	HL	HL	PW	HL	FO
2	39	PW	PW	PW	HL	HL
3	42	...	...	PW	PW	HL
4	27	HL	HL	PW	PW	PW
5	28	HL	HL	PW	PW	PW
6	23	PW	PW	HL	HL	...
7	25	PW	...	HL	HL	HL
8	22	HL	HL	HL	HL	HL
9	23	HL	HL	HL	HL	HL
10	52	HL	HL	X	HL	HL
11	19	...	HL	HL	HL	HL
12	32	FO	FO	FO	FO	HL
13	33	PW	PW	PW	HL	HL
14	30	TFW	HL	HL	PW	PW
15	35	PW	HL	HL	HL	PW
16	20	...	TFW	TFW	HL	...
17	45	PW	PW	HL	PW	PW
18	50	PW	PW	HL	HL	HL
19	31	X	PW	HL	...	HL
20	20	TFW	TFW	TFW	FW	FW
21	19	TFW	TFW	HL	HL	HL
22	17	...	...	HL	HL	...
23	21	TFW	TFW	TFW	TFW	HL
24	23	TFW	HL	HL	...	HL
25	17	...	...	TFW	...	HL
26	40	...	...	TFW	TFW	HL
27	26	...	...	...	HL	HL
28	18	...	HL	HL	HL	HL
29	63	PW	PW	X	PW	HL
30	30	PW	X	X	PW	HL
31	36	HL	HL	HL	FW	FW
32	16	...	...	...	PW	HL
33	23	PW	HL	HL	HL	HL
34	20	...	HL	TFW	HL	HL

Key to abbreviations:
FO -- farm operator
HL -- hired laborer
PW -- pieceworker
FW -- family worker
TFW -- transient family worker
X -- farm laborer elsewhere
(...)-- not engaged in farm work

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465 two laborers -- 1,000 baht for Laborer 7 and 900 baht for Laborer 30, averaging 950 baht for the year. In 1950, earnings of 500, 850, and 1,000 baht were reported respectively by Laborers 18, 19, and 29, averaging 783 baht for the year. In 1951, only one case of 600 baht earning was reported by Laborer 5. In 1952, earnings of 600, 1,000, 1,000, 1,000, and 350 baht were reported respectively by Laborers 5, 14, 29, 30, and 32, averaging 790 baht for the year. In 1953, earnings of 2,000, 600, 1,000, and 300 baht were reported respectively by Laborers 4, 5, 14, and 15, averaging 975 baht for the year.[4]

592
464 In the preceding paragraph, the term "transient family worker" was introduced. This refers to a person distantly or not at all related to the family in question who has been accepted as a family member with a dual status of half relative and half laborer. Since there is actually no genuine family tie, such member has been observed to come in and go out of the family rather freely as the occasion
[465] may arise, and hence the term "transient". While staying with the family, the transient member is expected to participate in the family work that is appropriate to him in exchange for good, shelter, clothing, and occasional monetary gifts.

In 1948, we came across a case where an old man of 80 was living with one of the seven headmen of Bangchan as

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4. Table 53 gives an idea of the meaning in real terms of these incomes.

592 a transient member of the family. This was rather unusual,
464 however. The pattern was that a transient member was
[561] accepted when he is rather young. If he was quite mature,
he might also be accepted; but the expressed motive of the
592 accepting family would then be somewhat different. When
465 approached by a mature prospective transient member, the
464 family head would most probably say that he could not afford to keep a hired laborer but he would be glad to let the man or woman stay with him as a member of the family, and that they might as well "share in the food, and share in the work".

It has been observed that transient family workers received much less from the family than the standard wage
[435] of hired laborers. While the latter received an annual wage of 1,000 baht or the crop from 5 rai, the former might be given only 50 or 100 baht a year. To farm operators of moderate or large rice farms, transient family workers were certainly an economic advantage. It was quite natural that these operators would try to keep them in the family as long as possible. Among the several methods observed were the following: (1) adoption; (2) promise to sponsor ordination of the young male transient member; and (3) giving a certain amount of lampai.

592 It was mentioned in the section on the family in
464 Chapter II that adoption as practiced in Bangchan did not
[597] involve legal registration of the adopted child, and that
[792] maltreatment of adopted children was not infrequent. To sponsor an ordination was in fact not quite as expensive

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592 as it might seem to be, for there was a wide range of
464 ordination expenses and the family head naturally tended
792 to arrange one that was not so expensive unless it was for his own son. He might even arrange a joint ordination of
592 which the cost was much reduced. Moreover, most of the cost
464 of the ordination would be covered by the customary contributions made by neighbors. The lampai arrangement, which was nothing but a sophisticated term for wage, was a real concession on the part of the family head, indicating that he really wanted to keep the transient member in the family even at a certain cash expense.

464 The presence of transient family workers and their
592 relatively low remunerations indicated a condition of popu-
466 lation pressure on land. Already, these people had adversely
[167] affected the laboring sector of the village economy because they represented an additional supply of cheap labor. Although they had contributed to a low cost of producing paddy and thus benefited the operators, with the rise of the price of foods which farmers had to buy and with the decline of free food (in the forms of fish and aquatic plants) transient family members may in time become a liability rather than an asset to the family. To be sure, when such a time has arrived, the family would be reluctant to admit a transient member. The trouble, however, is that the cost of maintaining an extra family member is implicit and not readily distinguished by the family. It would thus take some time before the real situation would be recognized.

182 464 592 Nevertheless, the advantages of transient member arrangements to both parties should not be overlooked. It has at least provided the poor with a kind of economic security, since they might arrange to join some families in the village in time of crises. This is perhaps the principal reason why the village, not the living quarter, is considered by most Bangchan people to be their home. By sending some offspring to live with a more affluent family, the poor villagers had been able to reduce the size of their families and thus had managed to prevent their level of living from falling far below the minimum level of subsistence. As for the accepting families, it has already been shown that they had enjoyed the benefit of cheap labor provided by transient family workers.

*243 178 463 621 [592] Changes in Farming Population in Bangchan

Table 11 shows that the number of farm operators in Bangchan had decreased from 229 in 1949 to 216 in 1953, while the number of the family heads whose main incomes were derived from farm labor had increased from 27 to 38 within the same period.

When the farm operating families were studied individually, it was found that 181 families had been operating their rice farms in Bangchan throughout the period. There were 48 farm operators whose names disappeared from the list of operators in 1953. These were compensated by 35 new operators. Thus, there was a net loss of 13 farm operating families during the period from 1949 to 1953.

*243 16 178 463 Of the 48 families disappearing from the 1953 list of farm operators in the village, 21 moved out, 2 were annexed, and 25 were dropped from the list because they had changed their occupations to some other kinds. Among these last mentioned, four had become investors, three traders, thirteen laborers, one public servant, and four had obscure occupations.

Of the 35 new farm operating families, 17 were immigrants moving into the village during the period between 1949 and 1953, 14 had evolved from pre-existing families, and four were families already existing in the village in 1949 but were then having some occupations other than farm operating. Among the four families last mentioned, three were formerly farm laboring families, and one was formerly an investor family.

*243 178 463 The fact that there were as many as twenty-five families leaving farm operating occupation as against only four families entering it within the same period seemed to indicate that farm operation as an occupation had become less attractive in Bangchan during recent years.

It may be argued that former farm operators who had given up farming did so because of the force of special circumstances beyond their control, and that the change to other occupations was not due to the relative unattractiveness of farm operation. A tenant operator, for example, might have to leave the farm because his landlord no longer wanted him to work on the parcel. In fact one such case was

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*243 reported where the tenant had to leave the farm in the
178 beginning of 1953 and had since become a hired laborer.
463 This was Laborer 12 shown in Table 34. In most cases of
[427] farm operators who had become farm laborers, however, they were marginal operators working on areas too small to provide decent incomes. It was found that the total working area in 1948 of thirteen farm operators who had become farm laborers was 94 rai, averaging only 7 rai per farm. It is possible to speculate, then, that low farm income was a major factor in the occupational shift among these thirteen families. To the extent that this speculation is acceptable, it may be inferred that the shift to the farm laboring profession among these thirteen cases was voluntary rather than a result of special circumstances beyond their control.

The relative unattractiveness of farm operation stands out clearly when the cases where former farm operators taking up new occupations other than farm laboring were considered. As mentioned earlier, there were twelve of these of which four had become investors, three traders, one a public servant, and four had obscure occupations. Among those having obscure occupations, two were families of old people apparently without any income, one family head was allegedly engaged in no occupation except gambling if this could be considered an occupation at all, and one family head -- the sole member of a one-man household -- was also a person of no known occupation. For obvious reason, these four cases should be left out of consideration, leaving only those who had

*243 178 463 [311] become investors, traders, and public servant. In 1948, these eight families were operating farms of a combined area of 286 rai, ranging from 20 rai to 80 rai, averaging 36 rai per farm. Seven of these eight families owned rice fields totalling 201 rai, ranging from 5 rai to 80 rai, averaging 29 rai per family owning land. Evidently, it may be said that these seven families deliberately had given up farming in favor of new occupations from which they expected higher remunerations. As for the one family owning no land, the same generalization still holds. This family was operating a 22-rai farm in 1948, a farm of optimum size which could be expected to yield a higher income than any of those operated by the thirteen former [464] operators who had turned farm laborers. The head of this [465] family, nevertheless, got a permanent job in the Bangkok Harbor, a government owned concern, with a salary of more than 7,000 baht annually which is much higher than his former net income from operating a rented farm.

A case has thus been built for the relative unattractiveness of farm operating occupation among a certain sector of farm operators who had shifted to other occupations. This was responsible for the decline of farm operating occupation from 80 per cent of the occupational structure of the village in 1949 to 72 per cent in 1953 (Table 11). If it had not been for the 14 new families branching out from existing families who had taken up farming during the period between 1949 and 1953, the decline would have been more abrupt.

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There are reasons to believe that newly established indigenous families had tended to take up farming. First, rice growing is probably the only profession that these newly wed couples had been properly trained for.[5] Second, during their nascent period their financial preparation had been oriented toward starting a rice farm. This is best illustrated by a remark of a Bangchan operator whose daughter and her husband were about to start an independent family:

> A (informant's son-in-law) is now (1954) 24 years old. I have known him since 1948 when he was a transient family member of B. A married my daughter C in 1952 and has since been living with me. He is a very diligent man who works even in the dry season -- digging earth and that sort of thing (for his own lampai).
>
> I gave the couple 200 tang of paddy for their lampai for last year's work. I am going to give them the product from 10 rai for this year's work.
>
> Already the couple have accumulated from their lampai the following: two baht weight of gold, lumber enough to construct a farm house, and 100 tang of paddy. I told them not to keep their money in cash. When they receive a certain amount of money, I instruct them to buy durable goods like lumber or buffaloes. But if they want to lend out money, it's all right with me. Any way, they are not to keep cash. By the way, they have loaned out the 100 tang of paddy, so they will have more paddy when that amount is returned with interest.
>
> The couple will leave me next year. They have most of the things they need for starting a family now. In fact they wanted to start out this year, but I asked them to stay on another year.
>
> When they leave me next year, I will give them the customary parental gifts -- one buffalo, one plow, one harrow, one clothing container, and paddy for seed and for consumption.

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5. See the section on training for farm work.

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Third, among the land owning class the newly established family usually received from their parents an outright gift of land or the benefit of free use of a certain area of land for two or more years. They would not receive this gift if they did not pursue rice farming.

It is seen, then, that while rice growing might have become less attractive as an occupation, there are still some cultural factors that have been working to confirm the Bangchan villagers in their preference for rice cultivation.

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CHAPTER V

FARM TECHNOLOGY

Types of Rice Cultivation

*243 Rice cultivation in Thailand may be categorized according to: (1) whether or not irrigation is used; (2) the height and rapidity of growth of the variety of rice plant used; and (3) the method of sowing.

*243 312 Upland, or non-irrigated, rice is found in some parts of north or northeast Thailand, where in many spots irrigation is impossible. The Central Plain is characterized by lowland, or irrigated, rice. Irrigated rice is of either the floating or non-floating varieties. Where the level of irrigation water cannot be well controlled, as in middle part of the Central Plain, the floating varieties are widely used because of their ability to grow sufficiently rapidly to keep up with water levels that rise three or four meters between October and November. Only the non-floating varieties are grown in Bangchan. Non-floating varieties are also capable of keeping pace with rising water levels, but not as rapid a rise as can be handled by the floating varieties. They are hence employed only where the water level is under rather effective control, as in Bangchan. The two methods of sowing are broadcasting and transplanting. The floating varieties lend

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*243 312 themselves only to the broadcasting method of sowing, while the non-floating varieties are sometimes broadcast and sometimes transplanted. In the broadcasting method, the farmer simply strews the seeds on the plowed-and-harrowed field. In the more or less twice-as-laborious transplanting method the farmer first nurtures seedlings in a special bed and then at the appropriate growth stage transplants the seedlings onto his field in even rows. Both before and after transplanting, the plants require rather careful water control, possibly only by the employment of dikes. It has been observed that the method of planting is not optional with the farmer. Rather, it is governed by topography, expected condition of water supply, and availability of labor. To sum up: Bangchan rice is irrigated, non-floating, and usually transplanted but sometimes broadcast.[1]

*243 242 Any attempt to get the farmers to alter the system of planting should be planned with care; otherwise more harm than good might result. There is a general belief among leading agricultural officials that the broadcasting method is undesirable because it allegedly gives only one-half the yield of the transplanting method. The author reserves his judgment on this, for no systematic comparison between these two methods of growing rice has as yet been made. Consideration also must be given to the fact that the transplanting method

1. According to our 1948 survey of 104 rice farms, of a total of 3,528 rai 3,030 rai were transplanted and 498 rai broadcast. Thus, the proportion was roughly six transplanted rai to one broadcast rai.

*243 242 requires much additional hand labor and reduces the possibilities for mechanization to a minimum. On the other hand, the more labor intensive transplanting method would seem to be more suitable to a population pressure area like Thailand if it really gives as relatively higher a yield as it is claimed to give.

*243 351 [235] [244] [245] [226] Farm equipment

In Thai agriculture, it is very difficult to separate the farm from the home. In the chapter on the community it has already been indicated that the home lot not only is the living place for the farm family but also provides space for threshing and for storage of farm equipment, room for chicken raising, land for kitchen garden and for fruit and vegetable growing, and space for fish trapping by the draining method.

*243 351 422 In other words, all the material components of the farm, except the rice fields, are located or stored on the home lot. Here, items that are uniformly or frequently found include:

A. Household equipment

1. Buildings
2. Furniture
3. Bedding facilities
4. Kitchen accessories
5. Storing facilities
6. Lamps of various sizes
7. Ritual accessories

B. Farm equipment

1. Farm building: equipment and buffalo shed.
2. Implement: plow, harrow, yoke, roller, shovel, spade, hoe, weeding knife, noria, sickle, pitchfork, rake, broom, winnowing machine, wooden winnowing spitula, basket, mat bin, box bin, home-mill.

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3. Mechanical power: windmill.
4. Engine power: internal combustion engine.
5. Fishing equipment: pressure lamp, spear, hook, throwing net, dipping net, trap.
6. Repair equipment: axe, knife, chisel, handsaw, auger set, hammer, jack plain, block plain.
7. Transportation facilities: various kinds of boats.

C. Livestock

1. Draft animals: buffaloes.
2. Poultry: chicken, duck.

D. Seeds and materials

1. Paddy for seeds and for consumption.
2. Ropes.
3. Fuel and oil for engine and for light.

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*128 Since we are primarily concerned in this section with farm equipment, only those listed under B will be discussed. And since we are dealing primarily with rice production which is the main source of income of Bangchan rice farmers, attentio will be paid almost exclusively on the equipment which are used in the production of rice.

For the purpose of our discussion, farm equipment used in Bangchan may be categorized in a number of ways: (1) According to their use in the various processes of rice production; (2) According to their relative degree of indispensibility on rice farms; (3) According to their relative prices, and the cose of maintenance and repair; and (4) According to their historical improvement.

*243 Farm equipment was used in Bangchan in different processes of rice production as follow:

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Processes of rice production	List of equipment used
Repair dikes	Shovel, spade, hoe
Break and level soil	Plow, harrow, roller, yoke
Irrigation and drainage	Windmill, engine, noria, spade, shovel, hoe
Weeding	Weeding knife, hoe
Harvesting	Sickle
Hauling	Boat
Threshing	Pitchfork, rake, broom
Winnowing	Wooden winnowing spatula, winnowing machine
Storing	Basket, mat bin, box bin

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Most of the equipment enumerated above were indispensible on rice farms. Only where there were substitutions -- for example, the windmill and the internal combustion engine, and the wooden winnowing spatula and the winnowing machine -- either the less costly but more labor using or the more costly but less labor using instruments might be used. It was observe however, that while the less affluent farm operators were able to use the less costly of these irrigation and winnowing equipment, the affluent farm operators kept both and utilized each appropriately. When only a small amount of water was needed in the field, for example, they might use the windmill althoug the engine was available, because the windmill was already on the field and it was only a question of hitching the noria to it while the use of the engine involved heavy hauling and some extra cost of fuel.

As a matter of fact, both the windmill and the engine were not absolutely indispensable. In 1948, it was found

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*243 that of the total of 104 farms under the survey, 77 farms
312 were equipped with either or both of these major irrigation
402 equipment and 37 farms did not have any of these. It was found also that the average yield of farms with irrigation facilities was 32.2 tang per rai as against 30.7 tang of farms without irrigation facilities. It must be noted, however, that Bangchan farmers reported that the water condition of the 1948-49 crop year was ideal for rice growing, one which occurs only once in a life time. Farmers unequipped with irrigation facilities were thus not as much handicapped as they would be in the less favorable years. Moreover, it has been a customary practice for farmers who had enough water in their fields to drain excess water into the fields of their neighbors who need some water. If the neighbors still need more water, they may get a free use of the windmill which has completed its service for the year to its owner. Thus in a good year, a windmill owner would have less use of the instrument which in turn becomes more available to neighboring farmers. In a drought year, on the other hand, the owner uses more of his windmill, and prospective borrowers have a slim chance to use the instrument. It would appear, then, that if the survey were conducted in a drought year, the disparity between the average yield of farmers owning irrigation facilities and of farmers not owning ones would be much larger than 1.5 tang per rai as was the case for the crop year 1948-49.

*243 We may thus group farm equipment according to their
*128 relative degree of indispensability as follow:

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A. Indispensable: Shovel, spade, hoe, plow, harrow, roller, yoke, weeding knife, sickl boat, pitchfork, rake, broom, wood spatula, basket, mat bin, box bin.

B. Dispensable, but essential for good crop productio Windmill, noria.

C. Unnecessary, but contributing to convenience: Engine, winnowing machine, and oth

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Price of various items of farm equipment varies from as low as 0.25 baht a piece for a broom to two thousand baht for a good boat. To avoid confusion, we shall use only the average of different prices for 1948 reported by our sample farm operators for the same item of equipment in order to eli inate variations due to quality. We may arbitrarily categorize farm equipment into low-price and high-price equipment, considering items costing under 100 baht as low-price equipment and items costing 100 baht or over as high-price equipment. On this basis, various farm equipment used by the 104 farm operators in 1948 are listed below.

Items	Average prices (1948)
A. Low-price	
Coconut broom	0.25 baht
Pitchfork	1.50 "
Shovel	3.16 "
Rake	4.75 "
Chinese broom	12.00 "
Yoke	12.06 "
Hoe	13.50 "
Basket	15.00 "
Weeding knife	19.00 "
Sickle	24.00 "
Harrow	30.00 "
Box bin	43.00 "
Mat bin	51.50 "
Plow	80.00 "

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B. High-price

Noria	309.00 baht
Sampan boat	386.00 "
Windmill	429.00 "
Winnowing machine	498.00 "
Mard boat	1,046.00 "
Chala boat	1,400.00 "

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Prices of equipment used in rice farming give us only an idea of the initial investment necessary to start a rice farm and the cost of investment in this equipment, which may be calculated in terms of interest on that investment. Prices alone, however, do not determine the annual cost incurred in the use of farm equipment; for some items remain in service for several years while others have a relatively short life, and they all differ in the relative cost of repair and maintenance.

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In the 1948-49 survey of 104 farms, two types of schedules were used. The "early schedule" was administered to the first fifty respondents, and the "late schedule" was administered to the rest. The early schedule was more detailed

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than the late schedule. For example, in the early schedule there are detailed questions on the original cost and subsequent depreciation of each plow, and each detachable plow-part, owned by each of the fifty respondents in the early sample. On the basis of these responses, we calculated the average depreciation rate of plows. Each of the fifty-four respondents to the late schedule was asked only one question on plows, viz the number of plows he owned. In the case of each plow of each respondent to the late schedule, we simply applied the average cost and depreciation figures resulting from the early

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schedule. Thus, in our late sample much laborious detail wa
obviated.

On the basis of responses from fifty farm operators, annual depreciation for each item of farm equipment used in 1948-49 was calculated below:

Items	Depreciation baht/year
1. Coconut broom	0.25
2. Pitchfork	0.33
3. Yoke	1.17
4. Weeding knife	1.67
5. Hoe	2.51
6. Shovel	2.79
7. Basket	3.00
8. Rake	3.39
9. Harrow	3.42
10. Mat bin	3.85
11. Sickle	8.90
12. Box bin	10.32
13. Chinese broom	12.00
14. Plow	16.88
15. Winnowing machine	42.69
16. Noria	57.95
17. Sampan boat	65.83
18. Hard boat	84.81
19. Windmill	85.00
20. Chala boat	86.10

Several methods of computing depreciation were adopte
In most cases, where the equipment was valueless at the end of its servicable life, the annual depreciation was calculated by simply dividing the original cost of each item by i expected length of service in years. In cases where the equi ment consisted of detachable parts, e.g., plows and windmill the cost of replacement of each part was first determined an then reduced into annual replacement cost, then the annual replacement costs of all parts were added together to make t

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*243 annual depreciation of the equipment in question. In cases
435 where the equipment still had some market values at the end of their servicable lives, these residual values were first deducted from the original costs before they were divided by the length of service. The most complicated cases were those of chala and mard boats and the neria, which involved annual maintenance and minor repair as well as periodical major repair in say every four or five years before they were finally and totally worn out at the end of their rather long services of from twenty to fifty years. In each of these cases, all items of such expenses -- annual maintenance and minor repairs as well as periodical major repairs -- were added to the original cost and the total was divided by the entire length of service in order to arrive at the annual depreciation figure.

*243 With few exceptions, all farm equipment enumerated
178 above have been used by Thai farmers for centuries. Thus, since the establishment of the village there has been no change in the use of such basic agricultural tools as the plow, harrow, hoe, weeding knife and sickle. Moreover, it may be said also that there have been only slight modifications, if any at all, in these equipment during the long course of their usage. The plow, harrow, or sickle which is now being used in Bangchan is perhaps of the same type and appearance as would have been seen centuries ago.

*243 Standing in contrast to these basic agricultural tools,
177 the first known propeller windmill in Thailand, according to
178 testimonies by Bangchan informants, was invented by Nai Yong
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Manichaem of KY8 in 1940. An official report to the Director of the Department of Agriculture in 1940,[2] however, gives the credit to Nai San of Lard Buakhao, Minburi, who lived only four miles to the south of Manichaem's home. The buying up of gasoline engines by the Japanese during the occupation period served to facilitate the spread of this device. Gasoline engines probably came to the village about 1930 or slightly later. In 1948, there were five engines owned by Bangchan residents. Because of the exceptionally good water condition of that year, these engines were not used in rice production. They were not, therefore, included in our calculation of the cost of producing paddy in 1948. It was observed that their use was limited to fishing by the draining method. The winnowing machine, which utilizes a hand-operated fan arrangement, is relatively new. It is rather expensive, costing an average of 498 baht. Only 21 out of the 104 farmers in our 1948-sample could afford to own it, the rest being obliged to use the traditional winnowing method of simply tossing the grains into the air by wooden spatula and letting the wind carryaway the chaffs.

According to historical improvement, farm equipment may thus be categorized as follow:

A. Old simple tools without any modification:

Shovel, spade, hoe, plow, harrow, roller, yoke, weeding knife, sickle, boat, pitchfork, rake, broom, wooden spatula, basket, mat bin, box bin.

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2. Submitted by Yingsakdi Israsena and Kamol Janlekha.

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B. Old equipment with slight modifications:

Noria (larger ones are now used because they are more adapted to windmills than smaller ones to which human energy was applied in the old days).

C. Recently employed equipment, mostly labor saving devices:

Gasoline engine, first used in Bangchan in 1930 or slightly later.
Winnowing machine, relatively new, date of introduction into the village not certain.
Propeller windmill, allegedly invented in the village, first used in 1940.

On the whole, it may be said that very few improvements have been made in farm equipment. For this, two opposing explanations may be advanced: (1) Little attention has been paid in the past to farm equipment, resulting in continual using of primitive implements which are inefficient and could be improved if enough attention and effort along the line were given; (2) These basic farm equipment are functionally efficient although they may be simple in form -- the fact that there has been no structurally change in the past few hundred years means that they have successfully stood the test of time rather than that the effort to improve these equipment has been lacking.

The author reserves his judgment on the validity of either of these two explanations, for scientific study of rice farm equipment in Thailand on which proper judgment may be based is not known to him.

Draft Animals

231 In Bangchan, as in most of the rice producing areas of the country, only one kind of draft animal is used -- the buffalo. This subject has already been dealt with in the

231 section on livestock, Chapter 2. The method of buffalo feed has also been mentioned in the section on land utilization, Chapter 3.

*243 231 Inasmuch as draft animals, or more specifically buffaloes, provide services in rice production, they may very well be considered a kind of farm equipment. They are used in all steps of breaking and leveling the soil and also in threshing. They are absolutely indispensable on rice farms.

231 435 An average purchased value of a work buffalo was 985 baht per head. According to the 1948 survey, buffaloes began their farm work at the age of 4-5 years and remained in service [237] for an average of 10½ years. When they are dead, their meat is consumed and the hide is dired and made into rope. Some farmers sold the buffalo carcass on the spot and received an average price of 250 baht in 1948. When the original cost of 985 baht was subtracted by the residual value of 250 baht and the result was divided by the length of service of 10½ years, the annual depreciation so obtained was found to be 70 baht. This method of computation for depreciation when adopted for buffaloes appears to be rather crude, for the maintenance cost was neglected and some buffaloes might be bought at the age over 5 years (at varying prices) in which case their length of service might be expected to be shorter than 10½ years. The general pattern, however, was that farmers bought buffaloes which were freshly brought in from the northeast at the age between 4 and 5 years.

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*243 231 Finally, buffaloes as equipment are as old as the wet rice culture itself. It is rather unfortunate that in Thailand there has been no systematic effort to improve buffalo breeds. As a matter of fact, the general practice of castrating good buffaloes so that they may turn out even better work while letting alone the inferior ones has tended to lower the working quality of the buffalo.

*243 Steps in Rice Production

In the transplanting method of growing rice, the seeds are sown first in the seedbed, and then at the appropriate growth stage the seedlings are transplanted onto the fields which have been prepared during the time the seedlings are being nurtured in the seedbed. The preparation of the seedbed is generally the same as that of the transplanted fields, except that the former is more thoroughly done since the soil in the seedbed must be finely pulverized and very well leveled. From the standpoint of labor utilization, therefore, the process of production can be more conveniently described step by step according to the work schedule of one farm which was under observation during the entire work season of the 1953-54 crop year. The various steps are listed below:

1. Plowing. Started on June 4 and ended on August 23. This immediately followed the big shower of rain on June 3 which sufficiently wet the soil. Consideration was also paid to the water level in the canal which was then high enough. Plowing was first concentrated in the field designated to be the seedbed. The parcel was plowed and cross-plowed several

*243 times, usually three or four. When the seedbed had been plowed and cross-plowed, plowing of the other fields began, but not immediately after the plowing of the seedbed, for the buffaloes were then used in harrowing of the seedbed.

2. Harrowing. Started on June 13 after plowing of the seedbed was completed and ended on August 24, the day following the completion of plowing of the fields for transplanting. As with the case of plowing, harrowing was first concentrated on the seedbed.

3. Removal of weeds after harrowing. This is a necessary step following harrowing. During the harrowing process, weeds which have been turned over by plowing are collected at the spikes of the harrow. Occasionally, the farmer will lift up his harrow in order to free it from the accumulated weeds which are thus left in small piles. Not all the weeds, however, are caught by the spikes of the harrow. The result is that after harrowing there may be seen on the parcel small piles of weeds emerging above the water, while the uncollected weeds which scatter all over the parcel are hidden under water. [857] All these weeds must be removed from the parcel. Removal of these weeds may be done by children working side by side with adults. The weeds are first collected by hand and put in larger piles on the parcel. These larger piles are later transferred to the dike so that the parcel will be cleared of weeds. This process is usually done during the noon recess (actually from 10 a.m. to 2 p.m.) when buffaloes rest. Children may carry on the work while adults resume their plowing or harrowing

*243 in the afternoon session. This process started on June 13 and ended on August 15.

*243 312 4. Irrigation and drainage. This process includes the feeding of water into the field and removing of an over-supply of water from the field as well as repairing of the dikes so that the control of water will be effective. Repair of dikes is the first thing to be done in each work season. At first, large holes which are readily noticed are filled. Later, when water has been fed into the parcels, leakages may be noticed and blocked with earth.

The first big shower and a few more that subsequently occurred during the first few days of the work season of 1953 had given ample water so that plowing had been continuously done without any additional water until June 9, by which time the water in the seedbed parcel had been reduced by the natural process of evaporation to the point where more water had to be fed in if more plowing was to done on the parcel. Since much had to be done in the breaking of the soil in the seedbed parcel of 7 rai, water was fed into it on June 10 and 11 and thereafter whenever water was needed in any parcel. In the fields other than the seedbed, water was irrigated into the highest parcel first and was later channelled to the successive lower parcels by gravitation by simply making on opening through the dike. When there was enough water for the whole field, excess water was drained into the canals by the same gravitational method. In the case of the farm under study, irrigation and drainage started on June 4 (actual feeding of

*243 312 water started on June 10, irrigation work before that was limited to repairing the dikes) and ended on July 8.

[132] The rising of the water level in the canal from July onward, slowly at the beginning and progressively more rapidly afterward, until it reaches its ebb in November, is due to local rains as well as rains falling elsewhere which affect the general water level of the entire Central Plain. While farmers are anxious for the arrival of rains at the beginning of the rice season in order that they may get their field work started, by August their worry has shifted to too much water instead of too little. If there is too much water at this later stage when the canal water level is rapidly rising and will soon go well above the height of the dikes, there is a danger that the seedlings in the seedbed and newly transplanted rice plants may be destroyed by the flood. Every Bangchan farmer knows that as from the Buddhist Lent of each year (the full moon of the eighth lunar month -- July 27 for 1953), the fieldwork has entered a new phase when he has to spend longer hours on the field or else it might not be ready for transplanting before the canal water level rises too high to permit transplanting. Even after transplanting has been finished, unless it is done well before the flood so that the transplanted rice plants are well established on the field, the danger still exists.

*243 5. Rolling. This is a necessary step following plowing and harrowing. Only if the seedbed is to be used for a second time in the year as an additional parcel after all the

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 seedlings have been uprooted, may rolling be omitted and the parcel be plowed and harrowed only before it is ready for transplanting. In case of the farm under study, rolling started on June 13 and ended on August 22. It may be noted here that it ended two days earlier than the last harrowing. This was possible because the last harrowing was done on the parcel which was earlier used as the seedbed, and thus rolling was not needed on this parcel.

6. Sowing and broadcasting. This step can be further broken down into cleaning of the seeds which is done by slowly pouring the seeds in the open into a receptacle some five or six feet below and letting the wind carry away the dirt, soaking, spreading of sprouted seeds, and actual sowing or broadcasting as the case may be. This whole combined step started on June 18 and ended on July 15. Since five different varieties were used, the work was spread out into four successions one of which involved two varieties at the same time.

7. Preparation and repair. This includes such items as construction of a temporary watch-house, construction of a buffalo-shed, mounding up of the earth floor of the buffalo-shed so that it would be high above the water level during the flood, and repair of equipment. According to our records, this step started on July 5 and ended on December 9.

Since our records were kept during the rice season only, the work so enumerated did not include preparations which had been made during the preceding dry season or earlier. Such work included selection and storing of the seeds which

*243 was done during the harvest time of the previous year, and preparation and repair of equipment which was done during the lean dry season. Usually, rice stumps were burnt in March or April, and this should be included in the preparation step. However, our operator did not burn rice stumps after the harvest of the previous year. The reason for not burning them was that he had a poor harvest and the left over stumps were so far apart that burning would be rather difficult. If he had a good crop, our informant said, the stumps would be close to one another so that when fire was set it would spread to the whole parcel. As was the case for the previous year, the informant said he would have to set fire on almost every stump if he wanted to burn them all. Since this would involve much labor, he decided not to burn the rice stumps at all.

When farmers were through with plowing (about September), the plow was dismantled and each part cleaned with water. At the end of the dry season when the new work season is approaching, these parts were again cleaned with water and later soaked with oil and re-set. The same care was given to the windmill, roller and noria. Other equipment like harrow, pitchfork, hoe, etc., was not dismantled. They were simply washed with water. Inspection had to be made, however, so that all of these would be ready for use when the work season began.

8. Preparation of bamboo binders. The day previous to each uprooting of seedlings in the seedbed when they were old enough to be transplanted, the farmer had to see to it that he had enough bamboo binders which were to be used in

243 binding the seedlings into bundles. Since only fresh bamboo binders could be used, the farmer had to make them himself from the locally grown bamboos. Our records show that this step started on July 17 (the day prior to the first cooperative uprooting conducted for the farm under study) and ended on August 27.

9. Uprooting. This is the heaviest step of all farm work. The seedlings must be pulled out as many as one could each time and are smashed to the puller's shank in order to rid them of mud which accompanied the roots. These seedlings were then made into standard sized bundles with the use of bamboo binders. Each variety of seedlings must be uprooted at about the same time, for they should be all transplanted not later than the following day. Uprooted seedlings were not carried to the homeyard, but left temporarily on the dikes of the seedbed.

243 476 Farmers in Bangchan organized themselves into cooperative work groups to mutually help one another in such kinds of field work as uprooting, transplanting, harvesting, and to a somewhat limited extent weeding. In case of the farm under study, more uprooting work was done through cooperative work groups than by family members working on family parcels. Our records show that uprooting by the family started on July 17 and ended on September 8, while the cooperative uprooting which the family participated started on July 15 and lasted until September 11.

*243 10. Transplanting. Uprooted seedlings should be transplanted within a day or two. Transplanting was also done through the cooperative work group. In fact, our records show that about twice as much work was done through cooperative transplanting as that through cooperative uprooting. This was to be expected because transplanting took about twice as much time as did uprooting.

The first transplanting on the farm under study was the cooperative undertaking, which started on July 18 and ended on September 19. Transplanting by family workers started as late as August 20 and ended on September 10. In addition, 160 man-hours of transplanting was done by piece-workers. In case of uprooting, the extra labor engaged was only 39 man-hours.

11. Hauling. There were three phases of hauling of rice: (a) hauling of seedlings from the seedbed the parcel where they were to be transplanted, (b) hauling of harvested bundles of rice from the fields to the threshing floor in the homeyard, and (c) hauling of the threshed and winnowed paddy from the threshing floor to the bins. In the hauling of seedlings, we included also associated processes such as cutting of the top portion of the seedlings, counting of the bundles of seedlings, arraying them, and clearing of the top portions which had been cut out from the seedlings.

Hauling of seedlings started on July 17 and ended on September 10; hauling of harvested bundles of rice started on December 13 and ended on February 7; and hauling of winnowed

*243 paddy to the bins in the building was done only twice, on February 7 and 14.

12. Field inspection. When the farm operator and his family were going to and coming from work on the fields, they naturally made observation on the seedlings, the water level, and the field condition. From the standpoint of labor utilization, it is rather difficult to apportion the time spent on these observing activities. For the purpose of our records, therefore, we limited field inspection to special trips around the fields intentionally made for inspectional purposes only. The records show that inspection thus defined started on August 25 and ended on November 30. It must be noted that the canal water level during this period had already risen so high that it was then possible to make field inspection on boat. Usually, either the farm operator himself or his wife made a round of about two hours every other day. Since this was the period when most of the seedlings had been transplanted onto the fields, inspection was limited to observing the general growth of the plants. It was, in fact, a period when there was nothing else for the farmer to do except to wait for the rice plants to grow up to maturity and bear seeds so that they may then be harvested.

13. Care of the plants. In transplanting, three or four seedlings were planted in one stand by pressing their lower ends into the muddy ground under water, the distance of planting being about eight inches. Occasionally, some of these seedlings which had not been pressed hard enough into the soil

*243 would detach themselves from the ground and be seen afloat on the surface water. To remedy this, the farmer usually inspected his newly transplanted parcel and simply pressed the floating seedlings back into the ground. Sometimes, transplanting was poorly done or the seedlings were roughly handled during uprooting, resulting in "dead stands." These dead stands could not be distinguished from the live ones in the first few days after transplanting, for both would appear greenish yellow in color. In four days after transplanting, however, the root system of the live rice plant resumed its normal function and most stands assumed their true green color. The dead stands could then be easily detected for they remained greenish yellow. These dead stands were removed and new seedlings were transplanted in their places.

Weeding was another care given to the rice plants. Again, it was difficult to apportion the time spent on each of these separate activities -- pressing the floating seedlings back into their original position on the ground, replacement of the dead stand stands with the live seedlings, and weeding -- for at certain periods (within a few days after transplanting) they were all done in the same trip and almost concurrently.

[476] Weeding was also done cooperatively, although recently cooperative weeding has become less popular and involved only [592] few families. It may be said, therefore, that care of the [178] plants as of 1953-54 was largely a family undertaking. Our records show that care of the plants in our sense of the term [476] started on July 24 and ended on September 29. Of this, the [592]

*243 [476] [592] work done by the family members themselves lasted from July 24 to September 28 and the work done through cooperative work group (weeding only) lasted from September 20 to September 29. It was observed that as from the end of September there was no need for weeding, for weeds could not keep up with the rising water level.

14. Preparation of threshing floor. When harvesting was approaching, the farmer would get busy preparing the threshing floor. He had to do this well ahead of time, that is, before harvesting actually started, or else there would be complications during that busy period. As a matter of fact, this was a rather short step of rice production. Although our records show that it lasted from November 29 to January 27, that seemingly long period was due to the fact that cracking appeared and repair of the threshing floor was necessary on the latter date. In fact, the whole work took only seven work days, involving only 13½ man-hours and 32 buffalo-hours. The method of preparing the threshing floor was simple. The ground apace designated to be the floor was first soaked with water for the whole night. In the following morning, four buffaloes were led to tramp over and over this small earth floor for an hour and a half, in the meantime another worker levelled the floor with grub hoe. The process was repeated on each of the four following days until the floor became compact and level. *243 476 Finally the surface was pasted with wet buffalo manure to minimize surface cracking.

15. Harvesting. This was largely done through a

*243 476 cooperative work group, the proportion of the work done by the family workers themselves and that done through cooperative harvesting being about one to five. Cooperative harvesting started on December 4 and ended on January 25, while family harvesting started on December 12 and ended on February 6.

*243 16. Threshing. This step can be further broken down into piling of harvested bundles of rice around the threshing floor, laying some of these on the threshing floor, actual threshing by having the buffaloes tramp over and over the rice stalks with rice seeds on them (by this time the stalks had already broken loose from the bundle), frequent turning of stalks that were in the lowest layer upward (with the use of pitchforks), separating the threshed paddy from the stalks (with the use of pitchforks and rakes), and finally piling of the threshed paddy. Threshing started on December 15 and ended on February 14. It was one of the few steps in rice production in which the work was often carried on into the night.

17. Winnowing. Started on December 25 and ended on February 14. The completion of winnowing marks the end of rice production as far as rice farmers are concerned.

18. Stacking of straw. After threshing, straw was piled up in stacks around poles in the homeyard or the edge of the field near the homeyard. This was done on December 29 and February 4. It was a simple step using only a total of 16 man-hours of labor.

231 19. Procuring grass for buffaloes. Care for buffaloes is a whole year job involving leisurely work, such as taking the buffaloes to graze on the fields which any child can do,

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231 as well as painstaking work like ridding them of insects during a certain period of the year by smoking throughout the night. Besides, in some years when the water level is exceptionally high, for example in 1952, the buffaloes may have to be tended in other villages of higher elevation. Moreover, there always is need for constant guard against robbery of these precious draft animals. It is extremely difficult to keep a record of labor spent on these activities. The author is reluctant to attempt even at mere estimation.

In view of the difficulties mentioned above, only the procurement of grass for the buffaloes which could be measured was taken into consideration in the computation for labor requirements in rice production. This was done with the realization that there was more labor actually spent on the tending of buffaloes which could not be estimated and which should be considered as extra work over the calculated requirement. Our records show that cutting grass for buffaloes started on June 14 and ended on November 27 when the buffaloes began to feed on straw. (This straw was obtained from a neighbor's field at the mouth of Bangchan Canal which was planted to an early variety of rice; hence, even though harvesting had not yet begun on the farm under study, it was possible to feed the buffaloes with straw and save time that would have to be spent on procuring fresh grass for buffaloes during this busy period when all available labor should be spent on harvesting.)

*243 20. Supervising the work done by cooperative workers.
476 The amount of supervision varied with the kind of cooperative

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*243 work. In cooperative uprooting, which usually started as
476 early as 5:30 a.m. and lasted until each guest worker finished his 100th bundle of uprooted seedlings, the host did not participate in the work but had to entertain his guest workers by talking with them while they worked and providing a meal after the work. He had to see to it that every worker had enough bamboo binders to bind each bundle of uprooted seedlings, and it was his own responsibility to check that each guest had actually uprooted his share of 100 bundles. Usually, cooperative work was done on the honor system -- the bundles were not counted. In one of the cooperative weedings for the farm under study, however, one guest who had been known to be a not very fast worker finished his share too soon to the surprise of his fellow workers. Perhaps partly with a sense of curiosity and partly with a sense of justice, these other guest workers stopped their work temporarily and helped the host counting the bundles uprooted by that man. To the embarassment of all concerned, it was found that the man had actually finished only 80 bundles. In cooperative transplanting, the host was not obliged to feed guest workers. In this case, each guest worker was to finish one-fourth of a transplanted rai. The host's duty was to assign each worker to his respective plot which had to be properly measured. Earlier in the day, the host and his family had to haul the uprooted seedlings to each of these plots. While cooperative transplanting was being done, the host usually walked from one plot to another to see to it that proper distance of planting was being observed by each worker

*243 476 as unscrupulous guest workers might tend to lengthen the distance in order that they might work less because the share of work was on an area basis. In cooperative harvesting, it was customary that the host provided a meal after the work was done. As with the case of cooperative transplanting, each guest worker was to harvest an area of one-fourth of a rai. No checking was necessary in this case. In the rather unsignificant cooperative weeding, the host worked side by side with guest workers in the same plot, and work was measured by the time spent on weeding -- in "day" or "half-day," one "day" being an equivalent of six-hours' work and correspondingly one "half-day" an equivalent of three-hours' work. Guest workers were induced to weed more intensively by an offer of prizes in the form of cigarettes for a certain number of bamboo binders they collected in the course of weeding (by pulling). The underlying idea was that since these bamboo binders which were left in the parcel during transplanting sank deep in the soil, thus the amount of bamboo binders collected by each guest worker more or less indicated his weeding effort.

Our records show that supervision of cooperative work started on July 22 and ended on January 24.

*243 476 461 21. Entertaining guest workers. It was already mentioned in the previous step that customarily the host provided food to guest workers in cooperative uprooting and cooperative harvesting. To feed some twenty to thirty people was quite a job, thus practically all family workers were occupied in food preparation and serving on these occasions. Our records show that entertaining guest workers started on July 22 and ended on January 24, and that while supervision of cooperative work

*243
476 utilized only 26 man-hours of labor, entertaining the same
461 groups involved as many as 158½ man-hours.

Labor Requirement in Rice Production

*243
461
*128 During the 1953-54 rice year, an exploratory study of labor requirement in rice production was conducted, using only one farm. This farm was operated by Headman Chom Srisuay of KY5. It was one among the 104 sample farms covered by the preliminary survey in 1948-49. The choice of this farm was made on the basis of the high degree of cooperation given us by Chom and all his family.

[594] During the period covered by this special study of labor requirement, Chom had a family of nine, consisting of Husband Chom (47), Wife Sai (44), three sons -- Phuan (19), Phan (16) and Phloen (8), and four daughters -- Phung (15), Phad (13), Bunmarg (7) and Mian (4).

In the year of the study of labor requirement, Chom operated a farm of 49 rai consisting of four parcels: Parcel A, 7 rai; Parcel B, 20 rai; Parcel C, 7 rai; Parcel D, 15 rai. The locations of these parcels are shown in the sketch map on page

Part of Parcel A was used at the beginning of the sea-
*243 son as seedbed. After the seedlings had been uprooted and
461 transplanted, this parcel was again plowed and harrowed and planted to three varieties of rice -- Mue Hag, Ched Ruang and Khao Sa-ing. Parcel B was also planted to three varieties -- Mue Hag, Ched Ruang and glutinous rice. Parcel C was planted to only one variety -- Mue Hag. Parcel D was planted to two

*243 varieties -- Khao Sa-ing and floating rice. The areas in each
461 parcel planted to different varieties are given below.

Parcel	Total area rai	Area planted to each variety Var. name	Area in rai
A	7	Mue Hag	3
		Khao Sa-ing	3
		Ched Ruang	1
B	20	Mue Hag	10
		Ched Ruang	7½
		Glutinous rice	2½
C	7	Mue Hag	7
D	15	Khao Sa-ing	9
		Floating rice	6

It may be seen that actually there were five varieties altogether. The areas devoted to these varieties were as follow: Mue Hag, 20 rai; Khao Sa-ing, 12 rai; Ched Ruang, 8½ rai; glutinous rice, 2½ rai; floating rice, 6 rai. Since 6 rai was planted to floating rice and it was mentioned in the first section of this chapter that this floating rice lent itself only to the broadcasting method, it may be noted here that of the total area in rice of 49 rai, 43 rai was devoted to transplanted rice and 6 rai was devoted to broadcast rice.

*243 Of the nine members of the family, Chom, Sai, Phuan
594 and Phan were first-rate workers while Phung -- the fifteen
461 year old daughter -- was diligent but still needed more training in the farm work. Chom kept four buffaloes. Thus the needed four regular workers who were supposed to be Chom, Sai, Phuan and Phan. When the work season was about to begin, however, Phan was engaged by the Cornell research team as a

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MAP II

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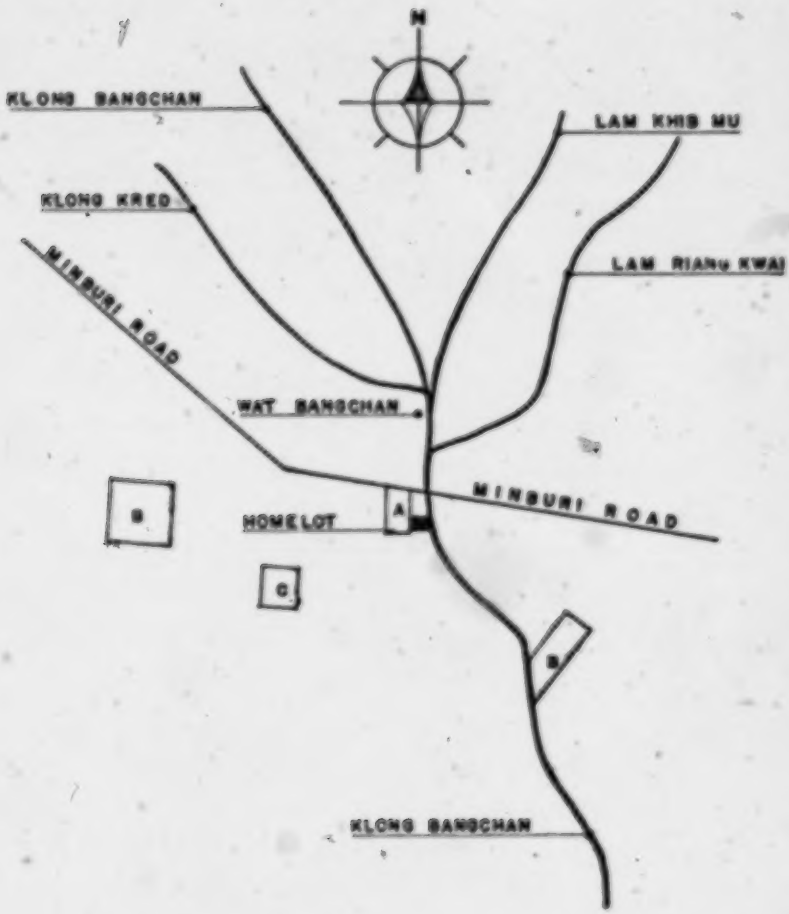
361
423

SKETCH MAP OF CHOM FARM AND HOME LOT
BANGCHAN, THAILAND
1953



Rough scale: 4 cm. to 1 k

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 594 461 [464] row man. He could not very well be substituted by his younger sister who was also needed to perform the housework. A worker was thus hired for the period of two months -- from the middle of June to the middle of August -- primarily to help in plowing. Phan also partially helped in plowing and harrowing in part of the morning session before he started his work for the Cornell team at nine o'clock.

[476] During the cooperative work season, Chom represented the family in cooperative uprooting and cooperative harvesting, and Phuan in cooperative transplanting, weeding and harvesting. Phan also represented the family in cooperative work scheduled for Saturdays and Sundays when he was free from Cornell duty.

243 461 128 Work records of all workers of this farm were kept by the author throughout the work season from June 4, 1953 to February 14, 1954. At the beginning, the author stayed overnight with the family. Family workers were requested to give accounts of their activities of the day. To facilitate more accurate accounts regarding the time of the work, a clock was [115] given to the family. When family workers became acquainted with the type of information that was needed, Phan, our row man, was assigned to make a daily report on the kinds and time of work done by each worker. Phan's daily report was taken down by the author in the labor schedule specially prepared for the purpose.[3] Later, when Phan's reporting skill was well developed, he was asked to report on the daily labor records only four times a week, usually Monday, Tuesday, Thursday and Friday.

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3. See Appendix B.

243 Since the farm work usually followed the same pattern for a
461 certain period, it was observed that Phan remembered quite well
128 the time and the kind of work done by each family worker during
the past two or even three days. The time of work was recorded
231 to the nearest half-hour. In Tables 35 and 36, labor spent by
464 family workers, piece-workers hired by the family, and buf-
592 faloes, on different steps in rice production was given in
man-hours and buffalo-hours. The dates when these various
476 jobs started and ended were also given. It should be noted,
however, that labor recorded as spent on cooperative work was
actually not spent on the family farm but rather on farms of
other cooperative members. This was nevertheless exactly com-
pensated by cooperative work on this farm on several occasions
which were not entered in the calculation to avoid error
because of duplication.

243 The data from Tables 35 and 36 may be summarized as
461 follows:

221 1. Man labor provided by farm staff.

592 Work started June 4, ended February 14, a total of 248
464 work days.
231 Total man-hours spent by farm staff -- 5,478.

2. Man labor provided by piece-workers.

Work started July 19, ended August 30, a total of 10
work days.
Total man-hours spent by piece-workers -- 229.

3. Animal labor provided by buffaloes.

Work started June 4, ended February 13, a total of 112
work days.
Total buffalo-hours -- 2,119.

[TEXT CONTINUED ON PAGE 246]

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TABLE 35

SUMMARY OF YEAR ROUND WORK BY CHOM FARM STAFFS
Bangchan, Thailand, 1953

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[592]

Steps*	Duration Start	Duration End	Days in work	Man-hrs.
A. Work by Farm Staff				
1. Plowing	June 4	Aug 23	49	918½
2. Harrowing	June 13	Aug 24	28	291
3. Remove weeds after harrow	June 13	Aug 15	25	219½
4. Irrigate and drain	June 4	July 8	21	186½
5. Rolling	June 13	Aug 22	7	42
6. Sow, broadcast	June 18	July 15	13	42½
7. Prepare and repair	July 5	Dec 9	10	106½
8. Prepare bamboo binders	July 17	Aug 27	10	45½
9a. Coop uprooting	July 15	Sept 11	25	127½
9b. Family uprooting	July 17	Sept 8	20	115½
10a. Coop transplanting	July 18	Sept 19	36	267½
10b. Family transplanting	Aug 20	Sept 10	13	125
11. Hauling	July 17	Sept 14	55	733
12. Field inspection	Aug 25	Nov 30	42	87
13a. Care of the plants	July 24	Sept 28	14	114½
13b. Coop weeding	Sept 20	Sept 29	8	86
14. Prepare thresh floor	Nov 29	Jan 27	7	13½
15a. Coop harvesting	Dec 4	Jan 25	44	747½
15b. Family harvesting	Dec 12	Feb 6	18	148½
16. Threshing	Dec 15	Feb 14	43	597
17. Winnowing	Dec 25	Feb 14	9	86½
18. Stacking of straw	Dec 29	Feb 4	2	16
19. Procure grass for buf.	June 14	Nov 27	83	157
20. Supervise coop work	July 22	Jan 24	8	36
21. Entertaining guest workers	July 22	Jan 24	7	156½
Total	June 4	Feb 14	248	5,478½
B. Work by Piece-workers				
1. Coop uprooting	Aug 18	Aug 25	6	24
2. Uprooting	Aug 23	Aug 30	2	45
3. Transplanting	July 19	Aug 2	2	160
Total	July 19	Aug 30	10	229
Grand total	June 4	Feb 14	248	5,707½

[464]

* See details in the section on steps in rice production.

TABLE 36

SUMMARY OF YEAR ROUND WORK BY BUFFALOES ON CHOM FARM
Bangchan, Thailand, 1953

*243
221
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	Duration Start	End	Days in work	Buf-hrs.
1. Plowing	June 4	Aug 23	49	918½
2. Harrowing	June 13	Aug 24	28	582
3. Rolling	June 13	Aug 22	7	84
4. Hauling	Aug 23	Aug 23	1	8
5. Prepare thresh floor	Nov 30	Dec 4	5	32
6. Threshing	Dec 15	Feb 13	35	494½
Total	June 4	Feb 13	112	2,119

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 461 221 4. Labor requirement per rai.

Our records show that the total area planted to rice was 49 rai.
Therefore, man labor per rai was $\frac{5,707\frac{1}{2}}{49}$ = 116 man-hour

And animal labor per rai was $\frac{2,119}{49}$ = 43 buffalo-hours.[4]

5. Labor requirement per 100 tang of paddy.

Our records show that a total crop of 2,100 tang of paddy was produced.
Therefore, man labor per 100 tang of paddy was
$\frac{5,707\frac{1}{2}}{2,100} \times 100$ = 272 man-hours
And animal labor per 100 tang of paddy was
$\frac{2,119}{2,100} \times 100$ = 101 buffalo hours.

The Critical Period in Rice Production

*243 221 The entire length of rice producing activities, which in the case under study lasted from June 4, 1953 to February 14 1954, may be subdivided into three distinct phases: (1) cultivation and planting season which lasts from the first day of field work to the date when the seedlings have all been transplanted and properly cared for; (2) flooding season which lasts approximately from the date when the water level has risen up over the dikes to the time when the early varieties of rice are ready to be harvested; and (3) harvesting season which lasts from the harvesting time of the early varieties until all varieties have been harvested, threshed, and winnowed.

Bangchan farmers recognize these three distinct phases which are called in Thai na nar (lit., field season), na nam (lit., water season), and na khao (lit., paddy season). They

4. This would be 290 man-hours per acre.

5. This would be 107½ buffalo-hours per acre.

243 221 know that they must work hard and spend long hours in the field during na nar which is the critical period during which all steps in rice growing must be finished before the deadline set by the end of this phase. Perfect timing of each step is required because one step is a prerequisite to another. Preparation of the seedbed, for example, is the first thing to be done and must be done as soon as possible, for unless this is finished seeds could not be sown and it takes at least thirty days of good care for the seedlings to attain an appropriate growth so that they may be transplanted onto the fields. During the time the seedlings are being nurtured in the seedbed, the fields must be made ready for transplanting at a certain date set by the age of the seedlings. Normally, seedlings may be transplanted at an age between thirty to fifty days. If they are too young, they would be too weak to stand the uprooting and transplanting processes. Yet, if they are too old, the rate of development after transplanting would be retarded and a poor crop would result. The date of transplanting is also conditioned by the general water level, which is sometimes controllable and is sometimes beyond human control. In transplanting, the water level of the parcel should be about 8-10 inches, and should certainly not exceed the height of the seedlings of about 15 inches. Allowance must be made for the expected rain water, since transplanting time coincides with the period of heaviest rainfalls in September. Normally, the young seedlings are able to survive total submergence for two or three days but they will be drowned by a longer submergence.

243 Hence, transplanting should be completed some time before the
221 whole field is inundated. It is seen, then, that this critical period of na nar is not only one of physical strain on the part of the farmer but also a period of anxieties.

When the rice plants are well established in the fields, they more or less can take care of themselves, for they grow sufficiently rapidly to keep up with the rising water level unless the rise is abnormally rapid. Thus, na nam or the flooding season is a period when farmers have nothing to do except procure grass for the buffaloes. It was earlier indicated that field inspection that was done during this period was actually a pleasure trip to observe the general growth of the rice plants; for even if anything wrong was noticed, nothing could be done about it.

Farmers are busy again when harvesting season starts. Each variety of rice ripens on its exact date and it must be harvested within a day or two. If harvesting is delayed even for a short period of three or four days, the paddy will be over-ripe, resulting in a higher proportion of breakage and hence a lower price. If there is any anxiety at all, it is now over the possibility of rain which may damage the paddy which is left to dry in the field. This is unlikely, however, for the rainy season has just passed. Generally speaking, this
[461] is a period of joy rather than anxiety. The major field work -- harvesting -- although one of the mat burdensome field operations consuming one-sixth of the total man labor spent on rice production, is largely a cooperative undertaking carried on

243 under a lively atmosphere. Moreover, the amount of work done
221 depends solely on the amount of human labor utilized. Hence,
461 if the operator wants to finish his harvesting in time when he has not enough available labor, he simply hires more piece-workers. The situation is different in the critical period of cultivation and planting, when the amount of work done depends not only on the amount of labor utilized but also on the accomplishment of the preceding steps which are governed by water condition, weather condition, available equipment, animal labor as well as man labor.

243 In the 1953-54 crop year, it was observed that na nar
221 started on June 4 and ended on September 30, na nam lasted from October 1 to December 3, and na khao from December 4 to February 14.

243 While the figures on total labor requirement in rice
461 production represent valuable information, an earlier discussion in this section has led us to the belief that the mere knowledge that it takes 272 man-hours and 101 buffalo-hours to produce 100 tang of paddy is not enough to demonstrate the labor requirement situation if it is to serve as a guide in problem locating and problem solving. These figures must be further broken down into those required during the critical period and those required in the non-critical period.

243 Our records show that of the 5,707½ man-hours spent
221 in producing 2,100 tang of paddy on Chom Farm, 3,226½ man-
231 hours were utilized in na nar (June 4 to September 30, 119 days),
461 133½ man-hours in na nam (October 1 to December 3, 64 days),

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243 and 2,347½ man-hours in na khao (December 4 to February 14, 72
221 days). Similarly, of 2,119 buffalo-hours spent on the same
231 production, 1,592½ were utilized in na nar, 24 in na nam, and
461 502½ in na khao. From these data, we may calculate the averages for daily labor utilization in each period as follow:

1. Na nar (119 days)

Total man-hours, 3,226½; daily man-hours, 27.1
Total buf-hours, 1,592½; daily buf-hours, 13.4

Man-hours per rai, 66.
Buf-hours per rai, 32½.

2. Na nam (64 days)

Total man-hours, 133½; daily man-hours, 2.1
Total buf-hours, 24 ; daily buf-hours, 0.4

Man-hours per rai, 2½.
Buf-hours per rai, ½.

3. Na khao (72 days)

Total man-hours, 2,347½; daily man-hours, 32.6
Total buf-hours, 502½; daily buf-hours, 7.0

Man-hours per rai, 47.
Buf-hours per rai, 10.

It is seen that three-fourths of the total buffalo labor was utilized in na nar. This was to be expected, for most of the steps involving buffalo labor were in this period. It is important to observe that buffaloes assumed an active role in practically all steps of land preparation -- plowing, harrowing, and rolling. Human labor, on the other hand, played only a passive part in these steps.

243 Table 36 shows that buffaloes were utilized in six
231 steps in rice production -- plowing, harrowing, rolling, haul-
461 ing, preparation of threshing floor, and threshing. These steps

*243 may be classified according to the way the animals are used
231 as follow:
461

1. Steps in which buffaloes are always used and in constant proportion to men.

Steps	Proportion of buffaloes to men
Plowing	1 to 1
Harrowing	2 to 1
Rolling	2 to 1

2. Steps in which buffaloes are always used but not necessarily in constant proportion to men.

Preparation of threshing floor: Four buffaloes are led by one worker to tramp over the dirt floor which was soaked with water on the previous day. While the buffaloes are tramping over the floor, another worker levels the floor with hoe. The number of buffaloes and workers may be more or may be less, and there is no definite proportion between the animals and men.

Threshing: Four buffaloes are led by one worker to tramp over harvested rice stalks (with paddy still intact) which have been spread over the threshing floor. While the buffaloes are tramping over the rice stalks, two or three other workers separate straw from the threshed paddy with pitchforks.

3. Steps in which buffaloes are not usually used but are sometimes used to minimize human labor when opportunity permits.

Hauling: Two buffaloes are led by two workers to draw the boat carrying seedlings along the muddy water way. Of a total hauling work of 733 man-hours in 55 work days lasting from July 17 to February 14, buffaloes were used only once on August 23, involving only 8 buffalo-hours.

*243 Since buffaloes are used in the critical period of
221 na nar in the three steps where they must be used and used in
231 constant proportion to men, it is not difficult to see that
461 the field work accomplished in this critical period depends more on buffaloes than on human workers. It was mentioned that

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*243 Chom Farm utilized four buffaloes and four regular workers
221 including the operator himself. Supposing that one buffalo
231 is sick, we might expect that the work accomplished in this
461 period would be reduced to three-fourths. On the other hand, if one regular worker is sick, that would not materially affect the amount of work done, for the sick worker would certainly be replaced by a substitute. Even if no extra family worker is available, it would be only a matter of hours that Chom would be able to recruit one more worker among his relatives and neighbors. He could not recruit a temporary service of a buffalo. If more buffalo labor is badly needed, the only alternative is to purchase the animal. Looking from a different angle, if Chom wants to finish plowing and harrowing ahead of the original schedule for fear of an early inundation, he could not accomplish that by simply utilizing more human labor alone. It is thus seen that buffaloes, more than human workers, are the limiting factor in the accomplishment of the field work during the critical period of cultivation and planting season.

Labor Adjustment Devices

*243 Rice plants have one unique quality: each variety will
221 mature on a certain exact date no matter how early or how late it is planted.[6] If there were only one variety of rice in existence, this would be a serious handicap to rice growers, for there would certainly be much more demand for labor in

6. The exceptions are the very early varieties which mature at the age of about 90-100 days. Ripening dates of these varieties are set only by the length of time they have been planted, regardless of the time of the year.

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243 harvesting time than could be coped with by the supply for it.
221 Chom Farm, for example, would alone need 916 man-hours in one or two days, during which time approximately the same amount of labor would be needed by each of the other farms. Fortunately, there are in existence hundreds of rice varieties whose maturing dates vary from October to February. These different varieites are grouped into the early, medium, and late varieties according to their ripening dates of October to November, early December to early January, and middle January to middle February, respectively. Usually, the choice of varieties of rice to be grown in a certain locality is so conditioned by local water levels at different periods that a narrower range of selection is forced. Thus, the earliest variety in Bangchan is harvested in early December and the latest in middle February. The terms "early," "medium," and "late" are also arbitrarily used by local people to denote the relative ripening dates of locally grown varieties. Thus, in Bangchan the varieties ripening in early and middle December are known as the early varieites, those ripening between late December and middle January the medium varieties, and those ripening in late January and after the late varieties. It is possible, then, that the same variety may be called an early variety in one place and a medium or even a late variety in another.

243 By growing several varieties of different ripening
221 dates, a farmer is able to spread out labor required in har-
461 vesting. In the same manner, labor required in uprooting and transplanting is spread out by sowing these seeds at different

*243 times. Using too many varieties of rice on a farm, however,
221 will complicate the working schedule; and sowing times of these
461 varieties cannot also be spread out too far apart because seedlings should all grow up to the size appropriate for transplanting some time before the deadline set by the water level. It has been observed that most farmers grow from three to six varieties on their farms.

* 243 Another efficient device for spreading out labor is
221 that of farmers in a locality organizing themselves into
461 informal cooperative work groups to perform on a mutual help
467 basis such field work which can be best cooperatively done, such as uprooting, transplanting and harvesting. There were three cooperative work groups in Bangchan: (1) Mu Sapan Yao, or the Bridge Group, consisting of farm operating families living in the vicinity of the bridge across Bangchan Canal; (2) Mu ha Wat, or the Near Wat Group, consisting of families living around Wat Bangchan; and (3) Mu Bon, or the North Group, consisting of families living in Upcanal Bangchan. The organization and the system for labor compensation of these various informal work cooperatives will be discussed in the next section.

Cooperative Work

*243 There were five kinds of cooperative work in Bangchan --
476 cooperative uprooting, cooperative transplanting, cooperative harvesting, cooperative weeding, and cooperative pounding of cargo rice. While the first three kinds were important undertakings through which a major part of those rice production

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*243 476 steps were carried on, the last two were relatively insignificant and were participated in by few families. All of these five kinds of cooperative work, except cooperative pounding of cargo rice, have been mentioned in the earlier sections of this chapter.

We did not include pounding of cargo rice as a step in rice production, although it was closely related to it. Before or at the beginning of the farm year, when the pressure of the field work was not yet strong, farmers would pound their home-milled rice which was to be consumed during the entire work season. The recent trend has been for farmers to take their paddy to the rice miller who retained a portion of the milled rice and bran as his fee. Nevertheless, there were still some farm families who milled rice needed for their own consumption, contending that it was more economical and that in so doing they could save the much needed bran for their livestock. Home-milled rice, which appears in the form of cargo rice, must be pounded in order that its outer coat may be removed. Farmers found that it was less tedious, and perhaps it was even fun, to do pounding as a group work rather than as a laborious task for an individual family; so they formed a group of say ten families, each sending a representative to participate in group pounding at each member family's home in rotation. Cooperative pounding was more often carried on in the evening. When the work was finished, refreshment was served by the host.

In this section we shall concentrate on the three

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243 major cooperative work -- cooperative uprooting, cooperative
476 transplanting, and cooperative harvesting.

At the outset, it should be understood that cooperative work groups were very informally organized. Although the idea was to mobilize labor to work on each member's farm in rotation, the work obligation was not collective but was purely bilateral -- each farmer receiving help was bound to return the same amount of work to each guest worker individually There was no such thing as group responsibility.

Supposing Chom wanted help in the uprooting of his early variety, after figuring out how many guest workers he needed for the occasion, he would send word to the group that he wanted, say fifteen workers, on the specified date. Each member approached had to make it known to Chom that he could or could not participate in that cooperative work for Chom. Technically, members were approached individually. There should not be any difficulty, therefore, in limiting guest workers to the required number. Since immediate reply was an ettiquette that was strictly observed, Chom would know not only the number of guest workers but also who would come on the specified date. Another strictly observed rule was that one should participate in a cooperative work only when he was asked to do so. This latter was necessary because there might otherwise be too many guest workers, which meant more future reciprocal work on the part of the host.

Since a farmer grew several varieites of rice, he usually needs help several times in each of the uprooting, transplanting, and harvesting processes. A help unit is called

*243 476 a "ngarn" (lit., work), which is one hundred bundles of seedlings uprooted in case of uprooting, one-fourth of a rai transplanted in case of transplanting, and also one-fourth of a rai harvested in case of harvesting.

The author followed closely every cooperative uprooting which Chom participated. It was found that this operator had bilateral obligations with 20 other members who during the 1953 season had uprooted for him a total of 41 units or 4,100 bundles of seedlings -- 1,400 bundles on July 22, 1,100 bundles on August 3, and 1,600 bundles on August 15. Chom had to make good the reciprocal work of this same amount for all his guest workers according to their individual shares of contribution to him. At the end the records show, however, that Chom himself had contributed only 28 units or had uprooted only 2,800 bundles for fellow members. Although his son Phuan had contributed six more units, the family was still short of seven units. As it actually happened, Chom was away from the village on a house building work in Dhonburi from August 18 to 25. Dkring this period of eight days he was supposed to participate in seven cooperative uprootings. His only substitute, Phuan, could not do the work for him for Phuan was also tied up in cooperative transplanting. Chom therefore arranged for [464] [465] a professional piece-worker to do the seven cooperative uprootings he was committed to at the going rate of 13 baht per 100 bundles uprooted.

Records show that at the end Chom's contribution to each of his twenty fellow members was individually equal to the

*243 help he received from each of them (the work by Phuan and the
476 piece-worker was considered as Chom's contribution), the exception being the cases with A and B. Chom had contributed three units to A, receiving only two units from the man; but he had received four units from B, giving him only three units of work. This was settled by transferring Chom's credit with A to B which is the general practice.

*243 There were two professional piece-workers among Chom's
476 twenty fellow members. In fact, there were four such piece-
464 workers in our records of this group of cooperative uprooting, but Chom was bilaterally obligated to only two of them. Perhaps it is necessary to mention at this juncture that each member of a cooperative group had within that group their own circle of members among whom he had bilateral obligatory work. Chom, for example, had a circle of twenty-one within that group of twenty-four. We got this number of twenty-four by listing all the names of the persons (representing families) to whom each of the twenty-one members of Chom's circle had bilateral obligatory work. Most of these names overlapped, and the composite number was found to be twenty-four. It is seen then that the number of members of both a circle and a group depended entirely on which member was used as the basis. It would be misleading, therefore, to state the Ku Sapan Yao Cooperative Uprooting had twenty-four members, for no real size of a cooperative work group exists because of the overlapping nature of various circles within it.

All the four professional piece-workers in this

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243 476 464 cooperative uprooting were exceptionally good workers, and this was the reason why they were approached when help was needed. These men accumulated work credits and utilized them when they were contracted by operators who had not enough family labor to uproot their seedlings. Chom, for example, after utilizing his own family labor as well as all the work credits he earned in cooperative uprooting, still was in short of labor to uproot his latest varieites on August 22 in which ten units of work were needed for the estimated 1,000 bundles [465] to be uprooted. He, therefore, contracted Sa, a fellow member, to do the job for 130 baht. On that date, Sa called upon ten members including himself to uproot Chom's seedlings in his name. So the same old faces appeared on Chom's farm. Outwardly, this looked like an ordinary cooperative uprooting on the mutual help basis. In reality, however, it was a business deal out of which Sa received cash payment from Chom who in turn received labor. Our records show that Sa had another earlier contract to uproot 1,700 bundles for another operator, and the same method of recruiting labor among fellow cooperative members was used. Since our records show only cooperative uprootings conducted among this group of twenty-four members, it was possible that Sa might have a few more contracts which did not appear in the records.

Ordinarily, farmers do not like to be obligated to professional piece-workers, for they might later be asked to work in return for somebody they do not like. In fact, there was some talk in 1953 among farm operating members on the

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*243 476 464 possible ways to eliminate the participation of professional piece-workers. From the standpoint of professional piece-workers, however, to get oneself admitted into a cooperative group is a boon to their respective families for job opportunity would be assured to them. This is the reason why Sa was able to earn 2,000 baht in 1953 while most of his fellow piece-workers' earnings were as low as 300 or 600 baht.

[465]

*243 476 The same principle of labor reciprocity held in the other kinds of cooperative work, which also involved cash payment in the end to professional piece-workers who served as clearing agents to settle the balances of work credits. Generally speaking, such balances were more in case of cooperative transplanting than cooperative uprooting, and the same were even higher in the case of cooperative harvesting. This was to be expected because transplanting involved about double the amount of labor spent on uprooting, and harvesting alone required about a tenth more than the combined labor requirement of these two operations.

*243 461 476 Chart 1 shows both man-labor spent by Chom farm staffs and man-labor spent on Chom Farm, the former being represented by the solid line and the latter by the dotted line. On the basis of equal reciprocity of labor, these two should be technically equal in total magnitude. They differed, however, in their daily distribution. It is seen that the two lines coincide during the periods from June 4 to July 14, from September 30 to December 3, and from January 26 to February 4, when there was no cooperative activity. During the periods from July 15

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243 to September 29 and from December 4 to January 25, these two
461 lines diverge from each other. Although both fluctuate greatly,
476 it is readily seen that fluctuation of the dotted line representing labor spent on Chom's Farm is much more than that of the solid line representing labor spent by Chom farm staffs. This shows that by adopting cooperative work device Chom was able to spread out the work of his farm staffs although the daily labor requirement on his farm still remained highly fluctuating.

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#243
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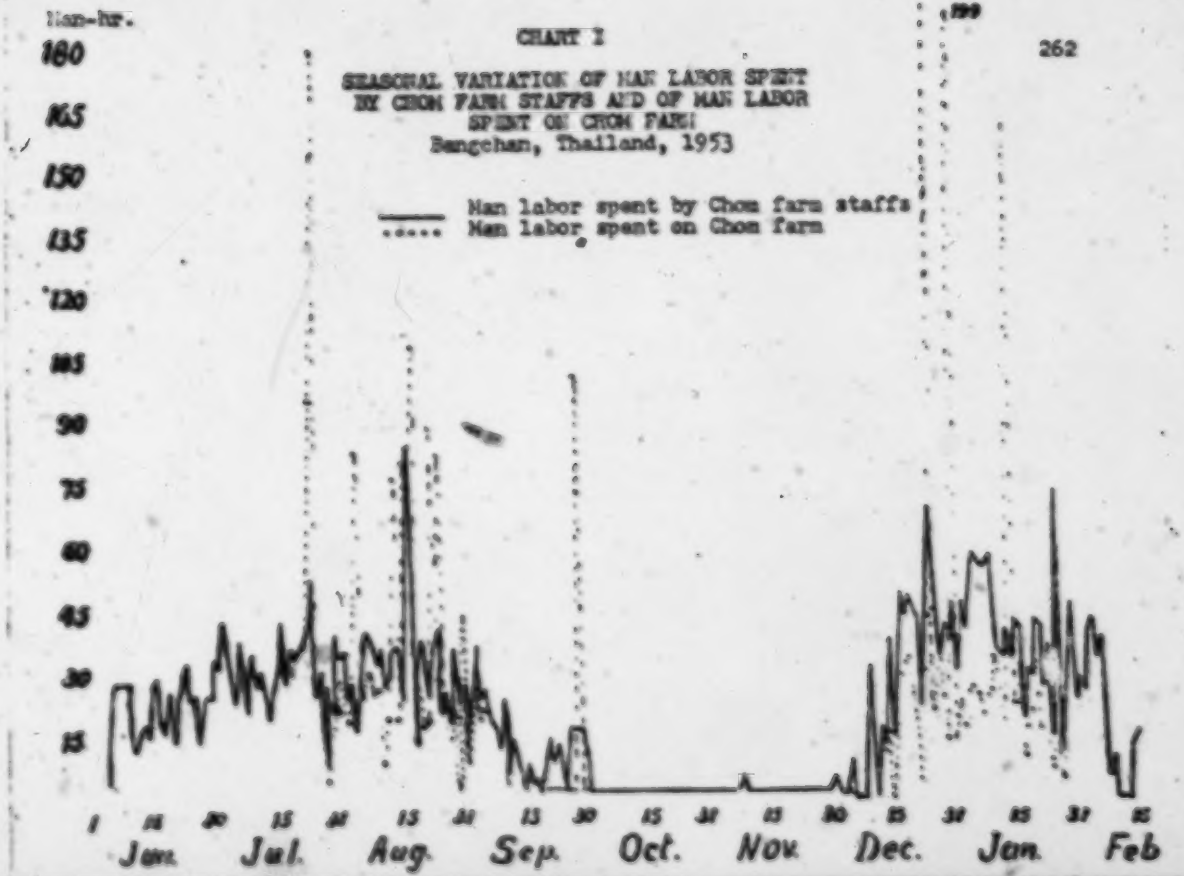
461

CHART I

SEASONAL VARIATION OF MAN LABOR SPENT BY CHOM FARM STAFFS AND OF MAN LABOR SPENT ON CHOM FARM
Bangchan, Thailand, 1953



#263
821
291
961

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CHART II

SEASONAL VARIATION OF BUFFALO LABOR SPENT ON CHOM FARM
Bangchan, Thailand, 1953

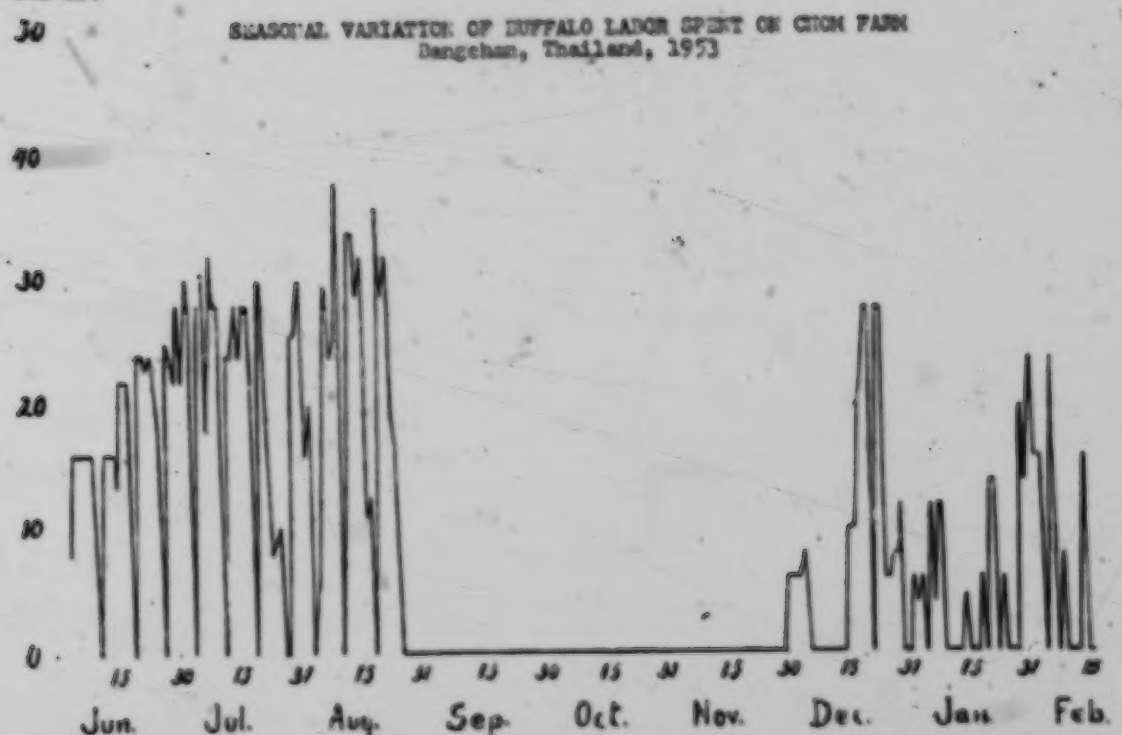

TABLE 37

DAILY LABOR SPENT BY CHOM FARM STAFFS
Bangchan, Thailand, 1953

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hr	man-hr	man-hr	man-hr
Jun 4	8	24	--	24
5	16	28	--	28
6	16	28	--	28
7	16	28	--	28
8	16	28	--	28
9	16	28	--	28
10	8	12	--	12
11	--	16	--	16
12	16	18	--	18
13	16	15½	--	15½
14	16	27½	--	27½
15	13½	29	--	29
16	22	19½	--	19½
17	22	16½	--	16½
18	20	26½	--	26½
19	--	14½	--	14½
20	24	25	--	25
21	24	24	--	24
22	23	33	--	33
23	24	24	--	24
24	21½	25½	--	25½
25	18	14	--	14
26	--	18½	--	18½
27	25	25	--	25
28	24	25	--	25
29	22	34½	--	34½
30	28	32	--	32
July 1	22	43	--	43
2	30	38	--	38
3	27½	30	--	30
4	--	23	--	23
5	28	38	--	38
6	30½	32½	--	32½
7	18	21	--	21
8	32	35	--	35
9	28	28	--	28
10	28	3-½	--	30½

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TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

*243
221
231
461
476
592

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
July	11	--	23½	--	23½
	12	24	20	--	20
	13	24	26½	--	26½
	14	28	31	--	31
	15	24	38	5½	43½
	16	28	27½	--	27½
	17	28	36	--	36
	18	22	30	5	35
	19	--	36	--	36
	20	30	37½	--	37½
	21	28	37	4½	41½
	22	19	46½	5	51½
	23	8	20½	4½	25
	24	9	31	--	31
	25	10	16	--	16
	26	--	4	4	8
	27	--	17	4½	21½
	28	25½	27½	12	39½
	29	26	28½	9½	38
	30	28	21	13½	34½
	31	30	35	--	35
Aug	1	16	18	6	24
	2	20	21½	7	28½
	3	--	7½	8½	16
	4	5	17	9½	26½
	5	22½	24½	16	40½
	6	29½	29½	10½	40
	7	24	30½	6½	37
	8	25½	25½	7½	33
	9	38	26	10½	36½
	10	--	8	19½	27½
	11	28	16	13	29
	12	34	19	16½	35½
	13	34	25½	12	37½
	14	29	19	7½	26½
	15	32	81½	4	85½
	16	11	67½	4	71½
	17	12½	35	5½	39½
	18	--	4½	8	12½
	19	36	38	--	38
	20	29	17½	8½	26

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

*243
221
231
461
476
592

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hr	man-hr	man-hr	man-hr
Aug 21	32	18	6½	24½
22	19	28	7	35
23	17	41½	--	41½
24	8	16	4½	20½
25	--	19	7	26
26	--	14½	3½	18
27	--	21	15	36
28	--	4	16	30
29	--	2	22½	24½
30	--	14	14	28
31	--	8	4	12
Sept 1	--	8	9	17
2	--	27½	10	37½
3	--	12½	11½	24
4	--	19	7	26
5	--	21½	3½	25
6	--	19	--	19
7	--	17	--	17
8	--	12	--	12
9	--	24	--	24
10	--	6	--	6
11	--	11	3	14
12	--	9	--	9
13	--	6	--	6
14	--	2	--	2
15	--	8	--	8
16	--	3½	--	3½
17	--	4½	--	4½
18	--	2	--	2
19	--	2	3½	5½
20	--	2	12	14
21	--	2	7	9
22	--	2	11	13
23	--	2	7	9
24	--	2	--	2
25	--	2	14	16
26	--	2	14	16
27	--	2	14	16
28	--	16	--	16
29	--	2	7	9
30	--	2	--	2

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TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Oct	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	2	--	2
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2
	11	--	2	--	2
	12	--	2	--	2
	13	--	2	--	2
	14	--	2	--	2
	15	--	2	--	2
	16	--	2	--	2
	17	--	2	--	2
	18	--	2	--	2
	19	--	2	--	2
	20	--	2	--	2
	21	--	2	--	2
	22	--	2	--	2
	23	--	2	--	2
	24	--	2	--	2
	25	--	2	--	2
	26	--	2	--	2
	27	--	2	--	2
	28	--	2	--	2
	29	--	2	--	2
	30	--	2	--	2
	31	--	2	--	2
Nov	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	5	--	5
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hr	man-hr	man-hr	man-hr
Nov 11	--	2	--	2
12	--	2	--	2
13	--	2	--	2
14	--	2	--	2
15	--	2	--	2
16	--	2	--	2
17	--	2	--	2
18	--	2	--	2
19	--	2	--	2
20	--	2	--	2
21	--	2	--	2
22	--	2	--	2
23	--	2	--	2
24	--	2	--	2
25	--	2	--	2
26	--	2	--	2
27	--	2	--	2
28	--	2	--	2
29	--	2	--	2
30	6	5	--	5
Dec 1	6	2½	--	2½
2	6	1½	--	1½
3	6	1½	--	1½
4	8	2	7	9
5	--	--	--	--
6	--	--	--	--
7	--	--	--	--
8	--	25½	--	25½
9	--	33	--	33
10	--	--	--	--
11	--	12½	4½	17
12	--	8	5	13
13	--	16	22	38
14	--	--	15	15
15	10	17	16	33
16	10	30	19	49
17	20	33	10	43
18	22	34	15	49
19	28	24½	21	45½
20	28	19½	24	43½

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

*243
221
231
461
476
592

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hrs	man-hr	man-hr	man-hr
Dec 21	--	4½	18	22½
22	28	30½	21	51½
23	28	43½	27½	71
24	6	40	8	48
25	6	21	18½	39½
26	8	34½	--	34½
27	8	24	18	42
28	12	17½	24	41½
29	--	14½	24	38½
30	--	47	--	47
31	--	14½	16	30½
Jan 1	6	23	24½	47½
2	4	17	24	41
3	6	26½	24	50½
4	--	27½	32	59½
5	12	25½	32	57½
6	4	20	36	56
7	12	25½	32	57½
8	12	26½	32	58½
9	--	34	15	49
10	--	19½	16	35½
11	--	25	9	34
12	--	23½	18	41½
13	--	23½	10	33½
14	4½	32	11	43
15	--	26	16	42
16	--	10	9	19
17	--	16½	15	31½
18	6	21	9½	30½
19	--	33	10	43
20	14	25½	16	41½
21	14	17½	10	27½
22	--	32½	5	37½
23	6	5½	9½	15
24	--	74½	--	74½
25	--	2½	8½	11
26	--	22	--	22
27	--	29½	--	29½
28	20	47½	--	47½
29	14	31	--	31
30	20	24	--	24
31	24	29	--	29

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

*243
221
231
461
467
592

Date		Animal labor	Human Labor		
			On farm	On coop. work	Total
		Buf-hrs	man-hr	man-hr	man-hr
Feb	1	16	25½	--	25½
	2	16	39½	--	39½
	3	14	43½	--	43½
	4	--	34	--	34
	5	24	38½	--	38½
	6	8	22	--	22
	7	--	5	--	5
	8	8	10½	--	10½
	9	--	--	--	--
	10	--	--	--	--
	11	--	--	--	--
	12	--	--	--	--
	13	16	12½	--	12½
	14	--	16	--	16

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

CHAPTER VI

FARM ORGANIZATION AND MANAGEMENT

*128
241

Broadly speaking, a farm is one or more tracts of land held or operated as a unit for the production of agricultural products.[1] The subject of farm organization and farm management is usually treated under the more general term "farm management". A recognition of the distinction between these two functions of the farm operator is necessary. Organization refers specifically to the function of creating the general scheme or plan of production, whereas management refers to the function of putting the scheme into operation and of making those adjustments in the business which are necessary in order to obtain the maximum economic returns from the farm business as a whole.[2]

*243
433
44

Limited Role of Bangchan Operators

1. Limited role in organization: Discussions in the preceding chapters have indicated that at the present stage of technological development Bangchan operators have really not much choice in creating the general scheme or

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1. H. C. M. Case and Paul E. Johnston, Principles of Farm Management, J. B. Lippincott Company, Chicago, 1953. pp. 466.

2. G. W. Forster, Farm Organization and Management (New York: Prentice-Hall, Inc., 1950), p. 19.

243 plan of production. If a crop is to be produced for market
433 in Bangchan, in all probability it must be rice. Since
44 crop rotation is not practiced, there is no need for decision making as to the kinds of crops which are to be grown
235 other than rice. The operator may have to decide how many chickens he should keep, but he normally settles on a flock of ten to fifteen, for it would be too much a burden to keep a larger flock and fewer heads of poultry would not
243 be worth the time. The production function, or the choice
433 of the best factor combination, also does not call for any serious consideration. For it has been observed that at the present stage of technological development of rice production in Thailand or even in the whole region of Southeast Asia the marginal product of labor has already approached zero. In other words, more labor applied to the same area under the same method of planting would not materially increase the crop harvested. It has been claimed, though, that a larger crop may be expected from the same parcel planted to broadcast rice by changing the planting method to the more labor intensive transplanting system. This claim has never been substantiated, however, by any systematic comparative study. Besides, the transplanting method is so universally adopted in Bangchan that it can almost be taken for granted to be the one in use by any rice farmer. Moreover, it was mentioned earlier that the planting method is not optional with the farmer but is governed by topography, expected condition of water supply, and availability of labor.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 433 The preliminary study in 1948-49 shows that a well equipped farm has a higher crop yield than a poorly equipped farm. Yet the issue here is not one of deliberately choosing the best factor combination among several others. Rather, the lowly capitalized farm is so equipped because of the failure on the part of the operator to command enough capital to meet the required standard factor combination. It is seen, then, that if the operator had enough resources he would follow the established pattern of farm capitalization, thus there appears also to be not much choice either in the selection of the kinds and amount of farm equipment.

*243 242 433 The operator may decide on whether or not fertilizer is to be used, and this will certainly affect factor combination. It has been observed, however, that Bangchan farmers have never applied any commercial fertilizer to their rice fields of which plant nutrients have been replenished only by the annual inundation and natural deposition of buffalo manure. The reason for the rice farmer's disinclination to fertilization as given by the Thai Ministry of Agriculture was the relatively high price of commercial fertilizers.[3] In fact, progress reports on fertilizer, a study conducted by the ministry, indicate the possibility of profit from proper application of commercial fertilizer on rice fields, but operating on a narrow margin the rice farmer simply could not afford the risk. Uncertainty due to weather and

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3. Ministry of Agriculture, Problems in Thai Agriculture, op. cit.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 433 water conditions is also a major factor militating against investment on fertilizer. As it happens, therefore, fertilization does not prevail in the decision making of Bangchan operators.

If the operator has any positive role at all in the production plan, it is in the selection of rice varieties. This topic has already been dealt with in the section on labor adjustment devices of the preceding chapter.

*243 433 423 Finally, one of the most important organizational decisions involves the choice of the size of the farm. It has been observed that poverty in agriculture is as much a problem of farm size as of any other single factor. Most frequently, farm size is spoken of in terms of acres -- the land input. Although this measure is generally not sufficient, it serves the purpose quite well in single-crop farming areas such as Bangchan and all other rice areas in this country. In this study, therefore, farm size will be expressed in rai (two-fifths of an acre) devoted to rice.

Generally speaking, if the Bangchan operator is free [464 592] to choose the farm size that suits him best, his decision will be based almost entirely on the size of labor force under his command, which in turn depends largely on the size of his family labor. As it happens, most operators are not *243 free to do so. It was mentioned in the section on land tenure 427 of Chapter III that it was only the landlord-operator group, 464 actually 11 out of a total of 216 farm operators in Bangchan, 423 that had demonstratively shown sign of land saturation and

*243 427 464 423 thus could freely choose the proper size of their farms.

To be sure, some of the other 205 operators in the land scarce group could rent in enough additional parcels to make an efficient-sized farm. The preliminary study in 1948-49, however, reveals that of 104 farms under study 87 were under-sized. The point we want to make in this section is that there are considerations other than economic interest which preclude the attainment of a most favorable farm size by some of these land scarce operators. In the study of labor utilization on Chom Farm, it was seen that preparation of the fields was finished long before the deadline, indicating that the land input could be increased or labor input could be decreased. If Chom wanted to rent in an additional parcel of five rai, the problem presented would not be simple. In the first place, all rice land in the village had been filled up, so Chom's additional parcel had to be one that had been operated by a neighbor of his. [597] Unless this neighbor had expressed an intention to quit this parcel, conscience alone would prevent Chom from outbidding the other person for the parcel. Second, although lease of land was on a one-year basis, in practice the landlord usually rented his lands continuously to the same tenants. If the landlord wanted to operate a certain parcel himself, the former tenant might think that it was reasonable enough to abandon the parcel. But it was inconceivable that he should leave the parcel so that another tenant could operate it. Third, the additional parcel should not be too far away

243 423 464 427 from the homelot because much time and energy would be wasted in daily walking to the field.

It would seem, then, that most rice farm operators had little opportunity to obtain a farm size they thought best and had to accept what was due them. Thus, their role in choosing the size of business, which is the most important role, is also limited.

243 221 433 2. Limited role in management: Inasmuch as management refers to the function of putting the scheme into operation, Bangchan operators certainly have a large part to play. A good rice crop depends largely on the relationship between the height of the young plant and the rising water level. Since the rise of water level is highly seasonal, depending on local rains as well as rains elsewhere that affect the general water level, scheduling the farm work and seeing to it that the schedule is followed becomes a most important function of the farm operator.

243 433 Management, however, refers also to the function of making those adjustments in the business which are necessary in order to obtain the maximum economic returns from the farm business as a whole. Inasmuch as this latter function is concerned, the operator's role has been limited as in the case of the organizational function. As previously stated, under the present stage of technological development in rice production in this country, not only the points of diminishing return of both labor and capital (farm equipment, at the present state of technical development in the village)

*243 have been long passed but also the marginal products of
433 these two factors have already approached zero. Under this condition, the function of making adjustments of the farm operator is reduced to the minimum.

It is seen, then, that the farm operator's role in organization and management has been under Bangchan condition, reduced to scheduling and supervising with the possible exception of choosing rice varieties. Good management, in the village sense of the term, means finishing the planting work in time or well before the deadline set by water condition. This is likely to continue to be the case until there is such a radical change in the rice producing industry of this country as, for example, an introduction of a new equipment which commercially adopted, an availability of commercial fertilizer at a reasonably low price, an efficient method of soil amendment that allows another crop to be grown in rotation with rice, or a dependable water control system to the extent that damages due to flood or drought can be altogether eliminated.

*243 Elements of Agricultural Production
433
*128 The four elements of agricultural production -- land, labor, capital (farm equipment and materials), and management -- have all been discussed at various stages of this dissertation. In this section, these elements will be brought back into discussion again insofar as they have bearing on farm organization.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 433 [427] 1. Land: This element represents 22 per cent of the total cost of producing paddy (Table 38). Of this, 15 per cent is actual payment for explicit rent while 9 per cent is assessed value of implicit rent.

Among the cost items in Table 38, cash expenses include actual rent (13%), wages for pieceworkers (3%), wages for hired laborers (3%) and seeds and materials (6%), while imputed expenses include implicit rent (9%), value of family labor (31%), value of the operator's labor (13%), depreciation (10%) and interest on investment (11%). It is seen that cash expenses comprise only 25 per cent, while imputed expenses comprise as high as 75 per cent of the total cost.

In view of the high proportion of imputed expenses, the method adopted in the imputation will be explained here.

[427] [435] 1. Rent: Going rate for 1948-49 of 6.2 tang (49 baht) per rai was used.

[592] [461] 2. Value of family labor: Labor requirement based on acreage was first calculated, using the standard factor of 13.4 adjusted rai to one fully employed worker (this was the 1949 average for farms with regularly hired laborers on which [435] workers were assumed to be fully employed). When the labor requirement in terms of number of fully employed laborers needed was known, imputed family labor cost was calculated at the going wage rate for the year of 1,600 baht (1,000 baht cash and 600 baht of food privilege).

3. Value of the operator's labor: In addition to

[TEXT CONTINUED ON PAGE 280]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 36

COST OF PRODUCING PADDY ON 104 SAMPLE-FARMS*
Bangchan, Thailand, 1948

Items	Total	Average	Per cent
	baht	baht	
1. Rent of land			
a. Actual	99,501.63	957	13.1
b. Assessed	70,604.54	679	9.3
Total	170,106.17	1,636	22.4
2. Labor			
a. Hired labor	24,757.00	238	3.3
b. Piecework	25,696.00	247	3.4
c. Assessed value of family labor	338,839.00	3,258	44.6
Total	389,292.00	3,743	51.3
3. Capital			
a. Seed and material	42,574.77	409	5.6
b. Depreciation	73,236.50	704	9.6
c. Interest on investment	84,590.22	813	11.1
Total	200,401.49	1,926	26.3
Grand Total	759,799.66	7,305	100.0

Total crop. . . . . 112,415 tang of paddy
Total acreage . . . 3,527.75 rai

Average cost per tang 6.76 baht
Average cost per rai 215 baht

* The cost figure in this table is slightly higher than the one given in the preliminary report because of the inclusion of the value of operators' labor.
The value of the operator's labor is estimated at 1,000 baht per year for those operating farms of 10 rai or more, and at 500 baht for those operating under 10 rai.

*243 433 [435] the value of family labor, the cost of managerial service of the operator of 1,000 baht was arbitrarily charged for farms with the size of 10 rai or over. For farms under 10 rai, only 500 baht was arbitrarily charged as the cost of managerial service.

4. Depreciation: From the original cost of each item of equipment (including buffaloes) was deducted its residual value at the termination of its service, and the result was divided by the expected length of service in years of the equipment.

5. Interest on investment: The rate of 15 per cent per year was arbitrarily chosen. This was the maximum legal rate, and was also a minimum rate of return which any person in Bangchan might reasonably expect from his money if he chose to lend it out at any moment.

*[128] Since much of these imputed expenses were arbitrarily chosen, the cost of producing paddy might naturally vary widely according to the assigned value of each item. Our cost of production figure, then, will be more meaningful, if the amounts of these arbitrarily imputed values are constantly kept in mind.

*243 433 461 423 Farms in Bangchan are composed of from one to four parcels of land. The characteristics of this fragmentation are shown in Table 39. The size of a parcel ranges from one rai to 65 rai, averaging 18.8 rai. Fragmentation obviously brings about a waste of considerable time and energy spent in going from one parcel to another, and thus an increase in

[TEXT CONTINUED ON PAGE 282]

TABLE 39

FRAGMENTATION OF WORKING AREA OF 104 SAMPLE FARMS
Bangchan, Thailand, 1948

Description of Farm	Frequency	Total Number of Parcels	Total Area	Average Area of One Parcel
			rai	rai
One-parcel farms	48	48	1,128.00	23.5
Two-parcel farms	35	70	1,272.75	18.2
Three-parcel farms	14	42	745.25	17.7
Four-parcel farms	7	28	381.75	13.6
Total	104	188	3,527.75	--
Average	1	1.8	33.9	18.8

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 433 461 423 labor cost. Most farmers must go by foot or boat to work at places ranging from a hundred meters to two kilometers from home. This waste is the more serious during the period of preparation of the fields at the beginning of the season when the water level in the canals is not high enough to permit the effective use of a boat.

243 178 423 Table 40 shows the frequency distribution of areas worked by Bangchan operators in 1948 and 1952. It is seen that in both years work areas concentrate in the size groups between 10 to 40 rai, averaging 34.2 rai for 1948 and 31.7 rai for 1952. It is seen also that the work areas of 1948 have a wider range than that of 1952. There were 30 farms in 1948 whose areas were 40 rai and over, while the number of such farms was 28 in 1952.

Table 41 shows that of 96 continuing farms, 20 have increased their size during the five years period, 40 have decreased their size, while 35 farms have the same size throughout.

243 433 46 2. Labor: This element represents 51 per cent of the total cost of producing paddy (Table 38). Of this, only a small fraction is actually paid for -- 3.3 per cent to hired laborers and 3.4 per cent to pieceworkers. The bulk of labor is supplied by family workers (including the operator himself) whose labor value is assessed at 44.6 per cent of the total cost of producing paddy.

It is seen in Table 42 that the number of adjusted rai per worker is only 9.4 for farms which used only family

[TEXT CONTINUED ON PAGE 286]

7: Janlekha X-4.5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 40

FREQUENCY DISTRIBUTION OF AREAS WORKED BY 96 OPERATORS
Bangchan, Thailand, 1948 and 1952

*243
178
423

Class in Rai	Number of Farms 1948	1952
110 to under 120	1	0
100 to under 110	0	0
90 to under 100	1	0
80 to under 90	4	2
70 to under 80	3	3
60 to under 70	5	7
50 to under 60	6	7
40 to under 50	10	9
30 to under 40	18	22
20 to under 30	22	19
10 to under 20	16	18
Under 10	10	9
Total	96	96
Mean	34.2 rai for 1948 31.7 rai for 1952	
Median	30.3 rai for 1948 31.1 rai for 1952	

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 41

CHANGES IN AREAS WORKED BY 96 OPERATORS -
Bangchan, Thailand, 1948-52

243
178
423

Description of Farms	Number of Farms
Same size*	35
Increased size	20
Decreased size	41
Total	96

* To take care for reporting errors and errors due to confusion over planted areas and harvested areas, a margin of 2 rai is allowed. Hence, farms reporting size changes of two rai and under are considered to have no change in size.

*243
461
464
592

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7 Bangchan

TABLE 42

DISTRIBUTION OF FULL TIME LABOR FORCE OF 104 FARMS
Bangchan, Thailand, 1948

Condition of Regular Labor Force	Number of Farms	Number of Workers	Adjusted* Areas	Adjusted Rai Per Man
			rai	rai
Farms without hired laborer				
One family worker	8	8	131.75	16.5
Two family workers	28	56	497.50	8.9
Three family workers	25	75	646.25	8.6
Four family workers	20	80	747.50	9.3
Five family workers	10	50	487.25	9.7
Six family workers	--	--	--	--
Seven family workers	1	7	75.50	10.8
Eight family workers	1	8	83.00	10.4
Nine family workers	--	--	--	--
Ten family workers	1	10	107.50	10.8
Sub-total	94	295	2,776.25	--
Average	1	3.1	29.50	9.4
Farms with hiredlaborers				
a. With one hired laborer				
One family worker	1	2	58.50	29.2
Two family workers	5	15	177.50	11.8
Five family workers	2	12	108.00	9.0
b. With two hired laborers				
One family worker	1	3	70.00	23.3
c. With three hired laborers				
Two family workers	1	5	80.00	16.0
Sub-total	10	37	494.00	--
Average	1	3.7	49.50	13.4
Grant total	104	332	3,270.25	--
Average	1	3.2	31.50	9.8

* An "adjusted" rai equals one transplanted rai or two broadcast rai. Cultivation of one rai by the broadcasting method requires roughly only one-half the labor involved in the transplanting method.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 433 46 labor, while the corresponding number is 13.4 for farms which used regularly hired laborers along with family workers. We make the assumption that farms with hired laborers had full utilization of labor (otherwise there would be no need to hire an extra laborer) and that farms without any hired labor might or might not have full utilization of labor. The significantly larger area per worker for farms demonstrating full utilization of labor than that of farms which did not demonstrate such condition indicates that there was latent underemployment in terms of rai per worker on some Bangchan farms. Table 43 suggests that there might be as many as 87 of such farms out of 104 sample-farms in Bangchan in 1949.

While full utilization of labor is fairly well indicated by employment of regular hired laborers, it is not necessaryily the case that the family labor of farms which employ some pieceworkers had been fully utilized except during the peak period when the pieceworkers were employed. It has been observed that many of the apparently undersized farms had to engage some pieceworkers to do some uprooting, transplanting, and harvesting because the labor requirements for these steps are so highly seasonal that such labor adjustment devices as planting of several varieties of rice and cooperative work system could not amply spread the work of the family. The extra work sought from the pieceworkers is usually small, however.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 43

FREQUENCY DISTRIBUTION OF ADJUSTED AREA WORKED PER MAN OF 104 FARMS
Bangchan, Thailand, 1948

*243
46

Class Intervals of Adjusted Rai Per Man	Number of Farms	Cumulative Number of Farms
rai		
Under 2.5	1	1
2.5 to under 5.0	11	12
5.0 to under 7.5	29	41
7.5 to under 10.0	18	59
10.0 to under 12.5	21	80
12.5 to under 15.0	5	85
15.0 to under 17.5	9	94
17.5 to under 20.0	3	97
20.0 to under 22.5	1	98
22.5 to under 25.0	2	100
25.0 to under 27.5	2	102
27.5 to under 30.0	1	103
30.0 to under 32.5	1	104
Total	104	

Note: It is seen from this table that there are 80 farms whose adjusted area worked per man are less than 12.5 rai.

By interpolation, it may be estimated that there are 7 farms whose adjusted area worked per man falls between 12.5 and 13.3 rai.

We can say, then, that there are 87 farms whose adjusted area worked per man are less than 13.4 rai -- the average for farms with hired laborers, or farms which have demonstratively shown sign of full utilization of labor.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 231 461 Buffaloes are considered as a kind of farm equipment, so the cost of buffalo labor appears under the item of cost of equipment. Buffalo labor is, however, so closely associated with man labor that it seems to be more appropriate to discuss it here.

It has been pointed out that the accomplishment of farm work during the critical period depends largely on buffalo labor. Farmers fully realize the importance of this draft animal, which is always given good treatment. Even in the busiest season of field preparation, when farmers work from dawn to dusk seven days a week, the buffalo has a full holiday each week (on Wan Phra, the Buddhist holiday) and has a four-hour noon recess, usually from 10 a.m. to 2 p.m., on work days.

243 433 435 3. Farm equipment and supplies: This element represents 26 per cent of the total cost of producing paddy. Our records show that in 1948 the total value of farm equipment and materials of the 104 sample-farms amounted to 559,626 baht, averaging 5,381 baht per farm, and ranging from 443 to 16,733 baht. The frequency distribution of the value per farm of farm equipment and materials is shown in Table 44.

[128] Table 45 shows the frequency distribution of the value per rai of farm equipment and materials which ranges from 34 to 518 baht, averaging 159 baht. It is seen, in spite of this rather wide range, that three-fifths of the value per rai concentrate in the interval between 100 and 200 baht per rai.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 44

FREQUENCY DISTRIBUTION OF THE VALUE PER FARM OF EQUIPMENT AND MATERIALS OF 104 FARMS
Bangchan, Thailand, 1948

Class Intervals	Number of Farms	Average Per Farm
baht		
Under- 1,000	2	460
1,000- 1,999	12	1,477
2,000- 2,999	8	2,596
3,000- 3,999	17	3,490
4,000- 4,999	11	4,511
5,000- 5,999	15	5,473
6,000- 6,999	11	6,380
7,000- 7,999	9	7,380
8,000- 8,999	4	8,307
9,000- 9,999	4	9,357
10,000-10,999	6	10,520
11,000-11,999	4	11,584
12,000-and over	1	16,733
Total	104	88,268

Mean . . . . . 5,381 baht

Median . . . . . 5,055 baht

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 45

FREQUENCY DISTRIBUTION OF THE VALUE PER RAI OF EQUIPMENT AND MATERIALS OF 104 FARMS
Bangchan, Thailand, 1948

Class Intervals	Number of Farms
baht	
Under- 50	1
50 - 99	11
100 --149	38
150 - 199	23
200 - 249	13
250 - 299	8
300 - 349	22
350 - 399	3
400 - 449	2
500 - 549	1
550 - 599	2
Total	104

Mean . . . . . .159 baht

Median . . . . . .152 baht

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 433 It is often said that the underdeveloped areas are characterized by over-population and under-capitalization. While there is much truth in this, there is also a danger of oversimplification. Capital here includes a relatively small physical in put, but it is actually large in terms of cost per unit.

4. Management: We did not assign any value to the operator's managerial work; only the assessed value of his labor -- 1,000 baht annually, or 500 baht annually if he operated only 10 rai or less -- was included in the item of assessed value of family labor.

The role of management has already been discussed in the previous section of this chapter.

It has been observed that management is furnished by the Bangchan operator and his wife, and in some cases *243 their grown-up sons and daughters. Not a single case has 423 been known where the management on rented farm is shared 427 with the landlord or his agent. It is interesting to note that the absence of the landlord's part in management was exhibited in an environment that should normally create and regenerate his influence over the tenant -- the condition of land scarcity, the Thai respect for one's betters, and the ease in communication between the landlord and the tenant.

Actually, the absence of the landlord's part in management does not necessarily mean that he has no influence over his tenants. On the contrary, landlords in Thailand

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 are as influential as most landlords in other countries.
423 It is the limited role of organization and management, which
427 has already been discussed, that has precluded their advisory contributions.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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CHAPTER VII

ECONOMIC CONDITION OF FARM OPERATORS

12.1 Income performs two basic functions in the social economy: (1) as incentives to resource owners, income affects the use to which resources are put in production; (2) as purchasing power in the hands of families, income affects the well-being of people. This functional dichotomy is significant because it has its foundation in the primary values that motivate people in our society. The first function is oriented toward production, the second toward welfare.[1]

Western economists have been all too prone to restrict their analyses to the first of these two functions. In the East, as already indicated in the introductory chapter, commercialization of agriculture was started only in the latter phase of Western colonial regime in the area, more specifically after the construction of the Suez Canal. Even now, the transformation from the age-old self-sufficing economy into a commercial economy has not been completed because the fabrics of the traditional society have not been reshaped and the traditional outlook still prevails. Here

1. Theodore W. Schultz, Production and Welfare of Agriculture (New York: The Macmillan Company, 1949), p. 21.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

121 lies the main problem of Southeast Asia -- the problem basically of transition. Writing in 1949, Paul Mus rightly states: "The traditional world was not dead; it still held sway in the countryside. A state of affairs, in which the people's livelihood is calculated in terms of one world and their taxes in those of quite another, cannot endure."[2]

* 128 433 Degree of Self-sufficiency

During 1952-53, a consumption study was made on 106 sample-farms, which include the 96 continuing sample-farms and 10 new farms brancing off from the original sample-farms of 1948. Details of this consumption study will be discussed in the section on ordinary household expenses later in this chapter. For the purpose of the present discussion, Table 46 -- frequency distribution of degree of self-sufficiency of those 106 sample-farms -- is here introduced. By degree of self-sufficiency is meant the proportion of the value of home-grown products expressed as a percentage of the total value of annual consumption. Quantitatively speaking, it is seen that Bangchan farm families produce more than half of the things they ordinarily consume.

24 433 [592] 000 However, the number of different products consumed which are produced by the family can be counted with the fingers of one h[illegible]. These are rice, fish, eggs, fruit and vegetables. On the other hand, there are scores of items

2. Paul Mus, The Role of the Village in Vietnamese Politics.

[TEXT CONTINUED ON PAGE 296]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 46

FREQUENCY DISTRIBUTION OF DEGREE OF SELF SUFFICIENCY MEASURED IN MONETARY VALUE OF 106 SAMPLE-FARMS
Bangchan, Thailand, 1952

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Class Intervals in Per Cent	Number of Farm Families
21 - 25	1
26 - 30	2
31 - 35	3
36 - 40	5
41 - 45	18
46 - 50	12
51 - 55	24
56 - 60	19
61 - 65	18
66 - 70	5
Total	106
Mean	51 per cent
Median	52 per cent

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

438
511 On the other hand, there are scores of items
[262] that have to be bought for daily consumption. These are:
[263
[273] (a) Food -- fish, fish sauce, shrimp paste, meat, coconut,
[276] onions, garlic, dried chili, curry essence, limes, tamarind,
[372] palm sugar, white sugar, salt, and cookies: (b) Stimulant --
[515] dried areca, betel, lime, tobacco, tobacco binder, and
liquor; (c) Clothing; (d) Medicine; (e) Soap; (f) Fuel --
Kerosine, matches, charcoal, and fire wood. The list includes only standard items appearing on our check list.
Actually, there are more of such items as coffee, tea, lemon-
* [128] ade, coca-cola, and pepsi-cola. Articles that are bought
[272] but do not appear on the check list for ordinary household
expenses for certain technical reasons which will be discussed in the section on consumption later in this chapter
are building materials, machinery, farm equipment, furniture
and household utensils.

000 The Operator's Remuneration and Measures of Success

From almost the beginning of the study of farm management in the United States, much effort has been given to measuring the success of farming businesses, or of farm-family undertakings or enterprises, and then of correlating various factors with these, such as size of business, yields per acre or per animal, or work-efficiency measured perhaps as crop acres per man or per horse or per tractor, with a view to discovering some general farm management principles or rules for a farmer or farm family to follow in becoming more successful. Black, Clawson, Sayre and Wilcox give the

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

000 following description of measures now generally in use.[3]

1. Gross farm income: This is the cash income received from the sale of farm products, plus or minus changes in inventories. In some cases, the value of farm products used in the home is also included. This figure is often divided by the number of workers employed on the farm to determine the gross farm income per man, which may be computed for individual farms to show the differences in the "volume of business" handled per man.

2. Net cash farm income: This is the difference between the money income and the money outgo of the farm business. It is the amount of cash income left over from the farm business available for family living, investment, or savings.

3. Net farm income: This is net cash income adjusted for inventory increases and decreases and depreciation. It is comparable to the net income figure accountants compute on corporate income statements. It is the net gain to the farm and farmer and his family from the farm business. It therefore includes the return on the investment. It indicates how much further ahead or behind the farm as a business is at the end of the year than at the beginning. It is the difference between the beginning Net Worth and ending Net Worth as these are reckoned in ordinary bookkeeping.

4. Labor income: This is more precisely called the labor and management income of the farm operator.

3. John D. Black, Marion Clawson, Charles R.Sayre and Walter W. Wilcox, Farm Management (New York: The Macmillan Company, 1951), pp. 489-93.

7; Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

000 It is like net farm income except for two deductions. The first is an estimated charge for the use of the capital invested in the farm business. This was intended by T. F. Hunt, who first used this measure, to introduce a correction for differences in the size of farms, in order to put them all on equal terms so far as size is concerned. The second deduction is an imputed value for the labor of members of the family (not including the proprietor). This was introduced to put all the farms on an equal footing so far as amount of unpaid labor is concerned. What is left is therefore the return to the farm operator for his labor plus his management. In this measure also, the value of home-consumed farm products is not ordinarily included in the receipts, for apparently about the same reasons as given above. When labor income is carefully computed, the value of the dwelling is subtracted from the value of the farm in calculating the interest on the investment in the farm business, and the cash costs of boarding the hired help are also added to the wages paid hired labor.

Hunt devised labor income as a means of comparing the efficiency of management of individual farms in the same area, practicing about the same kind of farming, and with the same general level of land values and cash rentals. It has served this purpose reasonably well. Unfortunately, it is sometimes used for comparisons among regions, and at different levels of agricultural prosperity. Its most serious misuse is as a measure of farm incomes for comparison with

7: Janlekha X-4.5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

000 urban and other incomes.

5. Rate of return on the investment: This is Net Farm Income less an allowance for unpaid family labor and the operator's labor, divided by the total value of the farm investment. The rule followed for imputing value to operator and family labor is what the same labor would have cost if hired. The earnings figure thus includes the contribution of the farm capital plus that of the management. This measure is the same as that used in urban business except that in trade and industry the compensation for hired management is often deducted before computing the rate of return. This measure is put to the fore in the farm accounting done by the University of Illinois and a large number of collaborating farmers. It looks upon a farming enterprise as an employment of the farmer's capital rather than as an employment of the farmer's labor. It measures the rate of return on the capital with the management thrown in and the operator's labor allowed a hired man's wage, rather than the return to labor with the management thrown in and the capital allowed a usual 5 per cent as a rental. Since it varies widely with the amount and quality of the management furnished with the capital, it may well be, therefore, in effect much more of a measure of differences in management than differences in capital. It would be more accurately described as earnings of management and capital per dollar of capital investment. This way of looking at a farm business can be realistic, however, in a region like the Corn

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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000 Belt where many landlords and others look upon farms as investments. The Illinois accounts always figure labor income too so that the farmer or investor may use either measure.

6. Operator's labor earnings: This is labor income plus the value of family-consumed farm produce and use of the farm dwelling. Professor S. W. Warren says of this measure: "Labor earnings is a better measure of profits than labor income. It is not used as much, because of the difficulty of obtaining accurate information on the amount and value of farm products used in the household."[4] It really includes earnings of management as well as labor.

7. Farm family income: If the success of the farming venture is to be measured by what the farm family gets out of the joint farm-family undertaking, three additions are needed to net farm income, namely, the value of the farm products used by the household, the value of the use of farm dwelling, and any nonfarm earnings of the farm working force. It is possible to organize a farm-family undertaking in such a way as to increase this aggregate without increasing the net business gain of the farming part of it.

8. Income for the family living: The same as (7), less payments on the interest and principal of debt on real estate and chattel. These two items should not be included as cash expenses. They are distributions of income, not expenses.

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4. S. W. Warren, How to Study a Farm Business.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

000

It is seen that some of these measure farm business success more nearly, and some of them the success of the farm-family enterprise.

434
*128 To measure Bangchan operators' remuneration, the author thinks that operator's labor earnings is most suitable.and the next best measure is perhaps the labor income. It was mentioned that Professor Hunt devised labor income as a means of comparing the efficiency of management of individual farms in the same area, practicing about the same kind of farming, and with the same general level of land values and cash rentals. Bangchan conditions, as earlier described, seem to approximate circumstances which Professor Hunt had in mind when he devised this measure.

*243
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*[128] Table 47 shows frequency distribution of labor income of the 104 sample-farms for the 1948-49 crop year. It is seen that only 57 of these 104 farms produced a positive labor income. Thus, even in the year which many Bangchan farmers considered to be the best rice year in their lives, more than four out of every ten farmers in the sample did not have anything left from the sale of their crop after deducting all farm business expenses and interest on the [427] capital invested. It should be noted, however, that the family still has other incomes accruing to family labor (value of family labor), the use of family owned land (imputed rent), and the use of family owned equipment (interest), as well as the imputed returns to family labor deducted in the calculation of labor income. The family also has the subsistence production which it draws from the farm.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 47

FREQUENCY DISTRIBUTION OF LABOR INCOME
OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

*243
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Class Intervals	Number of Farms
baht	
9,000 - 9,999	1
8,000 - 8,999	0
7,000 - 7,999	0
6,000 - 6,999	1
5,000 - 5,999	2
4,000 - 4,999	2
3,000 - 3,999	7
2,000 - 2,999	6
1,000 - 1,999	12
0 - 999	26
-1,000 to -1	25
-2,000 to -1,001	12
-3,000 to -2,001	3
-4,000 to -3,001	4
-5,000 to -4,001	2
-6,000 to -5,001	00
-7,000 to -6,001	0
-8,000 to -7,001	0
-9,000 to -8,001	1
Total	104
Mean	356 baht
Median	212 baht

243 434 [435] Of 47 farms which had negative labor incomes, 37 were in the class interval of from -1 to -2,000 baht, 9 from -2,001 to -4,000 baht, and one -- the least efficient as far as this measurement is concerned -- produced as low a labor income as -8,006 baht. This last farm had to support a large family of eleven members. With an acreage of 40 rai, which was rather small relative to the size of the family (another family of ten was operating a 110-rai farm in that same year), it was natural that this farm did not have much rice to sell.

243 434 342 [427] [435] In figuring farm expenses, we intentionally left out the dwelling and included as farm buildings only the ones that housed the buffaloes, farm equipment and materials. The main reason for this omission was that there was a wide range of dwelling facilities in Bangchan -- from a teak building valued at 30,000 baht to a dirt floor thatched shack valued at no more than a few hundred baht. Besides, rental for a dwelling in rural areas of the country is practically unknown. Since a family living in the village must have their own dwelling regardless of their occupation, it was considered in this study that dwellings should be separated from farm investment. This consideration was further substantiated by the fact that when a family gives up farming they continue to live in the dwelling while all the farm equipment may be sold.

243 434 433 When the charge for dwelling is dispensed with for the reasons given above, the only difference between labor

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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[243] [434] [433] income and operator's labor earnings lies in the value of farm produce consumed by the family. Earlier, five kinds of produce were listed -- rice, fish, eggs, fruit and vege-
[235] tables. For technical reasons, we consider only rice and eggs as products of the farm, rice being the primary crop
[226] and eggs the secondary crop. Fish is not considered a farm product because Bangchan villagers fish for consumption, not for sale. Besides, fishing is done by every resident of the village, farmers and non-farmers alike. It is thus
[244] more of a way of life than an economic enterprise. The same
[245] is true for fruit and vegetable growing which is done in a very small scale.

If we agree on considering only rice and eggs as the products of the farm, it is not difficult to estimate the amount and value of farm produce consumed by the family for Bangchan operators can readily give a rather accurate information on their rates of consumption of these two products. Thus, under Bangchan condition the figure for operator's earnings is not as difficult to obtain as it appears to be the case among most American farms. The frequency distribution of operator's labor earnings of our 104 sample-farms is given in Table 48. It is seen that only 17 farms produced negative remuneration for the operator computed by this method as against 47 farms by the labor income method. As Professor Warren has said, of these two, labor earnings is a better
[171] measure of profits. It is especially so in Bangchan and perhaps in other agricultural regions in Southeast Asia

[TEXT CONTINUED ON PAGE 306]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 48

FREQUENCY DISTRIBUTION OF LABOR EARNINGS
OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

243
434

Class Intervals	Number of Farms
baht	
11,000 - 11,999	1
10,000 - 10,999	0
9,000 - 9,999	0
8,000 - 8,999	0
7,000 - 7,999	2
6,000 - 6,999	4
5,000 - 5,999	4
4,000 - 4,999	7
3,000 - 3,999	7
2,000 - 2,999	18
1,000 - 1,999	27
0 - 999	17
-1,000 to -1	12
-2,000 to -1,001	3
-3,000 to -2,001	1
-4,000 to -3,001	0
-5,000 to -4,001	0
-6,000 to -5,001	1
Total	104
Mean	1,980 baht
Median	1,685 baht

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 434 433 [171] where farm families are relatively large and agricultural workers are usually under-employed.

Since farming in Bangchan is basically a single-crop enterprise, the major crop (rice) heavily outweighing the secondary crop (poultry), we are in a position also in this study to use another measure of success -- returns from rice over the cost of producing it -- without entailing the difficulty of cost allocation. We simply charge all items of expenses including the values of family labor and the operator's labor to the rice enterprise, the only exception being the value of paddy consumed by chickens and/or ducks. By returns from rice is meant the market value of the total harvest of paddy. This measure is similar to the net farm income when the farm products used by the family are included in the receipts (in some states of the United States this is done, but ordinarily not, the main reason for leaving these out being the difficulty of imputing accurate money values to them).

*243 *128 434 433 Tables 49 and 50 shows respectively the frequency distribution of the cost of producing paddy per tang and per rai for the 104 sample-farms. It is seen that the coefficient of variability of the cost per rai is lower than that of the cost per tang, the former being 19 per cent and the latter 27 per cent. This is to be expected, for on the basis of such a unit area as rai there are several items of cost that are somewhat fixed -- seeds, rent, human and buffalo labor in all steps of field preparation, planting, and

[TEXT CONTINUED ON PAGE 309]

7. Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 49

FREQUENCY DISTRIBUTION OF COST OF PRODUCING ONE TANG OF PADDY OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

*243
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Class intervals	Number of Farms
baht	
4.00 - 4.99	14
5.00 - 5.99	21
6.00 - 6.99	19
7.00 - 7.99	25
8.00 - 8.99	13
9.00 - 9.99	6
10.00 - 10.99	2
11.00 - 11.99	2
12.00 - 12.99	1
13.00 - 13.99	0
14.00 - 14.99	1
Total	104
Mean	6.76 baht
Median	6.92 baht
S.D.	1.87 baht
Coef. variability 27 per cent	

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 50

FREQUENCY DISTRIBUTION OF COST OF PRODUCING ONE RAI OF PADDY OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

*243
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Class Intervals	Number of Farms
baht	
120 - 139	2
140 - 159	8
160 - 179	7
180 - 199	19
200 - 219	22
220 - 239	23
240 - 259	11
260 - 279	5
280 - 299	4
300 - 319	0
320 - 339	2
340 - 359	1
Total	104
Mean	215 baht
Median	215 baht
S.D.	41 baht
Coef. variability	19 per cent

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 *128 433 434 harvesting. The only cost item that appears to vary with the size of the crop is the cost of threshing and winnowing which does not figure prominently in the cost of producing rice.

Table 51 shows the frequency distribution of returns over cost of producing rice of our 104 sample-farms.[5] It is seen that there were 79 farms which, according to this measure, produced some profit ranging from 0 to some 10,500 baht, while there were at the same time 25 farms which produced a loss ranging from -1 to some -6,500 baht.

*243 *128 434 Factors Affecting Farm Profit

Farm profit depends on a number of factors. Among these are listed below by Hart and Warren as "what makes a farm pay."[6]

1. Prices
2. Quality of land
3. Size of business
4. Rates of production of crops and animals
5. Selection and combination of enterprises
6. Labor efficiency
7. Farm layout, farmstead and building arrangement

[TEXT CONTINUED ON PAGE 311]

*[128] 5. Returns over cost was calculated by multiplying the rice crop by farm price and deducting the total cost from this total. Method of computing cost was described on page 143.

6. V. B. Hart and S. W. Warren, Farm Management Manual.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 51

FREQUENCY DISTRIBUTION OF RETURNS OVER COST OF PRODUCING PADDY OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

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Class Intervals	Number of Farms
baht	
10,000 - 10,999	1
9,000 - 9,999	0
8,000 - 8,999	0
7,000 - 7,999	1
6,000 - 6,999	1
5,000 - 5,999	4
4,000 - 4,999	4
3,000 - 3,999	6
2,000 - 2,999	11
1,000 - 1,999	20
0 - 999	31
-1,000 to - 1	12
-2,000 to -1,001	88
-3,000 to -2,001	3
-4,000 to -3,001	0
-5,000 to -4,001	1
-6,000 to -5,001	0
-7,000 to -6,001	1
Total	104
Mean	1,190 baht
Median	887 baht

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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8. Efficiency in the use of farm equipment

9. Markets and marketing

While these nine points may appropriately be considered as standard factors affecting farm profit, it is obvious that the extent of their respective effect varies with location, type of farming, and the stage of technological development of the area in question. In Bangchan, we may immediately rule out as an important variable the selection and combination of enterprises because there is only one enterprise -- rice. Farm layout, farmstead and building arrangement is also a rather insignificant factor as a variable affecting the profit of rice farms, although we have earlier noted that parcelization may have increased the cost of labor and irrigation. Efficiency in the use of farm equipment may also be considered as an insignificant variable factor in Bangchan; for the equipment units are usually small although numerous, hence farm equipment tend to be fully utilized.

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Labor efficiency needs more explanation than mere passing comment. Table 52 shows that labor constitutes 51 per cent of the total cost of producing rice. It should be noted, however, that of 3,743 baht that goes to labor for each farm only 485 baht is actually spent, the balance of 3,258 baht being imputed values of family's labor and the operator's labor. It is seen, then, that a reduction in labor cost would involve largely only imputed values. It certainly will correspondingly reduce the total cost

[TEXT CONTINUED ON PAGE 313]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 52

BREAKDOWNS OF COST OF PRODUCING RICE ON 104 SAMPLE-FARMS
Bangchan, Thailand, 1948
(Total area -- 3,528 rai; total crop -- 112,415 tang)

Items	Total	Average			Per Cent
		Per Farm	Per Rai	Per Tang	
	baht	baht	baht	baht	
Rent					
Actual	99,500	957	28	0.88	13
Imputed	70,600	679	20	0.63	9
Total	170,100	1,636	48	1.51	22
Labor					
Actual					
Pieceworkers	25,700	247	7	0.23	3
Hired laborers	24,800	238	7	0.22	3
Sub-total	50,500	485	14	0.45	6
Imputed					
Family workers	237,800	2,287	67	2.11	31
Operator	101,000	971	29	0.90	13
Sub-total	338,800	3,258	96	3.01	44
Total	389,300	3,743	110	3.46	51
Seeds, materials	42,600	409	12	0.38	6
Depreciations	73,200	704	21	0.65	10
Interest on investments	84,600	813	24	0.75	11
Grand Total	759,800	7,305	215	6.76	100

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

*243 and enhance income from the farm, but it would not sig-
434 nificantly affect the farm family income or income for the
461 family living (see definitions under Headings 7 and 8 of the section on the operator's remuneration and measures of success) unless more land is added.

*243 In rice farming, rates of production of crops and
433 animals is reduced to rice yield per rai. At the present
434 stage of technological development in Bangchan, this is not as much a result of management as of nature -- the water condition and the quality of land (in both senses of soil fertility and levels of the fields). Since we already have quality of land as a factor, rates of production may thus be eliminated.

After eliminating factors that are either insignificant or duplicates of other factors under Bangchan conditions, the standard factors affecting farm profit are thus reduced to prices, quality of land, size of business, and markets and marketing. These influences are familiar to students in agricultural economics, and therefore do not need further elaboration here.

[171] In addition to these standard factors, there are certain special factors affecting farm profit which the author suspects to be appropriate not only to Bangchan but also to all other rice producing areas of Southeast Asia. These are the differentials in paddy prices, in rates of interest, rentals, and wage.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 426 432 Differentiation in paddy prices is limited to cases where farmers have received in advance the payment for paddy to be delivered at harvesting time. This is a common practice which is called in Thai "tog khao" (lit., fall rice). Usually, the advance price received by the farmer is about half or not more than three-fifths of what he would normally receive. Considering that cash is usually received about a month or two before the delivery of the paddy, it would seem that tog khao is a kind of loan with as high a rate of interest as from 25 to 50 per cent per month.

*243 426 465 A similar practice is adopted with respect to advanced payment for piecework, where pieceworkers are committed to uproot, transplant, or harvest at about half of the prevailing rates. This is called tog raeng (lit., fall labor).

*243 128 427 Tables 24 and 25, in the section on land tenure of Chapter III, show a wide range of rental rates of rice lands which have not demonstrated any marked difference in crop producing ability.

Rates of interest in Bangchan vary greatly from 0 to 10 per cent per month. This topic will be discussed more fully in later sections of this chapter.

*243 434 556 The important point that should be observed in connection with these differentials in paddy prices, rates of interest, rentals, and wage is that it is the less affluent farmers who usually bear the burden of higher costs due to these practices. Thus, these differentiations serve only to widen the gap between poor and well-to-do farmers.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Ordinary Household Expenses

*243 511 *128 During the inundation period of 1952 (October 1 to December 3)when farmers were not occupied with field work, a study of household expenses was made covering 96 continuing farm operating families and the ten new farm operating families which have branched off from our original sample-families. In this special study, only ordinary household expenses were covered including food, stimulants, clothing, medicine, toilet articles, fuel, cash contributions, and personal expenses.

The method of study has already been described in the chapter on methodology. Annual ordinary expenses of an average farm operating family are shown in Table 53, which is intended to give the kind and quantity and value of each item of expenses consumed by an average family. The frequency distribution of total annual expenses is shown in Table 54.

*243 511 It is seen that total annual expenses average 6,056 baht per family annually. Of this, about half, or to be exact 2,962 baht, is actually purchased, the rest being produced by the family. Major items, in terms of money value, among cash expenses are found to be coconut, palm sugar, cookies, tobacco, clothing, kerosine, contributions to neighbors, and personal expenses, each exceeding 100 baht annually.

The reason for large expenses on coconut and palm sugar is that these two foods have relatively high prices

[TEXT CONTINUED ON PAGE 318]

7: Janlekha X-4,5 (1948-1953) 1956 AO7 Central Thai AO7
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TABLE 53

AVERAGE ANNUAL ORDINARY EXPENSES OF 106 SAMPLE-FAMILIES
Bangchan, Thailand, 1953
(Average family size, 5.7; average consuming unit, 4.7)

*243
S11

Items	Quantity		Value in Baht	
Home-produced				
Food				
White rice	1,623	kg	1,623	
Raw fish	151.2	kg	756	
Fermented fish	137.7	lit	413	
Shrimp paste	16.7	kg	75	
Eggs	108	eggs	54	
Vegetables	174	kg	174	
				3,094
Purchased				
Food				
Raw fish	16.6	kg	83	
Fish sauce	36	bottles	54	
Shrimp paste	6	kg	27	
Pork and beef	8.4	kg	84	
Vegetables	1	kg	1	
Coconut	196	fruit	292	
Onion	11.3	kg	34	
Garlic	11.3	kg	34	
Dried chili	7.6	kg	53	
Curry essence			10	
Limes	80	fruit	16	
Tamarind	6.3	kg	19	
Palm sugar	71.4	kg	152	
White sugar	4	kg	16	
Salt	64	lit	8	
Cookies			192	
				1,075
Stimulants				
Dried areca	8	kg	48	
Betel			68	
Lime	3.8	kg	3	
Tobacco	4.4	bundles	120	
Tobacco binder	7	bundles	14	
				253
Clothing				556
Medicine				92
Toilet (soaps)				44
Fuel				
Kerosine	77.7	lit	101	
Matches	104	boxes	26	
				127
Cash contributions				
To temple			82	
To neighbors			261	
				343
Personal				472
Total				6,056

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 54

FREQUENCY DISTRIBUTION OF ANNUAL ORDINARY EXPENSES
OF 106 SAMPLE-FAMILIES
Bangchan, Thailand, 1952

*243
511

Class Intervals	Number of Farms
baht	
3,000 and under	6
3,001 - 4,000	12
4,001 - 5,000	15
5,001 - 6,000	21
6,001 - 7,000	13
7,001 - 8,000	9
8,001 - 9,000	5
9,001 - 10,000	5
10,001 - 11,000	4
11,001 - 12,000	0
12,001 - 13,000	2
13,001 - 14,000	1
14,001 - 15,000	2
15,001 and over	1
Total	106
Mean	6,056 baht
Median	5,936 baht

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 511 and that they are consumed daily. Expense on cookies is high because of school children's daily allowances which *243 857 511 were assumed to be spent entirely on this item. Even though cash is extremely scarce in the village, especially during the period from July until just before harvesting time in January when roughly seven out of ten farm operating families do not have any cash at all, the children still have the privilege of receiving daily cash allowance. This is possible because of the chicken enterprise. The children simply take eggs along and convert them into cash at cooky stalls in the school yard. In this manner, it is seen that the school children have an important part in the daily flow of Bangchan eggs into Bangkok markets.

*243 276 511 The kind of tobacco commonly used in Bangchan is the relatively inexpensive native tobacco which smokers make into cigarettes themselves with the use of a special kind of thatchleaf binder. Bangchan women do not smoke, but they use tobacco heavily while they chew betel. Most men, young and old, are in the habit of smoking, while chewing betel is now limited to elderly people of both sexes. Tobacco is thus rated among major items of expenses because it is used in smoking as well as betel chewing.

*243 291 511 Obviously, clothing is one of the major items of expenses. In fact, it is the highest item after food, averaging 556 baht per family annually. Since rice farmers work partially under water most of the time, the rate of wear and tear of clothing is rather high. Each family worker

243 291 511 needs at least two work suits in each rice season, one during the field preparation and another during the harvesting season.

372 226 511 Kerosine is used every day for lighting purposes. We do not include in this category kerosine which is used in the farm work; but that used with the pressure lamp in fishing by spearing during the night is included in the ordinary household expenses, for we do not consider fishing as a farm enterprise but as a routine activity participated in by all Bangchan residents, farmers and non-farmers alike.

431 476 796 511 [792] [764] [535] Contributions to neighbors is a necessary item of expense in the village. These are cash gifts made by invited guests to the sponsor of such rituals as ordination, cremation, marriage, topnotch-cutting, and teacher worship. These rituals usually take place during the dry season following harvesting when cash is abundant in the village and are always followed by feasts, not uncommonly in a series of two or three days. Since all these rituals necessitate the participation of the priests, they have to be arranged in consultation with the temple to avoid conflicting schedules. Although few rituals have been noted to be in conflict with one another, usually they are spread throughout the dry season and most people are able to attend rituals to which they are invited. In cases where they cannot attend in person, they are obliged by conventional requirement to send in their cash contributions. The standard cash contribution is 5 - 10 baht. Usually, a

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

431 guest contributes exactly the same amount that was given
476 him by the man when he last attended his party. Written
796 account is always kept by the host specifying contributors
511 and respective amounts given. When invited to a ritual, the guest consults his book and takes along an appropriate amount of cash. It is on this basis of reciprocal help that a prospective sponsor of a ritual has been able to determine the size of cash contribution he would receive from neighbors. Since a guest normally contributes no more than ten baht and no less than five baht, his annual expense on this item depends largely on the number of parties he attends each year. Our records for 1952 show that this ranges from 30 to 1,000 baht, averaging 343 baht.

27
511 We include in the personal item of expenses the amounts spent on traveling, entertainment, coffee, liquor, etc. To be sure, some of these should be grouped under the stimulant item. We, however, intentionally put coffee and liquor here because the sequence seems to better fit the requirements of the persons responding to questions so that better answers might be obtained. Tobacco, betel, and areca, for example, appear to have somewhat constant rates of consumption. They are usually bought in large quantities which will last for a considerable length of time. As a result, informants are in a position to give more accurate rates of consumption of these items than those of liquor and coffee of which consumption is somewhat irregular and is difficult to estimate.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

511 Generally speaking, a remarkable degree of homogeneity in the pattern of ordinary expenses has been observed among Bangchan farm families. During the course of the enumerating work of this consumption study, however, it became progressively apparent that each item of ordinary expenses varied differently in its respective rate of consumption by sample families. The quantities of rice and fish consumed each year, for example, could be estimated within a small margin of error when the family composition was known; the amount of money spent on medicine, on the other hand, was unpredictable.

*128 511 In order to determine the degree of variability in the rate of consumption of each item, the figures of consumption must first be reduced to comparable terms. We have already known from Table 32, that the family size of our 106 sample-families range from one to thirteen, averaging 5.7 persons per family. But size in terms of number of persons may mislead, because a child certainly consumes less than an adult. To reduce variation due to age differences, in this consumption study family size is expressed in terms of consuming units. On the basis of information generally given by Bangchan residents that a child consumed about half the amount of rice normally consumed by an adult, we arbitrarily designate one-half a consuming unit to represent each child age 14 or under and one consuming unit represent each adult age 15 or over. Table 55 shows the frequency distribution of the size of family in terms of consuming units of our 106 sample-families. It is seen

[TEXT CONTINUED ON PAGE 323]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 55

DISTRIBUTION OF FAMILY BY CONSUMING-UNITS
106 FARM OPERATING FAMILIES
Bangchan, Thailand, 1952

*243
511

Consuming Units	Number of Families
1.0	2
1.5	0
2.0	4
2.5	7
3.0	14
3.5	10
4.0	15
4.5	5
5.0	9
5.5	8
6.0	9
6.5	5
7.0	9
7.5	4
8.0	3
8.5	0
9.0	1
9.5	0
10.0	1
Total	106
Mean	4.7
Median	4.5
Mode	4.0

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*128 that the size ranges from 1.0 to 10.0 consuming units,
SII the mean being 4.7, median 4.5, and mode 4.0 units.

In order to determine the degree of variability of the rate of consumption of each of the 32 items of expenses, a sub-sample was chosen from all the 15 modal-size families of 4.0 consuming units. Since these fifteen families were already of comparable size as far as consumption was concerned, expenses on each of the 32 items could be directly compared to one another. The coefficient of variability of each of these 32 items of ordinary expenses is shown in Table 56.[7] It is seen that the variability coefficient varies from 30 per cent for rice to 199 per cent for medicine. As expected, rates of consumption of the basic items were found to vary least among rice, fish, clothing, tobacco, and garlic, and vary most among curry essence, eggs, and medicine.

SII Several factors have been noted to affect the variability of the rate of consumption of these various items of both home-produced and purchased goods. Since food constitutes more than two-thirds of the ordinary household

[TEXT CONTINUED ON PAGE 326]

7. The standard deviation of each item was first calculated by the formula $S.D.^2 = \frac{\Sigma X^2 - \frac{(\Sigma X)^2}{N}}{N-1}$, where S.D. is standard deviation, X individual items of expenses, and N the number of items; and then converted into coefficient of variability by the formula Coef. var. $= \frac{S.D._x}{\bar{X}} 100$, where $\bar{X}$ is mean expense.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 56

VARIABILITY OF VARIOUS ITEMS OF EXPENSES
OF 15 SAMPLE-FAMILIES
Bangchan, Thailand, 1952

	Coefficient of Variability
	per cent
A. Low variability	
1. Rice	30
2. Fish	31
3. Clothing	39
4. Tobacco	40
5. Garlic	42
B. Moderate variability	
6. Onion	53
7. Soap	57
7. Coconut	57
9. Fish sauce	60
9. Salt	60
11. Palm sugar	62
12. Contribution to wat	63
13. Betel	64
14. Tamarind	67
15. Dried chili	69
15. Fermented fish	69
17. Kerosine	70
18. Shrimp paste	73
19. Areca	76
20. Vegetables	77
21. Limes	78
22. Contribution to neighbors	83
23. Matches	84
24. Lime	87
C. High variability	
25. Personal	100
26. Children's pocket money(coddies	103
27. White sugar	112
28. Pork and beef	123
29. Tobacco binder	125
30. Curry essence	126
31. Eggs	152
32. Medicine	199

511 expenses (Table 53) and the Thai concept of food taking is somewhat different from the Western concept, an explanation of the food habit of Bangchan residents, which in no way differs from that of Thai farmers elsewhere in the country, is perhaps necessary at this juncture.

262 264 By far the most important single dietary item of the Thai is khao or rice, which is the basis for every meal. The general term for "eat" is kin khao which has the literal meaning "to eat rice". Other dietary items are considered as embellishments and are thus called kab-khao (lit., with-rice). Typically, the "with-rice" items contain high seasoning in the form of chili and various hot curries. It is inconceivable for a Thai to eat "with-rice" alone without any rice, for not only the "real food" would then be missing but also there would be nothing to neutralize the highly flavored taste of the "with-rice". Actually, "with-rice" and rice are fed to the mouth in one lump with spoon or hand as the case may be. Eating "with-rice" alone would be just like eating butter without any bread. Moreover, "with-rice" are relatively more expensive than rice. Since the general idea is that they serve only to induce the in-take of rice, for sheer economic reason they should be consumed as little as possible so long as the required amount of rice in-take can be maintained. Accordingly, proper proportion of "with-rice" to rice in each helping has become one of the strictly observed table manners. This is easily noticeable, for only rice is served individually when the

262 family sit at the table while "with-rice" are placed at
264 the center and each person must partake of a small bit of these, just enough to properly go with a spoonful of rice taken each time. This table etiquette is generally observed throughout the country by all classes of people. A story had it that a Thai student of an aristocrat family wrote home objecting to the proposed marriage between his sister and one of his Thai friends in America. One count against the man was that he had been observed to have taken too much "with-rice" while dining out at a Chinese restaurant in New York!

511 Among the factors affecting variability of the rate
182 of consumption of various items of goods, the following may be mentioned:

261 a. Relative price of the food in relation to its
511 ability to mollify hunger when taken with rice. When Bangchan
182 farmers were questioned why they did not consume eggs produced at home but instead sold them and bought the inferior platoo fish (Rastrelliger chrysozonus), the answer was that an egg barely induced them to take a plate of rice whereas one platoo fish bought with half the money obtained from the sale of an egg could induce them to take three or four plates of rice and thus satisfying a hearty meal.

511 b. Homogeneity of quantitative need for certain
182 products like rice, fish, clothing, tobacco, and garlic. Consumption per consuming unit of these goods has been observed to be more or less constant regardless of the prices and the family's purchasing power.

182
184
511 c. The family's purchasing power. Certain goods considered as luxuries -- medicine, eggs, pork and beef, and white sugar -- were not consumed by poor families.

184
276 d. Individual taste and preference. The Moslems would not consume any pork although they had enough money
261 to buy it. Some poor farmers spent more money on curry
182 essence than their more affluent neighbors because they
511 preferred highly flavored dishes, and some tobacco smokers did not spend a cent on tobacco binder because they preferred the home-grown banana leaf binder to the thatch leaf binder which had to be purchased.

182
511 e. Producing ability of the family. It was observed
[184] that those who caught more fish tended to consume more fish regardless of their financial conditions.

f. Health affected the consumption of medicine.

[431]
[476] g. Prestige affected the amount of cash contributions
[554] to neighbors.

h. Personal habits -- thrift, fun loving, indulgence, like or dislike of liquor -- affected the amount of personal expense.

i. Presence or absence of children of school age in the family affected the consumption of cookies.

Special Expenses

511 By special expenses we mean major items of expenses which do not occur regularly but which may arise in one time or another. Examples: purchases of land, gold and

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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S11 jewelries, and major farm and household equipment; expenses on major repairs, sponsoring rituals, major medical cares, and gifts to offspring when they start an independent family; and odd expenses like a trip to Mecca and legal prosecution.

*128 S11 Fortunately, the somewhat spectacular nature of this type of expenses has caused each item to be remembered well by the farmer even for a period of four or five years. Another factor contributing to good memory on this subject on the part of farm operators is the limited number of incidents which were found to average three per family and range from zero to six during the period from the dry season of 1948 to the end of the crop year of 1952-53.

Records of special expenses were taken very informally when the author revisited the 96 continuing farm operating families (of the original 104 sample-families) in 1952 after an absence from the village of three years. The visit was in part a courtesy call during which time each farm operator was asked how he had been getting along during the three lapsing years. Every person approached was apparently pleased and gave full cooperation when asked to list the kind and amount of his major items of expenses during the period from the dry season of 1948 to the time the interview was made. These were recorded and kept in separate file for each farm operator. To avoid errors of omission these operators were visited several times and the same topic was brought up. The informations on these special expenses were constantly kept up to date until the end of the 1952-53

*128 511 crop year. Except for a few exceptional cases, no new item appeared during the few months that lapsed because rice farmers customarily make their major purchases during the dry season following harvesting time. Special expenses of the 96 continuing families during the period from March, 1948 to February, 1953 were shown in Table 57.

511 Some explanations are necessary for Table 57. In the first place, whereas ordinary household expenses are estimates based on experience of farm operators, these special expenses are actual amounts spent during the specified period of five years. [432] Most of the expenses on land purchases were down payments and subsequent partial payments. Of the four families reporting purchases of household equipment, three bought guns and one bought a sewing machine. [757] [755] All major repairs were for dwellings. The major medical expenses did not include small amounts of money regularly spent on drugs for headache and stomachache or even on delivery of babies which was done by traditional midwives whose fees were nominal. In fact, there were only three cases of major medical expenses. The largest one included [525] Bangkok hospital bills amounting to 14,000 baht. The 36,190 [484] baht of odd expenses included 3,000 baht on gambling(only [691] two operators reported expenses on this item, others admitted win and losses but did not give the amounts), 2,000 baht on purchases of government lotteries which are issued once a week and also on several other occasions, 500 baht on legal prosecution, 300 baht on reward for the

[TEXT CONTINUED ON PAGE 331.]

TABLE 57

SPECIAL EXPENSES OF 96 SAMPLE-FAMILIES
DURING MARCH, 1948 -- FEBRUARY, 1953
Bangchan, Thailand

Items	Amount	Number of Families Reporting	Average for Fam. Reporting	Ranges
	baht		baht	baht
Purchase of land	43,235	9	4,804	1,100 - 9,000
Purchase of gold	64,357	48	1,341	240 - 5,000
Purchase of f. equip.	136,074	56	2,430	150 - 8,050
Purchase of household equipment	8,200	4	2,050	1,550 - 2,800
Major repairs	78,870	34	2,323	350 - 7,000
Loan settlements	101,530	20	5,076	1,100 - 21,000
Loans extended	51,630	14	3,688	300 - 16,000
Net expenses in sponsoring rituals*	156,996	36	4,361	-10 - 15,000
Major medical expenses	19,400	3	6,467	400 - 14,000
Odd expenses	36,190	7	5,170	300 - 30,000
Gifts to offspring	15,600	4	3,900	100 - 10,500
Total	712,182			

* Total expenses minus cash contributions from guests.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7 Bangchan

511
525
691
484
431
593

recovery of a boat stolen, 390 baht on "laxity", and 30,000 baht on a trip to Mecca. The gifts to offspring included only gifts presented when offspring left the family to start an independent family of their own.

Special Receipts

*128
434

By special receipts we mean major items of receipts in addition to those regularly obtained from crops, labor, rent, and interest on loans extended. These are counterparts of special expenses, and informations about them were obtained from the 96 sample-families in the same manner and almost concurrently. Examples of these special receipts are: sales of land, gold, and major farm equipment; loans obtained, full or partial settlement of loans extended; gifts and remittances; and odd receipts like those from government lottery prizes, running a gambling house, and laxity practices. Special receipts of the 96 sample-families during the period from March, 1948 to February, 1953 were shown in Table 58.

Some of these items of special receipts need explanation. Land sold by two farm operators were sold for cash needed for loan repayment. It is perhaps worth noting that one of these two operators was in the habit of heavy drinking and had been in recent years spending about two thousand baht annually on liquor alone, while the other was in the habit of gambling. All five operators reporting sales of gold gave the reason for the sale that cash was needed to either buy farm equipment (buffaloes) or to repay

[TEXT CONTINUED ON PAGE 333]

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 58

SPECIAL RECEIPTS OF 96 SAMPLE-FAMILIES DURING MARCH, 1948 -- FEBRUARY, 1953
Bangchan, Thailand

Items	Amount	Number of Families Reporting	Average for Family Reporting	Ranges
	baht		baht	baht
Sale of land	18,700	2	9,350	7,700 - 11,000
Sale of gold	12,150	4	3,038	250 - 6,000
Sale of farm equip.	6,500	5	1,300	500 - 3,000
Loan settlements	1,700	2	850	200 - 1,500
Loans obtained	141,100	29	4,866	400 - 30,000
Remittances	6,200	2	3,100	200 - 5,000
Odd receipts	6,500	3	2,167	1,500 - 3,000
Total	192,850			

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*128
434 the loans previously extended to them. Among the five operators reporting sales of farm equipment, one sold his part of the joint ownership of an engine in order to buy a new one for his own, three sold their old buffaloes and bought younger ones, and one -- the inventor of the propeller windmill mentioned earlier in this dissertation -- sold windmills and other farm implements he made for sale.

434 The average amount of money received from loan set-
426 tlement during the past five years of 1,700 baht appeared
432 to be too small considering that the amount of loans ex-
511 tended by the sample-families during the period was as high as 51,630 baht and that the ability of these sample-families to settle loans extended to them was 101,530 baht out of a total of 141,100 baht. An explanation for this lies in switching of debt responsibility. At least one case was known where an operator, who was in debt to a fellow farm operator, sold a parcel of land to a third party at 11,000 baht. This buyer, apparently not having enough cash, arranged that he would assume responsibility for the amount of 8,000 baht which the seller of the parcel owed the other farm operator and would pay only the balance of 3,000 baht to the seller in cash. Strictly speaking, the creditor should report that he received a certain amount as loan repayment (actually, 4,000 baht for the principal and 4,000 baht for interest of 25 per cent for four years) and spent this same amount on loan extension. Actually, however, only the seller of the parcel reported that he had sold a

434
426 parcel of land and had cleared off his debt. The creditor
432 did not report anything about this deal, for he really did
511 not receive a cent out of the arrangement.

434 Loan obtained is the largest item of special receipts
426 involving 29 farm operators and 141,100 baht. The following
511 were the purposes of the loans sought as given by borrowers: land purchase, 7 cases; buffalo purchase, 3 cases; sponsoring rituals, 3 cases; to partially defray ordinary household expenses which exceeded cash incomes especially in years of poor crop, 16 cases; and to cover major medical expenses, 2 cases (two operators listed two combined purposes of the loan, hence the total becomes 31 instead of 29 if there is only one purpose for each case).

*128 Net Accumulation of Assets
434
511 Figures of net accumulation of assets within a certain period are valuable to the understanding of the economic conditions of farm operators in that they show the economic achievement, or the internal saving, of these operators. In order to obtain exact figures, however, it is necessary that we have complete inventories of the farm families at the beginning as well as the end of the period. Since our data on inventories of the sample-families for 1948 and 1953 are incomplete, especially we are totally unaware of the quantitative debt situation in 1948, we cannot use the simple method of subtracting the net worth as of February, 1953 from that as of March, 1948 to determine net accumulation

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

*128
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511

of assets during this five-year period. At best, we can only attempt at estimates based on certain known figures from records of special receipts and special expenses described in the two preceding sections.

Assets may conveniently be broken down into land, dwellings, household equipment, farm buildings, farm equipment, livestock, supplies, gold, cash, and accounts receivable (payable). We shall see that some of these may be left out of consideration in our method of calculating net accumulation of assets from records of special receipts and special expenses during March, 1948 and February, 1953.

It was observed that all the sample-families used the same dwelling throughout the period. Any cash outlay in repair should not be considered as an increase in inventory at least as average over the whole sample, for it can be reasonably assumed to be an amount necessary to maintain the dwelling at its original value at the beginning of the five-year period.

Assuming no change in technology, as was observed to be the case, farm buildings and farm equipment can also be left out of consideration for the same reason as the case of dwellings. It was observed that farm operators in Bangchan kept no more farm equipment than necessary. New purchases can thus be assumed to be replacement for worn-out equipment, and should not be considered as inventory increase, again when averaging over the whole sample.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*128
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[231]
[235]

The only livestock kept on rice farms other than buffalo, which were included under consideration of farm equipment, are chickens and ducks, which are raised "naturally." It was earlier mentioned that the size of the flock was more or less constant. Livestock, therefore, did not figure in significant inventory changes, and can also be left out.

*[243]

The only item of supplies on rice farms is paddy stock. This is used up and sold out each year. For more or less the same size of farm, and spreading over a series of five years, a difference in the average amount of paddy stock at about the same time of the year in 1948 and in 1953 would not figure significantly in inventory change.

It was also already mentioned that rice farmers did not want to keep cash at their homes for fear of robbery, and that any person receiving a large amount of cash quickly passed the money on to others. We can therefore assume that the amount of cash on hand at the same time of the year does not vary much. Cash, then, may also be left out of consideration.

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432
511

Of the items of assets enumerated above, there are now to be considered only land, household equipment, gold and accounts receivable (payable). In all purchases of land, gold, and household equipment, only the cash paid was recorded and considered as assets accumulated. For example, when an operator purchased a parcel of land at 7,000 baht and paid the down payment of 1,000 baht, only the 1,000 baht

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

434 was considered as spent in land purchase. If, however,
432 he made another partial payment of 2,000 baht during the
511 period covered by the study, a total of 3,000 baht was considered. Since purchases of gold and household equipment are normally made with cash, a total of cash spent on these three items (land, household equipment and gold) would seem to fairly well indicate the extent of internal saving of
434 each family. The assumption here is that one would not
426 borrow money to buy gold or a gun. With this correction
511 the figure remaining will represent a change in net assets, if we can assume no other changes in the debt situation. For those who bought these assets, it is very unlikely that any increase in outside debt occurred. The reason for this belief lies in interest rate differences: any person with some cash (which may be borrowed at low rate of interest in case he was about to buy land) would rather settle his high interest bearing debts first before buying household equipment or gold or making down payment for land. For those who did not buy these assets, some increase in debt for consumption purposes may have occurred. Both groups may have decreased debts during this period. The most likely assumption is that those buying land experienced a net decrease in debts other than those incurred in buying land, while those not buying such assets experienced a net increase in debts. The balance was probably one of some
[454] increase in debt in the village. Therefore, although these figures for net accumulation of assets provide a fair

7: Janlekha X-4,6 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

434
426 representation of internal savings in the community, they
454 probably overstate this increase somewhat.
511

When calculated in the manner outlined above, the
511 net accumulation of assets of our 96 sample-families was
434 found to total 84,942 both during the period from March, 1948 to February, 1953, averaging 885 baht per family per year. The frequency distribution of this accumulation of assets is shown in Table 59.

It is seen that of 96 sample-families, 90 had positive accumulation while only 6 had negative accumulation. Fifty-six or more than half of the total number of families studied had an accumulation of assets in the class interval between 0 and 999 baht. The highest amount of accumulation was found to be 9,000 baht, while the lowest was -10,470 baht.

We should examine the figures of Table 59 more closely before drawing a sweeping conclusion from the mere fact that 90 out of 96 sample-families had positive accumulation. In the first place, the raw data show that of the 56 families reporting accumulation in the class interval of 0 - 999 baht, there were 42 families whose accumulation was 0. Thus the number of families with positive accumulation was really not 90, but actually 48 or only half of the total sample-
[435] families. Besides, consideration must be paid to the fact that gold is not only a kind of security but also an article of prestige as well, and a gold necklace of 15 - 30 gram weight valued at 500 - 1,000 baht is usually worn by a rural Thai who can afford one. When a person reappears in the

[TEXT CONTINUED ON PAGE 340]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 59

FREQUENCY DISTRIBUTION OF NET ACCUMULATION OF ASSETS*
BY 96 SAMPLE-FAMILIES
Bangchan, Thailand, March, 1948 -- February, 1953

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S11

Accumulation in Baht	Number of Families
9,000 - 9,999	1
8,000 - 8,999	1
7,000 - 7,999	2
6,000 - 6,999	1
5,000 - 5,999	1
4,000 - 4,999	3
3,000 - 3,999	3
2,000 - 2,999	9
1,000 - 1,999	13
0 - 999	56
-1,000 to -1	2
-2,000 to -1,001	0
-3,000 to -2,001	0
-4,000 to -3,001	0
-5,000 to -4,001	1
-6,000 to -5,001	1
-7,000 to -6,001	0
-8,000 to -7,001	1
-9,000 to -8,001	0
-10,000 to -9,001	0
-11,000 to -10,001	1
Total	96

Mean . . . . . 885 baht
Median . . . . . 113 baht

* Includes net purchases of land, gold, and major household equipment.

511
434 village after long absence, his achievement will be judged not by the words from his mouth but by whether he has less or more gold than the time he left the village. The importance of gold as a prestige item being as it is, it is not surprising at all to see that a farm operator who did not have any gold will tend to buy a necklace when he receives a lump sum from the sale of rice although he knows that the amount would not last until the next harvest even without that extra expense on the necklace. When this farm operator ran out of money say in July or August, he would rather go into debt than part with that necklace if it really is his only adornment. Tables 57 and 58 show that within the five-year period there were 48 families buying in gold as against only four families selling out gold and that the average for those buying in was 1,341 baht per family while the average for those selling out was 3,038 baht, indicating that when financial pressure arose it was the families having more gold than necessary for display that tend to sell it. Realizing this situation, the author thinks that it is justifiable to give an allowance of about 1,000 baht for gold purchased for prestige purposes. If we agree on this point, there would remain only 34 families demonstrating accumulation of wealth, possibly through internal savings.

Debt Situation

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511 In order to understand the debt situation in Bangchan, it is necessary to distinguish debts created by purchasing goods on credit, which we shall henceforth call credit

426 purchase, from debts created by loans. The tendency among
511 policy makers and scholars to use the general term "debt" without specifying which is which has often led to confusion which we shall see later in this section.

*128 Debts, both credit purchase and loans, are the most difficult subject of this study as far as information gathering is concerned. In a culture where prestige counts more heavily than profit, this is a delicate topic from which an ordinary informant usually shies away.

*128 Although it was realized that farm indebtedness was
426 very essential in the understanding of the economic condition
511 of farm operators in Bangchan as well as elsewhere, in the first year of our study (during 1948-49) only fragmentary information was obtained and we were unable to present comprehensive statistical statements as to the incidence of particular types of credit in the preliminary report in which only categories were given. Since these categories are valuable as background information, they will be restated as follows:

Types of credit

1. According to length of the term
   a. Short term -- a few months
   b. Long term -- one or several years

2. According to amount
   a. Small -- less than 1,000 baht
   b. Large -- 1,000 baht or over

3. According to the nature of relationship between parties to the loan
   a. Among blood relationship or close friendship
   b. Others

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4. According to type of security, if any
   a. Land
   b. Gold, jewelry, or other movable asset
   c. No security

5. According to the nature of the contract
   a. Oral contract
   b. Written contract

6. According to rate of interest
   a. High
      (1) For small loans, from 5 per cent per month and over
      (2) For large loans, from 2 1/2 per cent per month and over
   b. Low -- anything lower than above. Some rates would thus be considered low even though they were in excess of the maximum legal rate of 1 1/4 per cent per month
   c. No interest

Types of source of credit

1. According to location
   a. Local -- within the village or immediate neighborhood
   b. Near -- in more distant hamlets in Bangchan and Kannayao Communes, in the market town of Minburi, and in nearby villages like Bangkhuad or Wat Khoo.
   c. Far -- in Bangkok and such towns as Dhonburi or Nonburi.

2. According to lender
   a. Non-affluent persons who give the loan only on the appeal of a relative or friend in need
   b. Affluent farmers who lend money for interest as a secondary income
   c. Villagers whose primary source of income is money-lending
   d. Chinese rice dealers residing nearby who regularly buy local rice surpluses. These dealers lend money for the purposes of:
      (1) Gaining income from interest -- usually loans are small with high rate of interest
      (2) Promoting a rice trade relationship with borrowers -- usually loans are small with low rate of interest or no interest at all
   e. Local store-keepers sell items on credit -- the amount extended depends on character.
   f. Money-lenders in Bangkok and other large population centers -- usually mortgage term is required.

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511 In our second visit during 1952-53 our informants appeared to talk more freely on the topic of debts, especially when they were interviewed on the kinds and amounts of special expenses and receipts. At the beginning we did not ask our sample-operators direct questions on the amount of credit purchase or loan they were having. Only casual information pertaining to debts that arose during the discussion of related topics was noted and filed separately by the informant and also by the person referred to both as a lender and as a borrower. It was noticed that while most informants did not want to lay bare the whole situation of their debts, they were rather cooperative and sometimes even eager to make partial statements as long as an answer to the blunt question "How much do you owe now?" could be avoided. For example, one of the 96 sample-operators was telling the author the amounts of outstanding debts of some of his fellow operators (ranging from 3,000 baht to 15,000 baht) and proceeded on to generalize that rice farmers had to go into debts at one time or another. The author, thinking that that was the most opportune time to ask the man about his own debts, raised the blunt question just mentioned. The informant replied, "Just about the same amounts as these people are owing." He then changed the subject, indicating an unwillingness to give the exact amount of his outstanding debts. In the conversation that followed, however, he eagerly stated that he had been able since 1948 to clear off as much as 21,000 baht of debts. When asked how much a proportion

124 426 511 that was to the total amount of his debts, he paused to calculate and then said it was exactly three-fourths of the total. The author then asked whether he was right in figuring that the man's current outstanding debt was 7,000 baht. The informant admitted that that was the correct figure.

There were, however, some twenty farm operators in our sample who took the author as one of their family members, and were thus very cooperative in giving any information that the author wished to have. Thus, by the end of 1952 we had a considerable amount of data on loans. Constantly checking available information in the files, from the dry season of 1953 onward the author put more effort in getting the debt situation of each of our 96 sample-families, concentrating first on the extent of loans and their respective interest rates. During the inundation period of 1953, effort was shifted to getting information about credit purchases and their respective rates of interest which were brought up to date as of December of the same year. Information on loans was also brought up to date at this same time which may be considered as the end of business year because the early varieties of rice were being harvested at this time of the year. Table 60 shows the classification of farm operators according to kind of debts involved as of the time immediately preceding the sale of the early varieties of rice.

*128 426 511 It is seen that there were only two non-responses out of the total of 96 sample-families. Among these 94 farm

[TEXT CONTINUED ON PAGE 346]

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TABLE 60

CLASSIFICATION OF 96 SAMPLE-OPERATORS ACCORDING TO OUTSTANDING DEBTS
AS OF DECEMBER, 1953
Bangchan, Thailand

Classification	Number of Operators	Amount of Debt in Baht		
		Long-term	Credit Purchase	Total
No debts of any kind	37	--	--	--
Long-term debts only	15	90,600	--	90,600
Credit purchase only	23	--	23,870	23,870
Long-term debts and credit purchase	19	65,850	13,850	79,700
No response	2	--	--	--
Total	96	156,450	37,720	194,170

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*128 426 511 operators reporting their debt situation, 37 had no debt of any kind, 15 had long-term debts only, 23 had credit purchases only, and 19 had both long-term debts and credit purchases. Frequency distributions of credit purchases and of long-term loans are shown in Tables 61 and 62 respectively.

426 829 511 The debt situation in Bangchan can be best revealed by quoting directly some of the remarks made by villagers as follows:

"Rice farmers must have debts. Whoever can so manage to avoid debts should be placed on the financially sound list."

"I have been thinking, all day and all night, of the way to avoid debts -- and all in vain. They finally come to a total of one thousand baht with five hundred baht interest every year. I clear them all every year also. Those who cannot clear this kind of debts are sure dead."

"I always pay cash -- afraid of debts."

"Money-flower[8] (a direct translation of the Thai word for interest) is really a peculiar kind of flower. It blooms best in times of drought and flood."

426 511 Apparently, the term "debts" as used in the above quotations refers primarily to credit purchases. It is not difficult to see how these credit purchases have become 000 institutionalized in the rural areas of Thailand. Writing

8. Thai word for interest is dorg-bia (lit., flower of money).

[TEXT CONTINUED ON PAGE 349]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 61

FREQUENCY DISTRIBUTION OF CREDIT PURCHASES
OF 96 SAMPLE-OPERATORS
Bangchan, Thailand, December, 1953

426
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Amounts in Baht	Number of Operators
3,500 and over	1
3,000 - 3,499	1
2,500 - 2,999	1
2,000 - 2,499	2
1,500 - 1,999	2
1,000 - 1,499	11
500 - 999	14
Under 500	10
No credit purchase	37
No response	17
Total	96

Mean . . . 898 baht for those reporting any credit purchase

Median . . 911 baht for those reporting any credit purchase

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 62

FREQUENCY DISTRIBUTION OF LONG-TERM LOANS
OF 96 SAMPLE-OPERATORS
Bangchan, Thailand, December, 1953

426
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Amounts in Baht	Number of Operators
30,000 and over	1
20,000 - 29,999	1
10,000 - 19,999	1
9,000 - 9,999	0
8,000 - 8,999	2
7,000 - 7,999	2
6,000 - 6,999	1
5,000 - 5,999	2
4,000 - 4,999	2
3,000 - 3,999	5
2,000 - 2,999	6
1,000 - 1,999	10
Under 1,000	1
No loans	60
No response	2
Total	96

Mean . . . 4,601 baht for those reporting any loan

Median . . 2,850 baht for those reporting any loan

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

Writing
*243 on economic change in Thailand since 1850, Ingram points
17 out that soon after the Bowring Treaty (1854) the popula-
43 tion of Thailand tended to specialize more and more in the production of one major crop (rice) and a small number of other primary products, selling these products for money, and using the money to buy various articles of consumption. "Money thus came to play an increasingly important role in an economy in which it had formerly been of but minor significance. When Western traders were freed by the Bowring Treaty to put such products as cheap cotton prints on the Thai market, the people bought these products and, if they could not buy they sought a source of money income. Money could most easily be acquired by producing some commodity for the export market. As villages and households turned to the production of money crops, and as they began to purchase bright-colored garments from the traders, the household crafts declined. Cotton fields were perhaps used for rice or abandoned in favor of land suitable for rice. With the money income earned through the export market, the farmer bought the goods he had formerly made for himself."[9] The
*243 money economy had brought along its inevitable companion --
178 credit, which had become accentuated by the fact that Thai
426 rice farmers received their principal incomes only once a
43 year. There has been a tendency to trace the perpetuation of farm indebtedness to farm poverty which is in turn traced to low productivity in underdeveloped areas. While this is

9. Ingram, op. cit., p. 36.

*243 178 426 43 perfectly true especially among the under-sized farms in Bangchan, there is still to be explained why more affluent farm operators are also continually in debt. It has been observed that when people come into contact with superior goods or superior patterns of consumption, with new articles or new ways of meeting old wants, they are apt to feel after a while a certain restlessness and dissatisfaction. Their knowledge is extended, their imagination stimulated; new desires are aroused, the propensity to consume is shifted upward. This principle according to which individual consumption functions are interrelated was propounded by Duesenberry, who calls it the "demonstration effect."[10] When the list of new items of consumption is checked, it appears that this principle of demonstration effect has demonstrated itself very clearly in Bangchan.

426 432 *[128] Table 63 shows that in the majority of cases credit purchases bear an interest of 50 per cent per season, ranging from 0 to 67 per cent. Information from sources other than our sample farm operators reveals that two methods of interest charging were practiced by Bangchan storekeepers and peddlers. One method was to charge 40 per cent interest on credit purchasesmade during March - May, 30 per cent during June - the first half of November, and no interest on purchases made in the second half of November and after; all these rates were charged on the assumption that accounts would

10. This is about the receipt from 8.4 rai in 1953.

[TEXT CONTINUED ON PAGE 352]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 63

CLASSIFICATION OF CREDIT PURCHASES ACCORDING TO RATE OF INTEREST CHARGED
Bangchan, Thailand, December, 1953

426

Rates of Interest In Per Cent Per Season	Number of Cases	Total Amount of Credit Purchase
		baht
0	4	1,100
15	1	3,000
50	37	33,320
67	1	300
Total	43*	37,720

* One operator reported two credit purchases at different rates of interest, so there were 42 operators involved.

426 be settled at harvesting time in December or January. If
432 buyers failed to settle their accounts at harvesting time, a flat rate of interest of 5 per cent per month would be charged on the total amount (principal plus interest) until the whole debt was settled.

Another method was more simple: 50 per cent interest was charged to the amount purchased regardless of the time of purchase. The only exception was that no interest was charged on purchases made after the first half of November. Here, again, the assumption was that accounts would be settled at harvesting time. In case buyers failed to settle their accounts at the specified time, the same rate of interest of 5 per cent per month was charged on the total as in the case of the first method.

Our records show that there were nine among our sample-operators who failed to clear their credit purchase accounts at the harvesting time of the 1951-52 crop. These accounts, principal as well as interest, were considered as loans with interest rate of 5 per cent per month or 60 per cent per year payable at the harvesting time of the next crop, that is the 1952-53 crop. The shifting of purchase accounts into loans was done in order to simplify bookkeeping work on the part of both debtor and creditor, for these delinquent customers were likely to start their credit purchases again in order to get by until the next harvest. The total account of these nine operators was 19,550 baht, averaging 2,172 baht per case. This appears

426 in Table 64 under the item of loans with 60 per cent interest.
432 It is seen that these operators would have to pay an average of 1,303 baht as annual interest for this account alone. This explains why it was claimed by the villagers themselves that "those who cannot clear this kind of debts are sure dead." One way to avoid this adversity was to seek a long-term loan at the ordinary rate of interest of two per cent per month (Table 64) to replace the high interest loan created by credit purchases. In the previous section on special receipts, it was mentioned that 16 of a total of 29 farm operators in our sample who had sought loans during the past five years said that the loans were needed to defray ordinary household expenses. Obviously, the nine operators had tried to get loans with lower rates of interest to settle their accounts with the storekeepers but they could not get any.

Table 60 shows that of a total outstanding debt of 194,170 baht, more than three-fourths was in the form of loans and less than one-fourth was in the form of credit purchases. Although the majority of cases of aquisition of loans were found to have as their purpose the clearing of higher interest bearing debts, quantitatively speaking each of these was a small loan. Most other loans were sought for land purchases and buffalo purchases. Although these latter were fewer in number, they were larger in amount. It may then be said that a major portion of loan monies were sought for investment or productive purposes while

[TEXT CONTINUED ON PAGE 355]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 64

CLASSIFICATION OF LONG-TERM LOANS
ACCORDING TO RATE OF INTEREST CHARGED
Bangchan, Thailand, December, 1953

426

Rates of Interest in Per Cent Per Year	Number of Cases	Total Amount of Long-term Loans
		baht
0	1	700
12	6	21,666
15	2	5,667
18	1	1,600
24	15	82,267
30	1	3,000
60	9	19,550
not reported	2	22,000
Total	37*	156,450

* Two operators reported several loans of different rates of interest: one, three loans -- and the other, two such loans. So there were actually 34 operators involved.

426 credit purchases were almost entirely for consumption
432 purposes. The distinction can then be drawn that whereas credit purchases with high rates of interest indicate a shortage of cash due primarily to poverty, loans with lower interest rates do not necessarily serve as such an indicator. Thus, any survey bringing out only the total amount of debts does not shed as much light on the economic situation of the area as it would if the debts are itemized into loans and credit purchases.

Another important point is that farmers tended to clear off their credit purchase accounts the moment they were in a position to do so because they did not want to bear the burden of a very high rate of interest. Even in cases where they had a more pressing need for the use of the cash in hand during harvesting time, their creditors would be around to demand the settlement of debts. To these creditors, a relatively high return of five per cent per month was no longer a good business, for it is obvious that those farmers who would not settle their high interest bearing accounts during harvesting time must certainly be hard up and hence a poor risk. Besides, it will take another full year to collect the debts if they could at all. As a result, most of credit purchase accounts were usually cleared in Januaryof each year when farmers started to sell their early varieties of rice. It is seen, then, that for each year the total amount of credit purchase accounts was highest in December and lowest by the end of January, if not nil.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

426 Thus, figures of total debts alone are almost meaningless
432 unless they are itemized and the date when such accounts
+128 are outstanding is specified.

*128 Cash Situation and Role of Paddy
434

It is not the purpose of this study to quantify the cash situation in the village. Even mere estimation would already be too ambitious a task for a study of this nature. We propose, therefore, to give only an outline of the cash situation with the hope that it may serve as background information for further research along this line.

434 1. Extent of money in circulation

a. Incoming

Village net exportable rice: Total crop -- seeds (1 1/2 tang per rai) -- amount consumed by the family (30 tang per man-unit) -- feed or amount consumed by poultry (4 tang per chicken-unit: rooster, 1 unit; layer, 1 unit; chic, 1/4 unit; duck, 1 unit).

Village net exportable poultry products: Total egg production -- amount locally consumed, and total young roosters (7 months old) -- amount saved for breeding purposes.

Money regularly earned from outside sources: wages and salaries (teachers, headmen, janitors, workers on highways, and other workers drawing pay from outside sources); rentals (paid to village residents owning lands in other villages); remittances from outside; dividends if any.

Exportation of other products: mushroom, lotus.

Loans obtained outside the village.

Settlement of loans extended to outsiders (very limited, if any at all).

Sales of lands, gold and jewelries, capital goods to outsiders.

434 Odd receipts: lottery prizes, gambling, etc.

b. Outgoing

Imports: Several items of food, clothing, stimulants, medicine, toilet, fuel; building materials; buffaloes, farm implement, farm materials; gold and jewelries and other articles of adornment; stationary (very limited); ordination and other ritual items.

Outsiders' regular earnings in the village: rentals of land owned by outsiders, interest on loans and equivalent extended by outsiders, wage paid to outsiders (limited to peripheral areas).

Taxes, contributions and fees: land taxes, fees and contributions paid to outsiders.

Purchases of lands owned by outsiders.

Settlement of loans extended to outsiders.

Investment outside the village (one Bangchan resident owns shares of an electricity concern in Minburi totalling 5,000 baht, the same person had invested a total of 10,000 baht on a fishing enterprise in a coastal town).

Remittances: for educationof children sent to Bangkok.

Travelling expenses and pilgrimage.

434
458 2. Seasonal fluctuation of money supply

Money supply fluctuates very highly in the village because of pronounced periods of sale of paddy and of the method of payment for it. There are two periods of sale: during late December and March, and during July and November. There is practically no sale between March and July because canals are impassable during this more or less dry period. Actually, it is dry from March to May; after that although rain has started, the water level in the canals is not high

434 enough for efficient movement of paddy.
458 The general practice was that right after harvest immediate sale of paddy was necessary for settlement of credit purchase accounts and rentals. Another sale was perhaps necessary a few days later for living expenses which had been postponed during the cash-scarce [796] period before harvesting. Then another sale might be made in order to have cash to pay for building materials needed for repair work which was usually done during this time. Just before March a final sale for this first period was made in order that the family may have cash enough to last through July. The money was to cover contributions to various rituals to which the family had already been invited, and perhaps to cover ritual sponsor by the family itself. Besides, there was still need for cash for each family member to carry around during this period of festivals.

*243 Villagers said that few farm operators had any
434 paddy left for sale in the second period (July - November).
458 This was contrary to our findings as shown later in Table 65. Perhaps, they were thinking of conspicuous sales of large amounts by farmers having say over 500 tang of paddy for sale in the second period.

*[123] During the last few days of March, 1953, when paddy sale had apparently ceased, we made a round call covering the homes of all 96 sample-families and checked the amount of paddy on hand as of the end of March.

[TEXT CONTINUED ON PAGE 360]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 65

FREQUENCY DISTRIBUTION OF INDICES OF CAPITAL FORMATION POTENTIAL OF 96 SAMPLE-OPERATORS
Bangchan, Thailand, March 31, 1953

Class Intervals	Frequency
tang	
2,000 and over	1
1,000 - 1,999	1
900 - 999	1
800 - 899	0
700 - 799	2
600 - 699	0
500 - 599	1
400 - 499	6
300 - 399	5
200 - 299	8
100 - 199	15
0 - 99	22
-100 to -1	25
-200 to -101	9
Total	96
Mean	145 tang
Median	65 tang

*243
*128 This was one of the easiest jobs of the whole study.
433 There were few cases where we did find anybody at home
434 and there were many more where only young children
[574] were seen. Since a Thai farm home is considered an open house to fellow villagers, we simply took liberty of walking right through and made an inspection by ourselves. Thus in a period of less than a week we were able to secure the figures of paddy stock on hand of every single operator in the sample.

The amount of paddy stock alone simply indicates but not represents sale in the second period, for a certain portion must be saved for seeds, consumption and feed. It is rather simple, however, to calculate the amount saved, for we were already in possession of work areas from which the amount of seeds may be estimated and we knew the size of the family (in terms of both actual number and consuming units) from which consumption may be figured.

*243 In this second period, sale was made when the
432 farmer thought the price was high enough. Usually,
434 the prices of paddy were about 15 - 30 per cent higher during this period than in the first period when supply was high. The rate of shrinkage should be taken into consideration, however, for prices are expressed in volume. It is rather unfortunate that we do not have any official record for this vital rate of shrinkage. In our daily log, however, the following testimony appears:

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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Farmer A: "I put my paddy in the warehouse in the first half of the second lunar month (December 17-31, 1952). In the second half of the fourth lunar month (March 1-15, 1953) I sold it (and thus measured it ag in). I found that within these two and a half months of every 100 tang only 87 tang remained."

"Judging from experience, paddy starts decreasing its size and weight through the process of evaporation since the time of harvesting, and it is not before July that it becomes dry enough to retain its size and weight thereafter."

Farmer B: "Is it not possible that your 13 per cent loss was due to the chickens?"

Farmer A: "No. During that time (December-March) the chickens were well fed. There was a lot of paddy scattering in the home yard. They would not bother going up into the warehouse (mat bins)."

C (of Cornell group): "Lazy chickens might feed right in the mat bins with plenty of paddy."

Farmer A: "I don't think so. Lazy chickens would not take the trouble to fly. They'd rather prod around the home yard."

Another reason for sale during this second period, in addition to good prices, was a prospect of good investment, mostly loans, mortgages, or land purchases.

432 It has been observed that most business trans-
426 actions were done on credit. When the farmer went to town to receive payment for his paddy from the rice dealers, he would at the same time settle his accounts with the lumber yard and several dry-goods stores. So actually in many cases cash was not brought into the village except in limited amounts.

432 People do not like to carry a large amount of
[674] cash around in the village for inherent fear of robbery which rarely happens. Chinese rice dealers prefer to pay for the paddy they bought at their own home. If sellers insist that the money should be brought to them in the village, the dealers will break the total of say 5,000 baht into one or two thousand baht at each of three or four payments.

Villagers also do not like to keep a large amount of cash at home. In case the payment for paddy sold is to be made at the farmer's home, he would arrange for borrowers to come to his home at the same time so that the money will be immediately passed on to the others, thus avoiding risk involved in keeping cash. One of our sample operators said that he arranged a few years ago that a large sum of 10,000 baht be paid at his home so that he might pass the whole amount immediately to the owner of a parcel of land he agreed to buy. Everybody in his household was frantic when the money was received from the Chinese dealer but the

432 seller of the land did not show up until the next morning. Recruit had to be made for guns and men to guard the money for that whole long night.

3. Scarcity of money

243 434 Scarcity of money exists in Bangchan because there is, relative to the demand for purchased goods and services, only a small margin between the price received and the cash outlay of producing paddy. Another reason is that most farms are too small, thus yielding small net cash incomes to the majority of farm operators in the village. Small incomes of farm operators who constitute the core of village economy means also small incomes of the rest of the village population whose financial condition directly or indirectly depends on incomes of farm operators.

426 458 Scarcity of money is directly evidenced by shortage of money during theperiod from July to December. It is also indicated by high rates of interest on credit purchases and loans sought in the village.

434 454 The problem of scarcity of money has been rendered more acute by the fact that affluent farmers do not like to keep cash at home or put it in liquid form such as in saving bank in the nearby market town, but prefer to invest it in a more or less non-liquid form such as loans or land purchases. Some of those who had accumulated a large amount also tend to spend it on sponsoring of rituals costing as high as several

[796]

434 454 796 thousand baht to more than ten thousand baht which is a real drain on the village cash supply.

These huge expenses are, however, partially compensated by such items as loans sought from outside [426] or sale of lands and other assets. It cannot be expected, however, that these items would provide enough supply of cash to bring down the rate of interest in the village.

4. Role of paddy

*243 436 Paddy is extensively used in the village as a medium of exchange. It is used in both small transactions of a few baht and large transactions of several thousand baht. Thus paddy stock may almost be considered as equivalent of a bank balance.

*243 433 436 454 The most important consumption uses of paddy are as seeds and for human consumption. In order to make it really comparable to a bank balance, allowance must be made for the amount necessary for seeds and human consumption although the amount for chicken feed may be dispensed with because the farmer may choose to drop his poultry enterprise. On this basis, we have arbitrarily coined a term "index ofcapital formation potential with present levels of living" to represent the amount of paddy in tang which is left at the operator's disposal at the end of March after allowance for seeds and family consumption has been made. No allowance is made for special consumption expenses such

*128 *243 433 436 454

*243 *128 433 436 454

as sponsoring of ordination and other rituals. Algebraically, the formula for the index of capital formation potential may be expressed as follows:

$$I = P - (R \times 1\ 1/2) - (C \times 30)$$

where,

I is index of capital formation potential
P is paddy stock at the end of the first phase of sale (about March 31)
R is area in rai devoted to rice
C is the family size expressed in consuming units, whereby adults age 15 years and over are considered to be one consuming unit each and children age 14 years and under are considered to be one-half unit each.

The formula is constructed under the following assumptions:

1. Creditors and landlords demand settlement of debts and rentals immediately after harvest.
2. Farmers prefer to keep paddy rather than cash.
3. Before the end of March, affluent farmers sell only a certain part of their crops which would bring just enough cash to last until the next sale in July or after.
4. Amount of seeds necessary to plant one rai of rice is 1 1/2 tang.
5. Paddy consumption is 38.3 tang annually per consuming unit (Table). The surplus held on March 31 must last for 9 1/2 months before the next harvest can be used. Consumption during these 9 1/2 months is calculated at 30 tang per concuming unit.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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Table 65 shows the frequency distribution of index of capital formation potential of 96 sample-operators as of March 31, 1953.

It is seen that the median index of capital formation potential is 65 tang. The abnormally high indices of two operators, one over 1,000 tang and the other over 2,000 tang, have pushed the mean index up to 145 tang. It is seen also that there are 34 operators whose indices of capital formation potential are negative. Since there 34 operators constitute more than one-third of the sample, the situation may be said to be rather disheartening. This means that a good proportion of farm operators do not produce enough paddy even for their own consumption after having to pay for debts, rentals, and other immediate requirements.

In the opinion of the author, index of capital formation potential in the sense that is here used is a very useful device for a quick survey of economic condition of most rice growing areas of Thailand where the single-crop system is practiced and where there is relatively little secondary income.

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PART III

000 ECONOMIC PROBLEMS OF BANGCHAN

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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CHAPTER VIII

SALIENT FEATURES OF ECONOMIC PROBLEMS OF BANGCHAN

*128 Problems of economic significance have been constantly brought out during the course of discussions in Part I and Part II, some explicitly and others implicitly. In this chapter we shall undertake to restate these problems and summarize their salient features.

Low Incomes

*243 434 Data earlier presented show that the basic problem of Bangchan is that incomes of farm operators are low. Low income is due on the one hand to low return from rice, and on the other to limited earning opportunity from other sources.

Return from rice depends on yield, cost, price received, and size of the farm. Among these four factors, yield did not appear to be an immediate problem contributing to low return of Bangchan farms, since a five-year average of 28.8 tang per rai for Bangchan can be favorably compared to those of most of the other rice growing areas in the country. Yearly fluctuation of yield, nevertheless, shows that there is room for yield improvement through application of fertilizer, use of better seeds, and more efficient control of water supply.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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434 The cost of producing rice in Bangchan of 6.76 baht per tang of paddy in 1948 (according to our method of calculation earlier described) appears to be rather high in relation to an average price of 7.86 baht received in the same year. A net gain of 1.10 baht per tang of paddy seems to be inadequate with an average annual output of 1,081 tang of paddy per farm; even though every farm operator still has in addition incomes for family labor (in terms of value of family labor including himself) and from ownership of farm equipment (in terms of interest), and some operators who work on their own land still have additional incomes from ownership of land (in terms of implicit rent). As things stand at the present, this calculated cost can hardly be reduced in the near future unless there is an abrupt change in technology.

Many Bangchan operators appeared to thrive well under this condition of high cost because about three-fourths of the total cost of production was imputed and did not require an immediately cash outlay. Some of these cost items were hidden in the form of gradual depreciations which were not actually provided for each year. These would certainly be realized, however, when for example buffaloes died or equipment broke down. Even the imputed cost for family labor could not indefinitely be postponed. Family workers did not demand a lump sum payment like wages for laborers, but they had to be fed and clothed, and certainly personal expenses had to be allowed for them. Some

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*243 434 464 Some farmers had artificially reduced their operational cost by utilizing free labor of transient members of the family, who would not stay long if they were not adequately taken care of. These farmers would have to resort to pieceworkers or hired laborers when transient members decided to leave them.

*243 434 655 The farm price of paddy was adversely affected by the government control of rice export. It was estimated that huge profits of no less than 100 per cent had been made each year by the government through its monopoly over and later control of rice export and foreign exchange control. This will be dealt with separately later in this chapter.

*243 434 423 Although the average size of farm of 30.7 rai for Bangchan can be favorably compared to the average of 23.1 rai for the Central Plain, this does not mean that size of farm is not a problem contributing to low returns from rice. [464] It was pointed out earlier that there was a condition of disguised unemployment among Bangchan operators. Small size elsewhere simply indicates the widespread nature of the problem of disguised unemployment among farm operators in the Central Plain.

*243 434 Limited earning opportunity for incomes from sources other than rice is due to the fact that at the present stage of technological development no other crop can be profitably grown in rotation with rice because of agronomic limitations.

*243 434 221 The inundation period from the middle of September to early December, during which time no work is needed on

243 the rice enterprise, cannot be devoted to gainful utiliza-
221 tion of labor because: (a) there is not enough space in
434 the homelot, the only place above water; (b) poultry is not
a competing crop as long as it is raised naturally in limited
number. It becomes a competing crop when it is raised com-
[235] mercially. Commercial raising of poultry in Bangchan is
handicapped by locational reasons (far from market and far
from sources of feeds other than paddy). It is further
handicapped by a higher chance of contamination which is
true in such a geographical condition as prevailing in Bang-
chan; (c) another factor limiting an opportunity for growing
a secondary crop during this period is that cash is most
scarce in this time of the year and interest rate is highest.
Any cash outlay for investment is thus discouraged. Farmers
who have any cash at all will do much better by straight
lending, or disguised lending in the form of petty trade
on credit putting a high premium on credit purchases of
50 per cent extra on articles payable in two or three months;
and (d) opportunity for wage earnings is also limited during
this period because farmers do not need any help at this
time of the year, and because successive rains prevent
extensive public work and large scale construction.

It cannot be said, however, that there is no possible way for farmers to be gainfully employed during this period of inundation. Researches along this line are needed, ones that should take into consideration details of climatic, technical, economic, and social conditions of the village.

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The lean time from the middle of February to the end of May is devoted by some villagers, mostly young men, to wage earning outside the village. The size of this temporary labor migration depends on the job opportunities, and these job opportunities depend largely on personal contact. Seasonal off farm jobs are: (a) crude carpentry work usually on nonpermanent construction where cheap temporary labor is preferred; and (b) plantation work in the sugar cane region of Cholburi some eighty miles east of Bangkok.

Inherent Excess of Expenses over Incomes

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The prevalence of debts in the form of credit purchases among Bangchan farmers indicates an excess of expenses over incomes. It has been shown that most cash loans were sought to clear high interest bearing credit purchase accounts, although some were for productive purposes. Even in this latter case, it has been observed that farmers usually borrowed no more than an amount that was immediately needed together with cash on hand to pay for the capital investment. This means that after such capital purchases there was less cash for the household and operating expenses, and so there would be a higher credit account to be settled in the following harvest.

Low incomes coupled with relatively high expenses leave little or no room for internal savings.

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The situation is aggravated by an increasing rate of consumption relative to the ability to produce. While

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243 178 433 434 production method and farm organization remained the same throughout, there had arisen in the course of the past four or five years new items of consumption including wrist watches, fountain pens, hair do, Coco-cola, invitation cards, admission to Miss Thailand contest, etc., which demonstrate the operation of the principle of demonstration effect par excellence. It is not difficult to see, then, that any chance increase in cash incomes due to favorable weather and economic conditions tends to be absorbed in consumption.

While consumption correspondingly expands with an increase in income, it does not decline with a contraction of income -- at least not in the same proportion. This is the principal reason for farm poverty in rice growing areas where only a single-crop system is practiced and where fluctuation of crop yield is a normal phenomenon.

As a result, the excess of expenses over incomes [426] tends to persist. High rates of interest also have made this excess greater and greater among those who fail to make proper adjustment in their credit situation. Thus, the less affluent farmers are not only poor but are actually getting poorer and poorer.

Population Pressure

161 434 While low incomes and inherent excess of expenses over incomes are basic problems of Bangchan, discussions in the early chapters reveals that there are some factors contributing to the acuteness of the basic problems. One

161
434 among these contributing factors is population pressure.

*243 Disguised unemployment in the case of farm operators
161 and their family workers and actual unemployment in case of
434 farm laborers indicates a condition of over-population in
464 Bangchan in the sense that a certain part of its population can be removed without materially reducing total production in the area.

178 In view of a continually decreasing supply of fish,
226 it may be said that the situation has reached the point where
433 it not only affects the per capita income of Bangchan resi-
262 dents but actually exerts pressure on means of subsistence. There are several indications of decreasing supply of fish and other marine animals in the village. First, it is the consensus of opinion gathered by our daily informal talk with villagers non of whom was found to hold a contrary view. Second, a passage in our 1948 log, "X is very lazy. Everybody here in Bangchan catches shrimps and makes his own shrimp paste. He alone does not catch shrimps even though he is among the poorest," indicates that purchase of shrimp paste was in 1948 an exception rather than a rule. In 1952, however, it was found that a total of 22.7 kilograms of shrimp paste consumed in a year by an average family, 6 kilograms, or more than a quarter, was purchased. In this latter year, 83 baht worth of fish and 54 baht of fish sauce were purchased by an average family in addition to shrimp paste as against negligible amounts for the same items in 1948 (we did not conduct a systematic consumption

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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178 survey in 1948, the "negligible amounts" comes from daily
226 talk with Bangchan residents). Third, several informants
433 testified that the amount of fish caught from the same pool
[262] by the draining method had been decreasing each year. One of these gave the following comparative figures for fish caught from the same pool on April 8 - 10, 1953 and on approximately the same time of the year in 1952 as follows:

Kind of Fish	Number Caught in 1953	Number Caught¢ in 1952
Pla Salid	400	800
Pla Salad	100	200
Pla Kasong	50	120
Pla Chado	6	15
Pla Krai	1	--
Pla Doog	50	50
Pla Mor	20	25
Pla Chorn	150	300
Large turtle	5	3
Small turtle	7	3
Eel	5	5

Others also gave the 1953 figures, but could not itemize the 1952 figures; they only said that they "got much more than this year."

226 There had been until 1952 no positive program for
654 fish conservation; only negative measures have been taken, such as the Ministry of Agriculture's ordinance against fishing by certain methods at certain times of the year. In 1952, however, the Government began an extensive program of introducing a new variety of fish, Pla Mor Thed, into rural areas of Thailand. This new variety has been claimed to grow faster than the native varieties. While this program cannot as yet be appraised, a point of observation may be

243 161 178 464 Finally, it has been pointed out that the kind of training and the type of financial preparation given to young married couples have served only to confirm Bangchan people to their preference for rice cultivation. This together with limited job opportunities open to them elsewhere have tended to keep the villagers on the farms, and thus have tended to regenerate the condition of population pressure in Bangchan.

Lack of Effective Control and Regulation of Water Supply

243 458 Another contributing factor is the lack of effective control and regulation of water supply, which has caused annual fluctuation of rice crop. On the whole, this crop fluctuation is not as high as is the case in most of rice [731] growing areas elsewhere. Famine certainly has not been known in Bangchan. Nevertheless, it is a certain sector of rice growers -- the marginal farmers with limited ability to adjust or with relatively little command over capital -- who are seriously affected by annual fluctuation of rice crop.

243 426 When affluent farmers have a poor crop, their credit purchase accounts may go up beyond the normal level, but they are usually in a position to clear this type of high interest bearing debts at the end of the business year by their net cash incomes or at least by securing loans with lower rates of interest to pay the accounts. On the other hand, marginal farmers are not in a position to seek low interest bearing loans. In case of crop failure, therefore,

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*243 426 these marginal farmers who cannot settle their credit purchase accounts have to bear the burden of high interests on their accounts which are carried over to the following year.

*243 312 Although weather conditions are not controllable, water levels in Bangchan are subject to partial control through irrigationand drainage. The range of water adjustment for each farm is nevertheless small. At the beginning of the season, there is too little water in the main canals to be accessible to farmers. Thus, even though Bangchan operators are equipped with their own irrigation facilities, they still have to rely entirely on the rains to start their first step of field preparation. Again, during the inundation period the water level in the main canals, which are the only channel through which excess water may be drained away, is too high to permit any draining at all. It is seen, then, that the critical period is almost limited by weather conditions whichvary from year to year.

The problem stated above was recognized as early as 1903 when J. H. Van der Heide, a Dutch irrigation expert who was hired by the Thai Government to draw up an over-all irrigation plan for the nation, published his report suggesting an elaborate plan hinging on construction of a barrage across the Chao Phya River at Chainat.[1] Van der Heide pointed out that besides the improved yields of rice, the

1. J. H. Van der Heide, General Report on Irrigation and Drainage in the Lower Menam Valley.

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243 reduction in crop failures, and the improved quality of
3/2 rice, irrigation would also enable each family to cultivate a larger amount of land. The farmer could regulate the softening and flooding of his fields and thereby increase the number of days available for cultivation of rice. Without irrigation the work load was dictated by the rains.

[654] This over-all scheme was rejected by the government. Instead, a scheme drawn twelve years later by Sir Thomas Ward, a British irrigation expert, calling for separate small projects was adopted in 1916. Since the main source of water -- that from the Chao Phya River -- was not utilized by this latter scheme, the problem of scarcity of water in the early period of rice season has not been solved. Commenting on this point, Ingram wrote in 1955: "It is perfectly clear that if Van der Heide's irrigation schemes had been pushed forward rapidly, using foreign capital when necessary and domestic revenue where possible, the investment would have proved a sound one for the nation. The crop failure of 1919-20 alone cost the nation more than the entire

[654] cost of the works."[2] With loan from the International Bank for Reconstruction and Development, the government is now undertaking the Chainat Project which includes construction of a barrage across the Chao Phya River as envisaged by Van der Heide half a century ago.

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2. Ingram, op. cit., p. 87.

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Problems in the Marketing of Rice

Another factor which has aggravated the basic economic problem of Bangchan lies in the marketing of rice. In order to meet its contract commitments, as well as to obtain control over the price of rice to domestic consumers, the Thai government declared a monopoly on rice export at the end of World War II. This monopoly enabled the government to appropriate a large part of the high prices received for rice exports. Surplus rice had to be sold to the Government Rice Office at prices fixed in baht. Mills were allowed to sell rice for local consumption, but the entire surplus over domestic needs had to be sold to the government, which resold it to foreign buyers. Internal transport of rice and paddy was strictly controlled, and provincial surpluses of milled rice were delivered to warehouses in Bangkok. The government did not control the price of paddy. It merely bought milled rice for export, and the paddy price was determined by the competition of millers and middlemen, the willingness of growers to sell their paddy, and the rice prices paid by the Rice Office.[3]

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Government profits arose in two ways. First, the Rice Office sold rice to shippers for about 20 per cent more than the price it paid to the millers. This trading profit was considerable because both the purchase and sale by the government were paper transactions involving little expense. Second, a potential exchange profit arose from the fact that

3. Ibid., p. 88.

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243 439 655 the export price was expressed in foreign exchange. The Rice Office figured its accounts at the official rate of exchange, and the price in foreign currency was fixed at such a level that even when converted at the official rate the Rice Office could buy rice from millers and still make a 20 per cent profit on the transaction. The foreign exchange proceeds were turned over to the Bank of Thailand. The bank in turn might sell part of the foreign exchange at the official rate, e.g., for certain imports, but it also sold part at the open-market rate of exchange. On this portion it made an additional profit equal to the difference between the two rates. Ingram estimates that for each metric ton of white rice, 15 per cent broken, for which the gross price to miller was 1,306 baht in 1951, the total government profit was 1,304 baht, of which 248 baht was trading profit and 1,056 baht was exchange profit.[4] Another writer estimates that the government's profit from each metric ton of white rice, 5 per cent broken, was 1,650 baht.[5]

243 435 439 655 661 In 1951, the Ministry of Commerce began to issue a number of permits to export rice against commercial contracts. Since the world price of rice was still above the prices fixed in government contracts, exporters were eager to obtain the private permits, and a lively market for

4. Ibid., pp. 89-90.

5. M. R. Anuporn, "Rice and the Thai Government," Prachatipatti, February 5, 1955.

*243 435 439 655 661 permits sprang up. During 1951 the black-market price for such permits reached U. S. $35 per ton. Officials were obtaining permits for export against commercial contract and promptly selling them in the market. A permit for 10,000 tons meant $30,000 even at the low price of $3 per ton, and when the price hit $20-$30, the temptation to bribe the crucial officials was enormous. Millers were eager to get a cut also, and they were reluctant to make rice available unless they got some kind of a premium.[6]

*243 439 433 By 1953, however, the world demand for marketable rice began to decline, and it may be said that the rice trade had shifted from sellers' market bo buyers' market. The primary reason for this decline was the recent increase in production in the deficit countries. As a rice exporting country, Thailand was naturally adversely affected. Her position was further aggravated by high production in Burma which offered lower prices in the international market.

*243 435 439 655 In recent years, the export prices of Thai rice had been steadily raised. For a ton of white rice, 5 per cent broken, it was L47 5s in 1951, L50 5s in 1952, and L55 5s in 1953. The decline of demand forced the government to lower the export prices by L1 - L5 per ton for the first time in 1954, and finally to virtually abolish its monopoly over the export of rice in 1955.

Thus, rice export has now become "free", but actually under rigid rules and regulations especially with reference

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6. Ingram, op. cit., p. 91.

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243 to the control of foreign exchange. By abolishing its
439 monopoly over rice export the government simply gives up
655 its trading profit but still retains the huge exchange
435 profit.

It is seen that the government had been strengthening its finances and increasing its revenues through the operations of rice monopoly and exchange control, and at the same time the internal prices of rice were kept at a low level. The largest share of the burden has no doubt fallen on the rice farmer, who receives less than one-half of the paddy price he would have received in a really free market. The lively market for export permits and frequent reported incidents of irregularities by crucial officials mean that the difference between the price that the farmer should receive and the price he actually receives has not all gone to the government revenue. This difference, amounting to no less than a billion baht annually, cannot therefore be expected to be channelized back to the farm. The worst part of the system, however, is that in practice there has been a kind of an upper limit without any corresponding lower limit for farm prices of paddy. Thus, while export prices steadily rose, the farm price of paddy in Bangchan was maintained at 900-1,000 baht per ton during the period from 1950 to 1952. When the export price began to decline in 1953, but in fact it was still well over the 1951 level, the Bangchan paddy price dropped abruptly to 600 baht.

243 441 Before War II, the problem in rice marketing had been one of alleged usurpation by the Chinese middlemen -- the rice dealers and the millers. Expert organizational ability, it has been observed, has put the Chinese in control over the internal rice trade of the country. Even now, all the five rice dealers operating in Bangchan are Chinese, and the three largest rice mills in the market town of Minburi are owned and operated by the Chinese. The other rice mill -- the smallest of the four in operation in Minburi -- is owned by a Moslem.

243 441 435 563 Ingram observes that the postwar system has had the effect of increasing the number of Thai middlemen and exporters. The fixed buying price of the Rice Office introduced a degree of stability into the paddy market and enabled Thai middlemen to compete with the Chinese. Formerly, the price of paddy fluctuated wildly from place to place and from month to month because of the variety of measures used in buying it, because of seasonal variations, and because of the many transactions involving merchandise or loans. Thai middlemen did not have the working capital, the experience, or the trading ability to compete with the Chinese under those conditions. But when the millers' buying prices became fixed within narrow limits for long periods, the middleman function was greatly simplified. No doubt other factors were involved, but people in the rice trade consider the greater stability of prices to be of major importance in the rise of Thai middlemen.[7]

7. Ibid., p. 92.

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563 Relative to the enormous problem created by export and exchange control, the internal marketing problem now appears to be small at least in its relative effect on rice growers. It is true that the Chinese combines in the forms of Rice Dealers' Association and Rice Mills' Association have consolidated economic influence in favor of the Chinese middlemen in Bangkok. But it is equally true that competition among the Chinese rice dealers and millers in the countryside also has worked to the advantage of growers.

It has been observed that the Chinese dealers in Bangchan offer prices to farmers that scarcely differ from prices that the farmers could get from the millers if they were to break the existing pattern and deal directly with the millers themselves. This would often be possible because most of the local farmers possess the large chala boats needed to convey paddy to the mills which are only a few miles away. Actually, the Chinese rice dealers and Bangchan farmers have been observed to be in a rather efficient state of economic symbiosis that compares favorably [186] with most inter-ethnic divisions of labor. Further attestation is found in that there appears to be extremely little anti-Chinese sentiment among the villagers, and this is despite the fact that the national government has from time to time taken somewhat spirited measures against the [426] Chinese. The favors, non-interest bearing loans, and good will gestures accorded the Thai farmers by local Chinese dealers should also be taken into consideration.

*243 256 472 Although private rice millers in Bangkok operate with a rather high degree of collusion, in the countryside the many small millers compete actively on the basis of price charged for their services or price paid for paddy or both. The comparatively high capital investment of the enterprise has rendered inter-mill competition in the countryside very intense, and it is obvious that the farmer gains economically from such competition. If somehow the government could, by a carefully conceived gradual program, induce a large number of smaller mills to move from Bangkok to the countryside, the farmer will benefit all the more. Already, the trend has been for gradual business decline for Bangkok mills and business upswing for the countryside mills.[8]

*243 256 656 44 It is rather unfortunate, however, that the government has explicitly taken the view that small rice mills (capacity of five tons and under) in the countryside are detrimental to the interest of the farmer. It is officially held that small rice mills would bring about a large number of middlemen who would then combine to suppress the farm price. Actually, more middlemen tend to produce correspondingly keener competition in the marketing process which is beneficial, not detrimental, to rice growers.

*243 256 433 Small rice mills, which may be more conveniently erected in the villages and perhaps with local capital, will reduce the cost of transporting rice by a third, for about two-thirds of the weight of paddy is head rice, the other

8. The Economic Yearbook, edited by Luan Pannoi, Bangkok, 1951.

243 256 433 comprising the by-products of milling -- broken rice, bran, and husk. There is still a further saving when paddy is milled where it is produced, for bran would not have to be moved away from the farm as part of paddy to distant mills and then moved back again to the farm where it is bought back to be utilized as feed.

If not hampered by unnecessary government restriction, small rice mill industry will provide opportunity for local investment to which internal savings among affluent farmers may be channelized. The relatively low capital requirement and the simplicity of operation of small movable rice mills have made it possible for many Thai farmers in the northern part of the country to become successful rice millers, and there is no reason to believe that farmers in the Central Plain cannot do likewise.

Scarcity of Cash and Credit

434 4-58 An important factor contributing to the acuteness of the basic economic problem of Bangchan is the scarcity of both cash and credit in the village. Bangchan farmers receive cash from the sale of paddy in two periods -- from January to March, and from July to October. Most sales are expedited in the first period, when rentals and credit accounts are expected to be settled. Farmers also need cash for the purchase of goods they have forgone during the previous work season when they had little or no cash. Since there will be no sale of paddy during April - June when paddy cannot be moved through the shallow water level

434 in the canals, some cash is also needed to last the farmers
453 through the festive and merit-making dry season.

Since most of Bangchan operators are farmers whose incomes are barely or not at all enough to cover their household expenses, very few could hold their paddy stock for sale in the second period when higher prices may be expected.

[454] It has been observed that Bangchan farmers do not want to keep cash in their homes for fear of robbery. This is probably another reason for the withholding of paddy from sale in the first period in addition to the prospect of better prices. These few affluent farmers who have some paddy for sale in the second period have to sell it all before the arrival of new crop which often floods the market and forces the prices down.

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[426] Farmers usually arrange that payment for their paddy be made in the market town where they immediately pass most of the cash on to their creditors or sellers of the goods they plan to buy on that date. On the way home, they would stop over at the village stores to settle their other accounts. Thus, by the time they are back at home there is not much cash on hand to worry about. The few affluent farmers would do the same thing in their early sales -- that is, they would sell only a small portion of their crop so that there will be only a small amount of cash left on hand by the time they are back at home. In their later sales, however, these farmers must have a large amount of cash. It has

43 been observed that arrangement is often made to pass the excess cash on to other people -- usually borrowers or sellers of land or capital goods.

It is seen, then, that only a part of cash payment for surplus paddy sold by Bangchan operators is brought into the village, and that the amount brought in would not stay long in the village either.

It is also seen that this dread of cash together with the normally low net cash return from rice because of relatively high cost of production have tended to keep the money supply in the village at the midmum level even during the harvesting season.

426 To offset the low money supply, credit is extensively used in the village, especially after July until December when cash received from the sale of paddy has been all used [436] up and the sale of the new crop has not started. Paddy is also used as medium of exchange.

It has been shown that debt is widespread in Bangchan, and that the modal interest rate was 24 per cent per year for loans and 50 per cent per year for credit purchase accounts. No matter how extensively credit is employed, these high rates of interest indicate that there is still a scarcity of credit itself and of credit facilities in the village.

Scarcity of credit is indicated not only by high apparent rates of interest but also by discounts and premiums of various forms. Some of these are: (a) Tog khao wherein

426 two tang of rice are required to pay at harvest time for one tang of rice borrowed during the cash-scarce work season; and (b) Tog raeng wherein an advanced payment of say 10 - 15 baht is made for a promise to harvest one rai of paddy which normally brings in a cash wage of 25 - 30 baht payable on the day the work is done.

Scarcity of credit and the consequent high interest rates naturally discourage productive investment, for those who need operating capital certainly cannot afford to pay for these high rates of interest and those who have cash at all would do much better by straight lending.

426 471 184 Scarcity of cash and credit in the village is a blow especially to the marginal farmers who comprise the majority of Bangchan operators. These are farmers with a low index of capital formation potential who are often found among the land-thirsty category of operators. It has been pointed out that farmers with a high index of capital formation potential could more easily adjust their credit situation and thus are able to avoid high interest bearing debts. The marginal farmers, on the other hand, cannot do likewise. Scarcity of cash and credit and its consequences -- high interest rates and discounts and premiums of various forms -- have certainly put these marginal farmers at a most disadvantageous spot of receiving less for the same unit of labor and product and of having to pay more for the same unit of goods. Under this circumstance, the gap between the affluent and the less affluent farmers is ever increasing.

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CHAPTER IX

CONCLUSIONS

*243 *128 493 In Chapter VIII, we have tried as far as we could to locate salient features of current economic problems of Bangchan, in an attempt to achieve the primary purpose of this dissertation. It is seen that those problems which have been brought to light by available evidences center around low incomes and excess of expenses over receipts. This basic problem is aggravated by population pressure, the lack of effective control of water, complications of the postwar marketing of rice, and the scarcity of cash and credit in the village.

It is seen also that those various points brought out in Chapter VIII have aspects of geographical, technological, social, institutional, and even personal nature. *243 433 On the whole, however, they are interrelated and often integrated. The problem of low incomes, for example, is closely associated with those of population pressure and limited earning opportunities, both of which are affected by soil and water conditions. These have been rendered more acute by suppressed farm prices brought about by the postwar marketing conditions. As a result, expenses tend to exceed incomes -- a condition leading to scarcity of cash

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243 and credit, which in turn has caused the rates of interest
433 to be rather high. High rates of interest discourage investment, forcing the farmer to rely solely on returns from rice which is not purely a business enterprise but also a way of life. Rice production is affected by the lack of effective control of water and the small size of the farm which is limited by population and other job opportunities. Low production and relatively low prices of rice result in low incomes, thus completing the circle.

This sort of circular relationships by which the perpetuation of poverty of rice farmers in the Central Plain of Thailand may be explained is known as the vicious circle of poverty. Already, we have uncovered the conditions circumscribing this vicious circle. The task ahead is to break this circle and create an economic environment necessary for the attainment of rural prosperity.

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APPENDIX A

TERMS USED IN THIS STUDY

Measurement

*104 [243]

1. Rough rice or paddy: Grains of rice after they have been threshed but before they have been milled.

2. Milled rice or clean rice: Grains of rice after they have been milled.

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3. One rai equals two-fifths of an acre.

4. One tang equals twenty litres. It is the standard measurement for both paddy and rice. The weight of one tang of paddy varies from one locality to another. On the average, Bangchan paddy weighs about eleven kilograms per tang. The weight of one tang of milled rice does not vary significantly from place to place, the average being sixteen kilograms.

5. One baht (weight for gold and silver) equals fifteen grams.

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Currency

The basic monetary unit is the baht. During the period of the study, Thailand maintained a so-called open market exchange rate which served largely as the going and legal rate for all commercial transactions other than exported rice and a few specified items of export and import. At the time of the study, this open market rate was about 20.25 baht to one U. S. dollar.

The official rate of exchange during the early post-war period was 10 baht to one U.S. dollar. Following the

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436 devaluation of the pound sterling in September, 1949, this official rate was changed to 12.50 baht to one U. S. dollar.

Geographical Administrative Units

The area of Thailand is divided into 71 changwad, which we shall translate as "provinces". Each of these is under an official whose title we shall translate as "commissioner". In each province are a varying number of amphur, or districts, each under a Nai Amphur, or "district officer". In each district are many tambol, or "communes", each under a kamnan, or "commune chief". In each commune are many mu-ban, or "hamlets", each under a puyai-ban, or "headman". The hamlet is the lowest administrative unit.

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APPENDIX B

SCHEDULES USED IN THIS STUDY

125 I. Schedule 2.

RICE PRODUCTION COSTS AND INCOME, B.E. 1948, BY HOUSEHOLDS

10. GENERAL

101. Mu Ban House No. 102. Name

103. Date 104. Informants

OUTGO

RAI WORKED

11. By separate parcels:

111. Size 112. Rai

113. Location 114. Distance from home

115. Direction

12. By rice variety:

121. Variety 122. Rai

123. Parcel No. 124. Expected harvest date

13. Rai owned:

131. Owned free 132. Mortgaged and terms

14. Rai owned, not worked, not rented out:

141. Rai 142. Description

143. Location 144. Disposition

125 15. Rai used not producing rice:

151. Rai for house — 152. Rai for garden

153. Other — 154. Note tenure if not owned

16. Rai rented in:

161. Rai — 162. Parcel No. (111)

163. From — 164. Rate

MATERIALS CONSUMED

20. Seed:

201. Variety No. (121) — 202. Amount

203. Source — 204. Price or value

21. Fertilizer:

211. Kind — 212. Amount

213. Source — 214. Price of value

22. Other (oil, salt; etc.):

221. Kind — 222. Amount

223. Source — 224. Price of value

LABOR UTILIZED

30. Family workers:

301. Name (sex, age) — 302. Relationship

31. Workers hired by year:

311. Name, sex, age — 312. Origin

313. Agreement

32. Piece work:

Process	workers, origins	Quantity	Rate	Total cost
321. Preparation	3211	3212	3213	3214
322. Uprooting	3221	3222	3223	3224
323. Transplanting	3231	3232	3233	3234

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324. Harvesting 3241 3242 3243 3244

325. Other 3251 3252 3253 3254

CAPITAL GOODS USED:

40. Buffalo owned:

401. Workable 402. Young

4011. Names 4012. Value

4013. Life 4014. Residual value (meat, hide, other)

41. Buffalo rented in:

411. No. 412. Value

413. Owner 414. Dates

415. Rate

42. Buffalo costs:

421. Food 422. Labor

423. Medicine (for what) 424. Other

43. Buffalo outfit-yoke:

431. No. 432. Life

433. Cost, each

44. Buffalo outfit-yoke rope:

441. Material 442. Meters per year

443. Cost

45. Buffalo outfit-other rope:

451. Lead rope material 452. Meters per year

453. Cost 455. Nose rope material

456. Meters per year 457. Cost

46. Harrows:

461. No. 462. Material

463. Life 464. Cost, each

125 47. Plows:

471. No. 472. Types

473. Cost, each

Parts	Material	Life	Cost
474. Share	4781	4782	4783
475. mold board			
476. Handle			
477. Hitch			

48. Sickles:

481. No. 482. Life

483. Cost 484. Times whetted

485. Cost

49. Weeding knife:

491. No. 492. Life

493. Cost

50. Hoes:

501. No. 502. Life

503. Cost

51. Shovel:

511. No. 512. Life

513. Cost

52. Winnowing Machine:

521. No. 522. Life

523. Cost 524. Upkeep

53. Other tools: (water wheel: threshing pole: rake: etc.)

531. Kind 532. No.

533. Life 534. Cost

125 54. Boats:

541. Type 542. No.

543. Life 544. Cost

545. Upkeep 546. Residual value

55. Windmills:

551. No. 552. Cost

553. Upkeep

Parts	Size	
554. Arm	5541	555. Post
556. Pulley, shaft		557. Rope (Chain)
558. Life		559. Cost

56. Noria:

561. Kind 562. No.

563. Life 564. Cost

565. Upkeep

57. Engine:

571. Type 572. Life

573. Cost 574. Upkeep

575. Fuel Type 576. Amount

577. Cost

58. Watch house:

581. Material 582. Life

583. Cost

60. Other water, irrigation costs:

70. Building Material:

701. Use 702. Kind, amount

703. Source 704. Cost

705. Life 706. Repair

125 71. Taxes:

711. Kind
712. When due
713. Cost

72. Other costs:

INCOME

80. Rai rented out:

801. Rai
802. Description
803. Location
804. To
805. Rate
806. Cost

81. Buffalo rented out:

811. No.
812. Value
813. Life
814. To
815. Period
816. Rate

82. Equipment rented out:

821. Kind
822. No., amount
823. To
824. Period
825. Rate

83. Rice sold:

831. Variety
832. Amount
833. Harvest date
834. Sale date
835. To
836. Price
837. Straw sold

84. Rice kept:

841. Variety
842. Amount
843. Harvest date
844. Value

85. Family rice work wages:

851. Name
852. Employer
853. Work, dates
854. Rate

125 856. Net wage

86. Other income:

II. Schedule 2a (Simplified form of Schedule 2)

1. Name
2. Date
3. Rais worked
4. Rais rented in
5. Rais rented out
6. Rais owned
7. Home lot
8. Seed and planting method
9. Family labor used
10. Hired labor used
11. Piece work
12. Buffaloes used
13. Buffaloes owned
14. Buffaloes rented in
15. Buffaloes rented out
16. Ropes; yoke (number, life)
17. Ropes neck
18. Ropes nose
19. Ropes lead
20. Plows
21. Harrow
22. Sickles
23. Knife
24. Hoe
25. Shovel
26. Box bin
27. Mat bin
28. Basket
29. Chinese broom
30. Coconut broom
31. Pitchfork
32. Kata
33. Rake
34. Wood shovel
35. Boat
36. Sampan
37. Chala
38. Hard
39. Windmill
40. Rahad (Noria)
41. Winnowing machine
42. Building
43. Engine

125 III. Schedule 11

ACREAGE AND CROP BY YEAR

Name of operator..... Date.....

Year	Area devoted to rice	Harvested crop
1949	..... rai	.....tang
1950	..... rai	.....tang
1951	..... rai	.....tang
1952	..... rai	.....tang

IV. Schedule 12

SPECIAL RECEIPTS AND EXPENSES DURING 1948-52

1948

Kind and amount of special receipts.....
.....
.....
Kind and amount of special expenses.....
.....
.....

1949

Kind and amount of special receipts.....
.....
.....
Kind and amount of special expenses.....
.....
.....

1950

Kind and amount of special receipts.....
.....
.....
Kind and amount of special expenses.....
.....
.....

1951

Kind and amount of special receipts.....
.....
.....
Kind and amount of special expenses.....
.....
.....

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1952

125 Kind and amount of special receipts.....
.....
.....

V. Schedule 13

ORDINARY HOUSEHOLD EXPENSES, MARCH 1952 - FEBRUARY 1953

Name of operator.....Date.....

Kind and amount of goods consumed:

Paddy.....tang
Coconut.....fruit
Palm sugar.....can (of twenty litres)
White sugar.....kilograms
Shrimp paste..... "
Onion..... "
Garlic..... "
Dried chili..... "
Salt..... "
Curry essence..... "
Limes.....baht
Tamarind.....kilograms
Fish..... " ; bought.....kilograms
Vegetables..... " (per day)
Fish sauce.....bottles
Fermented fish.....barrels; home made.....barrels
Meat.....baht
Dried areca..... "
Betel leaves..... "
Lime.....kilograms
Native tobacco.....bundles
Tobacco binder.....bundles
Matches.....boxes
Soaps.....soaps
Eggs.....eggs; sold.....eggs
Medicine.....baht
Temple contribution.....baht
Contribution to neighbors...baht
Personal expenses.....baht
Clothing.....baht
Children's allowances.....baht
Kerosine: for light.....can; for fishing.....can; for irrigation.....can.

125 VI. Schedule 14

FARM AND HOUSEHOLD INVENTORY

Name of operator.....Date.....

Item	Quantity	Present or replacement value
Land		
Building		
Buffaloes		
Farm implement		
Plow		
Harrow		
Roller		
Sickle		
Weeding knife		
Hoe		
Shovel		
Windmill		
Noria		
Gas engine		
Pitchfork		
Kata		
Rake		
Chinese broom		
Coconut broom		
Basket		
Mat bin		
Box bin		
Winnowing machine		
Wooden spatula		
Others		
Boats		
Sampan		
Kard		
Chala		
Others		
Fishing equipment		
Net		
Trap		
Spear		
Hook		
Pressure lamp		
Others		

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Item	Quantity	Present or replacement value
Poultry and other livestock		
Chicken		
Duck		
Others		
Kitchen utensils (enumerate)		
Bedding (enumerate)		
Storage (enumerate)		
Furniture (enumerate)		
Miscellaneous (enumerate)		

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125 VII. Schedule 15

BRIEF HISTORY OF FARM OPERATOR

Name of operator.....Date.....

Name of spouse.....

Other members in the family

Name.....Relation.....
Name.....Relation.....
Name.....Relation.....
Name.....Relation.....
Name.....Relation.....
Name.....Relation.....
Name.....Relation.....
Name.....Relation.....

Date of first marriage.....
Date of starting an independent family.....
If not branching off from old family, date of assumption of familyheadship.....

List kind, quantity, and value of parental gifts when branching off:

Item	Quantity	Value
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

List kind, quantity, and value of wealth accumulated during nascent period:

Item	Quantity	Value
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Describe past incidents of significance which had occurred to you:

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125 VIII. Schedule 16

BRIEF HISTORY OF FARM LABORER

Name of laborer..... Date.....
Age.....Education..... Date ordained.....
Date conscripted..... Date married.....
Name of father.....of mother.....of spouse.....
Names of children..... ....
....

Work record during past five years:

Year	Employer	Wage
1953	.....	.....
1952	.....	.....
1951	.....	.....
1950	.....	.....
1949	.....	.....

Information on condition of parents:

.....
.....
.....
.....

Information on the condition of the laborer:

.....
.....
.....
.....

125 IX. Schedule 17

CHECK LIST OF ECONOMIC CONDITION OF OPERATOR

Name of operator..... Date.....

Rai worked.....Rai owned.....Rai rented in.....
Rai rented out..... (all in 1952 rice year only)

Rental rates in 1952: Rate paid.....Rate received.....

Paddy stock on hand at the end of March, 1953.....tang

Outstanding debts in December, 1952 (before settlement by money received from the 1952 crop):
Long term loans: Amount.....baht Rate of interest.....
Amount.....baht Rate of interest.....
Amount.....baht Rate of interest.....

Credit purchase account: Total.....baht Principal,,....

Has credit purchase account of 1951 been fully paid at the harvesting season of that year? (Check) Yes.... No....

Amount of credit purchase account that was carried over from last year.....baht. Of this how much was the principal, or the amount agreed upon at the harvesting season of last year?.....baht.

The operator's comment on general debt situation:

.....
.....
.....
.....
.....

The operator's comment on debt situation of the people he knows:

.....
.....
.....
.....
.....

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125 X. Schedule 18.

DAILY WORK RECORD OF CHOM FARM STAFFS

Date_____

Hour	Kind of Farm Work				
	Worker A	Worker B	Worker C	Worker D	Worker..
0:00- 0:30					
0:30- 1:00					
1:00- 1:30					
1:30- 2:00					
2:00- 2:30					
2:30- 3:00					
3:00- 3:30					
3:30- 4:00					
4:00- 4:30					
4:30- 5:00					
5:00- 5:30					
5:30- 6:00					
6:00- 6:30					
6:30- 7:00					
7:00- 7:30					
7:30- 8:00					
8:00- 8:30					
8:30- 9:00					
9:00- 9:30					
9:30-10:00					
10:00-10:30					
10:30-11:00					
11:00-11:30					
11:30-12:00					

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Hour	Kind of Farm Work				
	Worker A	Worker B	Worker C	Worker D	Worker..
12:00-12:30					
12:30-13:00					
13:00-13:30					
13:30-14:00					
14:00-14:30					
14:30-15:00					
15:00-15:30					
15:30-16:00					
16:00-16:30					
16:30-17:00					
17:00-17:30					
17:30-18:00					
18:00-18:30					
18:30-19:00					
19:00-19:30					
19:30-20:00					
20:00-20:30					
20:30-21:00					
21:00-21:30					
21:30-22:00					
22:00-22:30					
22:30-23:00					
23:00-23:30					
23:30-24:00					

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APPENDIX C

REGISTERED RICE MILLS IN THAILAND

256 I. Number of registered rice mills in Thailand by changwad.

Changwad*	Number	Changwad*	Number
Angthong (C)	16	Patalung (S)	14
Ayuthia (C)	61	Pattani (S)	2
Bangkok (C)	49	Patumtani (C)	29
Buriram (NE)	5	Pichit (C)	26
Chacherngsao (C)	42	Prachuab (C)	4
Chainat (C)	4	Petchabun (C)	8
Chaipum (NE)	2	Petchaburi (C)	12
Chantaburi (C)	15	Pisnulok (C)	6
Chiengmai (N)	28	Prae (N)	6
Chiengrai (N)	12	Puket (S)	6
Cholburi (C)	25	Rajburi (C)	38
Chumporn (S)	9	Rayong (C)	9
Dhonburi (C)	45	Roi-ed (NE)	2
Kambaengpet (C)	5	Sakonnakorn (NE)	1
Kanburi (C)	3	Saraburi (C)	23
Khonkaen (NE)	12	Satul (S)	1
Krabi (S)	1	Singburi (C)	6
Lampang (N)	14	Smudprakarn (C)	26
Lampoon (N)	1	Smudsakorn (C)	14
Lopburi (C)	19	Smudsongkram (C)	11
Maehongsorn (N)	1	Songkla (S)	7
Mahasarakam (NE)	1	Srisaked (NE)	3
Nakornnayok (C)	16	Sukhotai (C)	6
Nakornpanom (NE)	4	Supanburi (C)	40
Nakornpatom (C)	38	Surin (NE)	6
Nakornsawan (C)	29	Tag (C)	4
Nakornsritamraj (S)	21	Trad (C)	3
Nonburi (C)	15	Trang (S)	1
Nongkai (NE)	2	Ubonrajtani (NE)	14
Pang-nga (S)	3	Udorntani (NE)	10
		Utaitani (C)	10
		Uttradit (C)	6

* Abbreviation immediately following each changwad indicates the geographical region: C, Central; N, North; NE, Northeast; S, South.

256 II. Number of registered rice mills in Thailand by region.

Region	Number
Central	663
North	62
Northeast	62
South	64
Total	851

III. Bangkok rice mills and their capacities (only those in operation)

Name of mill	Capacity tons/24 hrs.
Thai Rice Mill, 1	500
Thai Rice Mill, 2	350
Kwang Heng Lee	300
Kwang Hong Lee	250
Kiang Lee	230
Tai Sae	230
Chin Heng Lee	210
Nguan Hong Lee	200
Nguan Chiang Lee	185
Kwang Sun Thai	180
Chin Seng Lee	176
Long Heng Lee	165
Thai Rice Mill, 10	160
Chiang Seng Huad	160
Long Heng	160
Kwang Heng Thai	150
Kwang Sun Lee	150
Liang Huad Lee	130
Yong Chiang Thai	130
Thai Rice Mill, 7	110
Long Seng	90
Lee Heng	88
Hua Heng	84
Yu Heng Lee	80
Thai Rice Mill, 8	65
Chiang Seng Hong	60

Source: Economic Yearbook, 1954

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APPENDIX D

LIST OF FRUIT GROWN IN BANGCHAN

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Thai name	English name	Season
Chompu	Rose apple	Mar. - April
Farang	Guava	Aug. - Sept.
Khanun	Jack fruit	Nov. - May
Kluay	Banana	all year round
Kraton	Santol	Oct. - Dec.
Lamud	Chico	Nov. - April
Mafai	Rambeh	Mar. - April
Makharm	Tamarind	May -- Jan.
Makharm-pom	. . .	Nov. - Feb.
Makharm-ted	Manila tamarind	Dec. - Feb.
Makorg	Hog plum	Jun. - Sept.
Makrood	Kaffir lime	July - Oct.
Malakor	Papaya	all year round
Mamuang	Mango	April- June
Manao	Lime	July - Nov.
Maprao	Coconut	all year round
Maprang	Marian plum	Feb. - Mar.
Mapud	. . .	Mar. - Jun.
Matum	Bael fruit	July - Oct.
Ma-ug	. . .	all year round
Mawaeng	Sparrow's brinjal	July - Oct.
Mayom	Star gooseberry	Dec. - May
Noina	Custard apple	Nov. - Dec.
Phudsa	Jujube	Dec. - Jan.
Sapparod	Pineapple	May - Jun.
Som-khiewwan	Tangerine	Nov. - Dec.
Som-o	Pummelo	Sept.- Jan.
Som-sa	Sour orange	all year round
Tabtim	Pomegranate	all year round
Wa	Java plum	April
Yor	Morinda	all year round

(. . .) Not available.

APPENDIX E

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LIST OF VEGETABLES GROWN IN BANGCHAN

Thai name	English name	Season
Bawn	. . .	all year
Bua	Lotus	July - Dec.
Bua-bog	. . .	all year
Buab	Sponge gourd	Sept.- Dec.
Buab-liam	Towel gourd	May - Sept.
Chaploo*	Wild betel	all year
Faeng	Little gourd	Sept.- July
Fagthong	Pumpkin	Mar. - June
Horapa	Sweet basil	all year
Kaprao	Holy basil	all year
Khamin	Turmeric	all year
Khar	Galanga root	" "
Khileg	. . .	" "
Khing	Ginger root	" "
Krachai	. . .	" "
Makhua	Eggplant	" "
Man-musua	Yam	Oct. - Dec.
Man-samparang	Cassava	Mar. - April
Man-samrong	Bitter cassava	Mar. - April
Namtao	Bottle gourd	Aug. - Sept.
Oy	Sugar cane	Nov. - Mar.
Pag-bia*	Purslane	all year
Pag-bung*	Morning glory	" "
Pag-chee	Parsley	" "
Pag-kached	. . .	" "
Pag-khom*	Amaranth	Dec. - May
Pag-pangpuay*	Primrose willow	May - June
Pag-waen	Marsilea	July - Oct.
Prig-khinu	Bird pepper	all year
Sadao	. . .	Dec. - Feb.
Sano	. . .	Oct. - Dec.
Saranae	Peppermint	all year
Takrai	Lemon grass	" "
Tamlung	. . .	" "
Thonglang	. . .	Feb. - Mar.
Thua-fagyao	String bean	all year
Yod-khae	Kauri	April - May

(. . .) Not available.

* These plants grow wild in Bangchan.

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APPENDIX F

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LIST OF FISH AVAILABLE IN BANGCHAN

Thai name	English name	Season
Hoy karb	. . .	July - Sept.
Koy khong	. . .	all year
Kung	Prawn	July - Sept.
Kung foy	Shrimp	January
Pla boo	Goby	July - Dec.
Pla chado	. . .	all year
Pla chalad	. . .	" "
Pla chon	Serpentheadfish	" "
Pla dug	Silurid	" "
Pla jeed	Catfish	July - Feb.
Pla juad	. . .	July - Oct.
Pla kad	Fightingfish	July - Sept.
Pla kating	. . .	July - Oct.
Pla katunghew	. . .	July - Feb.
Pla khayaeng	. . .	July - Dec.
Pla khem	Needlefish	July - Feb.
Pla kod	. . .	July - Dec.
Pla kradi	Gourami	all year
Pla krai	Featherbackfish	July - Dec.
Pla krasong	. . .	all year
Pla krim	. . .	July - Dec.
Pla lai	Eel	all year
Pla lod	. . .	" "
Pla mor	Climbingfish	" "
Pla nua-on	Sheatfish	July - Dec.
Pla paeb	Minnow	July - Dec.
Pla salid	Pilotfish	all year
Pla siw	Carp	July - Dec.
Pla soy	. . .	July - Oct.
Pla tapian	Dace	July - Dec.
Taparb-nam	. . .	all year

(. . .) Not available.

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[For the author's discussion of his methods of processing data, ratings, scoring and sampling techniques, passim, see category 116, pp. 52, 53, 94, 127-156, 170-199, 215-221, 240-243, 271-311, and 364-391.]

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[Information on sampling techniques, methods of scoring, and the usage of control groups have been filed also in the category 128.]

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[For agricultural data, passim, see category 116, pp. 1-4, 31-38, 45-48, 92-148, 166-319, and 336-393.]

APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children. . . . . The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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1. In reproducing these notes, slight changes have been made such as substitution of descriptive terms for personal names which appeared in the original.

117 takes it down the steps to the fish pond, where she swishes
252 the basket around to wash the fish, and rinses her hands at the same time.

[23] There are some hazards to the food--chickens trying to get at the edible part of fish while the niece cleans it (she leaves the scales, etc. for them to eat); cat and kittens in the kitchen, having to be driven away from the grated coconut and coconut milk, and getting an occasional unweighed nip. Whether we start to weigh food for the evening meal or a.m. meal, some cooked foods are apt to be used, either left over
[26] from a previous meal, or cooked in advance. This a.m., for
[26] example, buffalo meat, already cooked (but not weighed before cooking) was used, and (3)khii-(2)leg leaves, which SS weighed last night. These latter were cooked last night, to reduce bitterness, then put into curry today.

Description of Food Preparation Area in a Relatively Poor Household

Wednesday, May 27, 1953

117 Arrived about 5:45 a.m. While other food was being pre-
[26] pared, the 11-year old son came in with a package of salted white radish and a small milk tin with some coconut oil which had just been bought. This is the house which we found flooded when they sent for us to see the baby last fall. The roof seems to be well thatched. The floor is not wet after last
[35] night's downpour. The bed platform, in one corner, is about
[35] 8 x 10 feet. The baby's cradle hangs above it. In the oppo-
[35] site corner is a shelf where utensils are kept. Some food,
[25] in paper bags, is in a basket hung from the roof. Fresh fish
[35] is kept in a jar of water until needed. The stove is on a small mound of earth, and further elevated on a small box (just big enough for the stove) filled with earth.

[55] We sit on a mat, spread on the mud floor, with the
[55] scales, plastic bowls and waxed paper ready for weighing food. The children lie on a mat nearby. In the house is a fresh mound of earth, a small straw bin with rice, and various pieces of equipment.

Notes on Meal Service

In a Relatively Prosperous Household

Friday, May 22, 1953

117 262 Before breakfast is served, the six-year old girl comes with a piece of jack fruit. SS weighs it and tells her to bring back what she does not eat. Later she comes with hands full of stones (14 of them). She has eaten this much as a "snack" before the regular meal. The grandmother finishes the piece (7 stones) and gives the rind to SS to weigh.

[264] At breakfast the family sits in a circle on the kitchen floor. Each person except the baby has his own bowl of rice before him. In the center of the circle, within reach of all, are four small dishes of "with-rice" which has been prepared for breakfast: sour curry of buffalo meat, curry of (3)khii-(2)leg leaves, bean sprouts and one small fried fish. The mother takes a very small bit of fish on a spoon with rice, and feeds baby. During breakfast baby has 6 bites of rice with fish, nine small spoonfuls of rice with sour curry. The mother herself eats one bite of fish. She takes four spoonfuls of sour curry on plate with rice. This is shared with baby. Mother and baby eat mainly rice, fish and sour curry of buffalo meat, whereas grandmother and the six-year old girl have curry of (3)khii-(2)leg leaves and bean sprouts with their rice.

In a Relatively Poor Household

Wednesday, May 27, 1953

While the mother finishes the meal preparation, the seven-year old girl feeds the baby, first rice with some chopped egg, then rice with the "water" from the egg. The mother remarks that she cannot cook unless someone looks after the baby.

117 264 Technique of eating -- A tray with the "with-rice" is set out, also a bowl with water, for rinsing the hand, and a basin or bowl with drinking water. There are spoons in the "with-rice," but these seem to be used for taking some of the juice, which may be eaten directly or put on the individual's bowl of rice. Solid pieces are taken from the serving dish by hand, and mixed with some of the rice, which is then picked up in the right hand. Occasionally the person eating will rinse his hand with water. When finished, each person rinses his bowl (using either water from the bowl nearby, or from the general supply -- in this case the canal). Dishes are turned upside down on the platform near the stove, to dry.

Examples of Notes on Food Eaten by Individuals

• 117
262
264 Household 16 July 23, 1953

Family members observed at meal-time: All, as they ate breakfast at various times.

Notes re kind and amount of food eaten:

Breakfast: Girl aged 12 and boy aged 7 start eating at 7:20 a.m. Each one has one dish of rice and stew of swamp cabbage and salt fish for breakfast. They are through eating at 7:40 a.m.

9:10-9:30 a.m. Father eats two dishes of rice with stew and mother does also.

10:10-10:20 a.m. Son, 18 yrs. old, returns home and eats two dishes of rice mixed with stew.

10:40-11:00 a.m. Sons aged 25 and 20 have breakfast. The older one eats two dishes of rice but the younger one eats three.

11:30 a.m. Daughter aged 22 has two dishes of rice and stew. She is through eating at 11:45 a.m.

Household 67 May 26, 1953

Family members observed at meal-time: Mother and children.

117
262 Notes re kind and amount of food eaten:

Dinner: Girl aged 7 seems to be fond of fish but dislikes vegetables. Boy aged 11 likes to eat the vegetables from the curry. Each one eats two dishes of rice mixed with small amount of hot curry (5:02-5:17 p.m.)

[855] One year old baby is fed by his older sister, eating two spoonfuls of rice mixed with boiled coconut milk. Whenever he refuses to eat, his mother nurses him.

5:40-5:55 p.m. Mother eats 3 dishes of rice with 2 dishes of hot curry, containing a small amount of fish.

Father begins eating at dark so we can't see him.

Table 14. Ages of Infants and Young Children at First and Last Measurements[1], Bang Chan, Thailand, 1952-54.

145

Age at First Measurement	Age at Last Measurement	Number of Children		
		Total	Boys	Girls
months	months			
under 1[2]	13-18	16	5	11
1-3	16-21	12	8	4
4-5	20-22	5	4	1
7-9	23-27	4	2	2
11-12	22-28	6	4	2
13-18	29-35[3]	6	0	6
19-24	36-40	10	3	7
25-30	40-45	5	3	2
31-35	42-51	4	4	0
36-43	53-60	3	3	0
		71	36	35

1. In addition to these listed nine children were measured once or twice but were not followed longer.

2. Weights and recumbent lengths for infants under 1 month are not included in this report because of varying ages from one day onward, at which the initial observations were made.

3. Except for one child who was measured over a relatively short period.

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these circumstances we find differences in response, we can be fairly confident that we have a true measure of personality differences and not a measure of how well these people have learned their respective cultures [first italics added]. 121

In my view, the Rorschach, not being a language-mediated instrument, is descriptively and analytically limited to too narrow a sector of psychological functioning (primarily to perceptual processes). It was therefore not used in my own research. However, the major condition of Spiro's argument is admirably fulfilled by our Sentence Completion Technique, the statements of which—covering a broad spectrum of psychological experiences—were expressly designed for, and are capable of, use not only in Thai peasant culture but in several other cultures of the world. 12.

The next two basic stages of the research are intended eventually to provide analytic depth and descriptive detail to the earlier formulations. The third stage, involving the use of the Thematic Apperception Test—eleven of the original Murray–Morgan "American" cards which were redrawn to suit Thai conditions—is concerned with portraying the fantasies and unconscious sentiments of the villagers to the extent to which they are willing or capable of articulating material which reveals such sentiments. This last point is important. I used the TAT in Bang Chan on the premise that this technique would elicit the type of data it is theoretically designed to elicit; that is, when informants are presented with highly ambiguous pictures and asked to make up stories describing what is occurring in the pictures, they will project through these stories their own unconscious sentiments and preoccupations. The rationale here is that since the stories and the pictures which stimulate them are so highly fanciful, with no realistic consequences or constraints, informants will give free rein to their imaginations and reveal those concerns that are not usually expressed in the more inhibiting and realistic circumstances of ordinary life; and being fantasies, the stories represent projections of unconscious materials. It is this fanciful element that differentiates the TAT data analytically from the considerably more realistic SCT materials.

To a large extent, these theoretical expectations were fulfilled in the informants' responses to the TAT. The villagers' inordinate preoccupation with aggression and social conflict in the stories, for example, was almost the antithesis of what one would predict from observations of overt behavior, but made considerable sense to an investigator who always found it hard to believe that their marked non-aggressiveness at the behavioral level did not betray something quite different at more latent levels.

Despite successes of this sort with the TAT, there were several instances when informants did not seem to articulate analytically useful material. This was either because some pictures held little psychological significance for them (and this happened, I might add, with cards that

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were expected to be among the most stimulating) or, more important, because the informants' stories were getting psychologically too close to home: the "unconscious sentiments" they were supposedly projecting onto the figures in the cards were becoming uncomfortably conscious and knowingly self-descriptive.

Thus informants would often get their story "heroes" into emotionally difficult or painful situations, and as if recognizing what they had done—"I will reveal this much, but not more"—would resist elaborating, working through, or even resolving the fanciful but personally distressing situations they had created.

I mention these difficulties primarily to emphasize that despite the usefulness of an instrument like the TAT for evoking the unconscious feelings of informants—and doing so more efficiently than other techniques heretofore devised—the extent to which such feelings will in fact be articulated depends largely on the informants' emerging awareness of their feelings, or lack of same, a characteristic which may well vary from culture to culture. In assessing TAT responses or any other fantasy materials, therefore, it is well to remember that the obtained data may eventually tell us just as much about the process of accepting and rejecting unconscious feelings as it will about the content of "unconscious" feelings as such.

The fourth section of the research consists of several detailed life histories. The major aim here is to provide in the most naturalistic terms possible what it means to feel and think like a Thai peasant. Except for highly general, open-ended questions ("Thinking back on your life, what are the most important things that ever happened to you?"; "What kind of childhood did you lead?") and occasional probes, the data are completely the product of the villagers' own assumptions, trains of thought, and emphases.

Having collected and worked with all the foregoing data, I would suggest that the life histories are clearly the most descriptively rich and psychologically revealing, especially when coupled with individual analyses of the projective test materials. However, being life histories, they are also highly idiosyncratic—perhaps an inevitable concomitant of their richness. It is precisely for this reason that the analyses of life histories were (and should be) undertaken toward the latter part of a research program, after a basic picture of psychological modality and variation, as well as a general description of villagers' unconscious processes and preoccupations, has first been provided. It is only in such a context that their representative character,[3] as well as their substantive significance, can be intelligently

[3] I am referring here to *psychological* representativeness, not to the more familiar problem of *social* representativeness—age, sex, occupational roles—that has been bruited about in the literature (Lindesmith and Strauss 1950, Mead 1953 and 1955,

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determined. So frequently the provocative, interesting, or delightfully human life histories found in the anthropological literature (Dyk 1938 and Tirabutana 1958 come immediately to mind) are so simply because they are the products of the more imaginative, articulate, and introspective members of the culture in question. The issue of course is not that a biography elicited from an articulate individual is to be considered ultimately any more or less valuable than one obtained from a more "typical" member of the culture—Kluckhohn's "Mr. Moustache" (1945) is ample evidence of what an articulate interpreter can do with the life history of a relatively inarticulate informant—but rather that it be accurately seen against a background of the psychological responses of the members of the community as a whole.[4]

The final stage of the research program is perhaps the most complex. Following the outlines of a recommendation originally made by Inkeles and Levinson (1954) and Inkeles (1959), it aims at presenting a systematic analysis of the *relationship* between the personality tendencies of the villagers, as determined through the foregoing materials on the one hand, and the functional requirements of Thai peasant society, as determined through ethnographic data, on the other.

An analysis of this type rests on at least three premises: (1) that there is just as likely to be a lack of congruence between the psychological capacities and proclivities of a group of people and the psychological demands that are made upon them by their own social institutions (demands that must be met if the institutions are to be maintained effectively) as there is likely to be a close fit, and that a crucial, empirical task of any culture-personality study is to detail the specific areas of congruence and noncongruence; (2) that human beings can bear considerable psychological strain—precisely how much we really do not know—and still function effectively, maintaining both their prevailing personality patterns and

Mandelbaum 1953, among others). The issue is the extent to which the psychological tendencies of life history informants—their readiness to respond and modes of response in various situations, their assumptions and unconscious premises—are typical of other villagers.

[4] I am reminded here of my own ambivalent reaction to a comment once made by a villager who, intrigued by the fact that I was collecting life histories, said: "I have heard about those people who are telling you their life stories. You've smart—getting interesting ones like them. Some of those people can really *phuud kay*." To *phuud kay* means to "speak well," but more particularly to speak cleverly, fluently, deceptively, convincingly, or beautifully (in an aesthetic sense). Actually, there were numerous individuals in Bang Chan who, in local terms, could speak considerably more *kay* than the life history informants. However, as the villager's remark suggests, the ability to be "kay-ful" in one's speech is something to which Bang Chaners give considerable attention, often to the extent of seriously modifying the intellectual content of their speech, and is one more factor that must be dealt with in assessing the content of a biographical document.

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III

Methodology in the Field

¶ 128 The discussion until now has been concerned with describing and interpreting aspects of the villagers' psychological life with little mention made of how these materials or those which follow were actually obtained. Since [121] one of the larger aims of this study is methodological (to present a method for dealing with some of the problems involved in designing cross-cultural personality research) and since the balance of the presentation depends directly on technical procedures, it is necessary to examine the nature of the data collection process itself. I will focus on three aspects of the research process: (1) the human beings involved (the villagers, the anthropologist and his assistants, and their interrelations); (2) the development and use of the Sentence Completion Technique in the field, including a discussion of translation procedures; and (3) the selection and nature of the sample.

• 12 Most of the foregoing discussion was not the result of a pre-planned methodological effort. Since I was dealing with data that emerge naturalistically from life's daily round, it seemed reasonable to impose few *a priori* methodological constraints on the investigation. My method was simply to try to be sensitive to *repetitive* and *culturally different* modes of behavior manifested by the villagers. Knowledge of the available literature and general knowledge of Thai culture may have helped, particularly with regard to the interpretations that were made. However, because both the observations and interpretations were made by a human being, it is inevitable that several of the factors discussed below should enter into my deliberations.

Field Research As a Social Event

Despite the entry into anthropological field work of what Kroeber (1955a: 307) called the "social science" tradition, the field situation remains a fundamentally human one where the kinds of data obtained, the willingness to provide information or to hold back, the types of interpretations that are made are all influenced by the personalities of the parties involved and how they perceive and deal with one another. The data that appear in most field studies are in part distillations of these complex interpersonal and

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intrapsychic forces, tempered by the investigator's capacity to see through them. Exactly what role they play in the fashioning of the final research product can probably never be fully determined since informants may not know or will not tell you what they "think" of you; and they are likely to be even less aware of how their thoughts have influenced their responses. Similarly, despite his training in self-consciousness, the investigator never has complete command over all the factors that prompted him to pursue a particular course of action in the field or an interpretive bent during the write-up. The problem is further complicated because there are numerous things which occur in the field that have little to do with the research as such, but which often impinge upon it, for example, an informant becoming markedly more aggressive during an interview when he learns that you have just returned from seeing a villager whom he dislikes. (This kind of information when it is available is not without interest. But no field worker is so omniscient as to have such complete knowledge of the likes, dislikes, and psychodynamics of every informant and thereby comprehend every turn in his behavior.) Yet, despite these ultimate limitations, the investigator can try to make as explicit as possible those human factors that he perceives as influencing the nature of the research experience. We will proceed from the relatively obvious to the more subtle considerations that bear on the materials being presented. 12 •

Villagers' Attitudes Toward the Investigators

Perhaps the major factor conditioning the villagers' attitude toward the research was the fact that other Cornell University investigators had worked in the community prior to my arrival. This meant several things: that precedents had been set for asking villagers personal and impersonal questions; that friendly, but generally not intimate, relationships had been established with several key villagers, notably those recognized as informal community leaders; that the villagers had come to accept the presence of Europeans as a normal part of their lives; and that our presence was seen as essentially a good thing. Not only were the *farang* (the Thai term for Occidentals) a source of novelty with their strange interests and long noses, as well as a source of prestige (for having singled out Bang Chan as the community being studied by "American professors"), but they were also a source of considerable practical help. Earlier Cornell workers had given funds to the Bang Chan monastery and school, had helped obtain vaccine to prevent a diphtheria epidemic, and had contributed added income to a few families in the form of rent for the "Cornell office" or salaries for the boys serving as the research team's houseboys. Perhaps the most important contribution the members of the research team made to the community, as 123

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123 124 a "serious-minded teacher" generally worked to the advantage or disadvantage of the research, I would definitely answer, "the former."

114 Perhaps even more important than the villagers' attitudes toward the author were their attitudes toward the Thai field assistants who worked with me at various times. It was through the field assistant that many villagers had their actual contact with the research and through him (or her) that I obtained a large part of my data.[1] Because the role of field assistant requires such distinctive qualities—"competence" in a foreign language, willingness to work with peasants and an appreciation of them, a desire to learn the way "other people" live—it was not easy to obtain or retain individuals to work with in Bang Chan. In a country such as Thailand where the term "social science" was virtually unknown until a few years ago, the position of "research assistant" simply offers no occupational future. Consequently, I had six different assistants working for me at different times during almost two years in the field. Two of these individuals were with me for less than three weeks. (One left the rice fields of Bang Chan for a position at the Thai Embassy in Rome; the other just did not like peasants.) Two were extremely able female graduate students in Education who worked only on Sundays and holidays, primarily with the younger village women. Out of both loyalty to me and a genuine interest in, almost love for, the villagers, they stayed on until the research was completed. The fifth, my major assistant, took three months to find, but he remained with me for fourteen months. When he left to work in Burma ("because I have never been to Burma") his place was taken by a very competent and sophisticated assistant district officer whom I "borrowed" from the Ministry of Interior. This last chap saw me through the life histories. Although he was excellent in the highly personalized setting of the life history interviews, his polished urban manner would have been too overbearing for the majority of informants during the earlier, more sensitive stages of the research. While this coming and going of field assistants,

• 12 114 [1] During the early stages of field work I was completely dependent on my assistant-translators, despite six months language training prior to leaving for the field. Later, I gained enough control over Thai to participate actively in the interviews. In order to minimize translation errors, however, it was decided to conduct and record all formal interviews (those involving the Sentence Completion Method, TAT, and life histories) completely in Thai, and translate later. The reasons for this are more fully discussed below. In effect, this meant training the assistant to carry the burden of the Sentence Completion interviews, the first large block of the research. By the time we reached the life histories, the interviews were taking the form of the informant replying directly to both myself and the assistant. All formal interviews were based on carefully prepared schedules, including even such matters as instructing on meeting arrangements. Only a portion of the total data of course came from these formal interviews. All the preceding materials, for example, were based directly on my own observations, or on the small but crucial verbal events that occurred outside the interviews and which actually comprised the interactive substance of day-to-day life.

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VI

Lessons from Thai Culture

12. The materials in this volume have been addressed to several issues: methodological, theoretical, and descriptive. My purpose in this final chapter is to reflect on some of these points and to examine them for their relevance to the main currents of contemporary social science research.

Turning first to the more obvious methodological issue, it is clear that of the two descriptive methods used in this study, the first, presented in the chapter on "naturalistic observation," while essentially anecdotal and less systematic than the Sentence Completion materials, was the more sensitive of the two approaches. The very fact that the discussion was not governed by a pre-planned methodological framework permitted pursuing certain issues that were central in the psychological life of the villagers, but which might not otherwise appear in a culture-personality study. On the other hand, it is also clear that the materials thus gathered have little *direct* utility for cross-cultural studies, other than to indicate that other field workers look for similar or contrasting psychological manifestations among the people with whom they are working.

The Sentence Completion materials, while descriptively less sensitive and graphic than the above, afford the great advantage of being directly translatable to any other culture, of providing a check on the typicality of the earlier conclusions, and of providing a description of the villagers' subjectively held behavioral dispositions.

While the materials were qualitatively different—one "natural," the other "instrumental"; one behavioral, the other verbal; one descriptive of action, the other descriptive of predispositions to action—they produced no striking empirical inconsistencies. Much of this may have been due to the fact that many of the SCT items focused on relatively specific interactional situations—those descriptive of face-to-face contacts—which tend to be highly patterned in Bang Chan, and into which "loosely structured" considerations rarely enter. Under these circumstances, any carefully applied method might be expected to obtain roughly equivalent data. On the other hand, the fact that much of what is analytically meaningful about Thai personality occurs before, after, or between face-to-face contacts suggests

4:Phillips E-4,5 (1956-1957) 1966
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that an instrument such as the SCT should never be used by itself, or at least not without some reference to behavioral data. The SCT, or my particular version of it, could not readily get at the process of psychological commitment that plays such an important role in the lives of the villagers, and which underlies their "loosely structured social system." In fact, the handling of this process may well be one of the most interesting things about the villagers. In a somewhat oblique way, the SCT data implied the importance of this process: so many of the villagers' responses were phrased in terms of fulfilling social forms and rituals, that an analyst might question the degree of psychological commitment behind them. However, "psychological commitment"—the reliability, depth, and constancy of relationships; the degree of involvement necessary for insuring that an interactional event will even take place—cannot begin to be recognized as an analytic problem until one sees beyond the very social situations that presume it, and this can probably only be done by naturalistic observation and interpretation.

While the SCT and observational data did not contain any striking empirical inconsistencies, they did demonstrate the significance of an issue raised early in this study: the problem of whether the culturally interesting or distinctive is the same as the culturally frequent or modal. The analyses indicated that for the most part these two types of characterization were not incongruent. Thus, the extreme individualism and self-concern of the villagers emerged unmistakably from both sets of data. However, there were instances when the two kinds of characterization were not isomorphic, and resulted in conclusions quite different from those originally expected. Thus, on the basis of the observational materials, I fully anticipated that anxiety about interpersonal relationships would emerge in the SCT responses as the villagers' most frequent form of anxiety. The amount of gossip that occurs in the community, the references that one hears to slander, the touchiness that villagers exhibit in their actual relations with others, all pointed to this conclusion. These were the appraisals of an outside observer struck by the "different" and "unusual" facets of the culture he was studying. Yet the SCT data indicated beyond all doubt that interpersonal anxieties were not, from the villagers' point of view, their most typical form of anxiety. They were worried more about their stomachs than their hearts.[1] This conclusion, deduced from the villagers' own per-

[1] One might argue here from a psychoanalytic point of view that the stomach is simply a substitute for the heart. However, one might also argue from a psychoanalytic point of view that the heart is simply a substitute for the stomach. This Freudian principle of the substitutability of needs cannot by itself account for the *direction* of the substitution (unless one assumes a doctrinaire early Freudian or neo-Freudian position) nor can it prove the existence of the hypothetical substitution. These can be demonstrated only by detailed, empirical data on the traumata, repressions, fixations,

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Summary

• 12 The general condition of health and sanitation in the village of Bang Chan, Thailand, and the nutritional status of 166 persons in a random sample including 31 village households and of 233 primary school children are described.

141 The mean height for adult men in the random sample was 158.6 cm. (62.4 inches) and for women, was 151.3 cm. (59.6 inches).

Mean weights for adult men and women were 53 kg. (116.6 lb.) and 45.3 kg. (99.7 lb.) respectively. Mean and median weights for various age groups did not differ markedly nor consistently.

145 In general, the Thai children were shorter and weighed less than western children of the same ages. Mean heights and median weights fell below the 10th percentile of Iowa school children whose measurements have been reported by Stuart and Meredith (1946).

The reported age at menarche, for 94 females in Bang Chan, ranged from 13 to 19 years, with a median age of 15.

As judged by the median ages of eruption of specific permanent teeth and the number of permanent teeth per child at each age level, dental maturity of children in Bang Chan was approximately the same as that of children in other regions, both western and eastern, for which data are available. Although the average number of teeth at some ages was lower for children in Bang Chan than for American or English children, the differences were neither marked nor consistent.

164 Children in the Bang Chan primary school were found to be relatively free from caries. Of 226 school children 7 to 14 years of age, whose teeth were examined by a dentist, 42% were completely free of caries of both deciduous and permanent teeth. Of the total group of children, 68% (76% of 116 boys and 60% of 110 girls) were free of caries of permanent teeth. The average number of carious permanent teeth per child was 0.5 for boys and 0.9 for girls. For children with caries experience, the figures were 1.9 and 2.3 for boys and girls respectively. None of the children examined had any filled teeth.

The reason for the relatively low incidence of caries

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12 As advocad by the Joint FAO/WHO Expert Committee on Nutrition (1951), this study combined clinical appraisal with dietary surveys. The only laboratory tests done were for hemoglobin content of blood, and examination of stools for parasites. Suggestions for planning the schedule for the clinical appraisal were obtained from the report on the second session of the Joint FAO/WHO Expert Committee on Nutrition (1951), Nicholls (1951) and especially from Professor Dean Smith of the London School of Hygiene and Tropical Medicine (1952).

125 Choice of physical measurements, and of procedures in making them, were influenced by a tentative list of specifications for anthropometric measurement, developed by the Committee on Anthropometry, Food and Nutrition Board, National Research Council (1951).

The schedule used for clinical examinations, and a description of procedures used, are included in Appendix A.

Sampling. - All of the children attending the Bang Chan primary school were examined. Three or four children who were listed on the school rolls were not present at any time during the period when examinations were in progress, and were considered by the teachers as non-attending.

Persons in a random sample of households in 5 of the 7 hamlets in the Bang Chan community were also examined. The two most outlying hamlets were excluded from the population to be sampled because of the difficulty, during the dry season, in getting to them or having them come to us. Of 230 households in the 5 hamlets, 31 were included in the random sample. Age and sex distribution of the 166 persons in the sample were roughly similar to distributions for the approximately 1700 persons in the village as a whole, as determined in the census of December 31, 1953. Following is a summary of the age distribution:

[162] [62]

Age in Years	Bang Chan, 7 Hamlets	Random Sample, 5 Hamlets
0-14	38%	41%
15-19	11%	10%
20-59	44%	41%
60 and over	7%	8%

[162] The sample included one Muslim family of 13 members.

In the 31 households, 166 of 184 persons, i.e. 90% were examined. Of the 10% non-response group, half were unavailable, for example away at work when the examinations were in [129] progress. The remaining members of the non-response group

A A [See pp. 51-52--Analyst]

125 included adults of both sexes and some preschool children who
123 were unwilling to allow the physician to examine them. The small non-response group included persons of both sexes and a wide range of ages, and would therefore not be expected to bias the sample seriously. In general, rapport and cooperation were excellent.

Reproductive Function in Females

[145] Information concerning menstrual history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 35).

Information on child-bearing history was obtained from women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 36).

Illness and Injury

• 12 [164] Evidence concerning the nature and extent of illness and injury in Bang Chan was obtained from various sources:

1) direct observation by the physician at the time of the physical examination, or when the physician was asked to visit a sick person in the village;

2) field notes in which information concerning illnesses, accidents and deaths were recorded as research workers learned of them; and

3) information obtained by structured interview in connection with surveys conducted by various persons working on the Cornell Thailand Project.

Adults in households which were included in the random sample were asked after the clinical examination whether any family member had been ill or injured during the past year. If so, the interviewer asked the nature of the illness or injury and what was done. The portion of schedule 6 which relates to this is included in Appendix A.

Some questions on illness were included in a survey of household heads in Hamlet KY-7 (Hanks, 1954) and in a structured interview to which there were 335 respondents from the

A [see pp. 51-52--Analyst]

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• 12 total of 336 households in Bang Chan (Ralis, 1955).[1] Appropriate portions of schedules used are included in Appendix A.

Women in the random sample of village households, and women whose young children were included in the child feeding study, were asked about survival of all children born to them (See Appendix A, schedule 3, item 36). With the exception of a few old women, those who reported that one or more children had died, were asked to describe the child's symptoms and the circumstances surrounding the death. When the description was clear enough to permit diagnosis, the physician recorded cause of death, as well as the informant's description.

Sanitation

Information concerning toilet practices was obtained from adult members in 30 of the 31 families included in the random sample of households. Additional information on toilet care of infants and toilet behavior of preschool children was recorded in field notes.

In connection with a weighed dietary survey, the observers noted practices relating to care of food, disposal of garbage, and source and treatment of drinking water, in 11 households on 4 days each throughout a year.

Schedules or portions of schedules used in recording the information on sanitation are included in Appendix A.

Results

Physical Measurements

141 145 Heights and Weights. - Mean values and ranges for heights, cristal heights and bicristal diameters, and both mean and median values and ranges for weights of boys and girls in the Bang Chan primary school are classified by age,

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[592] 1. In Ralis' survey, each "kitchen-unit" was considered as a household. As generally used in this data paper, "household" includes all persons living under one roof. A number of such households in Bang Chan include more than one kitchen-unit.

[see pp. 51-52--Analyst]

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mats on the floor as most of them would have done at home. Relatives were welcome; indeed they were supposed to come and help.

Nature and Incidence of Illness and Injury, and Treatments Sought by Residents of Bang Chan. - Evidence concerning the nature of illness and injury in Bang Chan was obtained in connection with the clinical examination of school children and persons in the random sample of village households; from questions in two types of structured interviews with household heads: 1) in the entire village, and 2) in one hamlet, KY-7; and from the field notes of workers associated with the Cornell Thailand Project.

In connection with the clinical examination, information was obtained from heads of 30 of the 31 households whose members were examined (See schedule in Appendix A).[1] In this group, none reported any accident or injury, and 26 said that no member had been ill within the year. Illness was reported as occurring in 4 households only. In one of these, a 49-year old man reported loss of sensation over the extremities and other symptoms which led the physician in the research group to conclude that he had beriberi. As treatment, this man had used an herb recommended by a priest, a native medicine given him by a neighbor and had gone to a private clinic at Minburi where he received an injection.[1] In another family, a 39-year old man who had asthma, took an advertised remedy which he purchased from a drugstore. Two children in the third family had fever for 8 days, for which a traditional practitioner prescribed herbs. In the fourth family, a 1-year old child with eczema was taken first to a traditional practitioner, then to a private clinic in Minburi where he was given an injection.

On the basis of other observations, however, we believe that illness and injury are more common in Bang Chan than is suggested by the replies to this particular inquiry. For example, no mention was made in one of the households surveyed of a baby who had been too ill to be weighed and measured, when team members called, and who recovered in a day or two without outside help. Coming as they did at the end of the clinical examination which was new to most of these people, perhaps the questions asked seemed relatively unimportant. No attempt was made to probe beyond the person's reply to the questions as stated.

Replies to questions in connection with an intensive

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1. From casual observation, one is led to believe that the villagers have considerable confidence in "injections," although the nature of the injection received or desired, is not usually specified.

[see p.51-Analyst]

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84 malunion of old fractures was observed in two cases.

165 Deaths. - Information concerning deaths in Bang Chan during the period of the field study was obtained primarily 12 from field notes. Mothers interviewed or examined by members of the research group which was specifically concerned with health and diet provided further information on infant mortality, and Ralis (1955) obtained some information concerning deaths of children in the respondent's family.

165 Deaths occurring while the field study was in progress. - During approximately 21 months of field study, members of the research group noted 14 deaths in the village. Three infants died, two within a few days of birth, and one at about two months of age. Two children died by accident, one as the result of a fall from a water buffalo, and the other by drowning. One child died of diphtheria and one of Hodgkin's disease. Of the seven adults who died during this period, one was a pregnant woman who became acutely ill and died while enroute to the Health Center at Minburi by boat. The cause of her illness was not known. One young man committed suicide, two adults died of tuberculosis, two of cancer, and one of colitis. One of those who died of tuberculosis was a young woman, the mother of seven children. She was urged by the physician on the team to go to the hospital in Bangkok, but she was unwilling. A sibling 8 years old, who lived in the same household, had died previously with a severe cough.

Mortality among infants and children. - Of the 397 living children born to 84 women interviewed, 323 or 81% of the children survived at the time of interview. Forty-three, or 11% had died within the first year, and 26 or 7% within the first month of life.

Although the data obtained by Ralis (1955) did not permit us to calculate the exact number of children born to the 335 household members interviewed, the number dead, and the number surviving at the time of interview, apparently more than twenty per cent of the children born into these families died (Appendix A). This estimate, for the village as a whole, tends to substantiate the figures obtained from the 84 mothers whom we interviewed.

Some information was obtained from 36 mothers concerning the cause of death of 58 children who were born alive. Twenty-one of these had lost one child only, 8 had lost 2 each, and 7 had lost 3 children each. Reported causes of death are summarized by ages, in Table 16.

In most cases, no specific cause could be assigned, and the case was classified according to the most prominent symptom as fever, convulsions or digestive disturbance.

A A [see p.51-Analyst] B A [see p.40-Analyst]

6: Goldsen and Ralis Z-4.5 (1955) 1957
AO7 Central Thai AO7

FOREWORD

Having two portraits of a community produced by two different field workers is itself a signal event in anthropology, but to have two portraits of the same subject by workers using different methods is unique. A portrait of Bang Chan is being made in traditional style under the Cornell Thailand Project, using unstructured interviews and intuitive judgment to reach generalizations. In contrast this data paper suggests a photograph of a detail made with Dr. Max Ralis as cameraman and Dr. Rose K. Goldsen as darkroom expert who hands us the final print. Dr. Goldsen is Co-Director of the Cornell Cross-Cultural Methodology Project; Dr. Ralis, Field Director of that project. 12 •

Dr. Ralis visited Bang Chan in May, 1953 where, after preparing his questionnaire, he proceeded with the assistance of specially recruited interviewers to visit every household in the community within the course of four weeks. His task was facilitated by advice from orthodox field workers in formulating the questions into colloquial Thai as well as in selecting the relevant indices for inquiry. The details of training interviewers and collecting data appear in the Appendix. Then with suitcase bulging with completed schedules he returned to Ithaca and completed preliminary tabulation of the results before being called away to new work. He left the legacy of further analysis to Dr. Goldsen who produced the present study without benefit of first-hand knowledge of Bang Chan.

The problem was to see if these data could be used to analyze which populations in Bang Chan benefited from agricultural innovation and modern medical facilities and to distinguish how this group might differ from the remainder that did not avail itself of the new. The survey of the acceptance of innovations in Bang Chan parallels similar studies conducted by the Cross-Cultural Methodology Project in other areas where Cornell maintains field stations: Peru, India, and Nova Scotia. The aim of this project is to determine the cultural conditions under which customarily used methods of data-gathering are analytically useful, and to develop techniques for adapting these methods to the demands of varying cultural milieux. Bang Chan provided a laboratory, so to speak, to test the analytic usefulness of the social survey in a cultural context that varied considerably from Western culture, where survey methods have been developed. As one also interested in this aspect of Bang Chan, I found her steps in identifying the context of innovation a fascinating sequence. Field workers are prone to generalize after a few visits. 121

Even at this stage of the Cross-Cultural Methodology Project the value of the survey approach becomes evident. Survey method in an area such as Bang Chan is still too untried to recommend it as an external check against the findings of anthropologists who have lived and worked in the area and have innumerable checks of internal consistency. But when, as in the present case, survey findings can be used to amplify and modify the impressionistic findings based on qualitative data, they serve to sharpen the anthropologist's perception and to alert him to subgroup differences which his emphasis might overlook or minimize. The hazards of structured interviewing, particularly questions of validity, are too well known to detain us here. The present case, however exemplifies a type of survey analysis that can be of aid to the anthropologist insofar as it makes him reexamine his impressions and break down his overall, modal montage into the more discrete pictures of subgroups. We hope that this sort of collaboration between the survey analyst, usually at the mercy of these hazards, and the anthropologist whose immersion in the culture enables him to interpret the meaning of these responses, will enhance the value of both methods. 12 •

We look forward to learning in greater detail where structured interview and further analysis of this type will serve best to advance current research.

L. M. Hanks, Jr.
Director of Research
Cornell Thailand Project

North Bennington, Vermont
May, 1957

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APPENDIX A

March 1956

HOW THE BANG CHAN SURVEY WAS CONDUCTED

How the Study Came to be Made

121 The survey conducted in May 1955 was part of a program* for testing diverse techniques of data-gathering in cultures substantially different from U.S. and Western European cultures, where the survey method of gathering data had been developed and tested.

114 The survey questionnaire was developed and the field work carried out with the help of area specialists of the Cornell Research Center in Bangkok. Mr. Robert B. Textor and Mr. Loebonga Satabhaya of the Cornell Thai staff assisted the field director and recruited the English-speaking Thai university students who interviewed for the survey.

The Questionnaire

12 After a period of training interviewers about the questionnaire and techniques of interviewing, the questionnaire was pretested in a rural community near Bang Chan. Then the staff, consisting of the field director, his deputy, and five Thai interviewers, among them one woman, moved to Bang Chan to carry out the survey.

124 Thai and English-language versions of the schedule were drawn up, but of the 335 interviews conducted in the survey,
125 the overwhelming majority was conducted in the Thai language rather than through an interpreter.

The Interviewers

124 The interviewers were a mixed group: one Thai-speaking American anthropologist; one trained Thai anthropological field worker; two Thai Christians (one a theology, the other a medical student); one Thai Buddhist medical student, one Thai Buddhist female social worker; and an American sociologist who used the Thai interviewers as interpreters.

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[122] * The Cornell Cross-Cultural Methodology Project for the Development and Testing of Improved Methods to Study Underdeveloped Areas is supported by a grant from the Rockefeller Foundation and is a project in the Department of Sociology and Anthropology.

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II. DEFINITIONS

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Definitions are here provided only for a few basic terms within the context of this survey. An attempt will be made to discuss the many concepts contained in the questionnaire before the beginning of the actual field work, as the desirability to keep this guide short makes it unadvisable to go into lengthy details at the present time.

[592]

A household is a single person or a group of persons making one economic unit and distinguished as one kitchen unit. It is likely that members of the same household sleep under one roof (or roofs) belonging to one person, but the main criterion of the definition is the kitchen unit. With each kitchen goes one household. There is occasionally more than one household under one roof; this is found when more than one kitchen is encountered in one dwelling unit.

The head of the household, shortly referred to as HH, is the person whom other members of the household consider to be the head and who lives in this household - we exclude absentee heads of households.

Relationship to the HH is to be designated as whatever applies among the following categories: husband, wife, son, daughter, father, mother, mother-in-law, or "other relative."

Respondent, shortly referred to as R., is the person being interviewed. The R. should preferably be the HH, or, in the absence or nonavailability of the HH, an articulate adult member of the household.

Articulate member of the household is a person in a given household who could be considered eligible to substitute as R. for the HH. An articulate member of the household is another member of the same household as the HH. Such an articulate member should be an adult in the position to express himself without unusual difficulties and he is expected to have a scope of views not much less limited than those of the HH.

III. PROCEDURE

[131]

Our survey will be conducted in Bang Chan, shortly referred to as BC. This is a rice village about 20 miles from Bangkok. The Cornell Research Center has been working in this village for many years and friendly relations have been established all over. Senior members of the Cornell Research Center have taken great pain in maintaining good rapport with the villagers and are, naturally, anxious that nothing should occur to damage the established fine relations. Each interviewer is expected to keep this in mind all the time while in BC.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

123 to get government support for the new school building.

Our non-official status relieved us from the responsibility of direct action and thus gave us the immunity from any criticism when sought help had not been responded, while in any event we enjoyed the privilege of the contact men. In the eyes of Bangchan villagers, we were equated with high officials and were given due respect. At the same time, as willing contact men, we were also thought of as good friends of Bangchan.

We did not, for a moment, seek to be admitted as if we were local people, which would appear to be artificial and which might be interpreted as insincerity. It seemed to us, nevertheless, that our sincere treatment of the villagers with some reservation as our equals -- a rare privilege in their experience -- was the most important factor militating in favor of our good rapport with Bangchan.

Techniques for Gathering Informations

• 12 Various techniques were used in securing information, each adopted with a view to procuring the best possible result under different circumstances. In general, information may be classified according to the methods used in obtaining it as follows: (1) structured questionnaires and check lists;[4] (2) informal interviews; (3) daily records of research workers; and (4) supplemental written records made by local residents.

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4. See Appendix B.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

• 12 Normally four daily visits were made to the village in each week with occasional overnight stays of two to four days. A field office was established in a house of one of the village headmen, who generously let us have free use of one of his buildings situated in the heart of the community. We usually slept here during an overnight stay, but some dozen other places were also available to us for the purpose including the temple, and we did actually have occasion to utilize each of these in order to get acquainted with as many families as possible.

All of the questionnaires and check lists were constructed in the field after a succession of talks with different informants about the same topic. The check list for household consumption, for example, was made in the following manner. The author approached one family head, preferably the one most intimate with him, and talked with him about various items which his family normally consumed. Kinds and quantities were recorded. Questions were also asked about the amount produced by the family and the amount purchased as well as the price of each of the purchased items. There were usually different ways of expressing rates of consumption of different items, and the informant was encouraged to use the ones he pleased. Rice consumption, for example, was commonly expressed in so many tang (a can of 20 liters) of paddy per year, while fish-sauce consumption was more easily expressed in how long a bottle would last. After the first interview was completed, four more family

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

12 heads were similarly approached. Results from these five interviews were then compared, and a pattern of consumption was established. With this combined result the author went to the coffee shop, which was a sort of men's club, and got the talk started about the topic. A few more items of consumption were added to the list this way. After the final check list was constructed, the five family heads were re-interviewed. All admitted that they had skipped the missing items.[5]

The author himself administered all, except one, of the whole enumerating jobs, the exception being the work on household and farm inventory. After he had tried to take such inventory of a few farm families, he realized that his sense of observation and his ability to appraise the value of household and farm equipment was far inferior to even the most humble of the local farmers. This was to be expected, since unfamiliarity with the local scene is a heavy handicap to that kind of work. Two bright young men, both local residents, were then hired as field assistants to do the work jointly, each checking the other.

Evaluation of Data

Since various techniques were used in securing information and an individual was approached several times for different types of information, relative merit of data varied according to their nature as well as the technique adopted

5. For check list of household consumption see Appendix B.

12 in gathering them. An over-all evaluation of data, therefore, cannot be made. Evaluation will be attempted, however, each time a new set of data is introduced as we go along.

1: Hanks E-5 (1953-1954) 1944 AO7 Central Thai AO7

[p. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kan (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

121 • 132 243 433 565 462 142 582 584 342 851 84 826 814 75 799 782 779

interest of improved maternal and child health, a few suggestions are made.

Purpose and Method

The purpose of this study is to set down the ethnographic data concerning childbirth in Bang Chan, following out the economic, social, religious, and cosmological aspects as needed to clarify the behavior and the psychological attitudes noted. The hope is that not only anthropologists but persons working in programs of maternal and child health will find the data useful.

The data were gathered from Buddhists and Muslims in Bang Chan by interviews and direct observation. Because Dr. Hazel Mauck, in the course of nutritional studies also made inquiries "from the standpoint of anthropological study rather than because of an assumed relation to nutrition or health" (1959:3) she first opened up the broad outlines of the subject. The author, with Dr. Saovanee as an interpreter of unusual competence, and Dr. Saovanee herself then pursued the subject further, including interviews at the Minburi Health Center and at Cha Choeng Sao.

A few comparative references such as to McFarland's dictionary and Phya Anuman's researches are given, but the focus is always kept on Bang Chan. Though many of the findings will have a certain pertinence in Bangkok, the fact that Kaufman found striking differences in Bang Khuat only 8 kilometers away shows how cautious generalizations must be.

The transliterations of Thai words are only approximations, based on the system promulgated by the Royal Institute of Thailand; the tones have been omitted. With the translation, always adjacent and a glossary provided at the end of the volume, the author feels there should be little confusion. Proper names which are generally known in a different transcription are left in their familiar form. In referring to works by Thai authors western custom is followed but in referring directly to the authors themselves Thai custom is followed, as it should be in direct address.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7
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FOREWORD

114 The research sector of the Cornell Thailand Project concerned with health, sanitation, nutritional status, and diet has been directed since 1950 by the senior author of this paper, Dr. Hazel M. Hauck, Professor of Food and Nutrition in the New York State College of Home Economics, Cornell University. In this report, she and two of her colleagues present some of the results of a field research project designed by her and carried out by the authors among the rice farmers of the village of Bang Chan in the central plain of Thailand during 1952, 1953, and 1954. Professor Hauck's account of other aspects of this field investigation was issued in 1956 as Data Paper Number 22 of the Cornell University Southeast Asia Program under the title, Aspects of Health, Sanitation and Nutritional Status in a Siamese Rice Village. Since 1948, Thai and Americans have been working in the Bang Chan farming community to define some of the problems involved in changing peasant cultural behavior, including health and food habits.

While in the field in 1952-53, Professor Hauck began the arduous task of systematically collecting detailed data on the diets of a carefully selected sample of Bang Chan villagers. This work was continued during 1953-54 by Miss Saovanee Sudsaneh, the junior author of this report. Her assignment was a demanding one, for once begun there could be little deviation from an established schedule designed to cover diurnal and annual cycles in the preparation and consumption of food. Miss Saovanee together with a suitable companion had to sleep in the village, rise before dawn, and proceed during the dry season by foot, and by boat during the longer wet season to the homes selected for study. Some of these households were situated two or three miles from the Project's village headquarters. Only one could be visited in a day. All homes had to be reached well before pre-daylight breakfast preparations were begun so that equipment could be readied and preliminary observations made. After a year of this dawn to dusk visiting, Miss Saovanee retired to a more normal daily round of post-graduate study in nutrition at Cornell, where she received her M.S. degree in 1956, and at Harvard, where she is a candidate for the doctorate. She plans to return to Thailand to teach and do research in nutrition at Kasetsart University.

The necessary companionship for Miss Saovanee during her field work in Bang Chan, a companionship involving, of course, the same rigorous and taxing schedule, was cheerfully provided by Dr. Jane Richardson Hanks of Bennington College, the third collaborator in the preparation of this report. Dr. Hanks has worked with the Cornell Thailand Project since early

INTRODUCTION

121 This study of food habits and nutrient intakes in a Siamese rice village was undertaken in connection with the Cornell Thailand Project. The project is one of several under the auspices of the Department of Sociology and Anthropology, which are focused on the process of cultural change
114 in non-industrialized societies. Dietary studies designed to contribute to a base-line description of the community were carried out from September, 1952 through May, 1954. Local headquarters, where members of the research group kept equipment, and could stay overnight, were maintained in the village.

128 The observations to be reported fall into two general categories: 1) descriptive information concerning many aspects of the food situation in Bang Chan and 2) quantitative information on food intake, and its estimated nutrient
126 value, for 11 selected families. Qualitative information on food in Bang Chan was obtained from several sources: 1) field notes made by various members of the Cornell research group, 2) structured interviews with mothers about their own food, and that of small children in the family, 3) records of food eaten during 24-hour periods, submitted by children in the third and fourth grades of the elementary school as homework for the health class, and 4) weighed dietary studies carried
114 out in 11 selected households. Quantitative information on food intakes was obtained from the latter source only. Most of the data to be presented were obtained between September 1952 and June 1954, but supplementary information was obtained from a diary for 1955, kept by a school teacher at the request of the research group, a study of innovations made by Ralis in May 1955 (Goldsen and Ralis, 1957) and information provided at our request by members of the Cornell research group who were in Thailand in the summer of 1957.

A general account of the economic, political and social organization of Bang Chan in 1948-49, together with some material on health and diet was given in the first interim report issued on the Thailand Project (Sharp et al., 1953). The second interim report concerned aspects of health, sanitation and nutritional status in Bang Chan in 1952-54 (Hauck, 1956), and the third was a report on factors related to acceptance of innovations (Goldsen and Ralis, 1957).

THE COMMUNITY

Location, Climate, Transportation

131 Bang Chan is situated in the rice-producing area of central Thailand, about twenty miles by road northeast of Bangkok.

273 in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

433 434 443 Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary [142] study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

121 In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

221 242 122 [124] From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953, and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

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1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 24 - Analyst]

One other aspect of (1)ngaan which should be mentioned
952 in connection with food and health is the opportunity for con-
796 tamination of food. The villagers did not associate sanitation
781 with health, hence the hazards of a community meal which many
[753] persons helped to prepare were many. Two incidents observed the day before an ordination in early April, will illustrate. In the final stage of making Chinese noodles, rice flour paste was extruded through a perforated disk into an enormous pot of boiling water. When done, the product was removed with a fish net, and plunged into the canal to cool, after which women helpers spread it out on banana-leaf covered trays. Dishes were also washed before use in the canal, which was then too low for boats. Since, however, many people drank untreated canal water at this season (see p. 28), the added hazards for the participants caused by these procedures may have been slight.

262 In summary, food plays a major role in ceremonies and
792 festivities, which are concentrated in the 3 months' dry season. Proposals for dietary improvement in Bang Chan must take into account not only the possible effects of the (1)ngaan season on the total nutrient intake, and on opportunity for exposure to contaminated food, but also the importance of these affairs from the standpoint of merit and prestige, and the relatively great financial burdens which villagers therefore undertake because of them.

QUANTITATIVE DIETARY STUDY: FOODS EATEN AND ESTIMATED NUTRIENT INTAKE OF SELECTED FAMILIES IN BANG CHAN

Procedure

Selection of the Sample

121 125 146 Medical inspection designed primarily to discover possible signs of nutritional deficiency was carried out in advance of the family dietary study. The suggestion of Grant (1948) that matched groups, of contrasting economic or other status be studied, appeared to be appropriate to the situation in Bang Chan. Our hope was to be able to select from the random sample of families given medical inspection (Hauck, 1956) a group of families (A) in each of which several members had clinical signs which might be evidence of malnutrition, and a group of families similar in age and sex distribution (B) in each of which the members were largely or wholly free from such signs.

125 146 When the medical inspection of the random sample was complete, however, too few of the families were found to meet our criteria for inclusion in Group A, i.e. the group of apparently less well nourished families. Additional families for

INTRODUCTION

121 In the study of food habits and health in Bang Chan, Thailand, mothers and small children were the focus of special attention. We were interested in these groups not only for their own sake, but because in an area where frank deficiency disease was not common, inadequacies in the diet might be reflected in the condition of these vulnerable groups to a greater extent than in the general population. Food habits in this rice producing village have been described (Hauck, Sudsaneh, and Hanks, 1958; Hauck and Hanks, 1959) and information has been presented on nutrient intakes of 11 families (Hauck, Sudsaneh, and Hanks, 1958; Hauck and Sudsaneh, 1959).

123 In the present paper, general procedures are described first, followed by sections on 1) health and care of mothers and 2) of infants, 3) diet of mothers during pregnancy, post-partum, and lactation, 4) feeding of infants and small children, and 5) growth in height and weight of infants and small children in Bang Chan.

PROCEDURES

124 Some of the information presented herein was obtained by direct observation, but much of it resulted from interviews, usually with the mother. One of our first tasks, therefore, was to develop appropriate schedules for such interviews.

Schedules for Interviews.

During the early weeks of getting acquainted in the community, we had preliminary unstructured interviews with a number of pregnant women and mothers of young babies. Frequently the child's father, a grandparent, or other family member would be present. Informants were encouraged to discuss infant feeding, common customs associated with childbirth, and other subjects
125 of interest to the research group. From the information so obtained and from conversations with workers at the Mother and Child Health Center in Bangkok, two schedules were drawn up. In general, both schedules included three areas of inquiry: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project. In this category some items were included because of their interest from the standpoint of an anthropological study rather than because of any assumed relation to nutrition or health.

853 3 and 6 months soupy rice was a common addition to the infant's diet, and after the first teeth appeared many had rice from the family pot. Between 6 and 9 months, also, fish was given regularly to many babies and egg at least occasionally. Crackers, cookies, and various items designated as (3)kha-(5)nom were frequent additions at this age.

163 Seasonal fruit such as mango and orange was given to some 855 infants from 6 months on, but most children had fruits other 262 than the (4)mak-(4)waa banana infrequently even at two years of age. As the feeding of rice increased, banana was given less often, so that for the 2-year old child even banana was eaten only occasionally. A minority of babies were fed vegetables by one year of age, and some had not begun to eat them by two years. Only about half the children from 2 to 4 1/2 years old had vegetables frequently.

Avoidance of hot tastes, rather than reluctance to give vegetables, may have been responsible for late introduction of vegetables into the diet of many children. In Bang Chan vege- [252] tables were often combined with other foods, as in curries. They were usually added toward the end of the cooking time after the mixture had been seasoned. Vegetables from such a "hot dish" would not be offered to a small child unless the parents considered him old enough to eat "hot-tasting" foods. Among the mild "with-rice" dishes were vegetables panned with a small amount of fat and seasonings other than chili, as well as vegetables cooked in coconut milk or in water (Hauck et al., 1958; Hauck and Hanks, 1959). In this connection the suggestion of a Thai co-worker that one might encourage eating more vegetables by discouraging the use of "hot" dishes seems promising, since a larger amount of mild than of "hot" "with-rice" food is eaten at one time. To promote more frequent, and earlier, feeding of vegetables to babies, one would need to encourage either more frequent preparation of mild "with-rice" dishes containing vegetables or special preparations of vegetables for the baby. The latter is rather impractical when foods are cooked one at a time over the same fire as in Bang Chan.

[252] Perhaps one reason why most infants in Bang Chan had fish [263] daily after 6 or 7 months of age is that in making curries fish was often cooked in a little fat or coconut milk before seasonings were added. Thus, a little fish could then be set aside for the baby before chili and other spices went into the pot. (Note, also, that rice and fish were the foods considered safe to eat 124 during (2)juu (1)faj by all mothers interviewed). Changes in 262 food preparation suggested for improvement of the family diet in general (Hauck, 1958) could automatically help to improve the feeding of young children who are gradually introduced to adult foods. At the same time, a better family diet would probably help to improve the quality and quantity of mother's milk, since during lactation mothers tended to eat as usual. In deciding whether the more effective approach would be through teaching

better nutrition for all family members or whether to concentrate on the feeding of children or other vulnerable groups, the values of the society should be considered. The importance of a suitable variety of food for health needs to be taught to adults as well as children in Bang Chan. The concept that good choice of food is important in pregnancy and lactation and for the health and growth of children seemed to be entirely absent. Since few believed certain foods to be harmful at these times, however, teaching how to choose foods for health should be easier in Bang Chan than it is in areas where positive taboos are common. 124 262

Behavior different from the traditional one may sometimes lead the way to changed practices among those who observe or hear about it. For this reason, in certain instances an informant who had ventured to deviate from the traditional practice has been identified in this record. Thus, we noted that in a number of ways the women school teachers and the wife of a man teacher deviated from the traditional behavior in Bang Chan. For example, a school teacher's wife used the hot ashes chamber after her fifth child rather than lying by the fire. She was one of two women informants who "ate all kinds of food" at this time when most women in the community restricted their diets very markedly. She did not consider taking the baby out into the sunshine harmful; indeed, she believed it would make the child stronger. This same mother was 1 of 4 in our series who had taken the baby to be vaccinated against smallpox. She and three women school teachers were among those who continued to give their babies boiled water to drink much longer than was customary in Bang Chan. The one person who suggested a specific food (eggs) as being good for a woman to eat during pregnancy was a school teacher. The two women who planned to go to the Minburi Health Center for delivery were school teachers. For lack of time after labor began they did not carry out their plans; but the fact that they intended to do, by choice, what was usually the last resort when labor proved long or difficult, may be significant. 121 183 178

Along with these departures from traditional ways and acceptance of some "modern" practices, the same persons might cling to other sorts of traditional behavior. The wife of a school teacher for example, though she thought that taking the baby into the sunshine might be favorable rather than harmful, said that if the baby were to be out very long she would cover its head with a beret to avoid bringing "cold" into the baby. This same mother took her child to the Minburi Health Center for treatment for a skin infection, but when the condition did not clear up immediately after modern therapy was begun, she took the child to a traditional doctor who prepared a decoction of herbs with which she treated the baby. 343 276

The behavior of respected persons, such as some of the school teachers, should be influential in helping to bring about

desirable changes in Bang Chan. An important point, however, is that leaders should understand, insofar as possible, the reasons behind the "modern" ways and not accept them merely because they are considered modern. Without adequate understanding traditional behavior which has served a useful purpose in protecting the people's health might be abandoned, or a half-understood "modern" way substituted to their hazard. For example, a popular traditional midwife said she knew that water was not boiled for mothers and babies in the hospitals in Bangkok, and the wife of a school teacher said she did not think use of boiled water was really necessary during (2)juu (1)faj. Traditionally, heat has been considered beneficial at this time. If this idea were extended to include an understanding of the value of boiling water to destroy harmful microorganisms and parasites, the traditional practice might be confirmed and even extended for the protection of other family members. If a sanitary water supply eventually becomes available in Bang Chan[1], precautions required to keep it so might be thought of as analogous to boiling of water; or chemical purification might be understood by the peasant as a modern way of conferring on water the virtues which boiling conferred when the "old way" was followed. Improvement in health and nutrition in Bang Chan must, of course, be seen as a long-time goal dependent on continuing education.

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[312] 1. In 1952-54 there were no wells in the area, and the problem of planning for a sanitary water supply when the plain is flooded for a part of each year is not an easy one.

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
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GROWTH IN HEIGHT AND WEIGHT OF INFANTS AND YOUNG CHILDREN

Evidence on growth in height and weight of Thai is scant. So far as we have been able to learn, all available studies have been cross-sectional. We, therefore, undertook, in the limited time available, to make longitudinal studies of growth of infants and small children and elementary school children in Bang Chan. Observations on the latter were summarized by Thorangkul (1957) and those of infants and small children, by Smith (1958).

In general Thai children of elementary school age are shorter and weigh less than Western children of the same age. Heights of children in the Bang Chan elementary school were, on the average, less than mean heights for Thai children given by Dr. Yong Chutima (1939), and they were much below mean heights at various ages from charts (class II) in use at the Department of School Hygiene, Bangkok. Mean heights of adult men and women in Bang Chan were slightly below those recorded by other observers who have measured groups of Thai men and women (Hauck, 1956). Without further study one cannot say whether the short stature of Thai as compared to Western peoples is due to inheritance, environment, or both. Nor do we know why school age children and adults in the rice producing village of Bang Chan were, on the average, somewhat shorter than their counterparts in Bangkok only 20 miles away.

Thorangkul (1957) found that although children 7 to 14 years of age increased in height in successive 3-month intervals, a large proportion of them failed to gain weight or even lost at times and that such failure to gain occurred in more children during the dry season than during the wet season. The reason for this was not apparent from our observations. Two possible explanations are: 1) use of untreated canal water may lead to heavier infestation with intestinal parasites in the dry season and 2) leafy vegetables are almost lacking, and other vegetables are in short supply at this time. One would expect the temporary shortage of vegetables to be reflected in growth failure only when the diet is borderline in respect to some nutrients as it appears to be in Bang Chan (Hauck et al., 1958; Hauck and Sudsaneh, 1959). Either of the possible causes suggested might affect the nutritional state of other family members as well as elementary school children. All those drinking canal water and eating "adult foods" could be affected directly, whereas infants who are still largely breast fed might be affected indirectly through the quantity and quality of mother's milk available to them.

In this section observations on the growth in height and weight of infants and small children in Bang Chan are presented.

clear evidence of a seasonal effect. If weight gain in Thai infants is related to season, this could be better defined by weighing groups of children at monthly intervals and determining when or if changes in rate of gain occur.

Although our records were not made for the purpose of correlating food intake with weight gain, and no quantitative information was obtained on the diets of mothers and babies, we attempted to see if any obvious relation existed between the variety of food eaten by the mother or the child and the child's growth. For this purpose, case studies were made of 7 infants whose records from birth onward were fairly complete. The age at last observation was from about 14 to 18 months. Four of these children had gained at each weighing and weighed more at one year of age than the average infant observed by Dr. Montri (1939). Three were chosen because they had lost weight or failed to gain at some time during the period of observation and weighed less at one year of age than the average infant observed by Dr. Montri. Infants of both sexes were included in each group. No illnesses or abnormalities were recorded in the clinical histories of any of these babies or their mothers. No evidence was obtained from the qualitative food records as to why some infants gained consistently and at a fairly "normal" rate, whereas others gained relatively slowly and failed to gain or lost weight at times (Smith, 1958).

Quantitative food records might have provided evidence on this point but our observations were inadequate for this purpose. Such quantitative records should include estimations of the amount of mother's milk obtained by the infants, based on the baby's weight before and after nursing, as well as records of supplementary food given. Analysis of the mother's milk, particularly for the content of the water soluble vitamins which are influenced by the mother's diet, should also help to shed light on the cause or causes of the common failure to gain weight among older infants and small children in Bang Chan. No cases of beriberi occurred among the infants we observed, but in two instances siblings had died of infantile beriberi.

Evidence of protein malnutrition has not been commonly recognized in rice eating areas, but one must consider the possibility that these children may be in a state analagous to pre-kwashiorkor. Development of the clinically recognizable protein deficiency disease may be forestalled when the child learned to feed himself and eats more liberally of rice with some fish and egg. Of the 54 children with kwashiorkor observed by Metrasiri and Metrasiri (1955) in Bangkok, many were weaned earlier than was usual in Bang Chan. Most of them, however, had been breast fed, and 4 were still being breast fed when the disease was diagnosed.

145 In summary, although infants and children in Bang Chan
121 increased steadily in height, the rate of increase tended to be less than that of infants observed in a well baby clinic in Bangkok and much less than is usual for Western infants.
[146] Repeated periods of failure to gain in weight, or even weight loss, which we observed in infants and small children as well as in school children 7 to 14 years of age, may be evidence of unsatisfactory nutrition and might account in large part for the relatively small size of adults in this area. Extended longitudinal studies on growth of Thai children are needed, as are studies of food intake, intestinal parasitism, and other conditions which may lead to growth failure. Controlled therapeutic trials would help in recognizing the more serious of many problems of child health in this region.

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4:Phillips E-4,5 (1956-1957) 1966
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[P.vii]

Preface

In a felicitous bit of phrasing, the psychologist Abraham Maslow (1954) characterized the research activities of American social scientists as either "problem centered" or "means centered" in their basic purposes. By the former he means studies that are concerned with describing and analyzing a problem that is important or interesting in its own right, and in which the question of *how* the study is conducted is self-evident, secondary, or unstated; by the latter he means studies concerned with illustrating the merit or validity of a particular research strategy or method, and in which the research findings themselves are subsidiary to the precision, elegance, or thoughtfulness of their formulation. Maslow's characterization applies with particular cogency to the writings of sociologists and psychologists. However, it is also relevant to anthropology, a field in which, on the one hand, authors continue to write splendid ethnographies without devoting more than a paragraph or two to how they collected their data, but in which, on the other hand, the editor of the *American Anthropologist* can introduce an article in his journal by saying (Spindler 1963: 1001): "The paper is intended as a solution of a procedural problem in data ordering, and nothing more, but one of the significant trends in modern anthropology is just this." 121 •

In culture and personality studies there has in recent years been an attempt to break through this tendency toward intellectual separatism. Some of the most significant contributions to the field have in fact been dual research efforts. Thus, despite their titles and theoretical concerns, such studies as Wallace's *The Modal Personality Structure of the Tuscarora Indians*, Kaplan's *A Study of Rorschach Responses in Four Cultures*, Gladwin and Sarason's *Truk: Man in Paradise*, and Spindler's *Sociocultural and Psychological Processes in Menomini Acculturation* have given from one-third to one-half of their total volume to problems of research design and method.

4:Phillips E-4,5 (1956-1957) 1966
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121 The present study is written in terms of this emerging syncretic tradition. It is concerned with two different but closely related problems: the description and analysis of selected aspects of the psychological life of Central Plain Thai peasants, particularly aspects of the villagers' daily encounters with one another; and the presentation of an approach for dealing with some of the problems involved in designing and carrying out cross-cultural personality research. Although all the chapters deal with both issues, certain chapters emphasize one more than the other. Readers interested mainly in the description of Thai peasant personality are urged to go directly to chapters I, II, and the first part of III, V, and VI; those interested primarily in the theoretical and methodological framework of the study are referred to the Introduction and chapters III and IV.

This study is also a product of the recent anthropological trend toward team research. If the author had been a lone field researcher, working in a completely unknown community, he could never have undertaken the kind of specialized project reported here. As will be seen below, it was only because considerable ethnographic material was already in hand, providing the cultural framework so necessary for intelligent psychological analysis, that the research was at all feasible. It is left to the reader to determine whether this kind of study is simply an anthropological luxury or whether it adds a new dimension to traditional anthropological approaches.

4:Phillips E-4,5 (1956-1957) 1966
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[P.1]

Introduction

The purpose of this study is twofold: (1) to provide a *basic* description of 121
the dominant personality traits of the adult members of a Central Plain Thai community; and (2) to demonstrate a procedure for dealing with many of the methodological problems, theoretical and technical, that are encountered in cross-cultural personality research. The primary data are observational materials and the responses of 111 Bang Chan villagers to a Sentence Completion Test, a so-called "projective technique."

Several considerations have prompted this work, its planning, emphases, and aims.

In 1955, when I participated in the preparation of a sociological hand- 122
book on Thailand (Sharp *et al.* 1956), I had the task of writing a descrip- 114
tion of the "social values and personality patterns of the Thai," using as sources all available materials in the English language. These sources consisted largely of the writings of travelers, businessmen, and government servants who had worked in Thailand, the comments of introspective Thai, and some preliminary ethnographic studies (R. F. Benedict 1946, Embree 1950, Sharp *et al.* 1953, deYoung 1955, Kaufman 1955, and unpublished field notes of the Cornell Thailand project). It quickly became apparent that these documents—written originally for purposes quite removed from those of psychological analysis—could provide little more than cursory impressions or intriguing clues to the psychological functioning of the Thai, and that a focused, systematic study of Thai personality was a problem for future research. The account that finally emerged from my review of the literature was hardly more than a vocabulary for describing some of the stereotyped forms of Thai social interaction: politeness, the maintenance of a stoical mien in stressful situations, the love of fun, and the like. Although worthy of note, such a lexicon obviously did not represent a thorough or intensive portrayal of Siamese personality. It was 121
with the aim of redressing this situation, therefore, that in the winter of 1956 I undertook a twenty-two-month field research project, a major portion of which is presented in this monograph. Since the research concerns

4:Phillips E-4,5 (1956-1957) 1966
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• 121 only the members of the village of Bang Chan, its descriptive universe is limited to this sample of the relatively homogeneous peasant population of Thailand's Central Plain.

A fundamental problem of cross-cultural personality research, however, is the question of precisely what to study and how to study it. Culture-personality studies are now universally acknowledged to be a legitimate part of the anthropological endeavor, but it should be remembered that the first research in this area, Mead's *Coming of Age in Samoa* (1928), is less than four decades old.[1] Forty years is not a long period in the development of a field of study, and much of the research during these years has necessarily been given to experimentation and the pursuit of randomly emerging problems. There is as yet no widely accepted "universal personality pattern," equivalent to the "universal culture pattern" in anthropology proper, to organize and guide psychological studies in non-Western cultures and, by specifying invariant points of reference, to expedite the overriding aim of such research: the determination of the range and variation of human personality. Too, despite the fashionableness of the field, there have in fact been comparatively few research projects that have focused *primarily* on the delineation of personality. With a few notable exceptions (DuBois 1944, Leighton and Kluckhohn 1947, Wallace 1952, Gladwin and Sarason 1953, Kaplan 1954, Hallowell 1955*a*, Spindler 1955*a*, Spiro 1958, and isolated life histories) the majority of psychological studies by anthropologists—and most of the personality research in the non-Western world has been done by anthropologists, not psychologists—have been peripheral to the field worker's major concern, ethnographic description, with the result that much of our personality material to date is scanty or ill-collected. Finally, as Inkeles and Levinson have pointed out (1954), the vast majority of personality-in-culture studies have been based not upon descriptions of individual human beings, the loci of personality, but upon descriptions of the institutions by which they were reared or the

[1] Questions of origins are of course always debatable. By stretching the concept of personality, one might make a case for Myers' and Rivers' work on the Torres Straits Expedition, 1898, or for Kroeber's three Gros Ventre biographies (1908) being the first culture-personality studies. During the teens and early and mid-twenties, Radin's Winnebago biographies (1913 and 1926), Elsie Clews Parsons' anthology (1922), Malinowski's work (1927), and Sapir's theoretical papers (1924 and 1927), although not in themselves culture-personality studies, certainly helped create a felicitous intellectual climate for Mead's research and for Benedict's *Psychological Types in the Cultures of the Southwest*, published the same year. In his synoptic review, Kluckhohn (1944) credits the Mead–Benedict–Sapir triumvirate with providing the groundwork for culture-personality studies in 1928. On the other hand, LaBarre (1958: 279) says: "Culture-personality studies essentially began in the 1930's at Yale University, when Edward Sapir and John Dollard began the first seminar on 'Culture and Personality.'" Milton Singer in his more recent historical review (1961) points to both events as marking the beginnings of the field.

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collective cultural products they have created: myths, folktales, religious conceptions and practices. In these instances, personality has been conceived of as either a hypothetical construct linking two sets of cultural institutions (child training methods and adult collective products) or the seat of unconscious processes for the handling of anxiety (created primarily by the child training methods and unconsciously expressed in the adult collective products). Although there is considerable cogency in this last approach (Kardiner 1939 and 1945, Erikson 1950: 98–160, Whiting and Child 1953, Whiting 1961), I would suggest that limiting the meaning of personality to a mechanism for handling anxiety represents a somewhat narrow conception of its functions and attributes. Several scholars (Opler 1936 and 1938, Hallowell 1941, Kluckhohn 1943*a*, Spiro 1952, among others) have ignored the issue of child rearing and have focused on the psycho-cultural functions of the collective products—both as sources and outlets for the anxieties as well as the realistic problems of adult life. These studies have been concerned not so much with portraying personality as with bringing psychological perspective and insight to the interpretation of ethnographic materials.

These comments are made not in criticism of past research, but rather to note that there are still few firmly established conventions for precisely how a cross-cultural personality study should or can be conducted. Much personality data in the past has *had* to be scanty, simply because the careful collection of ethnographic facts—a fundamental prerequisite to the interpretation of psychological data—is in itself so time-consuming.

Given this lack of a clear methodological mandate, I formulated the following general strategy for the study of the personality characteristics of Siamese villagers.

First, it was decided to concentrate on the description and analysis of the typical dispositions, feelings, conflicts, character traits, and psychological defenses of individual adult informants viewed within the setting of Thai peasant culture. This meant that the point of departure would be a series of psychological states and processes characteristic of individuals rather than a series of cultural institutions which might or might not reflect such states. It was clear, however, that this approach would be practicable only if substantial ethnographic data on the villagers were in hand to provide both general background information and the local cultural meanings necessary for interpreting the personality data. The issue of local cultural meanings will be amplified in a later section; for the present it is sufficient to note that I proceeded from the premise that a study concerned *primarily* with the portrayal of personality would be effective to the extent to which, on the one hand, it rested on solid ethnographic data and, on the other, freed the researcher from devoting his time and energy to collecting

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121 such data. Fortunately, the conditions for putting this plan into effect were present in the Thai situation, where extensive ethnographic studies had [122] already been conducted in Bang Chan by Sharp and his colleagues (Sharp *et al.* 1953, Janlekha 1955, L. M. Hanks 1959a–c, J. R. Hanks 1959, Textor 1960). To a large degree, the design and phrasing of my project was predicated on the prior existence of these materials.

Second, it was assumed that the states and processes referred to by the concept of personality are among the most complex of phenomena, with as many dimensions and attributes as there are to the concept of culture. This "primitive assumption" was made of course not to acknowledge an obvious truth, but to affirm the necessity that research designs for the study of personality in non-Western societies explicitly exhibit a recognition of the complexity of the task. I would suggest, for example, that collecting a set of Rorschach or TAT protocols during the last hurried weeks of one's field work—not an atypical practice (see Nadel 1955, Spindler 1955b, and Hallowell 1955c)—and then assuming that the personality portion of one's field work has been "done" is like collecting a list of kinship terms and assuming that all the complex emotional, economic, and juridical elements of actual kinship relationships have been covered. Although most anthropologists recognize the limited intellectual reference of kinship terms (Kroeber 1909 and 1952: 172, Opler 1937 and 1955: 190, Murdock 1949: 113–183, Edmonson 1957, Wallace and Atkins 1960), relatively few have taken an equally circumspect attitude toward the meaning of projective test materials, at least insofar as they have represented themselves to readers. The point is not that TAT protocols or kinship terms are unimportant, but rather that they should be seen as forming only a portion of a complex, cumulative research process, each stage of which should be carefully executed and aimed at dealing with a specific descriptive task. If personality is as involved and multi-dimensional as we all tacitly assume it to be, we should be willing to work with research designs that are equally involved and multi-dimensional.

121 *128 It was with the above in mind that I worked out a five-stage cumulative research program, the first two stages of which are represented by the data and interpretations in the present volume. The main body of this book has been limited to the two initial stages principally to permit a more complete exploration of the issues involved while at the same time keeping the report to a manageable size. The complete design is outlined below solely to provide the broader theoretical and methodological setting of the present study and to indicate its precise limits.

The first stage (chaps. II and VI) is perhaps descriptively the most

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interesting, but methodologically the most vulnerable. It involves sketching a naturalistic portrayal of the villagers' dominant personality traits on the basis of their overt behavior, and the patterning of these traits in their interpersonal contacts. Basically this entails trying to arrive at several generalizations about the villagers' characteristic types of response, drawing from several areas of cultural life—kinship, religion, gossip-group behavior, and so forth—and ignoring for the most part detailed situational considerations, deviations, and differences of age, sex, and status. The purpose of such a description is not to provide a precise picture of psychological modes and variations, which is a task in and of itself (stage two), but to sketch in broad strokes for the Western reader some of the manifestations of Thai character which are strikingly different from our own and are important elements in their pattern of expectancies. The emphasis here is on the psychological dimensions of interaction and on those traits which are possible, expectable, and—most important—inimitably Thai, not on those traits which are most frequent in a statistical sense. "Interaction" and "interpersonal contacts" are discussed mainly as attributes of the personalities of individual villagers rather than as attributes of the sociocultural system in which these individuals exist.

It must be emphasized that since the first approach is based on a spectator's observations of overt behavior, it cannot be expected to provide information about how, from a subjective viewpoint, villagers perceive their own behavior and feelings (particularly in psychologically loaded situations), what sentiments they feel but do not express, how they deal with such sentiments psychodynamically, what their unconscious defense mechanisms and private fantasies are (as contrasted to codified beliefs, which in some cases may be institutionalized fantasies); this type of information, commonly assigned to "deeper levels" of personality, is best dealt with in subsequent sections of the research. The major aim of the first section is to provide a general psychological map upon which finer points can later be traced.

The second stage (chaps. IV—VI), involving the use of the Sentence Completion Technique, is concerned with delineating in a statistical sense the subjectively held dispositions of the villagers in various areas of psychological concern: aggression, dependency, achievement, and the like. These dispositions refer not to a series of characteristics consistently shared by any distinguishable segments of the Bang Chan population but rather to the modal and variant characteristics held by villagers in different psychological situations. Since villagers who have similar dispositions in an aggression situation, for example, may have different ones in an achievement situation, it is expected that the frequencies of modes and variants, and their

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representative memberships, can change from area to area. Our modal and variant types therefore represent not a composite but a profile of the villagers' psychological tendencies.

This second stage of the research differs in intent from the first on several counts.

First, in contrast to the earlier emphasis on what the observer sees as the villagers' most typical behavior, the second section focuses on how villagers themselves perceive situations, or pychologically relevant states, and how best to deal with them. The statements of the Sentence Completion Technique describe a series of relatively unstructured but highly realistic situations and states—*"When I realize other people do not like me, I feel . . ."*; *"When he was asked if he wanted to become boss, he . . ."* —to which informants are asked to respond, and in so doing reveal their own needs, wishes, and experiences. It must be emphasized that the completions thus provided do not necessarily represent a description of how informants would in fact behave "when they realize other people do not like them," but do portray their predispositions to react in the manner indicated. The analytic meaning of the response is explored fully in chapter V, but for the present it suffices to note that a basic aim of this section of the research is to present in a systematic way the villagers' internal views and definitions of psychologically significant experiences.

Another aim of this section, of a different order from that above, is to shed some light on a problem that has been the subject of considerable interest, and also considerable obfuscation, from the very beginning of culture-personality studies: the question of a culturally modal personality. (Some representative studies or theoretical statements on this problem are: R. F. Benedict 1934, Belo 1935, LaBarre 1945, Gorer 1948, Mead 1951 and 1953; some representative criticisms, Lindesmith and Strauss 1950, Farber 1952 and 1951, Hart 1954, Piddington 1957; some representative analyses, Wallace 1952, Kaplan 1954 and 1957, Inkeles and Levinson 1954, and Farber 1955.) I am convinced that one of the major sources of difficulty surrounding the use of the concept of modal personality—or its over-inflated version, "national character"—has been the tendency on the part of some field workers to confound inadvertently the culturally interesting or different with the culturally typical. Researchers have been so intent on communicating to readers the unusual nature of the characteristics of the people they have been studying—those characteristics they encountered most personally and directly in the field—that they have often reported unusual characteristics that occurred with *sufficient* frequency to be impressive as actually occurring *most* frequently. I would suggest that it is precisely this kind of confusion that prompted the criticisms (Malinowski 1936 and Thurnwald 1940) of Mead's descriptions (1935) of the

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psychological transmutability of the sexes among the Arapesh, Mundugumur, and Tschambuli, and to a lesser extent those directed against R. F. Benedict's (1934) and Thompson's (1945) views of Pueblo Indian character by Goldfrank (1945), Eggan (1943), and Titiev (1944 and 1946). The issue here is not that traits occurring most frequently are ultimately any more reliable than interesting ones occurring sufficiently frequently or even rarely—these latter are perhaps the best evidence for the variegated and innovative richness of human personality—but simply that the two should not be confused when presenting descriptions of modal personality.

Setting aside for the moment the substantive differences between an "external" (stage one) and "internal" (stage two) approach to personality, it seems clear that the most sensible way for a researcher to proceed to make statements about modal personality—the most frequently occurring personality characteristics in a group—is not by naturalistic portrayal, but by presenting to several members of the group a series of standardized stimuli, the responses to which are then examined for modes and variants and the degree of modality and variation actually expressive of the group. At first glance, naturalistic portrayal may seem the more desirable approach to modal personality, but empirically it entails serious methodological difficulties. A researcher who employed such an approach with reasonable precision would have to (1) record literally everything that occurred around him in order to insure a complete set of observations upon which to base his determinations of modality; (2) identify in these data equivalent social situations for all individuals observed, which, given all the relevant factors present that must be permuted, would vastly reduce his total number of cases; and (3) attempt to tease out modal and variant psychological responses to these situations while working with a very small sample indeed. Moreover, there would always be certain areas of psychological functioning—in Bang Chan, for example, direct aggression between adults, undisguised adult sexual behavior—which would be either closed to him or radically altered *because* of his presence. Unhappily, it is often these very areas in which he may be most interested.[2] With a method such as the

[2] I know of no case in the anthropological literature in which a study of adult modal personality in the terms just outlined has ever been seriously attempted—undoubtedly for the reasons specified. Roberts' study (1951) of three Navaho households may seem stylistically similar but actually deals with a totally different problem. It may be noted that the anthropologist who has argued most vigorously for a naturalistic observation approach to personality—Jules Henry (1955, 1958, and Mensh and Henry 1953)—has at all times confined his illustrations to observations of children or children with adults, never adults with adults. The major and unexplicated reason for this limitation is the fact that the behavior of relatively unsocialized children is of an entirely different order from that of adults: it is more spontaneous, motoric, uninhibited, and less verbal than adults' behavior, so much of which is guided by social role requirements. Stated in another way: a Bang Chan child would

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With a method such as the
121 Sentence Completion Technique, however, the researcher obtains data
[125] that are the product of all individuals responding to the same stimuli, describing the same situations (although in the nature of the technique, hypothetical ones—and this is precisely what permits the handling of topics that may be taboo), and interviewed under generally the same conditions.

[128] Another major aim of this section is to illustrate the usefulness of the Sentence Completion Method for the cross-cultural study of personality. The specific advantages of the technique are elaborated upon later, but the point to be emphasized here is the necessity for phrasing *any* study of personality (or a principal part of it) in a non-Western culture in terms of a technique that will yield comparable data from *any other* culture. I am firmly convinced that only by using a method that can be easily adapted and freely translated from culture to culture can we begin to deal in earnest with the underlying theoretical justification of all culture-personality studies: the determination of the range and variation of human personality. As Spiro (1955: 257) has so persuasively argued:

> one of our main interests is to discover the extent to which culture influences personality; and for this purpose I believe that the Rorschach (*or any other culture-free unstructured stimulus*) is of crucial significance, for it provides us with a yardstick against which genuine personality variables, in contrast to patterned-response variables can be measured. This proposition requires some explanation. A culture, psychologically viewed, consists of a configuration of stimulus situations and the customary responses to these situations which have been learned by the members of a given society. Hence, in demonstrating, as we have successfully done, that emotional and behavioral differences are to be found within different sociocultural contexts we have not demonstrated the existence of personality differences at all. We have merely shown that different stimuli evoke different responses. What we must demonstrate, if we are to show personality differences, is that peoples reared in different sociocultural contexts respond differently to the *same* stimulus. We must, in short, be able to observe the responses of different peoples to a stimulus that is identical for all of them. . . . If under

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have few qualms about kicking another youngster in the presence of an observer, but a Bang Chan husband would think twice before beating his wife in this setting. Similarly, a mother might make love to her child in the presence of an observer, but never to her husband.

Henry himself recognizes the difficulties of using a naturalistic approach with adults (personal communication 1958), a conclusion shared by other researchers who have attempted naturalistic observation in psychological field work (personal communication from William Lambert with regard to the Whiting–Child–Lambert cross-cultural studies in socialization). Boggs (1956) provides an excellent illustration of the use of naturalistic observation with children. The work of Barker and his colleagues (Barker and Wright 1951, Barker 1963) represents the most sophisticated application of naturalistic observation to the *description* of behavior (although not necessarily personality), but again the focus is on children.

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these circumstances we find differences in response, we can be fairly confident that we have a true measure of personality differences and not a measure of how well these people have learned their respective cultures [first italics added].

In my view, the Rorschach, not being a language-mediated instrument, is descriptively and analytically limited to too narrow a sector of psychological functioning (primarily to perceptual processes). It was therefore not used in my own research. However, the major condition of Spiro's argument is admirably fulfilled by our Sentence Completion Technique, the statements of which—covering a broad spectrum of psychological experiences—were expressly designed for, and are capable of, use not only in Thai peasant culture but in several other cultures of the world.

The next two basic stages of the research are intended eventually to provide analytic depth and descriptive detail to the earlier formulations. The third stage, involving the use of the Thematic Apperception Test—eleven of the original Murray–Morgan "American" cards which were redrawn to suit Thai conditions—is concerned with portraying the fantasies and unconscious sentiments of the villagers to the extent to which they are willing or capable of articulating material which reveals such sentiments. This last point is important. I used the TAT in Bang Chan on the premise that this technique would elicit the type of data it is theoretically designed to elicit; that is, when informants are presented with highly ambiguous pictures and asked to make up stories describing what is occurring in the pictures, they will project through these stories their own unconscious sentiments and preoccupations. The rationale here is that since the stories and the pictures which stimulate them are so highly fanciful, with no realistic consequences or constraints, informants will give free rein to their imaginations and reveal those concerns that are not usually expressed in the more inhibiting and realistic circumstances of ordinary life; and being fantasies, the stories represent projections of unconscious materials. It is this fanciful element that differentiates the TAT data analytically from the considerably more realistic SCT materials.

To a large extent, these theoretical expectations were fulfilled in the informants' responses to the TAT. The villagers' inordinate preoccupation with aggression and social conflict in the stories, for example, was almost the antithesis of what one would predict from observations of overt behavior, but made considerable sense to an investigator who always found it hard to believe that their marked non-aggressiveness at the behavioral level did not betray something quite different at more latent levels.

Despite successes of this sort with the TAT, there were several instances when informants did not seem to articulate analytically useful material. This was either because some pictures held little psychological significance for them (and this happened, I might add, with cards that

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determined. So frequently the provocative, interesting, or delightfully human life histories found in the anthropological literature (Dyk 1938 and Tirabutana 1958 come immediately to mind) are so simply because they are the products of the more imaginative, articulate, and introspective members of the culture in question. The issue of course is not that a biography elicited from an articulate individual is to be considered ultimately any more or less valuable than one obtained from a more "typical" member of the culture—Kluckhohn's "Mr. Moustache" (1945) is ample evidence of what an articulate interpreter can do with the life history of a relatively inarticulate informant—but rather that it be accurately seen against a background of the psychological responses of the members of the community as a whole.[4]

The final stage of the research program is perhaps the most complex. Following the outlines of a recommendation originally made by Inkeles and Levinson (1954) and Inkeles (1959), it aims at presenting a systematic analysis of the *relationship* between the personality tendencies of the villagers, as determined through the foregoing materials on the one hand, and the functional requirements of Thai peasant society, as determined through ethnographic data, on the other.

An analysis of this type rests on at least three premises: (1) that there is just as likely to be a lack of congruence between the psychological capacities and proclivities of a group of people and the psychological demands that are made upon them by their own social institutions (demands that must be met if the institutions are to be maintained effectively) as there is likely to be a close fit, and that a crucial, empirical task of any culture-personality study is to detail the specific areas of congruence and noncongruence; (2) that human beings can bear considerable psychological strain—precisely how much we really do not know—and still function effectively, maintaining both their prevailing personality patterns and

Mandelbaum 1953, among others). The issue is the extent to which the psychological tendencies of life history informants—their readiness to respond and modes of response in various situations, their assumptions and unconscious premises—are typical of other villagers.

[4] I am reminded here of my own ambivalent reaction to a comment once made by a villager who, intrigued by the fact that I was collecting life histories, said: "I have heard about those people who are telling you their life stories. You're smart—getting interesting ones like them. Some of those people can really *phuud keŋ*." To *phuud keŋ* means to "speak well," but more particularly to speak cleverly, fluently, deceptively, convincingly, or beautifully (in an aesthetic sense). Actually, there were numerous individuals in Bang Chan who, in local terms, could speak considerably more *keŋ* than the life history informants. However, as the villager's remark suggests, the ability to be "keŋ-ful" in one's speech is something to which Bang Chaners give considerable attention, often to the extent of seriously modifying the intellectual content of their speech, and is one more factor that must be dealt with in assessing the content of a biographical document.

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121 *128 established social structure, albeit in a state of stressful equilibrium; (3) that too much strain will eventually lead to major changes either in their personality patterns or social structure or both, in either a social-psychologically integrative or malintegrative way.[8] Some preliminary illustrations of this approach can be found in Phillips (1963).

I have gone into considerable detail in the above discussion in order to indicate the broader context of the present volume and also to illustrate the necessity for thinking in terms of a multiple-stage research program, each part of which concentrates on a circumscribed descriptive issue. The point is that each stage of the design has *of necessity* its intrinsic strengths and limitations. At the very outset of this book it was noted that the purpose of this study is "to provide a *basic* description of the dominant personality traits" of the villagers. It is hoped that it will indeed provide that—by which is meant a portrayal of the villagers' most distinctive personality traits as expressed in overt behavior and an account of their subjectively held dispositions as revealed in responses made to a series of hypothetical but realistic situations. In the latter instance, special attention is given to the issue of psychological modality and variation as well as to the larger problem of cross-cultural comparability. However, the presentation will neither deal in any detail with fantasies, unconscious sentiments, or psychodynamic processes, nor will it have the descriptive—and idiosyncratic—richness that can be found in life history documents. The emphasis throughout is on the personality characteristics of the members of the community as a whole.

121 A final word should be said about the theoretical model which underlies the entire effort. The basic organizing principle of a study of this kind is that human beings can be most effectively described in terms of their *typical, characteristic,* or *stable* psychological responses. These terms refer not to the superficiality or depth of such responses (which may be con-

[8] This last premise is mentioned for purposes of formal completeness, not as a practical predictive principle. We have as yet little idea of the amount of psychological strain individuals can endure before making changes in their personalities or social environments, although in a loose *post hoc* way we have often been able to specify in individual cases the conditions which lead to such changes. Also, we obviously have no way of foretelling whether changes resulting from personality-institutional strains will lead to integrative social psychological responses (Manus culture during the past twenty-five years; the abolition of the taboo system in Hawaii in 1819); or simply to more intense strains, the most extreme examples being revolution (Burma during the early and mid-1950's, the Congo) or cultural malaise (many Melanesian and American Indian tribes). The crucial issue here may well be the time factor: how short- or long-lived these responses prove to be, or whether they are instrumental or conclusive. The Hawaiian abolition of taboo, for example, was inconsequential relative to what occurred five months later after the first missionaries arrived; but the recent chaos in the Congo may in time prove to be only a minor episode in the establishment of the nation.

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scious or unconscious), but to their *constancy*. Thus when we speak of a "polite," "fun-loving" people—or a "narcissistic," "self-accepting" people—we mean that there is great likelihood that these persons will respond or will be predisposed to respond in the manner indicated, especially in novel or ambiguous situations. Indeed, ambiguous situations provide the best evidence for how typical the responses actually are, a point that should be kept in mind later with regard to the Sentence Completion data. 121 •

It is recognized of course that this model cannot possibly account for all human behavior and feelings. Even the most polite people will have their moments of boorishness, and the most narcissistic their moments of selflessness. Also, responses that occur relatively infrequently, or under very special circumstances, may often prove to be among the most psychologically revealing. Yet the psychological tendencies of human beings are remarkably constant. People do act repeatedly in similar and often almost identical ways, and it is primarily this attribute of psychological predictability that brings order both to their lives and to our analyses.

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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

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121 remotely extended families, or with what L. M. Hanks [1959c] calls the 594 multi-local extended family, about which there is more below.)

591 The variations of the nuclear family, obviously excepting the monkhood, 594 arise primarily out of the large proportion of recently married couples who find it more expedient to continue living with one set of parents while accumulating funds for setting up their own independent households. In the case of one-person families, the variation arises when individuals are unable to live with their kin, are deserted by them, or have none. All the one-person families tend to be poor and are comprised largely of elderly people. In arrangements of the former type, there is a slight (five to three) tendency to matrilocality over patrilocality, and despite the intention of all concerned that the arrangements remain impermanent, there is considerable variability as to how long they are maintained. Analyzing a sample of 96 Bang Chan families, Janlekha found that although 30 percent came into being as nuclear families immediately after marriage, the balance underwent a period of residence with parents ranging from one to twenty years, the average being four years, with 16 percent never moving from the parents' home at all. Most cases of what Janlekha calls "limited extended families" result from a stem family inheritance pattern, although some entail elderly parents breaking up their households and moving in with the family of one of their mature children.

In addition to these basic variations, more accurately labeled "alternatives," there are several other variations of the nuclear family that occur with sufficient frequency to be noticed and at the same time are considered not at all unusual by the villagers themselves. Their significance for us is that they reveal what appears to be an almost nonchalant willingness or acquiescence on the part of the villagers to make modifications and adjustments in their living arrangements whenever necessary. Underlying this seems to be a fundamental assumption that the question of who lives with whom simply is not one of overriding importance: as long as individuals can live together without discord, act in terms of the household's established patterns of superordination and subordination, contribute labor or money to the family larder commensurate with their ages, and not inconvenience each other, they will be welcomed into the household; if unable or unwilling to fulfill such elementary obligations, they may take their leave, even if they are in fact full-fledged members of the nuclear family.

This rather flexible, or what the late John Embree would have called (1950) "loosely structured," approach to family organization is expressed in both centripetal and centrifugal ways.

596 Consonant with the fact that in all but the poorest Bang Chan families there is almost always enough rice to feed another mouth, it is common in

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as a release mechanism from boredom or tension (Riesman and Bloomberg 1957, Roy 1959–1960), as a "healthy" escape from reality (Flugel 1954, Bateson 1954), or as a normal and desirable regression to childhood pleasures (Freud 1905 and 1928). Running through all these observations is the obvious Western bias that play somehow is divorced from, or a reaction to, the harsh facts of social reality.[6] On reflection, however, it is clear there is no theoretical necessity, either maturational or social psychological, for play to be limited to cathartic functions, or for regarding it as a less realistic or less mature psychological state than that which causes boredom, tension, escape, or regression. In fact, one might logically argue that the conditions which create the latter states are less realistic and immature because they represent retreats to forms of infantile masochism. Such questions of course belong to the realm of interpretive debate. The essential point is that in the process of learning to adapt to the social psychological realities of one's culture there is no inherent, ontogenetic requirement (other than that imposed by the peculiarities of one's culture) for human beings to renounce their motivations for play. Simply stated, having fun need not be so much a retreat from or defense against adult reality and responsibility as it is something to be sought after for its own sake.

The fundamental analytic issue here may well be whether play is a psychobiological "given" of the human animal, on the same order as hunger, sex, and other precultural needs, or a learned, secondary cultural

[6] Of these various interpretations, the most broadly conceived and carefully argued is Freud's, where play activities are linked theoretically to the interrelationships of the id, ego, and superego and the aims of the "pleasure principle." However, even here Freud was caught up in the Western cultural bias that only children, those who have not yet had to come fully to terms with social reality, could easily "afford" the luxury of play. This same cultural bias often appears at a totally different interpretive level in the rather crass pronouncements of journalists and travelers who, in writing about the Thai, refer to the "child-like" behavior of these people who spend so much time, energy, and money in having fun.

Radcliffe-Brown's famous essay on the "joking relationship" (1952) is of course a special sociological case of the "tension release" function of play. In a brief paper, Keesing (1960) lists some seven overlapping functions of play, but here too play is seen largely as divorced from "everyday 'reality' activities." Callois (1958) brings together valuable cross-cultural data in what is otherwise a classification of organized games.

Probably the most comprehensive study of play ever written is *Homo Ludens: A Study of the Play Element in Culture* (1938; English translation 1950) by the late cultural historian, Johan Huizinga. Although Huizinga is concerned mainly with structured play activities (games of skill, chance, guessing games) and with the relationships between play and ceremonials, one of his observations is worth noting: "Nature, so our reasoning mind tells us, could just as easily given her children all those useful functions of discharging superabundant energy, of relaxing after exertion, of training for the demands of life, of compensating for unfulfilled longings, etc., in the form of purely mechanical exercises and reactions. But no, she gave us play, with its tension, its mirth, and its fun. Now this last element, the *fun* of playing, resists all analysis, all logical interpretation. As a concept, it cannot be reduced to any other mental category. . . ."

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need. The problem is that we really do not know, although comparative data from primatology (Yerkes 1943, Kroeber 1948: 27–29 and 60–61) clearly suggest that play belongs to the former category. If this is indeed the case it would imply that play is subject to the same degree of cultural influence, channeling, and socialization as are hunger, sex, and aggression, but can no more be fully obliterated than can these needs. Assuming, for the sake of argument, that this reasoning is correct, then the compensatory "escape" and "regressive" functions attributed to play by the authors noted above would not be at all unreasonable: play might well come to serve as an escape from adult reality in the same way that food sometimes serves as an escape from sexual anxiety or sex from food anxiety (Holmberg 1950). However, the point is that these are not the primary or typical functions of these needs, but secondary and defensive ones; although significant, they hardly comprise the necessary conditions for their being. If this approach is valid, we would be considerably wiser in our present state of knowledge (the Protestant Ethic and its intellectual extensions notwithstanding) to direct our attention to identifying the varying forms of play from culture to culture rather than to dwell on its secondary, compensatory functions.

Whatever its ultimate motivational basis, there is no doubting either the spontaneity or ingenuousness with which Bang Chaners turn social situations into occasions for play. For the most part they seem prompted in these situations by the simple desire to have a good time rather than to affect others in a socially pointed way, that is, their humor is not typically aimed at being sarcastic, didactic, or even exhibitionistic, although the person who excels at being funny is quickly recognized as such and is to an extent admired.[7] There is, in the negative sense noted earlier, an element of interpersonal effect operating here: comedy is a technique which almost by definition reduces the potentiality for face-to-face conflict. However, the villagers' play seems aimed primarily at satisfying personalistic function: their *individual* needs for pleasure and amusement.

The forms that these play activities take are numerous.[8] Perhaps their

[7] In the more explicitly institutionalized forms of comedy—*likay* (folk dramatic shows) or newspaper and magazine cartoons—these aims do come into play and often assume extreme, sometimes even biting, proportions. However, this is the comparatively safe world of theatre and "literature." Among themselves, in the world of face-to-face contact, villagers are considerably more gentle (or less sophisticated) and do not focus explicitly on such purposes.

[8] We will be concerned primarily with the forms of play, not its content. For whatever reason, humor and comedy seem to be the last refuge of what is genuinely private in a culture. Intercultural translations may succeed in communicating the manifest content of another people's humor, but they so frequently miss its intent that the result is either perplexity or disappointment ("Yes, and what happens then?").

The dangers of trying to share humor interculturally were perhaps never brought home better than when I tried to get the villagers' reaction to a story that received

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538 231 ("Who knows what he was in earlier lives and what powers he brought with him into this one?"), there is enough reality about the tale to make people want to listen. Moreover, it is wish-fulfilling fantasy; people laugh because reality has been outraged, but with a lingering desire that it really could be.

522 [538] The kinds of stories outlined above do not exhaust the villagers' stock of conversational humor. There are also tall stories without the supernatural touch, broad burlesques, "dirty" jokes,[12] and the countless epigrams that work their way into almost any conversation; the last are not so much topics of conversation as they are means of punctuating a point. However, enough has been said to indicate that in its cognitive stylization and social psychological purposes, Bang Chan humor is not too different from Western humor. It is rather the content, frequency, and evaluation of the humor that is so distinctive. That the content should be distinctive is of course self-evident, since all humor is rooted in the implicit and familiar premises of workaday, cultural life. In fact the very essence of a joke is seeing the culturally familiar in an entirely new light. This may help to explain, incidentally, why it is always so painfully self-defeating to try "to explain" the content of a joke: its entire effect is dependent on the listener's implicit

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522 831 538 [081] [12] Sexual and scatological humor in Bang Chan pose some special problems. On the one hand, because villagers take such a matter-of-fact approach to sex, there are actually few jokes and stories that aim explicitly at being titillating or risqué. For most Bang Chaners, sex is something to be experienced and enjoyed in private, not snickered about barracks-style; there is no *sanug* in *talking* about sex (although there may be in playing with tabooed words, especially if cleverly done). Also, villagers seem to lack any interest in lewdness for its own sake. Not only Bang Chan, but Thai culture in general, is striking for its relative absence of attempts to edify sex: there is nothing in Thai literature or art, for example, approximating the exaggerated bawdiness of Rabelais or the graphic sensuality of the kind of sculpture found at Khajuraho and Konarak in India.

On the other hand, sexual situations are very often used as vehicles for portraying the foibles and stupidities of people. Villagers particularly enjoy stories of individuals of either sex who devise ways for seducing the unsuspecting, or of individuals who manage to outwit their spouses while philandering with their lovers; the more complex their machinations, the more amusing the stories. However, it is the social psychological, not the sexual, dimensions of these tales that form the major bases of their appeal.

Finally, it should be noted that villagers tend to distinguish between what could be called "genital" and "anal" modes of humor. The latter type has considerably fewer taboos associated with it. Thus, whereas most villagers would avoid going into descriptive detail in reporting the physical aspects of a tale of sexual conquest, they would have few qualms about discussing (and often with acoustical detail) such things as people who pass air in public or who otherwise get themselves into compromising anal situations. (Interestingly, J. Marvin Brown in his linguistic work with Thai informants, often including female university students, reports in a personal communication that he encountered difficulty in obtaining the various Thai terms for sexual organs and acts, but that the terms for anal and excretory behavior were given with little hesitation.)

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recognition of the incongruity being portrayed; to have to explicate the way the familiar has been violated is to miss the whole point. Yet the very problem with which the anthropological investigator is characteristically faced is his unfamiliarity with the culturally implicit. His major intellectual task in fact is to make explicit that which is implicitly held by his informants. The only way to deal with this paradox is either to consider humor a special case of anthropological investigation, leave the content alone, and focus principally on forms and functions, or do a humorless exegesis and be prepared for disappointments. As indicated earlier, this writer greatly prefers the former alternative.

Why the frequency and value of the humor should be so different is difficult to say. That the villagers devote considerably more time to this mode of play and place considerably higher value on it than do most Occidentals is clear, especially from the pejorative comments of Westerners who are so disturbed by it. One possible reason may be the simple lack (compared to Occidentals) of time-consuming, functional tasks in the village; that is, given the villagers' definitions of things that have to be done during the cycle of daily activity, there is just more time available to them to be "frittered away" in amusing conversation. However, this negative explanation is at best only a partial solution since many people who have "little to do" manage to make busy work for themselves (in a diagnostic, not deprecating, sense); also, granted the fact that Bang Chaners have time to talk of many things, it does not explain why such a large portion of this time should be given over to humor. Another possible reason was indicated earlier: comedy provides an outlet for certain feelings that otherwise are denied direct expression or are a source of anxiety in the culture. The higher frequency of humor is a function of the degree of prohibition or anxiety, which in the case of some feelings—aggression, for example—is very high indeed. Since, as has probably been detected, much of the villagers' humor does revolve around aggressive situations, there is clearly some cogency to this approach. There is a third possible reason for the villagers' greater concern with humor. Humor, with its emphasis on the exaggerated, the incongruous, and unpredictable is, from a psychological point of view, essentially a form of new experience. In fact, it, and the real life situations to which it refers, are "invention" in the purest meaning of the terms: the breaking through of tried and established patterns of expectation. But people in different cultures look for their new experience, or express their inventiveness, in different ways. There is no inherent necessity (a consideration often overlooked by scholars concerned with culture change) for inventiveness to be expressed primarily through technological, economic, or sociological forms. It might well be, as Keesing has suggested (1960), that in many cultures the favoured modes for expressing the

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Chan. However, there remains the crucial question of how villagers manage to develop the long-term relationships that they do have, for despite the inevitable unpredictability of all human contacts, most Bang Chaners do live together in family units for more or less sustained periods of time, fathers do save for years in order to give their sons respectable ordinations into the monkhood, relatives and friends who have not seen each other since childhood do assemble for the cremation of a late kinsman or mutual friend, and mature adults do continue to feel a profound sense of respect and obligation to individuals who were their teachers when they were youngsters. What are the bases and rewards for these enduring interpersonal commitments?

The immediate rewards for these commitments are, on the one hand, quite apparent. They involve such things as the simple, unrationalized kind of love found among any group of kin or close friends. In the case of the ordination and cremation, there is the reward of making merit, not only for the son and the departed soul, but for all those who sponsor and participate in the ceremonials. The satisfactions gained from increasing one's social prestige by putting on an ostentatious ceremonial are not to be overlooked either. At a more subtle level in the case of the respectful student, the reward is gained from knowing that one is behaving in a proper and courteous way toward one's *aacaan* (in its social psychological connotations, similar to the Indian term *guru*) and is thus upholding established normative patterns. The rewards of maintaining the rituals of the moral order are not to be glossed over for Bang Chaners, like most Siamese, are a deeply ethical people. This is not meant as an evaluation of their behavior or as a statement of their capacity to conform to their ethical prescriptions, but simply as a statement of their preoccupation with ethical concerns. The rewards of *feeling* (genuinely or self-deceptively) that one has behaved in an ethically and ritualistically prescribed way are among the most satisfying of sentiments, although as indicated in the discussion of "social cosmetics," villagers often use the rituals of ethical behavior as substitutes for more demanding interpersonal involvements. Indeed, the great emphasis given to the performance of ethical rituals (speaking in soft and gentle words, honoring one's mentors) helps perpetuate the loosely structured relationships found in the community in that conformity to these rituals is perceived by many as comprising the fulfillment of their interpersonal obligations. Beyond this they are free to pursue their own interests. To a large extent the ritualistic forms serve as a comforting psychological justification for the pursuit of individualistic concerns, *i.e.*, "But I otherwise treat others so nicely." [20] This is not the result of conscious

[20] In one of his more recent and typically penetrating works, Goffman (1963) coins the terms "Involvement Shields," "Main Involvements," and "Subordinate

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*156 psychological manipulation. The frequency with which villagers evaluate themselves and others in terms of the performance of these rituals and the high frequency of rituals in actual behavior attests to the seriousness which Bang Chaners attach to them. Their compensatory nature in no way detracts from their importance to the individual. In fact, the precise opposite seems to be the case. Bang Chaners are a highly ethical people irrespective of the social psychological functions such ethics may serve.

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Less apparent than the above immediate rewards for fulfilling interpersonal commitments but perhaps the very factor that is common to most of them is the sense of reciprocity that is at the basis of all enduring relationships in Bang Chan. Reference was made to the *quid pro quo* nature of Thai social relationships at several points in the text. However, the importance of this consideration cannot be fully appreciated without realizing that the functioning of the entire Thai social system is ultimately dependent on it. Individuals become involved with others and do things for them because they consciously expect others to respond in kind. This applies to the relationships existing between family members who live together *because* such an arrangement is most advantageous to each; to the father who gives his son an ordination *in order that* the latter will make merit for him and feel obligated to care for him when he becomes old; to the friends and relatives who make merit for the departed soul *because* of the good things he had done for them during his lifetime; to the adults who feel obligated to their childhood teacher *because* of the knowledge, and thus power, he imparted to them. It might well be, as Mauss (1954 [originally

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[114] [121] Involvements" to describe in theoretical terms what has been analyzed here empirically. The major point of Goffman's concepts, and of his entire book, is that human behavior is typically polyphasic (people act one way and simultaneously think or feel another); that there are types and degrees of involvement with people, situations, and self; that situational behavior typically entails patterns of "deception" as ways of implementing disinvolvement (or, as he says, as ways "to conceal improper involvement and to affect appropriate involvement"); and most important that such patterns of "deception" are culturally—and not as heretofore assumed, idiosyncratically—phrased. His definition of "Involvement Shields" (p. 41) is particularly apposite to the discussion above: ". . . we think of involvement shields as one means by which the individual can maintain the impression of proper involvement while he is actually delinquent in his situational obligations."

Dealing mostly with American culture, Goffman does not of course analyze ethical rituals as a particular kind of "Involvement Shield." Americans favor other, more culturally distinctive patterns of deception. Also, he uses the term "involvement" in the same way that I have been using the term "commitment." Unfortunately, neither Goffman nor I say very much about the conditions, cultural or psychological, which determine whether a person is fully ("properly and appropriately") involved or committed in any particular situation or is simply shielding himself. However, I would argue on theoretical grounds that the *decision* is almost always idiosyncratic, the *actual behavior* almost always cultural.

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of the land upon which the human home is built. In effect, humans have temporarily "rented" the land from him.]

. . . [The] contract implies and is validated by reciprocal obligations . . . [In] its totality the system of complementary reciprocity validates, maintains, and gives substance to the implicit contractual networks. The symbolic meaning of exchanges (as contrasted to economic and other functions) is accepted without question by all villagers: as long as a person continues to give to and receive from a partner, he is assured that the particular relationship is in good order. *When an exchange pattern between two people terminates, it is overt evidence to both that the contract is dead,* regardless of the formal institutional ties or the religious validation which may, in theory, continue to bind the participants. [Italics added.]

In anthropological analysis it is customary first to seek and attempt to identify the factors which link human beings together rather than those which keep them apart. This is so much a part of our professional tradition—in effect, one of our "primitive predicates"—that we tend to gloss over the question of the extent to which people must have enduring interpersonal commitments. This question has not been pursued in precise detail in our discussion. However, the realities of Bang Chan social behavior are so weighted in the direction of atomistic and essentially non-relational considerations that any coherent discussion of them should be organized in approximately equivalent terms. It is for this reason that the bulk of our presentation has focused on the individualistic nature of the villagers and that the factors accounting for interpersonal linkage were left to the end. It is hoped that such an organization has accurately reflected the tone and quality of Bang Chan social life as it is encountered and felt by an outside observer trying to understand its meaning to those who experience it.

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III

Methodology in the Field

*128 The discussion until now has been concerned with describing and interpreting aspects of the villagers' psychological life with little mention made of how these materials or those which follow were actually obtained. Since
• [121] one of the larger aims of this study is methodological (to present a method for dealing with some of the problems involved in designing cross-cultural personality research) and since the balance of the presentation depends directly on technical procedures, it is necessary to examine the nature of the data collection process itself. I will focus on three aspects of the research process: (1) the human beings involved (the villagers, the anthropologist and his assistants, and their interrelations); (2) the development and use of the Sentence Completion Technique in the field, including a discussion of translation procedures; and (3) the selection and nature of the sample.

12 Most of the foregoing discussion was not the result of a pre-planned methodological effort. Since I was dealing with data that emerge naturalistically from life's daily round, it seemed reasonable to impose few *a priori* methodological constraints on the investigation. My method was simply to try to be sensitive to *repetitive* and *culturally different* modes of behavior manifested by the villagers. Knowledge of the available literature and general knowledge of Thai culture may have helped, particularly with regard to the interpretations that were made. However, because both the observations and interpretations were made by a human being, it is inevitable that several of the factors discussed below should enter into my deliberations.

Field Research As a Social Event

Despite the entry into anthropological field work of what Kroeber (1955*a*: 307) called the "social science" tradition, the field situation remains a fundamentally human one where the kinds of data obtained, the willingness to provide information or to hold back, the types of interpretations that are made are all influenced by the personalities of the parties involved and how they perceive and deal with one another. The data that appear in most field studies are in part distillations of these complex interpersonal and

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from those of the villagers, except that because our relationship was considerably more sustained and intellectually stimulating (they wanted to know about the village almost as much as I did), it was more intimate and unguarded. My closest friend in Thailand was not a villager but my male field assistant.

Investigator's Attitudes Toward the Villagers

Anthropological field work has been referred to variously as "a period of stepped-up socialization," "the ultimate test of the value and limitations of empathy," and more simply "the most rewarding part of the anthropological endeavor." It is all these things. However, perhaps its most distinctive characteristic is that it is a period of intensified self-control. It involves the willingness to suspend one's normal and familiar patterns of behavior in deference to patterns which are appropriate to the culture being studied, or at least not too incongruent, and which are aimed at one's overriding purpose in being there: to obtain data.[3] The rewards of field work are of course immediately apparent: to encounter directly a different arrangement of the human experience. But field work also involves the psychological price of being temporarily willing not "to be oneself." There are of course numerous instances within one's own culture when one does not behave like "oneself," but simply assumes the pose associated with one's role. What is distinctive of field work is the highly *sustained* quality of one's "acting"; the researcher must be *continuously* concerned with tailoring his actions to suit others' preferences. The problem is complicated further by the fact that in field work the preferences of others are usually only slightly known; in fact, the discovery of such preferences is part and parcel of the very process of field work. Thus, the researcher tends to be even more hesitant and concerned with keeping himself under rein. It should be noted that "not being oneself" is not identical with "not being true to oneself." Indeed, the ideal adaptation to the psychic requirements of the field situation may be to feel any way one wants to *feel* toward one's informants, but to be sure to *act* properly toward them.

My overt behavior toward the villagers involved assuming something of a social pose, but a relatively straightforward and simple one. I attempted to present myself as an interested, uncritical, and mildly bewildered young

[3] I am not speaking here simply of functioning comfortably in an alien culture. Cultures differ radically in the degree of conformity to or deviance from prevailing patterns that is permitted individuals; and in this respect, Thai culture is extraordinarily tolerant of personal deviance. However, this is not the same as living in a foreign culture when one's *raison d'être* is to induce members of that culture to coöperate, provide information, and confide in oneself. Here it is incumbent upon the outsider to make some adjustments in his normal behavioral responses.

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*125 Yet because it is potentially offensive, it is doubtful that they have ever been faced with the straightforward question: "How do you feel when you realize other people do not like you?" When the problem however is couched in the familiar linguistic frame, "When I realize other people do not like me, I feel . . . ," informants can readily supply the response that they have been conditioned to associate with these words. The SCT is more comfortable than a series of direct questions because it taps the system of relatively unconscious expectations and conditionings which comprise the psychological essence of language and thought.

The SCT and Cross-Cultural Research

*121 *125 The second premise concerns the character of the SCT data and their analysis. It is important to make explicit that the research strategy here is one which places particular emphasis on abstracting from the kaleidoscope of the villagers' thoughts and feelings a series of descriptive and analytic types. Despite their commonplace appearance, the sentences are really brief verbal summations of how informants see themselves reacting in a wide variety of real-life situations. These summations are quite abstract, and much of the graphic detail of Thai personality—as can be had, for example, from the rich description of a life-history document—must be held in temporary abeyance.

As noted earlier, the writer is keenly aware that abstracting a series of analytic types is not the only way nor, in absolute terms, necessarily the best way (if there be such a way) to study personality. The limitations of the approach, particularly its lack of descriptive detail and naturalism, should be apparent. However, the method does have certain intrinsic advantages over other techniques.

First, it emphasizes the cross-cultural significance of our data. Although I can provide little empirical evidence to support this contention (other than what by implication might be found in the work of Schaffner 1948; Farber 1951; Roseborough and Phillips 1953; Fried 1953; Rychlak 1955; Rabin 1959; and Leichty and Rabin 1961—the entire body of cross-cultural SCT material to date) I would argue that *all* human beings, regardless of type or level of culture, must deal with the kinds of problems posed by such simple phrases as "When people annoy me, I . . ."; "When he was praised he . . ."; "He wishes he were. . . ." In our SCT batteries all but four items, designed specifically for Thai culture, have this pan-human emphasis. If this assertion is correct, it would have at least two important implications. On the one hand, from a long-range programmatic point of view, it would suggest that the SCT is an ideal technique for studying the range and variation of human personality. Here is an instrument the units

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of which seem to have true cross-cultural stimulus value and the responses to which seem genuinely comparable from one human group to another.[4] The only thing which might mitigate these advantages is the fact that both the stimuli and the responses must be mediated by the translation process. But as was indicated earlier, considerable attention has been given to controlling this factor.

The reader should be aware that I am talking about my particular version of the SCT, not the technique as such. Hallmann and Getzels (1953) have noted that the common label, "Sentence Completion Tech-

[4] The claim of universal applicability that is made for the present SCT has also been made at various times for the TAT and Rorschach tests (Henry and Spiro 1953; Hallowell 1945 and 1955*b*; and Joseph and Murray 1951, among others). Without denying the TAT's and Rorschach's capacity to perform a number of important research functions—and to perform them well—the following points should be kept in mind with regard to this specific issue.

The familiar Murray–Morgan TAT cannot be used in every culture simply because not all people practice agriculture (as is depicted in card 2), use furniture (approximately one-quarter of the set), or even wear clothes (excepting 17BM, all cards portraying people). For such cultures, the stimulus value of the cards seems dubious. Some investigators (W. E. Henry 1947, Gladwin and Sarason 1953, and Lessa and Spiegelman 1954) have retained the principle of the TAT but have departed radically from the original cards by designing sets of pictures suitable only to the local and unique conditions of the cultures they were studying. Although this procedure satisfied their immediate research needs, it has contributed little to cross-cultural studies since the various sets have nothing in common. An alternative procedure, followed by the author in Thailand, DeVos in Japan, and Marshall in India, was to modify the flora, fauna, facial features, furniture, and clothes of the originals but retain the same social situations and aesthetic effects. This method permits cross-cultural comparisons, but only among peasant or more advanced societies —an extensive but incomplete ethnographic sample.

The Rorschach presents similar problems, but on a different level. The non-representational ink blots are clearly less culture-bound than the TAT pictures. However, their essentially pictorial quality creates difficulties in cultures where pictures are unfamiliar (Pilaga, for example; see Schachtel, Henry, and Henry 1942) or where graphic symbolism, particularly abstract graphic symbolism, has strong religious connotations (tribes of Central Australia, for example). In contrast to both the Rorschach and TAT, the SCT uses a medium which is truly universal—language.

Finally, assuming that the above difficulties may be resolved—Hallowell (1955*a*) calls them "administrative problems"—it should be remembered that the Rorschach, TAT, and SCT are not in competition with each other but serve different, although not mutually exclusive, research purposes. The Rorschach focuses on perceptual processes and the control and expression of inner promptings, the TAT on social needs, sentiments, and perceptions; and the SCT on reactions to realistic situational forces. In a sense, the three techniques emphasize different points of two underlying analytic dimensions: (a) inner determined as opposed to situationally determined behavior; and (b) unrealistic as opposed to realistic stimuli. The Rorschach falls on the inner determined and unrealistic sides of these continua; the SCT on the situationally determined and realistic sides; and the TAT in between. Again, without denying the importance of studying the inner determined and unrealistically stimulated aspects of personality, I would argue that the *primary* task of culture-personality research is to study personality in terms of realistically defined, albeit abstractly conceived, situations. A not too dissimilar point of view can be found in Linton (1945: 86–89).

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*125 • 121 nique," frequently makes one forget that variations in the context and form of sentence fragments actually make different versions of the SCT into entirely different "tests," leading to major differences in results and interpretations. Failure to recognize this obvious fact has led to some specious arguments (Lorge and Thorndike 1941 *vs.* Sacks and Levy 1952, for example) about the relative effectiveness of "the" instrument.

My point of view, of course, is that one can design an SCT to investigate *anything*, from cabbages to kings. The very nature of language—or more precisely, one of its defining characteristics, its "productivity" or "open-endedness"—permits this. (By "productivity" I mean, following Hockett 1959, that a speaker may say something that never before has been said or heard.) In this light, what is distinctive about the present work is not the fact that an SCT is being used but rather that the language of this particular SCT describes a number of universal social and psychological problems.

Second, the technique also helps to bring into focus an issue that is particularly crucial to cross-cultural personality studies. My primary task was of course to describe and analyze the villagers' predispositions in a number of areas of psychological concern: aggression, anxiety, dependency, and the like. There were originally thirteen such areas which, on the basis of prevailing ethno-psychological theory and practice, were presumed to be of major importance in the psychic lives of the informants. It should be recognized, therefore, that in selecting these areas I committed myself to the premise that there are in fact a number of analytic issues crosscutting all societies which are crucial to the psychosocial functioning of the members of these societies. This should not be taken lightly, because it is only on the basis of such a premise that a comparative science of personality may develop.

[114] Such a science does not as yet exist, at least as a coherent, systematic corpus of theory and fact. Kroeber is absolutely right when he says (1955*a*: 303): "Culture and personality studies are being pursued with intensity and devotion, but one feels that they are popping off in diverse and unaccountable directions much like a string of fire-crackers. One inquirer is interested in tensions, another in Rorschachs, another wants to experiment on frustration; but in effect each starts off on his own—except when a string of them go in for a fad like toilet training. . . ."

Yet, there has been a steady flame setting off all these firecrackers: the search, at times undeniably ill-planned and unreflective, for a set of abstract, analytic categories by which the personalities of all peoples can be described and compared. Papers by Kluckhohn (1953, 1954*a*, 1954*b*), Hallowell (1950, 1953), Spiro (1954), Inkeles and Levinson (1954), and Kroeber himself (1955*a*, 1955*b*) on the psychological universals in human

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behavior suggest that there are now sufficiently solid theoretical and empirical grounds upon which to build such an undertaking. Inkeles and Levinson deal with the problem directly (1954: 989–990):

> One promising approach is to concentrate, for purposes of comparative analysis, on a limited number of psychological issues . . . that meet at least the following criteria. First, they should be found in adults universally, as a function of both maturational potentials common to man and of sociocultural characteristics common to human societies. Second, the manner in which they are handled should have functional significance for the individual personality as well as for the social system, in that their patterning in the individual will affect his readiness to establish, accept, maintain, or change a given sociocultural pattern. A further task, one that will take longer to carry out, is to develop a set of descriptive categories for the empirical analysis of each issue.[8]

Toward this end, Inkeles and Levinson present a provisional list of analytic issues, some of which are replicated in the Thai study: relation to authority, conception of self, bases for maintaining inner equilibrium, major forms of anxiety and ways of dealing with them, modes of cognitive functioning, styles of expressive behavior, and the handling of major dispositions such as aggression, dependency, and curiosity.

In formulating the various issues to be included in the SCT, I borrowed from Inkeles and Levinson and the other writers noted above. However, like them, I wish to note that this list of categories is neither exhaustive nor definitive. In fact, because of limitations of time and instrument design, some of the areas proposed above—cognitive functioning, for example—had to be ignored. Others were also ignored during the write-up because the materials elicited were not in my opinion sufficiently meaningful or revealing. The value of our list lies not in its formal completeness but rather in the fact that the issues which are included seem, on the basis of knowledge presently available, to be of universal psychological importance. This is a beginning.

A third attribute of the SCT, related to the above, deserves comment. This concerns the abstract nature of the SCT items.

A fundamental problem in all cross-cultural personality research is not

[8] In a later paper (1956), Inkeles qualified one of these criteria by noting that there are probably many personality complexes which are functionally significant to individuals, but which have little discernible relevance to the functioning of social systems. Much depends here on how one defines "social system" and "personality"—particularly "levels" of personality. Inkeles, for example, draws a clear theoretical distinction between "basic personality" and "social personality," the latter being comprised only of those traits which are necessary for the effective maintenance or change of the social system.

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only the specification of a series of pan-human psychological issues as described above, but the selection of a research tool capable of obtaining empirical data that *accurately* reflect these issues in the various cultures studied. Aggression, anxiety, dependency, and the like may be universal human dispositions, but the causes and circumstances pertaining to them vary considerably from culture to culture. This is of course a basic anthropological truism (see particularly Whiting 1954 and Lewis 1955). Perhaps the best theoretical formulation of the problem from a research point of view can be found in an unpublished paper by Suchman (1955; see also Sears 1961) where the matter is framed in terms of what is called "concept equivalence" vs. "data or item equivalence." Or translated into our research operations: given the fact that the concept "anxiety" as applied to Thai culture is equivalent to the concept "anxiety" as applied to American culture, what kinds of items will bring forth *equivalent* empirical data from both cultures relevant to this concept?

My decision in dealing with this question was to design items which were sufficiently abstract so that they could be used in any culture with assurance that the empirical problems which they described were accurate and equivalent representations of the concepts.[8] In essence, statements such as *"He was most afraid of . . ."* *"When something worried him, he usually . . ."* were derived directly from the concept of anxiety, bypassing culturally specific definitions of anxiety; the experiences portrayed by the items are in themselves descriptively universal rather than culture-bound. Cultural specificity—which is of course the central aim of this research—enters when informants react to these experiences in their completions. From an operational point of view, therefore, the requirements of concept and item equivalence were effectively merged.

A final aspect of the SCT, of an entirely different order from the above, merits attention. This concerns those general methodological advantages which the SCT enjoys as an organized, semi-structured research technique.

First, the SCT permits the field worker to present his research interests to his informants rather than wait for manifestations of these interests to emerge spontaneously from the behavior or remarks of the informants. Data collected by this method is by no means any better than that obtained, for example, by observational techniques, but it is more complete. If an investigator wants to know how an adult villager would react to being struck by another person or what the villager thinks about when he is

[8] Florence Kluckhohn (1960: 6–7) in her effort to develop a technique for the cross-cultural study of value orientations comes to a similar conclusion. She says that the "more highly generalized" an item was, the more readily it could be translated for use in another culture.

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alone, he might have to wait months before an act of overt physical aggression actually occurred, or before an informant volunteered some of his reveries.[7] When these events do occur, it is exceedingly difficult for the analyst to assess how typical or deviant the event may be under the circumstances, whether it is characteristic of villagers of a particular age or sex and what other individuals may do or say in similar situations. Rather than depend upon what is essentially a "catch-as-catch-can" approach, the SCT brings the research problems to the informant and asks him to deal with them directly. It should be remembered that although the resulting data are not as naturalistic as observational materials, they are always the product of the villagers' own voluntaristic inclinations: their responses represent their own internal views of how to deal with the problems posed by the introductory phrases.

A corollary to the above is the fact that the SCT presents to a large number of individuals what are essentially the same stimulus situations. The primary advantage here is that it provides a solid empirical basis upon which to make statements about how typical or deviant a response may be.

The Selective Nature of the Responses

The third premise follows much of the preceding, but merits special consideration because of the cross-cultural phrasing of the study. In a sense, it is the basic methodological principle of all anthropological research.

In examining the SCT responses, it soon becomes apparent that the majority of our informants' statements make perfect sense and are the types of reactions that conceivably could be made by any human being. The word choice and style of many of the responses are of course inimitably Thai. For example, "*The most important thing in his life is* . . . ohhh! . . . having or not having something to eat. If you have something to eat: good. If you have nothing: trouble. We people are born in order to find things to fill our mouths and stomachs. Nobody can take his property and money with him when he dies." But the expressed meanings of the responses (in this case, practical survival) are not, despite perhaps anthropological expectations, alien or extraordinary.

The point to be emphasized is that although the villagers' SCT responses may not seem immediately familiar, they do fall well within the range of what is *objectively possible*. It is this element of objective possi-

[7] From an ethnographic point of view, the fact that such events do occur so rarely is not without significance. It is additional behavioral evidence of the amount of aggression control exercised by the villagers and of the fact that they prefer not to wear their hearts on their sleeves.

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bility that lies at the heart of the SCT analysis. As Kluckhohn has said (1959: 247; see also 1951: 421–422):

> The most specific quality of anthropological research arises from its preoccupation with culture. This concept (in the technical, anthropological sense) refers to those *selective* ways of feeling, thinking, and reacting that distinguish one group from another. . . . In the strict sense, we can speak of culture only when there are two or more objectively possible and functionally effective means or modes of meeting the same need, . . . and a given group exhibits a consistent and stylized preference for one path to the goal among a number of alternatives that are—from the observer's point of view—all open.

In this light, what is most significant about the responses is not that they are in themselves descriptively unusual, nor even that other cultural groups could not share some of them (the principle of "limited possibilities," supported by linguistic constraints, undoubtedly operates here), but rather that of all the objectively potential ways in which to deal with the SCT situations, the villagers select a few distinctive ways to the exclusion of others. In the example above, "the most important thing in his life" is *not* "his family" (the need for close social affiliation; being a source or recipient of succorance), his "love affair" (emotional-sexual need), "knowing himself" (realistic assessment of one's capacity for specific achievement), "passing his examination" (the need for status and accomplishment), or any other equally feasible response. Rather the response is "having or not having something to eat" (elemental subsistence). At bottom, it is the selective aspect of the SCT responses—in contrast to their strangeness or familiarity, which are secondary descriptive characteristics—that defines their essential "Thai-ness."

For readers who may be surprised by the interpretive labels given the above responses, it should be noted that we have touched here upon what is probably *the* crucial anthropological problem. I have tried briefly to suggest what these responses, if they were given, might mean—but in Thai, not American, terms. This compounds our interpretive problem considerably. The fact that such alternative responses are not typical is in itself, as we have just indicated, of extreme importance. However, if they were given, their meanings would not necessarily be the same to the villagers as they are to us. By way of illustration: it is hard to imagine any Bang Chaner completing the statement *"The most important thing in his life is . . ."* with the words "knowing himself." Few villagers are that introspective or self-objectifying. However, if by chance an informant did offer this completion, it would certainly not mean, as it does among some American subcultural groups, "the need for self-acceptance, personal identity, freedom from intra-psychic tensions," etc. (See Erikson 1950, 1954, 1959; Riesman

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1950; and Wheelis 1958.) At best, it would suggest that the Thai informant was faced with a difficult problem external to himself—perhaps finding a job or a spouse, or thinking of his future—and was appraising his ability to deal with that problem. Also, such an appraisal would have a strong constraining element: the necessity to control one's hopes and desires (perhaps for the hypothetical job or spouse) in order to avoid potential pain or disappointment; in essence, "beware of your limitations; do not forget your station." This is in turn supported by certain Buddhist concepts, such as *?ubeegkhaa*, or stoical indifference to the vicissitudes of life, among others.

Whether there is *any* way to express handily in Thai the Western notion of "the need for self-acceptance" is doubtful. Most villagers are too thoroughly narcissistic to require such a concept in their cognitive maps. Alternatively, there are other more direct ways of saying what "knowing myself" might mean in Thai, for example, "controlling my desires," "knowing whether I have the ability to do the job," or by referring directly to Buddhist doctrine. As such, these statements would be an expression of piety or the bolstering of one's self-confidence (or steeling oneself against failure) rather than psychic introspection.

A similar interpretive problem exists with the completion "his family." Because Thai kinship relations are so strongly influenced by concepts of benevolent superiority and dependent inferiority, most expressions of the need for affiliation with the family immediately imply the related need of succorance: security, support, protection, and sympathy, either as source or beneficiary.

The point of these comments is that the responses must always be first interpreted in the villagers' terms, not ours. Once made, precisely by explanatory notes such as these, these interpretations become part of the "data" and serve as a basis for our analysis. It should be recognized, however, that anthropological mythology (and these particular examples) to the contrary, not *all* the responses are interpretively dissimilar. When a villager says, *"When he hit me, I . . .* must hit him back," he means precisely the same thing we do. The point, therefore, is to be extremely sensitive to the possibility of differential meanings, underscore and explain it when it occurs, and use the native interpretation as a prerequisite and corrective to our own. For a brief but brilliant theoretical discussion of this problem see Bohannan 1959.

The Psychological Meaning of the Responses

The fourth premise concerns the psychological "meaning" of the responses. There are several aspects of this problem which require specification.

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*125 15 should conform. (For example: *"The best way to treat a subordinate is . . . to speak to him with kind and agreeable words"*; *"When he thinks of his father, he thinks of . . .* the goodness and kindness his father has done for him.") This is not a universal pattern since definitions of the ideal are ambiguous, lacking, or inappropriate for many of the items; also, such definitions seem not to be applied to items which imply immediate action. However, they do appear with sufficient frequency to be noticeable.

156 None of this should be surprising, inasmuch as viewing behavior in terms of "the good" and "the proper" is a central characteristic of the villagers' thought and idiom. They tend, *considerably* more than Americans, to evaluate (in an ethical sense) people and events rather than describe them, and even to describe by evaluating. Ask most villagers: "What kind of a person is so-and-so?" and their replies will consistently be in terms of whether he is "bad" or "good," rather than in terms of non-evaluative description, *e.g.*, he is "funny," "passive," "interesting." The words, *khon maj dii* and *khon dii* ("a bad person" and "a good person") are two of the most frequently occurring items in the Thai lexicon. One might epigrammatically characterize much of the villagers' thought as "super-ego-dominated." That this mode of thought should be applied to many of the SCT situations is hardly unexpectable.[9]

• 121 15 Having recognized this tendency, however, there is the problem of assessing its psychocultural meaning. Do such appeals to the ideal, especially as applied to the self, in any way weaken our definition of the responses as "predispositions to action?" Are many of the responses mere verbalisms that have little to do with real behavior?

121 114 15 A number of theorists, notably Murdock (1940 and 1954) and Kluckhohn (1943*b* and 1951) have taken the position that cultural behavior should be distinguished into two fundamentally different forms: ideal patterns and real patterns. The former are "those norms which are verbalized as the ideals to which behavior should conform" (Murdock 1954: 22); and the latter, patterns of actual, overt behavior. Opler has taken issue with the necessity for this distinction, and has argued (1948: 116):

> My own feeling is that the concern over precepts or ideal patterns which contrast with or stand apart from behavior is a pleasant distraction which will not get us very far. In my opinion the disparity between rule and behavior in society has been greatly exaggerated. Actually, behavior remains remarkably close to rules or precepts which are

[9] This same characteristic has been described in other contexts (Wilson and Phillips 1958, Phillips 1958, L. M. Hanks 1959*a* and 1959*b*) as the essentially moral nature of the villagers' universe: the tendency, largely implicit, for Bang Chaners to perceive events of the most diverse kinds within an ethical frame of reference. It might well be, as Redfield had argued for many years (1941, 1953, and 1956) that such a cognitive orientation is characteristic of all peasant peoples.

(181) (114)

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considered of moment by the group. I think that it can be demonstrated that when precept and activity draw too far apart, a modification of one or the other is likely to take place to close up the gap. 114 121 15

In assessing my psychological test materials, I take the following position with regard to this issue. The distinction between the ideal and the real is an analytic requirement because obviously there are some instances where the two patterns are not congruent. However, once such distinction has been made there is no inherent necessity to assume that there *must* be a gap between the two patterns or if there is a gap, to assume that it must be especially wide. One will inevitably encounter in Bang Chan cases where subordinates are not spoken to "with kind and agreeable words." But on the whole, the extent to which real behavior does accord with this precept is impressive. For the most part, it is not a mere verbalism but rather a viable guide to action: a subordinate who is not treated with kind and agreeable words will not (depending of course on other situational factors as well) long maintain his ties to his superior. This same reasoning applies to the majority of the cases in which informants couch their responses in terms of cultural ideals. 183 125* 15

A third aspect of the responses concerns the psychological "level" at which they will be interpreted. Because of the highly realistic nature of the completions, the necessity to interpret them in Thai terms (which precludes "blind analyses"—see DuBois 1944) and the necessity to work with the pooled responses of many individuals, our interpretations will not go psychodynamically very "deep." On the other hand, neither will we remain at the level of the manifest meanings of the responses. Although an informant's completion may represent a precise description of the way he would behave in real life, and in many cases does, it is more sensible from an analytic standpoint to view the response as a symptom of an underlying, more generalized, psychological orientation. The reasons for this are twofold: first, many of the responses which are superficially different seem to express simply alternate facets of a single, underlying predisposition; second, and more important, we must remember that on theoretical grounds personality characteristics are not, as Inkeles and Levinson point out (1954: 981) "phenotypic, behavior-descriptive terms, but rather are higher level abstractions that refer to stable, generalized dispositions or modes of functioning and may take a great variety of concrete behavioral forms." 125* 15

In these terms, a statement such as *"When he saw that others avoided him, he . . .* also avoids them" indicates not only a person's desire not to associate with those who avoid him but, more important, an underlying, more general disposition *to accept and maintain a breakdown in social relations.* Moreover, the latter interpretation also encompasses such varying responses as: ". . . must not speak to them because they are bad. They

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like to look down upon people" and ". . . probably was not generous with them, so they avoided him." The significance of this underlying interpretation becomes even more apparent when the three responses are contrasted with other possible but unoffered completions which belong to totally different interpretive categories, for example, ". . . tried to make up with them" or ". . . asked them why?" signifying *attempts to reintegrate or understand the interpersonal rupture* and ". . . felt terribly hurt," indicating *emotional pain or disturbance.*

A Working Conception of Modal Personality

Our fifth and final premise is concerned with developing a workable conception of modal personality despite the inevitable paradoxes which attend such an endeavor.

The fundamental problem here is that in abstracting out the psychological similarities which the villagers share with one another, we become unavoidably involved in the difficulties of working with "conjugate variables"; that is, the more we concern ourselves with the commonality of a personality trait, the less we simultaneously learn about the role of that trait in the functioning of the individual members of the sample. The significance of this is not so much that we sacrifice an understanding of individuals for an understanding of the group, but that in so doing we must also sacrifice some of the depth and perceptiveness of our analysis. A successful personality study is in large measure achieved by descriptive contrast: we learn more about human beings the less they appear like other people. When subtle individual differences must be submerged for purposes of group characterization, the resulting descriptions must necessarily be less sensitive and precise.

The root of the problem lies in the fact that our basic units of analyses are individuals who, despite all the similarities they share as members of Thai culture, are obviously different from one another in specifics. Moreover, as Wallace points out in a recent article (1961*a*: 147–148), from the point of view of culture-personality theory, they *must* have certain psychological differences:

> The problem of psychic unity is sometimes obscured by our tendency to regard human societies as populations and not as groups when we make psychological statements. A population of individuals may be described without references to their interrelationships; but a group cannot be considered apart from its organizational structure. Thus physical, demographic, or personality characteristics of the members of a population can be stated, explicitly or implicitly, as a statistical distribution on one or more dimensions, and to the extent that the data

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> permit, some measure or estimate of central tendency can be calculated which will allow the attribution of some value or range on one or more dimensions to all, or a specified sub-population, of the population itself. . . .
>
> But such predicates, universally applicable to all members of a population, are inadequate for the psychological analysis of that population as a group, as an elementary consideration reveals: most culturally organized groups not merely permit but require that their members perform different roles in interaction. . . .

Although Wallace does not state it in so many words, it is apparent that he is referring to differences in age, sex, and occupational roles, or to any other roles that may be deemed important, and is assuming that the individuals who perform the roles have in some respects different personality types. (Whether the latter assumption is completely valid is still another problem. For a provocative discussion of the analytic complexity of the personality-role relationship, of the non-congruence which may occur, and of consequent psychological adjustments see Levinson 1959; Nadel 1957 also touches on the issue.) In any case, it is clear that whatever psychic unity informants have as members of the same culture, they are differentiated from each other on at least two counts: (1) their individual life experiences and genetic-constitutional backgrounds which ultimately give them each a unique personality; and (2) their performance of different social roles.

These differentiae are of course virtually self-evident. But what is not self-evident—nor easy to decide—is how much emphasis should be given to them in formulating or qualifying our conception of Thai peasant modal personality. Any decision that we make is from some point of view unsatisfactory. Should we treat our informants solely as individuals, and pursue our analysis with rigor, we would get an increasingly refined picture of the uniqueness of these individuals but, at the same time, a decreasingly clear picture of their cultural or shared characteristics. The analysis would undoubtedly be more precise but, in effect, we would be studying "idioverses"—idiosyncratic versions of culture (Mead 1958)—with little basis for determining what is culturally typical or deviant. In fact, questions of the normative or variant would become logically irrelevant. On the other hand, should we group the informants into age or sex groups and contrast the responses of these groups, it might well seem that the personality differences between men and women, for example, are greater than the similarities, or even that Thai women are more like Navaho or American women than they are like Thai men. Although I suspect that culture makes for greater psychological similarity than does sex and, as Sharp has pointed out (Sharp *et al.* 1953) Bang Chan culture is, from a cross-cultural point of view, impressive for its slight differentiation of the adult

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roles of the sexes, such findings are not empirically impossible. Finally, should we de-emphasize the distinctions between individuals and role-defined sub-groups, and consider all the responses as a whole, we would as suggested earlier be in the best possible position for determining the villagers' modal personality but would proportionately lack analytic precision. There would always be some intra-sample differences—as far down as the individual level—which the critic could point to as requiring discrimination, although such discrimination would obviously have to be achieved at the cost of group identification.

Given these various alternatives, each of which has its merits and shortcomings, what should the analyst do? I have decided to conform to the principal aim of this research and focus primarily on total group responses, that is, on those abstracted psychological similarities which all or, more realistically, large numbers of our individual informants share with one another. Operationally, this entails investigating the responses of all informants on each SCT item rather than those of each informant on all items, and explicating the major underlying psychological theme or themes of these responses.

The inclusion of both the singular "theme" and plural "themes" in the preceding sentence is not only intentional but crucial to our formulation of modal personality. Its significance will perhaps best be seen by contrasting our approach with the two prevailing points of view governing most modal personality formulations. On the one hand, the majority of the culture-personality and particularly "national character" studies of recent years have been characterized by an assumption of psychological *unimodality*; that is, an assumption that the culture being investigated has such a high degree of psychological homogeneity that it can be portrayed as having a *single* personality pattern, with perhaps a few deviant sub-types. The assumption is based partially on precedents established within the history of ethnographic method (Herskovits 1954); partially on unconscious aesthetic considerations involved in the presentation of data (Opler 1948 on Benedict); and partially on the apparent validity of the concept in some areas of psychocultural functioning in which, once established, it is tacitly extended to include all areas. Even Wallace's sophisticated study of the modal personality of the Tuscarora (1952) is based on the premise of unimodality, although his aim is to find out precisely how *unimodal* the Tuscarora actually are.

Whatever attractiveness the premise of unimodality may have, it is clearly an oversimplification of psycho-ethnographic facts. Human beings in any culture are simply too complex to be of the same psychological stamp in all respects. In his recent paper (1961*a*), Wallace points out that a research design for the study of modal personality which involves only

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twenty binary dimensions (which is considerably less than is actually employed in most Rorschach analyses) will yield up to 1,048,576 structural types, to which Wallace adds, "the uniformity of the population on each dimension must be impressive, or the types must be very crudely defined, before any one type is likely to acquire prevalence over any substantial proportion of the group. . . ."

Having recognized the oversimplification of the unimodal approach, however, there is no inherent necessity to go the the opposite extreme and posit a complete *multimodality*. Yet this seems to be the position taken by Inkeles and Levinson (1954) and Kaplan (1954, 1957, and Kaplan, Rickers-Ovsiankina, and Joseph 1956) who, genuinely disturbed by the stereotypy and lack of sophistication of the unimodal viewpoint, argue that cultural groups are characterized by a plurality of personality patterns. Kaplan's arguments are particularly compelling in that he bolsters them with empirical cross-cultural evidence, although he himself admits (1954) that his results may be a consequence of his particular sorting and categorizing techniques. He concludes his comparative study of Navaho and Zuni TAT's with the statement that (1957): "The influence of culture on personality does not appear to create a common personality configuration in its members, but instead tends to foster a variety of personality tendencies in small groups or clusters of individuals while leaving many aspects of personality free to vary without respect to group membership."

My position, in comparison, is that the cases for complete unimodality and complete multimodality are both overstated. What both viewpoints seem to overlook is the likelihood of there being *specific areas* of psychocultural functioning in which a high degree of homogeneity exists and *other specific areas* in which a high degree of heterogeneity comes into play. This more flexible formulation not only provides a more realistic picture of modal personality than can be had from ascriptions of wholesale uniformity and diversity but directs our attention to identifying the areas of differential frequencies and attempting to account for them. For example, I suspect that those areas characterized by a high degree of homogeneity are ones likely to be surrounded by strong cultural sanctions, or are areas of psychological "focus" (psychological parallels to Herskovits' "cultural focus," [10] as it were) or, perhaps, are areas of greatest cultural conditioning; conversely, I would think that areas of high heterogeneity most likely do

[10] Although Herskovits seems to have changed his definition of "cultural focus" over time (1945 and 1948), his first definition is most relevant to our present meaning: "that area of activity or belief where the greatest awareness of form exists, the most discussion of values is heard, the widest difference in structure is to be discerned." However, unlike his formulation, which in practice assumes only one focus in one culture, our use of the term presupposes that a culture can have a number of psychological foci.

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not involve important social stakes (although they may involve very important personal ones, their highly charged personal nature perhaps being the very source of the heterogeneity). In these terms, I would expect Bang Chan SCT responses to be highly unimodal in the realm of authority—an area of sharp psychological focus—but relatively multimodal in the area of friendship. In any case, it would seem to me that whatever the ultimate reasons for an area being unimodal or multimodal, the identification of these areas is in itself an important task.

In the light of these remarks, I have tried to avoid establishing rigid rules about the number of major themes which may emerge from the responses to the various SCT items. The discussion which follows, and the SCT material itself, is organized in terms of specific areas of psychological functioning, and a table accompanies each SCT item. The tables are organized thematically and are designed to exemplify characteristic responses for each theme discussed in the test, although some of the minor themes and sub-themes are excluded for the sake of simplicity. The number of responses given under each thematic heading reflects the *approximate* percentage of all responses which are included in that theme. A theme is defined as an underlying, generalized psychological orientation encompassing the raw responses of two or more informants—the supposition being that it takes at least two to make a theme shared or "cultural." [11] The determination of a theme is explicitly weighted in the unimodal direction but is constrained by the nature of the responses themselves. No explicit criteria have been established for deciding the number of themes which may emerge before declaring an item, and the area it represents, either unimodal or multimodal. In fact, in terms of our empirical operations, these terms are viewed simply as ideal types. Also, it should be remembered that some of our responses are multidimensional in nature; that is, like much communication they simultaneously reveal several meanings and are interpretable from several perspectives. In this case, each perspective can conceivably yield a different number of themes. The number of simultaneous themes that occur are determined solely by the patterning of the responses themselves. Given these considerations, the statements that are made about the unimodal or multimodal nature of an area are phrased simply in terms of general comparisons as we move from one area to another. Since we are not using any fine statistical methods, this procedure is clearly the most efficient to follow.

[11] It is recognized, of course, that it is possible for responses to be shared by two or more informants solely on the bases of fortuitous factors or on the basis of the principle of limited possibilities. All human behavior, cultural or otherwise, is ultimately limited by such simple statistical considerations.

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*125 *128 *156 they manage not to harm the self. The interpersonal relationship is the major component of their evaluation in the sense that they are either indifferent to, or highly tolerant of, character traits of other people that exist outside the purview of their contact with them. In effect, villagers seem to assume that a person can be anything he wants to be, so long as his behavior is not detrimental to others. Villagers respond in a highly favorable manner to persons who conceal their feelings, and explain their approval by saying that such behavior helps minimize social conflict, particularly conflict of which they may be the object. Their commendation of people who control their feelings is extreme, taking the form of calling them "just," "good," "brave," "pure," and "thoughtful." In their interpersonal contacts, villagers say they are most careful about the effect of their words on others, and one informant presents what is perhaps the perfect summation of the role of politeness in their lives when he says that, in his relations with people, he is most careful "not to talk about important matters." For a sizable minority of villagers, the data also indicate a sense of untrustworthiness about the motives of others. The major forms of this lack of trust are that others will steal from or physically harm them, be treacherous, slander, or gossip about them. Our observational materials suggest that although their anxiety may have realistic foundation with regard to others gossiping about them, and perhaps slandering them, this would not be true in the case of others stealing or doing them physical harm. These fears are probably symbolic expressions of a more diffuse anxiety about harm to the self through the medium of interpersonal relationships. Whether anxiety about interpersonal relationships is indeed the major form of anxiety in Bang Chan will be investigated in the next section.

Anxiety and Reactions to Crises

• 121 152 In this section we are dealing with materials that present the most ticklish analytic problems we will encounter. We know from American culture that persons identify as sources of anxiety issues which are genuine existential problems (illness; payment of bills; how to deal with an arbitrary boss); issues which by most culturally "reasonable" standards should not be sources of anxiety, but which are nevertheless felt that way (how to obtain a beautiful or handsome figure with the least amount of effort); and issues which by both cultural and personal standards of "reasonableness" are not considered valid sources of anxiety, but which are nevertheless "understood" and tolerated (fear of thunder, wild animals, flying insects). In the last two cases, we know that the expressed anxiety usually symbolizes some other threat, which is considerably more crucial but unknown. And in the

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last instance, we know that the fanciful fear often serves the vital function of binding what might otherwise be extremely painful free-floating anxiety.[6] We also know from American culture that there are many objective sources of threat existing in the environment which are rarely identified as objects of anxiety, unless directly or imminently encountered, *e.g.*, being struck by an automobile. Finally, we know that there are objects or sources of anxiety that may be denied as such because of the cultural values associated with being fearful or brave: it is possible for a teen-ager to admit anxiety over an examination or an important "date," but usually not when he is asked to perform a daring deed by a group of his peers.

The point of these remarks is that despite our familiarity with the various forms and functions of anxiety, we are still hard put in most instances to identify the precise psychodynamic role of an anxiety response when it is expressed by individuals in our own culture. The problem is compounded immeasurably when we attempt to do this with members of another culture. It is for this reason that the responses below will be accepted as those things which actually frighten or worry the villagers of Bang Chan, and will not be examined for any intrapsychic functions that they may serve. The few interpretive excursions of this type that we took earlier in the text (e.g., the villagers' concern about a superior feeding them well) were sanctioned principally by the context in which the responses were made. Here, informants are asked to indicate their anxieties under a completely unspecified set of conditions.

Actually, most of the responses given below are, in terms of the villagers' culturally constituted reality, of a highly reasonable nature, suggesting that informants are reacting in terms of their genuine existential concerns. Being bitten by a cobra is a dangerous (although not a likely) possibility, and although a few villagers may hesitate *on direct questioning* to declare their belief in malevolent spirits (translated below as "ghosts"), all know about such spirits and at one time or another have performed acts to propitiate them, indicating considerable psychic investment in their reality. Although in some cases one might wonder about the motivations behind them, the responses make complete sense.

The responses to the first item, *"He was most afraid of . . ."* fall into three major categories. The vast majority of villagers (61 percent) are frightened by experiences, actually *possibilities* (and again, in their unpredictable world, the possible is psychologically critical) which threaten

[6] The major analytic difference between *anxiety* and *fear* is, in fact, that the latter is "bound" anxiety, *i.e.*, the anxiety has assumed a concrete, objective representation which the individual at least can deal with: by avoidance, doing battle with it, laughing over it, and the like.

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*125 *128 152 *156 fundamental security about their own *psychological* worth. This is undoubtedly abetted by the fact that the modes of social interaction in Bang Chan do not demand too much from the individual, as well as the fact that the individual, with his profound sense of free choice, often ignores or isolates himself from the impingements of others. (That a stance of psychic isolation is not necessarily maladaptive will be discussed in the final chapter.) When asked how they would react to frightening or worrisome situations, most villagers respond in terms of maintaining their inner psychic stability and in terms of accepting and tolerating these familiar psychic pressures. Their responses are non-constructive, but are highly congruent with their passive and secure orientations to the world. Their responses to "anxiety" tend toward psychological "unimodality" at an interpretive level, although in the last two cases the descriptive similarity of the responses first suggest a bi-modal distribution.

Aggression: Causes and Reactions

• 121 152 Analyzing "aggression" in Bang Chan is very much like analyzing "sex" in contemporary American culture. The category represents at one and the same time one of the most obvious and one of the most convoluted areas of the villagers' psychological lives.

152 *156 571 The most obvious fact about aggression in Bang Chan is that villagers cannot tolerate its spontaneous, direct expression in face-to-face relationships. This is demonstrated not only by the general absence of overt aggression in such relationships but by the elaborate array of devices that villagers use to control its expression: giggling when making or receiving an untoward request, using a go-between to soften the demand of an interpersonal lien, leaving the field at the slightest hint of provocation (whether the provocation is intended or not), as well as the more general use of flattery, comedy, and self-effacement (*kreeŋcaj*). The repeated use of these devices as well as the villagers' evaluations of "people who never show their feelings" (see tables 16 and 17) reveal their sensitivity to aggression as a latent, but intrinsic, attribute of most social encounters. In fact, their evaluations of people who inhibit their feelings—or their *assumptions* about the inherently hostile nature of such feelings—suggest that their recognition of the potentiality of aggression (whether in themselves or others) is quite conscious.

The net result of these orientations is to give face-to-face contacts an aura of surface pleasantness, but at the same time a high degree of brittleness. Over and over again, villagers indicate that they prefer not to have any relationship at all than to have one that is even tinged with hostility.

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that an instrument such as the SCT should never be used by itself, or at least not without some reference to behavioral data. The SCT, or my particular version of it, could not readily get at the process of psychological commitment that plays such an important role in the lives of the villagers, and which underlies their "loosely structured social system." In fact, the handling of this process may well be one of the most interesting things about the villagers. In a somewhat oblique way, the SCT data implied the importance of this process: so many of the villagers' responses were phrased in terms of fulfilling social forms and rituals, that an analyst might question the degree of psychological commitment behind them. However, "psychological commitment"—the reliability, depth, and constancy of relationships; the degree of involvement necessary for insuring that an interactional event will even take place—cannot begin to be recognized as an analytic problem until one sees beyond the very social situations that pres[illegible]e it, and this can probably only be done by naturalistic observation and interpretation.

While the SCT and observational data did not contain any striking empirical inconsistencies, they did demonstrate the significance of an issue raised early in this study: the problem of whether the culturally interesting or distinctive is the same as the culturally frequent or modal. The analyses indicated that for the most part these two types of characterization were not incongruent. Thus, the extreme individualism and self-concern of the villagers emerged unmistakably from both sets of data. However, there were instances when the two kinds of characterization were not isomorphic, and resulted in conclusions quite different from those originally expected. Thus, on the basis of the observational materials, I fully anticipated that anxiety about interpersonal relationships would emerge in the SCT responses as the villagers' most frequent form of anxiety. The amount of gossip that occurs in the community, the references that one hears to slander, the touchiness that villagers exhibit in their actual relations with others, all pointed to this conclusion. These were the appraisals of an outside observer struck by the "different" and "unusual" facets of the culture he was studying. Yet the SCT data indicated beyond all doubt that interpersonal anxieties were not, from the villagers' point of view, their most typical form of anxiety. They were worried more about their stomachs than their hearts.[1] This conclusion, deduced from the villagers' own per-

[1] One might argue here from a psychoanalytic point of view that the stomach is simply a substitute for the heart. However, one might also argue from a psychoanalytic point of view that the heart is simply a substitute for the stomach. This Freudian principle of the substitutability of needs cannot by itself account for the *direction* of the substitution (unless one assumes a doctrinaire early Freudian or neo-Freudian position) nor can it prove the *existence* of the hypothetical substitution. These can be demonstrated only by detailed, empirical data on the traumata, repressions, fixations,

4:Phillips E-4,5 (1956-1957) 1966
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*125 152 ceptions, took on additional significance when related to the sense of psychological worth and self-love that the people of Bang Chan *also* exhibit. Again, the essential issue here is not the presence or absence of anxiety about interpersonal relationships. There is little doubt that villagers do suffer such anxiety. Rather, the question is one of *relative* frequency, and, by implication, the *relative* importance of such suffering to the *total* need and deprivation system of the villagers. It is precisely with regard to this larger kind of question that an instrument such as the SCT can provide context and perspective.

Turning to the theoretical issues that have been raised or suggested by the data, perhaps the most important is the problem of "conformity" as it relates to the villagers' loosely structured social system. This problem is of course at the center of all social psychological research. It is concerned with how, why, and the extent to which individuals relate to their social environments. In fact, in a recent paper aimed at synthesizing the theoretical premises underlying most current culture personality research, Bert Kaplan (1961*b*) presents a cogently argued case for the necessity of anthropologists and psychologists to shift their attention from the study of why individuals behave in particular ways to the study of this more generalized disposition. He says (665–666):

114 • 121 *156

> Up to now our emerging theory appears to suggest a jungle-like situation in which wholly free and autonomous individuals, in a relatively opportunistic way, make use of the available channels of social partici-

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*125 121 152 regressions, and other psychodynamic processes of informants. Even so, it is highly unlikely that the anxiety responses of adults are *simply* the result of a series of unconscious processes—substitutive, projective, or otherwise. It must be remembered that an anxiety response is just as often a function of the ego, oriented to and in the service of the organism's reality needs, as it is a function of unconscious needs derived from the difficulties of the developmental process. When we consider that the villagers live in one of the most unpredictable universes imaginable and that they are a people entering the throes of a revolution of rising expectations, it is not at all surprising that they should feel anxious about threats to their physical well-being, expressed as a fear of going hungry or being poor. In fact, I would suggest that at bottom these are expressions of an existential anxiety about the essential instability, uncertainty, and impermanence of all life (including their own), an anxiety which has its cognitive basis in the "Wheel of Law" and other Buddhist doctrine. It might be argued that since, objectively viewed, the villagers are well fed and enjoy one of the highest standards of living in Asia, such anxieties are without foundation. I would answer by saying that the villagers are not aware of the per capita income figures for Asia, and that "reality" for any people is how they subjectively perceive and define it, not what it objectively is. To say that there is no realistic basis for the villagers' anxiety about going hungry and being poor is like saying that there is no realistic basis for their belief in interminable existences or in the timeless continuity of the self. In both instances they believe these things to be the case, and ultimately that is what is important.

4:Phillips E-4,5 (1956-1957) 1966
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pation and the rewards that are attached to them. . . . However, there is much evidence that conformity is ordinarily a generalized and diffuse disposition, not something that occurs only when some desired reward is in sight. One might say that it is the basic way of life of all but a few persons in any society. The essential meaning of most social action is not that the actor wishes to do this or that act, but that he wishes to stand in a conformative relationship to the social demands that exist in the situation. In the great majority of social situations most of us are not concerned with the problem of what to do, but much more with the problem of finding out what it is that would be appropriate. When we know what this is, compliance follows almost automatically. The basic fact is that we are mostly good citizens, persons who want to do what is right, correct, decent, and fitting. The culture and personality issue that we have been working to define so far, is not why persons wish to do this or that act, but why they are good citizens. Or, in other terms, what is the motivational basis for the generalized disposition to conformity. . . .

The approach outlined in this highly persuasive argument would clearly contribute to increased understanding of the functioning of social systems, particularly complex, smoothly operating ones. However, on the basis of our Thai materials, I wonder if it is not in fact based on the highly debatable assumptions that (a) all social systems function *equally* smoothly; (b) that all social systems are *equally* demanding in their functional requirements for people to conform; and (c) that persons in *different* societies are *equally* motivated, through socialization or otherwise, to conform. Kaplan in fact says: "One might say that it [conformity] is the basic way of life of all but a few persons in *any* society." (Italics added.) It seems to me that Thai culture provides a powerful argument for the capacity of a social system to function and of its members to have reasonably satisfying relationships with one another (they get done in a pleasant way the things that have to be done) while the standards for and dispositions to conformity are very low indeed. Again, it is perfectly true that Bang Chaners are highly motivated to conform, and even to over-conform, in face-to-face relationships. However, the most striking characteristic of these relationships is not the conformity exhibited in them. It is rather that there is never any assurance that the relationships will actually occur, or if they do occur, that the commitments undertaken in one face-to-face encounter will be carried over to the next. The conformity typically is immediate, short-lived, and uncertain. Bang Chaners may wish "to stand in a conformative relationship to the social demands that exist in the situation." But they first must make a judgment on whether or not to stand in that relationship, a decision that is very much based on their being "free and autonomous individuals, [who] in a relatively opportunistic way, make use of the

4:Phillips E-4,5 (1956-1957) 1966
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*156 available channels of social participation and the rewards that are attached to them. . . ."

• 121 114 15 Without claiming in any way to know the thinking that prompted Kaplan's provocative comments on the importance of the motivation of conformity in shaping action, I wonder if it is not based on the supposition that situations in all cultures are similar to those that we typically encounter in our own highly complex, functionally specific culture—a culture which, *if it is to operate in the highly complex and relatively efficient way we know it*, requires that individuals conform to the demands of their tasks. In other terms, to what extent is the argument for conformity based on the supposition that the majority of relationships in most societies are similar to those which obtain, for example, between workers on an assembly line or between a secretary and her employer, where, if conformity were not maintained most of the time, the consequences would be functionally disastrous, disastrous to the very *purpose* of the relationship? While I take issue here with Kaplan, there is one crucial aspect in which I am in complete agreement with what he seems to be aiming at. That is, if his argument is in fact based upon, and directed at understanding, a strictly American model, I can thoroughly understand the import of his question: "What is the motivational basis for the generalized disposition to conformity . . . [?]" After living in Thailand for several months and observing, and often identifying with, the ease with which individuals pursued their own purposes, oblivious to the requirements of conformity, I began to wonder not about the Thai capacity to maintain loosely structured relationships but about the considerably more mystifying American capacity to conform to the expectations of others. From a *psychological* point of view, the latter is by far the more difficult and demanding, requiring as it does inhibition of and control over one's own desires and a deeply developed predisposition to orient oneself to others. How this orientation is developed and sustained on such a pervasive scale as is found in American culture—particularly with regard to the rewards involved ("Are *instrumental* rewards such as money really sufficient to link person A to person B?")—is clearly, as Kaplan suggests by his posing of the issue, an analytic problem the motivational details of which we presently have only the dimmest understanding. To a certain extent this orientation is explicable in terms of the simple malleability of human beings; in terms of the consummatory rewards that instrumental satisfactions eventually lead to; or perhaps in terms of what Wallace (1957) calls, "cultural identification," or the love of one's culture patterns for their own sake (in this case, love of the modes of social interaction to be found in one's culture). This last would involve interactional patterns assuming a *motivational* "functional autonomy" (Allport 1937) of their own, that is, ego deriving an *intrinsic*

4:Phillips E-4,5 (1956-1957) 1966
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satisfaction from fulfilling another's expectations. However, it is clear that the actual motivational process individuals go through in order to learn to be concerned with the expectations of others—and considering the pervasiveness of this concern, it must involve either intensive or sustained learning—has yet to be examined in a ramified way.[2]

To my knowledge, the only scholars to address themselves directly to the question of the motivations and rewards for conformity are Kaplan in an earlier paper (1957) and Parsons (1952, 1961, and Parsons *et al.* 1953). Kaplan argued that there are two motivational tendencies making for conformity: the desire to behave morally and the desire to please others. The former tendency is quite explicable in terms of the development and functioning of the super-ego (a universal human attribute), and by emphasizing this, particularly with his later use of the pointed phrase, "good citizen," Kaplan's contribution is considerable. However, the latter consideration begs the question of why individuals should be so motivated to please others, and raises the additional problem, as I have done here, of whether all people are equally motivated in such directions. Parsons' early discussions of conformity simply propound the "evaluative, cognitive, and cathectic" satisfactions that the fulfillment of prescribed patterns award to the individual. In his later, more carefully elaborated essay, he sees the roots of conformity in the inherent helplessness of the human infant. In what is essentially a masterful sociological translation of Freud, he argues that conformity develops into a "generalized goal" or "mode of organization of the ego" as the individual successively identifies with, cathects, and internalizes the attitudes of the powerful figures (his parents) who respond to his helplessness. In this sense, Parsons seems to be arguing that the individual's major initial reward for conformity is the maintenance of his own life. The individual's conformity is gradually generalized as he goes through successive developmental stages, reaching its crystallization—the "point of no return," as it were—in the painful options of the Oedipal

[2] The theories that have been most concerned with the nature of conformity and "self-other" orientations—role theory and "symbolic interactionist" theory—have for the most part viewed the *motivations* and *rewards* for conformity as self-evident. That is, the immense literature of these "schools" has tended to focus not on why individuals should wish to conform in the first place, but on the skills, consequences, and non-motivational processes of conformative behavior. Writers such as G. H. Mead (1934), Cameron and Magaret (1951), Sarbin (1954), Shibutani (1961), and Rose (1962) all recognize the necessity of individuals to be socialized into conformity, but they go no further than describing the manifest processes of socialization—"intentional instruction" and "incidental learning," "imitation" and "spontaneous play activities." Having once mentioned these processes, they simply go on to assume that the conformative motivation is thoroughly internalized and self-sustaining. The only exception I have found is Shibutani who addresses himself to the matter of reward in a single sentence (1961: 509): "For most children, the voluntary inhibition of impulses begins with attempts to please those whom they admire."

4:Phillips E-4,5 (1956-1957) 1966
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121 114 15 situation. It might be added that since the Oedipal situation is very much of a moral crisis, Parsons' arguments go far in supporting Kaplan's earlier contentions. Parsons, however, says little about the *different* ways in which parents respond to the child's helplessness and little about *variations* in the intensity and types of identifications, cathexes, and internalizations that the individual may implement—factors which would obviously lead to different kinds of conformative tendencies. Our earlier materials on Bang Chan socialization are particularly instructive on this point. In fact, if Parsons' formulation were linked to those data, it would go a long way to explain precisely why Bang Chaners have such a weakly developed sense of conformity. In the same way, the contrast helps to underscore the profound sense of interpersonal involvement, dependence, and concern inculcated in members of our own culture during the developmental process. To Parsons, the quintessence of these interpersonal investments is, of course, the Oedipal situation: the prototypic encounter with the power of external authority and all that such power implies for the individual's need to conform and to deny and control his own impulses. If this interpretation is correct, it would further suggest that the Oedipal situation must be based, *in the first instance*, on the developmental experience of close interpersonal involvement—an experience which, as our Thai data demonstrate, is subject to broad cross-cultural variation.

*128 *156 The problem of "conformity" raises an additional question, one that has been implicit to many of our earlier remarks, but which merits explicit consideration in these final pages. At several points in the text, it was suggested that the villagers, with their profound sense of self-concern and freedom of choice, often choose to ignore or to isolate themselves from the effects and influences of others. This kind of behavior is a major dimension of their loosely structured relationships; it appears as well in their handling of dependency, anxiety, and aggression. From a psychological point of view, the behavior can be interpreted in one of two ways. On the one hand, it can be interpreted to mean that the villagers have difficulty in relating themselves to others, and use isolation as a means of defense. Implicit here is the notion of emotional deprivation, for who but a deprived person should wish to withdraw from contact with others? On the other hand, the behavior can be read to mean that the villagers are emotionally tough, and simply do not need other people very much. Here isolation is seen as self-reliance and mature emotional security. Throughout this study, I have chosen to stress the latter interpretation.

*128 114 *156 181 This kind of interpretation is not an easy one to justify in contemporary Western social science. Implicit to almost all of our thinking is the Judaeo-Christian assumption (more recently codified by Durkheim and Freud) that the greatest psychological pleasures an individual experiences are

and KY followed by a number.) The center of social life in Bang Chan is the Buddhist monastery or wat and the adjacent government primary school. The community simply consists of the clientele which regularly patronizes Wat Bang Chan and this school rather than other comparable institutions elsewhere in the region. Within the area of the community lives a minority of Thai Moslems constituting about ten per cent of the population. They have their own mosque which happens to be just outside Bang Chan, but they attend many secular and some Buddhist functions at Wat Bang Chan. A number of small stores, which also serve as coffee houses and men's clubs, are used as neighborhood centers in different parts of the village. Near the central wat and school, there is also a store, and the house provided by one of the headmen for use as the Project headquarters.

This present interim report of the Cornell Thailand Project includes some of the data necessary for the design of a program to improve health and diet in Bang Chan. Another report, now in preparation, will give the results of a detailed dietary survey made in the community following the health survey reported on here. These two studies together will indicate existing deficiencies in health and diet, and will permit the formulation of recommendations for needed changes in behavior as these can be realized in the context of the village and national culture.

The author of this study, Dr. Hazel M. Hauck, is Professor of Food and Nutrition in Cornell University. She has been associated with the work of the Cornell Thailand Project since 1950. She not only designed and supervised the research on health, nutritional status, and diet in Bang Chan, but during almost a year of field work in Thailand she obtained valuable data on many other topics for the Project's files. Some of her daily work in Bang Chan made little sense to the villagers, but they nevertheless became devoted to her. Her energy, tact and fine spirit in facing the discomforts and difficulties of rough field work in a tropical foreign land inspired both her Thai and American associates. Working with Professor Hauck were Dr. Amusith Rajatasilpin, now a teacher in the School of Public Health in Bangkok; Miss Sapha Indrasud, now in the Ministry of Public Health; Dr. Chumlong Kittiveja, of the Dental School of the University of Medical Sciences, Bangkok; and Miss Saovanee Sudsaneh, who has been doing post-graduate work in nutrition at Cornell and Harvard. To all of these faithful workers, the Cornell Thailand Project is greatly indebted.

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14 observed in 9% of the school children 7 to 14 years of age who were examined, and in about 6% of the males and 25% of the females over 15 years of age. Of 337 persons examined, however, 2 only, one child and one adult female, were found to have hemoglobin values under 9.75 g per 100 ml.

774 Modern sanitation was practically unknown in Bang Chan. Few families had covered pit latrines or made any effort to [514] cover excreta. Intestinal parasitism was common. Garbage [064] might be fed to animals, but was frequently thrown into the [364] canal or elsewhere about the compound. Provisions for protecting foods from contamination were meager.

When rain water was available, it was used for drinking, but several months each year water from the canals or fish ponds was used without prior treatment. For washing vegetables, cooking and washing dishes, canal and pond water was used throughout the year.

774 A few changes in sanitary practices, if they could be
751 brought about, might reduce some kinds of illness substantially. For example, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

758 Modern medicine will probably not be readily or generally available to a majority of the residents of Bang
• 121 Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

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Introduction

121 This investigation was undertaken in connection with the Cornell Thailand Project, one of several studies under the auspices of the Department of Sociology and Anthropology which are focused on the process of cultural change. Bang Chan, the community chosen for intensive investigation, has been described previously (Sharp et al., 1953). The studies to be reported [101] herein were designed to contribute to a baseline description of the community culture and were carried out during the first and second years of a 5-year project, i.e. from September 1952-May 1954.

114 For the clinical examination of the school children and families, the research group consisted of Dr. Ismaith Rajatasilpin, Miss Sapha Indrasud, Dua Srisuay, a local villager who assisted in many practical ways, and the author, who assumed major responsibility for planning and directing the work. Dr. Chumlong Kittiveja, of the Dental School, University of Medical Sciences, Bangkok, examined the teeth of the school children. Some data on sanitary practices were collected by Miss Saovanee Sudsaneh, in connection with the dietary survey.

121 The main investigations undertaken fall into two categories: 1) studies of nutritional status and 2) dietary studies, both qualitative and quantitative. In connection with both types of studies, information was collected concerning certain aspects of health and of sanitation in the village. Additional data concerning health practices, illness and death in Bang Chan were recorded by members of the Cornell research group in their field notes. This present report is concerned primarily with presenting findings from all of those sources regarding aspects of the health, sanitation and nutritional status in this rural Thai community.

Methods

Clinical Examination

125 Schedule. - In general, the clinical examination was directed toward discovery of signs and symptoms which might either be indicative of nutritional deficiency or of some disturbance which might be associated with or lead to nutritional deficiency. Certain items, such as cristal height, bicristal diameter, and age at menarche were included because information concerning them would contribute to our knowledge of norms for Thai people, and the clinical examination presented a good opportunity for obtaining such information.

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Nutrition (1951) the part played by diet in the production of tooth which are unduly susceptible to caries is still controversial, although in general, the importance of nutrition, especially in the formative period, is widely accepted. In accordance with the recommendation of this Committee, caries rates are recorded as a separate item, and are not taken as a criterion of malnutrition.

Dentition. - Median ages of eruption of specific permanent teeth in 240 Bang Chan children, ages 7 to 14, are shown in Table 20 (Appendix B). For this purpose, data on 226 children in the Bang Chan primary school, and 14 additional children between these ages, in the random sample, were included. The percentage of boys and girls at each age, having each specific tooth erupted, was calculated. Median ages of eruption were estimated according to the method suggested by Klein et al. (1937). A graph was drawn for each kind of tooth, for each sex. Cumulated percentages for each specified kind of tooth erupted were represented on the x axis and age in years at one year intervals on the y axis. Median age of eruption was estimated by determining the point at which the age percentage eruption curve cut the 50% perpendicular.

In Bang Chan, as elsewhere, the median age of eruption for specific teeth is lower for girls than for boys. In some cases the difference is slight, in others, from several months to more than a year. The difference is most marked for lower canine teeth.

The average number of teeth, deciduous, permanent and total, at each age, is shown for children 7 to 14 years of age, in Table 21 (Appendix B). For ages 8 to 13, the greater dental maturity of girls than boys is reflected in the larger average number of permanent teeth present at each age.

On the basis of median ages of eruption for specific teeth, and the number of permanent teeth per child at each age level, dental maturity of children in Bang Chan appeared to be approximately the same as for children in other regions, in both eastern and western hemispheres, with which they were compared. Although the average number of teeth at some ages was lower for children in Bang Chan than for American or English children, the differences were neither marked nor consistent (Kamalanathan, 1956).

Caries Incidence. - Caries incidence was found to be low among Bang Chan children as compared to many regions in which surveys have been made. Of 226 children examined by the dentist, 42% (45% of the boys and 38% of the girls) were totally free of caries. When all carious teeth, both deciduous and permanent, were included, the average number of carious teeth per child was 1.8 (1.6 for boys and 2.0 for girls).

145 not recall the age at menarche.

The median and modal reported age at menarche was 15 years, with a range from 13-19 years (Table 11).

Table 11

Reported Age at Menarche of 94 Females in Bang Chan.

	Age in Years						
	13	14	15	16	17	18	19
Number at each age	6	18	34	21	8	4	3
Percentage at each age	6	19	36	22	9	4	3

This estimate, made from ages given by recall, is necessarily approximate; however, none of the girls between 12 and 14 who were examined clinically, had passed the menarche. Moreover, median and modal ages at menarche were 15 years for sub-groups aged 15 to 24, and 25 to 39 at the time of inquiry, hence the inclusion in this series of women for whom the event was not recent did not alter the estimated median age at menarche. Wilson and Sutherland (1953) conclude that in tropical countries the onset of menstruation as compared with that for English children, 145 may be either early or late. Tanner (1955) notes that if 114 climate has an effect on age at menarche, it must be a minor one, • 121 and that at present the effect of race cannot be disentangled from nutritional and socio-economic circumstances. Basing his [146] judgment on the effects on man of famine associated with war, and on results of direct experiments on animals, Tanner expresses the conviction that nutrition plays a major role in determining the age at which menarche and the adolescent spurt in growth occur. If this view is correct, the relatively late median age of menarche in Bang Chan may be associated with inferior nutritional status.

145 One of 17 women in the age group 35-44 had passed the menopause, whereas 12 of 16 women over 45 years of age had done so. One of 7 women over 55 years of age, 2 of 7 women age 50-54, and one of 2 women age 45-49 had not yet reached the menopause. The reported ages at menopause were: 30-34 years, 2 women; 40-44 years, 3 women; 45-49 years, 3 women and 50-54, 5 women.

147 Approximately 100 respondents gave information concerning

6: Goldsen and Ralis Z-4,5 (1955) 1957
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FOREWORD

Having two portraits of a community produced by two different field workers is itself a signal event in anthropology, but to have two portraits of the same subject by workers using different methods is unique. A portrait of Bang Chan is being made in traditional style under the Cornell Thailand Project, using unstructured interviews and intuitive judgment to reach generalisations. In contrast this data paper suggests a photograph of a detail made with Dr. Max Ralis as cameraman and Dr. Rose K. Goldsen as darkroom expert who hands us the final print. Dr. Goldsen is Co-Director of the Cornell Cross-Cultural Methodology Project; Dr. Ralis, Field Director of that project.

Dr. Ralis visited Bang Chan in May, 1955 where, after preparing his questionnaire, he proceeded with the assistance of specially recruited interviewers to visit every household in the community within the course of four weeks. His task was facilitated by advice from orthodox field workers in formulating the questions into colloquial Thai as well as in selecting the relevant indices for inquiry. The details of training interviewers and collecting data appear in the Appendix. Then with suitcase bulging with completed schedules he returned to Ithaca and completed preliminary tabulation of the results before being called away to new work. He left the legacy of further analysis to Dr. Goldsen who produced the present study without benefit of first-hand knowledge of Bang Chan.

The problem was to see if these data could be used to analyze which populations in Bang Chan benefited from agricultural innovation and modern medical facilities and to distinguish how this group might differ from the remainder that did not avail itself of the new. The survey of the acceptance of innovations in Bang Chan parallels similar studies conducted by the Cross-Cultural Methodology Project in other areas where Cornell maintains field stations: Peru, India, and Nova Scotia. The aim of this project is to determine the cultural conditions under which customarily used methods of data-gathering are analytically useful, and to develop techniques for adapting these methods to the demands of varying cultural milieux. Bang Chan provided a laboratory, so to speak, to test the analytic usefulness of the social survey in a cultural context that varied considerably from Western culture, where survey methods have been developed. As one also interested in this aspect of Bang Chan, I found her steps in identifying the context of innovation a fascinating sequence. Field workers are prone to generalise after a few visits.

121 I recall seeing portable motors stored in some Bang Chan houses and
[243] can still picture many threshing floors with neatly layered heaps
[244] of rice straw where the mushrooms grew. A few of these apparently "progressive" farmers had special ponds to which they proudly invited me to watch the feeding of the tilapia fish. Occasionally one of them seized the opportunity of my visit to inquire about sending a sick kinsman to a Bangkok hospital. Without Dr. Goldsen's analysis I might easily have been lured to generalize that certain farmers were "innovation minded."

*177 The survey's evidence against a general "innovation mindedness"
*178 cautioned me to reconsider my impressions. I realized that it would
121 be an oversimplification of the social network in Bang Chan to
621 think of it as containing a group of "progressives" who sought avidly each new agricultural wrinkle and who pitted themselves against another group of "conservatives" who resisted change. Instead I was led to see some farmers interested in certain new things, others indifferent to these but interested in other things. Bang Chan looked more like a mosaic of small groups, each fitting or rejecting the new according to its circumstance.

*177 Instead of thinking simply of a group of highly motivated,
*178 wealthy farmers who assumed the responsibility of trying out the
243 new for the benefit of their less affluent neighbors, I was
244 alerted to recognize a variety of kinds of innovation. Innovation in growing rice, where one might employ a motor or fertilizer, differed considerably from earning extra cash during the dry season by growing mushrooms. The analysis of the survey evidence made me sensitive to the realization that mushroom culture was clearly a seasonal activity requiring little investment and open to any family, rich or poor, that needed cash. Certainly no genuine rice farmer would permit this extra work to interfere when the rains called time for ploughing. The finding that no correlation existed between acceptance of motors and growing mushrooms seemed in retrospect clear, almost self-evident.

*177 The survey analysis indicating that owning a motor, despite
182 my initial impressions, bears no relation to use of modern medical
244 facilities, made me reexamine my initial impressions. My own
757 studies had made me aware that making a living is a positive action among Bang Chan farmers: it requires forethought and will. Health, however, for Bang Chan is a kind of negative entity to be taken for granted until sickness arrives. Bang Chan has no vitamin pills nor tonics to maintain health, though all work actively to relieve sickness. Growing mushrooms and using modern medical facilities are phenomenally different undertakings. Certainly the survey analysis in this regard bore out and corroborated this "thematic" analysis.

6: Goldsen and Rallis Z-4.5 (1955) 1957
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INITIAL ACCEPTANCE OF INNOVATIONS IN BANG CHAN

121 •

The Concept of Acceptance of Innovations

The study of culture change is enlightened by specific investigations of how the members of a community come to accept an innovation, ultimately incorporating it in the fabric of their familiar and accepted cultural ways. The present analysis examines data collected in Bang Chan by means of survey interviews,* to see what light may be thrown on the factors accelerating acceptance of certain innovations in that particular village.

Before turning to the analysis of the data collected in one particular community, however, it is important to make two general, theoretical points: the first has to do with a logical analysis of the elements intrinsic in the concept "acceptance of innovations" by a community or a social aggregate; the second has to do with the underlying logic of the analytic procedure utilized in this paper.

The concept "acceptance of an innovation" may be better analyzed if it is broken down into three separate facets. One important facet of "acceptance" is the initial adoption or trial of the innovation by one or more persons of a group. A second facet is the continued use of the innovation. Finally, the third facet can be viewed as the individual's psychological acceptance of the idea of the innovation when it is fully incorporated into his community's way of life.

Both initial acceptance and continued use may be independent of psychological acceptance, and vice versa. An innovation such as contraceptives might be used by individuals (even though it conflicts with concepts already present in the culture). The Salk vaccine might be culturally and psychologically accepted by many, on the other hand, even though they may have no opportunity or desire to use it for themselves or others.

A complete analysis of the concept "acceptance of innovations" would deal with all three of its facets. The present report, however deals specifically with the first two only.

A Note on the Logic of Correlational Analysis

The generalizations reached in the present study are based on statistical correlations of responses collected in a social survey. These generalizations are of two main types. First: the frequency distribution of any given item or variable lead to generalizations

* For a discussion of how the survey was made, see Appendix A.

• 121 concerning the climate of opinion in the sample studied. The apparent precision of these frequency distributions, however, should not be misleading, for the specific magnitude of any given percentage distribution might have fluctuated considerably, had the questionnaire been worded slightly differently, or had the conditions of administration been slightly varied. These distributions may be considered reasonably accurate, however, within their own context. They cannot be expected to hold true for all time, for all places, or for all instruments; nevertheless, the varying magnitudes within a category (more people say a than say b), and the range of the categories used (almost all; a large majority, more than half, less than half, a small minority, a negligible proportion) can be considered accurate descriptive statements.

Second: the internal relationships between different variables lead to generalizations of greater stability than the frequency distributions. Thus, generalizations describing the way subgroups of the population vary from each other may be considered relatively stable.

Cross-tabular analysis provides evidence for these generalizations, following the logic of the ex-post facto experimental model. The linkage between variables is determined by observing how those members of the sample who differ from each other on the first variable, distribute on the second. It is this kind of analysis which is commonly carried out in studies of epidemiology. Such studies search for the possible correlates of a disease or pathology by means of the same kinds of cross-tabular comparisons. Before the tubercle bacillus has been isolated, it was important to study the relation of the sick and healthy portions of the population to urban and rural residence, family income, living conditions, etc. In the search for causes of traffic accidents, those persons with and those without a record of accidents can be compared in age, drinking habits, time of day or any other characteristics which may lead to significant clues.

The present study follows precisely the same line of reasoning. It examines the reported incidence of use of each of several innovations (not tuberculosis or car accidents) among groups in a community, who differ from each other in important aspects: those who have accepted another innovation compared with those who have not; members of the community who have favorable attitudes towards the new practices compared with those who are negatively disposed; those who are exposed to urban influences compared with those who are not; young people compared with old people, etc. The extent to which the incidence of use of the innovation differs beyond chance expectation in the groups thus contrasted provides a measure of the association or linkage between it and the related variables studied. The design of the present analysis may be presented schematically as follows:

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Design for Analysis

I. Dependent Variables

A. Acceptance of agricultural innovations

1. Motor
2. Fertilizer
3. Tilapia fish
4. Mushrooms

B. Acceptance of non-agricultural innovations

1. Use of clinic and hospital facilities

II. Independent Variables

A. Motivation level (indexed by attitude to each innovation)

B. Role and status factors

1. Economic level
2. Age
3. Family size

C. Communications factors

1. Literacy
2. Exposure to media of mass communication
3. Breadth of social contacts within the community

D. Urban orientation

1. Acceptance of urban patterns
2. Contact with urban centers

E. Capital investment factors

F. Other factors

1. Community integration and identification
2. Religious beliefs and superstitions
3. Personality factors
4. Knowledge of political figures
5. Willingness to perform industrial work

Interpretation of Results

What kind of causal interpretations may grow out of such an analysis? In the first example, tuberculosis, the experimental researcher might point out that further research has ultimately

121 established that none of the correlated factors finally turned out to produce the disease--the necessary condition was a bacillus. Indeed, some of the factors mentioned might be viewed as results of the illness rather than as causal factors. Correlational analysis in a study of this type can establish only that the factors associated with tuberculosis constitute the context within which the necessary condition (in this case the bacillus) was known to operate. In the second example, traffic accidents, it is perfectly apparent that age , or time of day, cannot produce a car accident, but the linkage between accidents and other factors provides portions of the context where accidents occur.

Why is it important to understand this context' Such knowledge can lead to inferences about more direct causation, which serve to narrow down the clinician or experimenter's search for the necessary condition. Indeed, a necessary condition may operate only when it is imbedded in this complex matrix of other related variables--or may even be rendered inoperative when the context is changed. Thus efforts toward change or improvement can be made more effective by being directed to the relevant conditions.

It is essentially this kind of reasoning which underlies the procedure of the present study. Just as in the examples cited, linkages can lead to inferences about causation which may later be checked in the laboratory, so, in the same way, linkages discerned in the present study can lead to inferences about causal factors. They are useful chiefly in providing the context within which the decision to try out these sorts of innovations comes about. In this sense of understanding the context, efforts to produce social change may be made with more understanding of the dynamics.

We may now turn to the data collected in Bang Chan for a study of factors related to acceptance or rejection of innovations within the larger context of a rural community in contemporary Thailand.

THE COMMUNITY AND THE INNOVATIONS

The Scene of Bang Chan

361 [131] Twenty-five miles by highway northeast of Bangkok is situated the community of Bang Chan. In this section of the central plains the inhabitants live as near as possible to the rice paddies which they till, so that instead of a compact village Bang Chan is a community spreading broadly along the banks of a canal network which from its two-mile stretch through Bang Chan, [621] covers most of Central Thailand. Under these circumstances precise definition of the community becomes difficult and might be

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743 B. Institutional Care of the Sick: Equally important as agricultural innovations in raising the level of living of an area *177 such as Bang Chan are the efforts to improve the health and wel- *178 fare of the population. Since the thirties there has been a clinic in the neighboring market town of Minburi and some Bang Chan farmers used clinics and hospitals in Bangkok before that time. Only about a third (36 per cent) say they have never been to a clinic or a hospital; over a third (37 per cent) have themselves gone for treatment; about one fourth (23 per cent) report having brought a patient there; over one tenth (12 per cent) say they visited relatives there; and a few (3 per cent) say they went there for various other reasons.*

ANALYSIS OF DATA ON AGRICULTURAL INNOVATIONS

*121 The central question to which the present analysis directs itself is: What are some of the factors which may be said to account for the fact that certain members of the community are willing to try out these innovations and to continue using them, while others are unwilling even to make the initial attempt? Is there some general pattern to be discerned among the several innovations? Is there any discernible clustering among them; that is, are some community members more "innovation-minded" than others, in the sense that if they try out or accept one innovation they are more likely to accept another? Or are these innovations accepted independently of each other? The following analysis of the survey responses attempts to shed some light on these and related problems.

Factors in Acceptance of Agricultural Innovations

241 Use of the small motor is basic to acceptance of other agri-
402 cultural innovations. Although only a minority of the persons of Bang Chan report that they own a small motor, many more used this
*177 machine through joint ownership or borrowing. Indeed, knowing
*178 whether a person owns or uses such a motor is a useful indicator of his readiness to accept other agricultural innovations. If he owns or has used a motor, then he is about five times more likely than others to try fertiliser, about two and a half times more likely to try raising tilapia, and about one and a third times more likely to try straw mushrooms.

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[125] * The question: "Have you ever been to a clinic or hospital...? In what various places...? For what various purposes did you go ...?"

There is some justification, then, for the inference that initial adoption of innovations such as fertilizer and tilapia, which require increased labor, will depend to some extent upon the availability of some labor-saving device (such as the small motor) which will enable the busy farmer to perform the necessary labor and, perhaps, leave him freer to exercise the care required for these innovations to be successful. Hence the relatively stronger relationship among these innovations. An innovation which does not make these demands, however (such as mushroom growing), is more likely to find acceptance on its own terms and may thus be less dependent for its acceptance upon availability of some sort of labor-saving device.

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Innovation and Attitude Towards It

There is further evidence in the survey substantiating the greater "autonomy" so to speak, of the decision to try mushroom culture compared with the decision to try fertilizer or tilapia.

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The present study tested the hypothesis that use of these innovations would be related to a favorable attitude toward them. Attitude toward the four innovations was determined by examining responses to the questions: "What is your opinion about fertilizer?" "...about mushroom growing?" "...about tilapia?" Responses were classified according to whether they revealed positive, mixed, or negative affective feelings to each of the innovations.

[121]
[125]

In general, positive attitudes towards all these innovations are widespread in Bang Chan. About three-quarters of the residents express positive feelings toward mushroom growing and over half express positive attitudes to artificial fertilizer and tilapia raising. (See Table 3.) None of these innovations elicits widespread expressions of disfavor, although the respondents are more likely to express an unfavorable attitude to tilapia (29 per cent) than to fertilizer (14 per cent) or to mushrooms (7 per cent)

TABLE 3. THE MAJORITY IN BANG CHAN HOLD POSITIVE ATTITUDES TOWARDS AGRICULTURAL INTRODUCTIONS

Attitude	"What is your opinion about..." Mushrooms	Fertilizer	Tilapia
Positive	76%	59%	57%
Neutral or mixed*	6	3	2
Negative	7	14	29
No opinion	9	16	8
Not ascertainable	2	8	4
Total cases	(333)	(333)	(333)

* The neutral or mixed attitude category comprises responses conveying partly favorable and partly unfavorable feelings such as, "some kind is good, some kind is not so good"; "in some ways I like it, in some ways I dislike it."

This table shows that in tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertilizer holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic Level			
	High*		Low**	
Owns or used motor (Proportion who have raised tilapia)				
Yes	43%	(89)	33%	(57)
No	25	(21)	17	(40)
Owns or used motor (Proportion who have tried fertiliser)				
Yes	20%	(89)	10%	(57)
No	5	(21)	*	(40)
Owns or used motor (Proportion who have tried mushroom growing)				
Yes	60%	(89)	36%	(57)
No	37	(21)	23	(40)

* Three buffaloes or more
** Two buffaloes or fewer

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Literacy

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

as apt to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	38%	(40)	86%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	30%	(67)	85%	(76)
One or more	57	(24)	88	(43)

*Male farmers only

However, no such relationship was discerned between these culture contacts and trying out either fertilizer, tilapia, or mushrooms.

Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out, is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertilizer or mushrooms.

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402 One is tempted to speculate about the significance of this relationship. One possibility deserves further investigation if the data were only available. If one important reason for incurring debts is to secure or to replace capital equipment, then those farmers more willing to make a capital investment, even though they incur a debt, are more likely to use the motor. Conversely, farmers unwilling or unable to contract debts for a basic improvement in their capital equipment might be the ones less likely to adopt an innovation such as the motor.

Other Factors

• 121 A number of other factors which conceivably might have been expected to differentiate those who tried out these innovations from those who never made an attempt to use them were investigated and proved to have no differentiating power. Factors such as age and family size, for example, were examined to see whether differential acceptance existed among younger compared with older age groups, or small as compared with large families. No such differences appeared. In the same way, the survey's rough measures of community integration and identification, certain religious beliefs and superstitions, certain personality traits, of knowledge of political figures, and willingness to perform industrial work likewise revealed no differential rates of acceptance when groups were compared.

*178 USE OF MODERN HEALTH FACILITIES

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75 Improvements in agricultural production must certainly not be viewed as the only efforts worthy of attention to raise the level of living in Bang Chan. Equally important are efforts to train the population to use modern health practices and facilities.

Hospitals have been available since the twenties in Bangkok and a clinic in Minburi since the thirties. Despite these facilities, much curing continues in the traditional way through priests or certain farmers of the locality who have learned from other practitioners to compound medicines, set bones, deliver babies and expel demons.

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[125] In the present survey the majority of respondents reported that they have sometimes in their lives used hospital or clinic facilities. To the question, "Have you ever been to a clinic or hospital?" 63 per cent answered affirmatively. Less than half of those who replied indicated having gone for their own treatment or hospitalization, the remainder for other reasons. The distribution of responses is given below.

6: Goldsen and Ralis Z-4.5 (1955) 1957
AO7 Central Thai AO7

APPENDIX A

March 1956

HOW THE BANG CHAN SURVEY WAS CONDUCTED

How the Study Came to be Made

121 The survey conducted in May 1955 was part of a program* for testing diverse techniques of data-gathering in cultures substantially different from U.S. and Western European cultures, where the survey method of gathering data had been developed and tested.

114 The survey questionnaire was developed and the field work carried out with the help of area specialists of the Cornell Research Center in Bangkok. Mr. Robert B. Textor and Mr. Loobongs Sotabhaya of the Cornell Thai staff assisted the field director and recruited the English-speaking Thai university students who interviewed for the survey.

The Questionnaire

12 After a period of training interviewers about the questionnaire and techniques of interviewing, the questionnaire was pretested in a rural community near Bang Chan. Then the staff, consisting of the field director, his deputy, and five Thai interviewers, among them one woman, moved to Bang Chan to carry out the survey.

124 Thai and English-language versions of the schedule were drawn up, but of the 335 interviews conducted in the survey,
125 the overwhelming majority was conducted in the Thai language rather than through an interpreter.

The Interviewers

124 The interviewers were a mixed group: one Thai-speaking American anthropologist; one trained Thai anthropological field worker; two Thai Christians (one a theology, the other a medical student); one Thai Buddhist medical student, one Thai Buddhist female social worker; and an American sociologist who used the Thai interviewers as interpreters.

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[122] * The Cornell Cross-Cultural Methodology Project for the Development and Testing of Improved Methods to Study Underdeveloped Areas is supported by a grant from the Rockefeller Foundation and is a project in the Department of Sociology and Anthropology.

6: Goldsen and Ralis Z-4.5 (1955) 1957
AO7 Central Thai AO7

APPENDIX C

Cornell Methodology Project,
Bangkok
2 May 1955

Interviewer Guide

Bang Chan Survey 1955

I. INTRODUCTION

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This survey is a multipurpose study. One of its objectives is to help determine HOW one can best use a technique such as a survey for community research in South East Asian villages. A survey is one of several techniques used in community research by Western social scientists. The study of a community permits to acquire knowledge about what is essential and important in the life of a village and town. Once a store of knowledge is available and described, the door is being opened for the introduction of innovations and improvements based on scientific knowledge and not based on hunches and speculative thinking. However, the instruments of social science research still bear great limitations. Life processes are the laboratory of research. Thus, dynamic processes are faced which make research complex.

Another objective of this survey is to study the meaning in a given cultural setting of variations in question wordings, different types of answer categories, and various types of questions in terms of question structure.

Finally, an attempt is made as well to collect some data from a typical rice village in the hinterland of Bangkok for supplementing cultural anthropological hypotheses and findings.

This interviewer guide is to assist the interviewer in his task. Here anticipated difficulties and weaknesses in this survey are brought to light in order to make it easier for the interviewer to avoid traps inherent in field situations. First of all, it should be noted that replies to ALL QUESTIONS ARE REQUIRED. It means that a given number for each question or subquestion must be ENCIRCLED ON THE ANSWER SHEET OR THE RESPONDENT'S REPLY MUST BE REGISTERED IN THE PLACE PROVIDED FOR. Unless strict adherence to this rule is obtained from each interviewer, questionnaires will contain omissions and become valueless. Such questionnaires would signify a loss of effort, a loss of time, and unnecessary exposure of respondents to interviews. Secondly, an interviewer who has any doubts about procedural points, should discuss them without any hesitation either with the field director, or with his deputy, Mr. Textor, or with Mr. Civ, who, all three, consider it their responsibility to clarify all possibly confusing matters and to give such training to each interviewer as to enable him to perform his task with ease.

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7

CHAPTER I

METHODOLOGY

Since 1947 Cornell University has been sponsoring
121 a number of studies in community development in various parts of the world. "All of these studies are multiple approaches to a central problem: What are the basic factors involved in the process of cultural change? In the Cornell studies of changing human behavior it is postulated that in any society no one element of change can be clearly understood except in relation to other elements. Biological factors -- birth rates, disease, malnutrition -- must be investigated in relation to the physical environment and the total culture of the society in which they occur. Functional aspects of culture -- family life, economy, education, religion -- must be studied in relation to each other rather than simply as isolated segments of group life."[1]

121 This study of the economy of a rice growing village
44 in Central Thailand is a part of the Cornell University Thailand Project which includes studies carried on by a group of research workers representing a variety of disciplines. The field work was begun in 1948-49 and was resumed in 1952-54.

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1. Alexander H. Leighton and Lauriston Sharp, "Notes for Field Research Workers" (Department of Sociology and Anthropology, Cornell University, New York, 1952), p. 1. (Mimeographed.)

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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Reasons for the Choice of the Field Site

After an extensive survey of a number of possible sites in the Central Plain, the community of Bangchan, some twenty miles northeast of Bangkok, was selected for intensive study. Among factors leading to this choice were the following: (1) accessibility from Bangkok, about forty minutes by car with optimal road conditions, and about two and a half hours by launch -- an important advantage because it was desired to maintain contact with events in the capital, to utilize research and other facilities there, and to work in a community which Thai from Bangkok or vicinity could easily reach should they participate in the research; (2) availability of a fairly concentrated population of over 1,600 almost entirely engaged in rice production; (3) production of a large surplus of rice sold to nearby Chinese millers for export; (4) local use of two alternative methods of growing rice -- transplanting and broadcasting; (5) presence of an active religious institution or wat; (6) presence of a large government primary school; (7) artificial division of the community between two administrative units or amphur, providing an exceptional opportunity for comparative study of local government; (8) presence of a small number of Moslem Thai, permitting study of this important minority group; (9) almost complete absence of Chinese residents, but dependence upon outside Chinese itinerant vendors or nearby traders and millers, permitting study of Thai-Chinese relations; (10) a wide range of variation with respect to individual

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

121 experience outside the community, from persons who had
621 never before seen any foreigner to others familiar with Bangkok or smaller centers of modernizing influence; (11) prospects of a fair degree of physical security from robbery or other violence during the study; and (12) the promise of excellent cooperation on the part of both peasants and officials of the region.[2]

121 A majority of the sites visited or heard about during the preliminary survey proved unsatisfactory for one or more of the following reasons: (1) they were too specialized (fruit or truck gardening, brick or pottery making, proximity of a naval establishment, preponderance of non-Thai or non-Buddhist groups); (2) they consisted of amorphous groups of sub-marginal tenant farmers exhibiting marked signs of social disorganization; or, most commonly, (3) they were decentralized and the dispersal of homesteads along canals would have required an inordinate amount of research time spent in moving about in order to communicate with the people.[3]

121 Although caution has been exercised to select a com-
184 munity most closely approximating a representative village
*243 of the Central Plain, we do not purport that economic conditions described in Bangchan are identical with those of other villages in the region. Bangchan's representativeness

2. Lauriston Sharp, "First Progress Report on Cornell Thailand Project, August 1-November 1, 1948", p. 2. (Mimeographed.)

3. Ibid., p.2.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

121 184 243 can later be checked through studies in a nearby control village and by comparison with results of the 1953 agricultural census. Nevertheless most of the problems of rural rice growing communities in central Thailand undergoing technological changes are expected to be found in Bangchan. We are confident, therefore, that the community is an appropriate model for locating agrarian problems and is a good site for a pilot study which is to serve as a base-line for further researches in agricultural economics and other social sciences.

Techniques for Establishing Rapport

123 Our first contact with Bangchan residents was made on September 1, 1948, when Professor Lauriston Sharp and the author were driving home from Minburi. We stopped over at a farm house on the side of Minburi Road two miles from the market town and introduced ourselves to a small gathering of farmers. We told them that we were both teachers, Sharp teaching in the United States and Janlekha in the nearby Kasetsat University, and that we were looking for a typical village where "Professor Sharp might study the real life of Thai farmers so that he could tell his American students how we live and work."

The place where the conversation was taking place was on the periphery of Bangchan village -- the western tip of Hamlet 4, Bangchan Commune. While one of the farmers was explaining the general condition to us, he was interrupted

T 63 Place of Bangchan in the Administrative Area

In the highly centralized system of Thai administration, the whole country is divided into 9 circles (pharg), 71 provinces (changwad), 414 districts (amphur) and 77 sub-districts (king-amphur), 3,650 communes (tambol), and some 50,000 hamlets (muban).

CT 621 634 121 In the section on reasons for the choice of the field site (page 32) a mention was made of an artificial division of Bangchan between two administrative units. By that we mean one part of our "natural" or "functional" Bangchan village administratively belongs to one amphur and the other part belongs to another amphur. The situation will become more vivid when we discuss our "natural" Bangchan village.

CT 621 121 Our "Natural" Bangchan Village

In this study we are not interested in an administrative unit which is often an artificial division, but rather in a "natural" or "functional" village which may be operationally defined as a geographical area inhabited by a conglomeration of people having one or more common social centers.

CT 621 794 872 Bangchan people patronize an active Buddhist religious institution popularly known as Wat Bangchan, and an adjacent government primary school, both centrally located in the community.

CT 621 *128 For practical reasons for ease in statistical manipulation, we assume that the smallest administrative unit --

a/4 [Erratum: this should read "page 36"---Analyst]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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In discussing the forces of demand for and supply of land in the few preceding pages, it is not the purpose of the author to quantify these forces and attempt to predict rent or the price paid by the tenant for the control of net income deriving from the use of the productive powers of the soil. Rather, the purpose is to confirm in this specific case Chamberlin's general notion that "the equilibrium of economic forces has been wrongly identified with an equilibrium between demand and supply. The latter is merely a special case of the former. Curves of demand and supply tell nothing, either by themselves or by their intersection, as to what price will be established, until other conditions are known."[14]

Prices of Land

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One of the most significant phenomena during the period covered by this study, from 1948 to 1953, is the rise of prices of land in Bangchan.

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Records of major receipts and expenses of 96 farm operators who have been continuously working on an average area of 3,140 rai, or 47 per cent of the total area worked by Bangchan residents, show that during this six-year period two operators sold two parcels of land and ten operators bought eleven parcels of land. Since none of these involved transaction between one and the other in our sample of 96 operators, it can be said that there was a total of thirteen

14. Chamberlin, op. cit., p. 15.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

182 rate of increase in land price is considered, however, it
423 is reasonable to believe that population increase is cer-
435 tainly not the only factor.
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[121] It is not the purpose of this study to deal with the price of urban land. Neither the problem of land utilization nor the whole economy of Bangchan can be clearly understood, however, without some account of the rapid building up of urban land prices in recent years. It is thus necessary to digress at this point into some factors accountable for this rapid rise.

369 It has been observed that the volume of domestic
454 saving in Thailand is small because of the low level of in-
423 come, and that such saving as does take place tends to be
435 put into real estate and gold and jewelry. Concentration
178 of income resulting from the postwar phenomenon of shifting
182 of political and economic power into the hands of few people, however, has somewhat increased the proportion of saving; but this is again used largely to purchase real estate. The natural result is the boosting up of urban land prices especially in the suburban sections where there has been a relatively high degree of improvement in road construction since the war.

423 This investment in land purchase has more than ever
45 before assumed a speculative nature. This is largely due
178 to the experience of inflation initiated by World War II
369 whereby huge and easy profits could be made from buying
182 and selling of land. Corruption in the sale and purchase

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

#243 466 Difficulty arises when farm workers are classified individually because of duplication. It was mentioned in Chapter II that family members might work for their lampai after they had fulfilled their obligation on the family farm work. It is seen, then, that a family member may be considered as both family worker and piece-worker. Even the farm operator himself may earn extra income from piece-working and thus becomes also a piece-worker. In fact, most farm operators who had only a small area to work did have time to earn extra income this way. It is only the hired laborer that could not earn extra income from piece-working because he is bound by contract to devote all his time to his employer's farm and household work. It is considered unbecoming for a hired laborer to take time out, even at night, to fish for his own biological family.

Sampling Technique

#128 621 So far we have been dealing mostly with the universe of our study -- the total population of our "natural" Bangchan Village as defined in Chapter II; although occasionally, it might have been noticed, reference has been made to a sample of 104 farm operators and of 96 continuing farm operators.

[121] [161] Our primary attempt in this community study is to cover the entire village. It is obvious, however, that all relevant information cannot be gathered on some 300 families comprising this village of about 1,700 people. We may, for

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

CHAPTER VII

ECONOMIC CONDITION OF FARM OPERATORS

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Income performs two basic functions in the social economy: (1) as incentives to resource owners, income affects the use to which resources are put in production; (2) as purchasing power in the hands of families, income affects the well-being of people. This functional dichotomy is significant because it has its foundation in the primary values that motivate people in our society. The first function is oriented toward production, the second toward welfare.[1]

Western economists have been all too prone to restrict their analyses to the first of these two functions. In the East, as already indicated in the introductory chapter, commercialization of agriculture was started only in the latter phase of Western colonial regime in the area, more specifically after the construction of the Suez Canal. Even now, the transformation from the age-old self-sufficing economy into a commercial economy has not been completed because the fabrics of the traditional society have not been reshaped and the traditional outlook still prevails. Here

1. Theodore W. Schultz, Production and Welfare of Agriculture (New York: The Macmillan Company, 1949), p. 21.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

121 lies the main problem of Southeast Asia -- the problem basically of transition. Writing in 1949, Paul Mus rightly states: "The traditional world was not dead; it still held sway in the countryside. A state of affairs, in which the people's livelihood is calculated in terms of one world and their taxes in those of quite another, cannot endure."[2]

* 128 433 Degree of Self-sufficiency

During 1952-53, a consumption study was made on 106 sample-farms, which include the 96 continuing sample-farms and 10 new farms brancing off from the original sample-farms of 1948. Details of this consumption study will be discussed in the section on ordinary household expenses later in this chapter. For the purpose of the present discussion, Table 46 -- frequency distribution of degree of self-sufficiency of those 106 sample-farms -- is here introduced. By degree of self-sufficiency is meant the proportion of the value of home-grown products expressed as a percentage of the total value of annual consumption. Quantitatively speaking, it is seen that Bangchan farm families produce more than half of the things they ordinarily consume.

24 433 [592] 000 However, the number of different products consumed which are produced by the family can be counted with the fingers of one hand. These are rice, fish, eggs, fruit and vegetables. On the other hand, there are scores of items

2. Paul Mus, The Role of the Village in Vietnamese Politics.

[TEXT CONTINUED ON PAGE 296]

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

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122 For the period of her field study, 1952-53, one of us (H.M.H.) received an award for advanced research from the United States Educational (Fulbright) Foundation in Thailand. Another (S.S.), who was field worker with the Cornell Thailand Project during 1953-54, was enabled to come to the United States for graduate study through a travel grant from the same Foundation. She held an assistantship in the Southeast Asia Program at Cornell University 1954-55, and the Anna Cora Smith Scholarship for Research in Home Economics, 1955-56.

114 [122] To their co-workers in the field, Dr. Anusith Rajatasilpin and Miss Sapha Indrasud whose services in connection with the medical inspection were provided by the Food and Drug Administration, Bangkok, through the courtesy of its director, Dr. Yong H. Chutima, the authors express their appreciation.

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3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
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123 The author is particularly grateful for the interest and friendliness of the parents, especially the mothers of Bang Chan. They patiently answered our questions at each visit and reassured the small children who seldom saw strangers and who were unused to being weighed and measured. Without their generous cooperation this study would not have been possible.

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4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
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122 The Ford Foundation, through its Foreign Area Training Fellowship Program, provided the funds for the field research and some additional time for writing, and for these I am extremely grateful. I also wish to thank the Cornell Research Center in Bangkok and the Fels Foundation for providing funds toward special parts of the research.

000 The teachers who served on my graduate committee at Cornell University and who supervised the writing of the earlier version of this study were Professors Lauriston Sharp and Morris Edward Opler. My debt to them far exceeds the usual obligations owed to benevolent, if hard-headed, readers of a doctoral dissertation: it is primarily from them that I received much of the knowledge and inspiration that bear on my present professional interests. Others who contributed to my training and to whom I am warmly grateful are Professors Robert M. MacLeod, Robert J. Smith, William W. Lambert, and my undergraduate instructors, Professors Daniel J. Levinson, David M. Schneider, and the late Clyde Kluckhohn.

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Berkeley, California
August 1964

4:Phillips E-4,5 (1956-1957) 1966
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Introduction

The purpose of this study is twofold: (1) to provide a basic description of 121
the dominant personality traits of the adult members of a Central Plain Thai community; and (2) to demonstrate a procedure for dealing with many of the methodological problems, theoretical and technical, that are encountered in cross-cultural personality research. The primary data are observational materials and the responses of 111 Bang Chan villagers to a Sentence Completion Test, a so-called "projective technique."

Several considerations have prompted this work, its planning, emphases, and aims.

In 1955, when I participated in the preparation of a sociological hand- 122 •
book on Thailand (Sharp *et al.* 1956), I had the task of writing a descrip- 114
tion of the "social values and personality patterns of the Thai," using as sources all available materials in the English language. These sources consisted largely of the writings of travelers, businessmen, and government servants who had worked in Thailand, the comments of introspective Thai, and some preliminary ethnographic studies (R. F. Benedict 1946, Embree 1950, Sharp *et al.* 1953, deYoung 1955, Kaufman 1955, and unpublished field notes of the Cornell Thailand project). It quickly became apparent that these documents—written originally for purposes quite removed from those of psychological analysis—could provide little more than cursory impressions or intriguing clues to the psychological functioning of the Thai, and that a focused, systematic study of Thai personality was a problem for future research. The account that finally emerged from my review of the literature was hardly more than a vocabulary for describing some of the stereotyped forms of Thai social interaction: politeness, the maintenance of a stoical mien in stressful situations, the love of fun, and the like. Although worthy of note, such a lexicon obviously did not represent a thorough or intensive portrayal of Siamese personality. It was 121
with the aim of redressing this situation, therefore, that in the winter of 1956 I undertook a twenty-two-month field research project, a major portion of which is presented in this monograph. Since the research concerns

4:Phillips E-4,5 (1956-1957) 1966
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such data. Fortunately, the conditions for putting this plan into effect were present in the Thai situation, where extensive ethnographic studies had already been conducted in Bang Chan by Sharp and his colleagues (Sharp *et al.* 1953, Janlekha 1955, L. M. Hanks 1959*a–c*, J. R. Hanks 1959, Textor 1960). To a large degree, the design and phrasing of my project was predicated on the prior existence of these materials.

Second, it was assumed that the states and processes referred to by the concept of personality are among the most complex of phenomena, with as many dimensions and attributes as there are to the concept of culture. This "primitive assumption" was made of course not to acknowledge an obvious truth, but to affirm the necessity that research designs for the study of personality in non-Western societies explicitly exhibit a recognition of the complexity of the task. I would suggest, for example, that collecting a set of Rorschach or TAT protocols during the last hurried weeks of one's field work—not an atypical practice (see Nadel 1955, Spindler 1955*b*, and Hallowell 1955*c*)—and then assuming that the personality portion of one's field work has been "done" is like collecting a list of kinship terms and assuming that all the complex emotional, economic, and juridical elements of actual kinship relationships have been covered. Although most anthropologists recognize the limited intellectual reference of kinship terms (Kroeber 1909 and 1952: 172, Opler 1937 and 1955: 190, Murdock 1949: 113–183, Edmonson 1957, Wallace and Atkins 1960), relatively few have taken an equally circumspect attitude toward the meaning of projective test materials, at least insofar as they have represented themselves to readers. The point is not that TAT protocols or kinship terms are unimportant, but rather that they should be seen as forming only a portion of a complex, cumulative research process, each stage of which should be carefully executed and aimed at dealing with a specific descriptive task. If personality is as involved and multi-dimensional as we all tacitly assume it to be, we should be willing to work with research designs that are equally involved and multi-dimensional.

It was with the above in mind that I worked out a five-stage cumulative research program, the first two stages of which are represented by the data and interpretations in the present volume. The main body of this book has been limited to the two initial stages principally to permit a more complete exploration of the issues involved while at the same time keeping the report to a manageable size. The complete design is outlined below solely to provide the broader theoretical and methodological setting of the present study and to indicate its precise limits.

The first stage (chaps. II and VI) is perhaps descriptively the most

4:Phillips E-4,5 (1956-1957) 1966
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man who wanted their help for the sake of "knowledge." I came to Thailand because a very wealthy American who manufactured automobiles (The Ford Foundation) had decided to make merit by giving money to universities as well as to monasteries and hospitals; I had applied for a fellowship, and he had given me the money.[4]

In my actual contacts with villagers, I tended to be much more docile and unassertive than is my wont, often to the extent of appearing diffident. Although in the relationships with my assistants I did not hesitate to express my opinions and evaluations of things—often in an excitable and seemingly aggressive way, which is one of my "natural" and extremely non-Thai modes of expression—I tried to keep my comments to villagers free of any evaluation. The only time I really let myself go was in laughter, which villagers liked but which they sometimes thought was undignified. To the countless little frustrations that occur in the field—spending an hour with an informant "making rapport" only to be told that he was too tired to take the TAT; seeing an informant get up at the high point of an interview, say "I must go," and simply leave—I responded either with giggling or stoicism, never anger. This latter posture was particularly difficult to maintain. When the owner of the "Cornell Office" asked me for three times the agreed upon cost of rent and board, I answered first by giggling and then by changing the subject, although neither was in any way representative of my genuine feelings. I later paid the original amount through a go-between, and nothing further was said.

Not all my behavior was oriented toward controlling such feelings, and not all of it was by any means intended as a disguise. In fact, the role of being an "interested, uncritical, and mildly bewildered young man" was not only the best way to present myself to the villagers from the point of view of effective research, but was often the way I felt. (The bewilderment was effective to the extent that it often elicited clarifications and specifications from informants who wanted to be sure I understood.) Similarly, my expressions of laughter were quite consistent with village patterns, and they could not easily be feigned. Perhaps one of the most enjoyable aspects of the pose was when I provided villagers with accurate and truthful answers to questions they might ask, but in an idiom that I thought would be most meaningful to them, *e.g.*, Henry Ford's merit-making activities.

[4] The source of my funds was of never-ending interest to the villagers. One Bang Chaner said he understood what the source of my funds was, but did not quite understand how I actually obtained them. "How does the money get into your wallet?" I explained that prior to my departure from the United States, I made arrangements with my benefactor's secretary to have the money deposited in a bank in Bangkok. And whenever I needed money, I would write a check and obtain the *baht* equivalent of the amount I had written. At this explanation, the villager broke out into a broad smile and said: "That's wonderful. It sounds just like Communism!"

6: Goldsen and Ralis Z-4,5 (1955) 1957
AO7 Central Thai AO7

APPENDIX A

March 1956

HOW THE BANG CHAN SURVEY WAS CONDUCTED

How the Study Came to be Made

121 The survey conducted in May 1955 was part of a program[*] for testing diverse techniques of data-gathering in cultures substantially different from U.S. and Western European cultures, where the survey method of gathering data had been developed and tested.

114 The survey questionnaire was developed and the field work carried out with the help of area specialists of the Cornell Research Center in Bangkok. Mr. Robert B. Textor and Mr. Loebonga Satabhaya of the Cornell Thai staff assisted the field director and recruited the English-speaking Thai university students who interviewed for the survey.

The Questionnaire

12 After a period of training interviewers about the questionnaire and techniques of interviewing, the questionnaire was pretested in a rural community near Bang Chan. Then the staff, consisting of the field director, his deputy, and five Thai interviewers, among them one woman, moved to Bang Chan to carry out the survey.

124 Thai and English-language versions of the schedule were drawn up, but of the 335 interviews conducted in the survey,
125 the overwhelming majority was conducted in the Thai language rather than through an interpreter.

The Interviewers

124 The interviewers were a mixed group: one Thai-speaking American anthropologist; one trained Thai anthropological field worker; two Thai Christians (one a theology, the other a medical student); one Thai Buddhist medical student, one Thai Buddhist female social worker; and an American sociologist who used the Thai interviewers as interpreters.

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[122] * The Cornell Cross-Cultural Methodology Project for the Development and Testing of Improved Methods to Study Underdeveloped Areas is supported by a grant from the Rockefeller Foundation and is a project in the Department of Sociology and Anthropology.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7

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The efforts of Bangchan villagers, who willingly and extensively contributed their time and knowledge to this study, are sincerely appreciated.

122 Finally, the author gratefully acknowledges the long-term financial support from the Cornell Southeast Asian Program and from the Government of Thailand which made the present study possible.

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

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3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
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4:Phillips E-4,5 (1956-1957) 1966
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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[18] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[18] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

4:Phillips E-4,5 (1956-1957) 1966
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non-histrionic agitation) * with which they reported some of their experiences suggested that this was indeed the case. I mention these considerations because the kind of material to come out of the interviews was perhaps not what one would expect from typically affable, easygoing Thai peasants. However, it must be recognized that the material focused only on the private sector of their lives, and indeed a very narrow area of this sector. Thus, although the articles may have been more analytic than previous efforts, they were also considerably more limited in scope.

C T 114

I have attempted above to describe and evaluate almost all the available literature on Thai personality. There are a few additional sources which might be cited (Ratanakorn 1955, Boesch 1956, Mosel 1957), but their major concerns seem so tangential to our present purposes that it would add little to discuss them. By way of summary, the following points should be noted. The Thai language psychological literature is for the most part an unself-conscious, non-analytic folk literature, and as such is a rich source of data rather than a source of ideas on Thai personality. Illustrations of the value of the literature as data were provided in the text. However, since these data are primarily the product of an urban literati it is difficult to determine precisely to what extent they are also descriptive of peasants, although many of the traits reported seem apposite. There are no psychologically oriented Thai language essays dealing exclusively with villagers. The English language literature tends to be more analytic and broad-ranging in its concerns. Excluding Tirabutana's autobiography, these efforts seem to fall into one of three categories: (1) itemizations of manifest traits with little attention given to the psychodynamics involved (Thai psychologist, Phillips in Cornell Thailand Handbook, Textor); (2) sensitive psychological reflections on incomplete or specialized ethnographic data (R. F. Benedict, leMay); and (3) analyses of a limited set of private psychological issues from a few informants. (Hanks and Phillips, Phillips).

Psychological Dimensions of Village Interaction

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Most personality portrayals proceed either by discussing how people behave in terms of a specific set of analytic issues, such as aggression,

* This is important simply because when opportunity permits—and the life-history situation is clearly such an opportunity—villagers love to tell a good story: full of histrionics, feigned exaggerations, and emotional flourishes. However, our informants were not given to theatrics during the interviews; on the contrary, they tended to tell their stories with an almost poignant seriousness. The fact that we were the first people ever to take such a direct, personal interest in them as individuals played a crucial role here. Being asked to reveal for the first time how they felt about their early lives, their families, and themselves was cause not only for pride but trust, and they often used the interviews as a way of unburdening themselves.

C [123]

4:Phillips E-4,5 (1956-1957) 1966
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need. The problem is that we really do not know, although comparative data from primatology (Yerkes 1943, Kroeber 1948: 27–29 and 60–61) clearly suggest that play belongs to the former category. If this is indeed the case it would imply that play is subject to the same degree of cultural influence, channeling, and socialization as are hunger, sex, and aggression, but can no more be fully obliterated than can these needs. Assuming, for the sake of argument, that this reasoning is correct, then the compensatory "escape" and "regressive" functions attributed to play by the authors noted above would not be at all unreasonable: play might well come to serve as an escape from adult reality in the same way that food sometimes serves as an escape from sexual anxiety or sex from food anxiety (Holmberg 1950). However, the point is that these are not the primary or typical functions of these needs, but secondary and defensive ones; although significant, they hardly comprise the necessary conditions for their being. If this approach is valid, we would be considerably wiser in our present state of knowledge (the Protestant Ethic and its intellectual extensions notwithstanding) to direct our attention to identifying the varying forms of play from culture to culture rather than to dwell on its secondary, compensatory functions.

Whatever its ultimate motivational basis, there is no doubting either the spontaneity or ingenuousness with which Bang Chaners turn social situations into occasions for play. For the most part they seem prompted in these situations by the simple desire to have a good time rather than to affect others in a socially pointed way, that is, their humor is not typically aimed at being sarcastic, didactic, or even exhibitionistic, although the person who excels at being funny is quickly recognized as such and is to an extent admired.[7] There is, in the negative sense noted earlier, an element of interpersonal effect operating here: comedy is a technique which almost by definition reduces the potentiality for face-to-face conflict. However, the villagers' play seems aimed primarily at satisfying personalistic function: their *individual* needs for pleasure and amusement.

The forms that these play activities take are numerous.[8] Perhaps their

[7] In the more explicitly institutionalized forms of comedy—*likay* (folk dramatic shows) or newspaper and magazine cartoons—these aims do come into play and often assume extreme, sometimes even biting, proportions. However, this is the comparatively safe world of theatre and "literature." Among themselves, in the world of face-to-face contact, villagers are considerably more gentle (or less sophisticated) and do not focus explicitly on such purposes.

[8] We will be concerned primarily with the forms of play, not its content. For whatever reason, humor and comedy seem to be the last refuge of what is genuinely private in a culture. Intercultural translations may succeed in communicating the manifest content of another people's humor, but they so frequently miss its intent that the result is either perplexity or disappointment ("Yes, and what happens then?").

The dangers of trying to share humor interculturally were perhaps never brought home better than when I tried to get the villagers' reaction to a story that received

4:Phillips E-4,5 (1956-1957) 1966
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most subtle expression is in the marvelous word games that the villagers play. What is striking about these games from an analytic viewpoint is not so much that they are funny, but that villagers are continually attentive to opportunities for playing them, and actively try to structure situations along such lines. In a sense, they are not "games" at all but verbal asides that emerge spontaneously from the discourse of everyday contact, and which serve to make such contacts enjoyable. One form of word play is particularly popular. For the lack of a better term, it could be called "silent stinky pinky."[9] Here two persons are chatting, and person A works into the conversation a statement that sounds completely innocuous. (A man, for example, says to a woman, *hen mii*, meaning "see the bear.") Person B, forever attentive, knows that words are deceptive: although A *said* one thing, he was really *thinking of*, and expects B to be *thinking of*, its rhymed phonemic inversion, which is vulgar or insulting. (Although the man said to her, *hen mii*, he was really thinking of *men kii*, meaning "your vulva smells.") Person B picks up the cue and responds with a statement that sounds equally innocuous but which when mentally inverted is just as scatological. The game continues until one of the parties gives up, whereupon the conversation returns with laughter to its original concerns. It must be emphasized that although this game is phrased in terms of a verbal contest, its purpose is not to best the other person but to work out with him or her a dialogue entertaining to both.

Sometimes these games arise and die out so quickly that it is difficult even for other, nonparticipating Siamese to spot them. The particular example cited here is one that has become almost part of the folklore of conversational gambits. However, what delights many of the villagers is the unpredictability of these patterns. On one occasion, I unwittingly juxtaposed a few English phonemes that had two informants and my assistant literally rolling on the floor with laughter. We were talking about the

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wide currency in Bangkok newspapers during 1956. It seemed that a husband was waiting outside a brothel to escort his wife, one of the prostitutes, home. She was busy with a customer. The husband called to her, telling her to hurry. She called back, saying that she would be through shortly. A few minutes later, he called again, and once more she said that she would be coming along. Finally, the husband went in and shot both his wife and her customer "because I lost my patience." When I told this story to several villagers, I was the only one who chortled. Most of them either commented on the sadness of the story or said the husband was stupid for killing the family breadwinner.

[9] In American stinky-pinky, people try to guess the rhymed equivalents of abstract definitions. Thus, if person A says, "I am thinking of a 'cadaverous Marxist,'" person B might say, "a dead red." The Thai version differs from its American cousin in that it is not only unspoken but is not really a parlor game. The tonal, monosyllabic nature of the Thai language probably is an important preconditioning factor here. (See also Haas 1951 and 1957 for illustrations of other kinds of verbal play.)

4:Phillips E-4,5 (1956-1957) 1966
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various kinds of ants living in Thailand and the United States. (Such are the topics that interest villagers.) The villagers wanted to know the English names for small red ants, normal black ones, and the large, rusty colored variety that are indigenous to the tropics. I named the first two with no difficulty. For the third, I said simply, "a giant ant." The assistant, turning to one of the informants, first gave the literal Thai equivalent of "giant," and then, as if this were the funniest thing he had heard that week, began to repeat, "giant, gi-ant, gi-ant." In a few seconds, they were all bursting with laughter.

Different, yet part of the same psychological constellation, is the whole complex of behaviors associated with the term, *sanuk*. *Sanuk* is usually translated into English simply as "fun." However, this translation conveys little of the motivational significance of the term. Essentially, *sanuk* is a quality inherent in all situations which are not only fun but also emotionally worthwhile. In fact, these two states are often thought of as reciprocals of one another. An activity that is novel, diverting, or that can be done comfortably, is *sanuk dii* (good fun); one that is tedious, overdemanding, that lacks the opportunity for frivolity, is not *sanuk* and should be avoided. Harvesting rice in coöperative work groups, attending a ceremonial, participating in an election (see Phillips 1958: 45–46), or even taking something as outlandish as a Sentence Completion Test are all *sanuk*. (The unifying elements of these diverse activities are either their novelty or the fact that they involve the presence of relatively large numbers of people but require no genuine interchange with them.) On the other hand, going into the army or working for a demanding superior are not *sanuk*.

The importance of *sanuk* is that it provides the villagers with a standard of value, a measure of how much they wish to commit themselves to a particular activity. The role of this standard should not be underestimated. Villagers who have taken a job in the city, often involving a time-bound daily routine or continuous, sustained attention to a task (work in a small factory, for example) frequently return to the village explaining that they quit "because it wasn't *sanuk*. How can you work on a job if there is never any time for fun?" Foreign employers, with their greater concern for the job than with the person who does it and with their annoying tendency to be *cuu cii* (compulsive, fussy, exacting) are a particular target for this indictment, although this is usually based on hearsay rather than personal experience. On the other hand, villagers will often take on free of charge a major job (for example, helping a neighbor build a house) precisely because it is *sanuk*. Although there are other considerations operating here—creating or repaying a personal obligation, doing a *bunkhun* ("a goodness") for a neighbor—the "sanug-ful" aspects of the task are always

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521 The sociological context of a story-telling is probably what is most
522 important here. Bang Chan is a community where other than cultivating
538 the single rice crop and attending to daily household chores and religious activities, the villagers realistically have little else to do but talk to each other. This is clearly not an inevitable attribute of the peasant condition, but it is true of Bang Chan where little attention is given to such creative leisure activities as craftsmanship, music, and art, and where there is little occupational specialization. In fact, probably more time is given to gossiping than to any other single waking activity except daydreaming. Bang Chaners talk of many things, serious as well as lighthearted: the price of rice, religion, gambling, the doings of "big people," family disputes, and the like. However, by far one of the largest segments of their total conversational repertoire is given over to "funny" stories. Of course, no story is ever exclusively humorous in nature; all communication is inherently multidimensional, and even the funniest story has a substantive, non-humorous message. However, if stories may be judged by their behavioral effects (laughter) irrespective of their intellectual content, then the function of a major part of Bang Chan gossip is amusement.[10]

538 The motivations for the selection of banana peel type stories are more
154 complex. In part, the choice seems prompted by a "there but for the grace of God go I . . . " mentality. As suggested earlier, Bang Chaners have a keenly developed sense of the possible: to them, this is a world where anything, not only the probable or the predictable, can happen. The banana peel story, with its emphasis on the painfully ludicrous and extreme, is a perfect representation of such an uncertain world. Its beauty is

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[123] [10] During the early stage of field work, I attempted to do systematic naturalistic
[114] observations of these gossip groups. The purpose was simply to identify the kinds of
[126] topics uppermost in the villagers' minds and the modes of interaction that most frequently developed during the sessions; it was hoped that the latter information might be related to the psychological test materials of the discussants. As a precisely designed and executed project, the effort, however, was dropped after a short time. For one thing, it was too difficult for two observers to record the *simultaneous* verbal and kinesthetic interaction of *several* people without the aid of a self-powered tape recorder and with the added burden of having to strain the material through the translation process. The task was further complicated by the fact that the membership of these groups continually changed as people would leave and enter the conversations. Also the groups would often break down into smaller sub-groups. Most important was the sheer multidimensionality of the conversation: any one utterance could simultaneously be funny, aggressive, boastful, carry practical information, etc. However, enough information was culled from these early attempts and later less ambitious ones to prompt the statements presented here. It is this writer's observation that one of the reasons behind the success of so much of the "small group" research conducted in the United States is that the groups studied have been *problem solving* or *task-oriented*, rather than simple gossip groups. The highly functional nature of the former has provided built-in constraints on the freedom of action permitted the discussants, and has made observational problems comparatively easier to deal with.

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tries to identify the bases of their contact. Having once identified these, he then tends to assume that not only the bases but the relationships themselves are relatively constant and reliable.[18] The relationship between Bang Chan employer and employee is an excellent example of the problem. An investigator concerned with specifying the bases of their relationship could readily point to two factors; contractual (in the strict meaning of the term) and sentimental. The former involves the exchange of a sum of money for labor fulfilled. The latter involves an array of behaviors expressive of the employer's concern for his retainer: feeding him well, not making him work too hard, treating him like a younger sibling or "adopted" child, recognizing his birthday, or buying him small gifts if possible. Interestingly, the subordinate's obligations to his superior are considerably less explicit and social psychologically less demanding: he must simply respect and obey him. However, as accurate as these specifications are, they say nothing about the reliability of the relationship. It may be broken off over matters that have nothing to do with how well each is fulfilling his interactive responsibilities. The employee may become bored; he may have a sudden desire to take a trip or go to Bangkok; if he is from a distant village, he may suddenly become homesick and just as suddenly leave. As indicated earlier, he will frequently do this without saying a word to the employer; his absence is sufficient to indicate the termination of the relationship.

Very often the breakdown of the relationship is short-lived. I recall my exasperation during the early stages of field work when right in the middle of an important interview, my field assistant would tell me—with absolutely no forewarning—that he had to be in Bangkok in an hour and a half, and would have to leave now. When I suggested that the interview first be completed, the reply, the first time this happened, was "No, I promised a friend I would meet him at the movies, and I have to go now." When asked why he made a movie date during working hours, he answered: "Well, this was the only time my friend could go." The straightforwardness of his response indicated that it was both futile and dangerous (he might never return from the movies) to ask why the friend could not go alone, what the real reason was for his sudden departure, or why he did not tell me beforehand so I could have made different plans. Pursuing such queries would have served only to annoy my assistant, rather than hold him; and from his own point of view, they were really not my business. This kind of behavior was neither idiosyncratic to this individual nor limited to movies. Later on, when other assistants asked for intermissions, the explanations

[18] Certain relationships are of course explicitly recognized as inconstant and unreliable. The relationship between appliance owner and repairman in our society, for example, has come to have these special attributes—not without strain and exasperation, but as part of the reality of the relationship.

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571 given were equally oblique. Although I never really overcame my feeling
• 123 of helplessness in dealing with such situations, I did manage over a period
466 of time to communicate to those in my employ the appropriateness (at least regarding our own particular relationship) of giving me fair warning, *e.g.*, "Europeans are different in this way."

571 Again, there is nothing extraordinary or unique about personal desires and inclinations intruding on the stability of an interpersonal relationship. However, what is unique to Bang Chan and Thai culture in general is the frequency of such intrusions, the extent to which they take precedence over the responsibilities of the established relationship, and perhaps most im-
*[156] portant, their general expectability. No Bang Chaner is ever taken aback when another does not fulfill his assumptions about how that other will behave. Note that these intrusions may have little effect on the face-to-face contacts existing between people. My assistant's declaration that he was going to the movies was presented in a most affable way and in the other examples cited, where people were left in the lurch, there need not have been any contact whatsoever between the parties involved.

114 Reference was made to these modes of relationship in the section on
*156 Bang Chan social organization and kinship. However, they received their
171 first formal, and perhaps most elegant, formulation in a now famous article entitled "Thailand—A Loosely Structured Social System," by the late John F. Embree (1950). Embree's application of the notion of "loose structure" was mainly descriptive rather than analytic; it was used to summarize a wide variety of empirical materials. Thus (182): "The first characteristic of Thai culture to strike an observer from the West, or from Japan or Vietnam is the individualistic behavior of the people. The longer one resides in Thailand the more one is struck by the almost determined lack of regularity, discipline, and regimentation in Thai life. In contrast to Japan, Thailand lacks neatness and discipline; in contrast to Americans, the Thai lack respect for administrative regularity and have no industrial time sense." After providing an extensive series of examples—on the lack of binding filial piety, on the tendency to permit a thief to steal from a neighbor's house without raising an alarm or attempting to stop him, on the capacity to delay and double-talk those with whom one has business dealings, Embree concludes (184): "The point here once more is that . . . while obligations are recognized, they are not allowed to burden one unduly. Such as are sanctioned are observed freely by the individual—he acts of his own will, not as a result of social pressure."

114 While Embree's formulation is by definition phrased in social structural
*156 terms, it inevitably directs our attention to an underlying motivational issue: the nature of the villagers' dispositions to conformity. Conformity to the expectations of others—whether such expectations are shared, comple-

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These assumptions about the indeterminate nature of the universe and human actions are so integral to the villagers' cognitive orientations that Bang Chaners often hesitate to make even the most elementary kinds of prediction. Thus, in asking a village lad how he felt about his older brother's forthcoming ordination, I was told, "I don't know." The tone of his reply indicated that he was not evading the question, so I pursued the matter further: "Well, do you feel happy about it? Do you wish you were being ordained together with him?" He answered: "The ordination is not for another three days. I do not know how I will feel at that time. But when that time comes I will know." In another case, I was going up the canal with a villager to attend a "Kathin" being held at the monastery. (A "Kathin" is a fiesta-like merit making ceremony sponsored by a person or group of persons from outside the village at which new robes are presented to the monastery monks. It involves the sponsors, their local hosts, and all villagers who wish to attend.) Although not necessarily an annual event, "Kathins" are held often enough at Monastery Bang Chan so that this villager, who was also a member of the monastery lay committee, was thoroughly familiar with every aspect of them. Simply to make conversation, I asked him: "What is the 'Kathin' going to be like today?" to which he replied, "I do not know. I have not been to the monastery yet today." Assuming that his past experience with "Kathins" provided him with some knowledge of the goings-on, I went on: "Well, do you think there will be many people?" His answer: "I do not know. You never know what a situation is like until you meet it. I have not met this one yet today."

The point of these various illustrations is that they represent a psychological universe of uncertainty and unpredictability. And in this kind of universe—where one hesitates to build up sharply defined expectations and where one is forever aware of the mutability and frailty of the environment—it is not unusual that there should also be a high tolerance for interpersonal nonconformity. What the actual limits are, theoretical or empirical, to this tendency to nonconformity are uncertain. Much of the nonconformity is undoubtedly made possible, in the first instance, by the sociologically simple and relatively undifferentiated nature of Bang Chan society; that is, the actual number of functionally specific tasks and roles—those that require special competencies—are few, and any number of different individuals can perform them. Thus, when a Bang Chan employee walks out on his boss or when a wife walks out on her husband, their actions do not from a functional point of view disable the system. Since the requirements of the role of house servant or farmhand are characteristically simple and understood by all, the departing employee can usually be replaced by another individual. Similarly, since any adult—aunt, grandparents, older sibling—can and often does rear another's children, and

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were at first a series of unrelated incidents—that is, the possible tenuousness of the links between parent and child first came to my attention with the occasional, but wholly unselfconscious, reports from informants on what to my Western ears seemed like rather turbulent childhoods: their frequent movement from family to family while they were still children and their own care, as adults, of friends' or relatives' children. (This suspicion was reinforced and partially verified later while recording life histories). Later it was noticed that, in sharp contrast to the West, villagers tend to be less concerned about the illness of children than the illness of adults; informants with whom this observation was discussed said either that they had not noticed or explained it by saying that since children recover so quickly from sickness there is less need to worry about them. Finally and perhaps most important, it became clear that the request of the villager who stopped me and asked me to take and rear her child was by no means idiosyncratic; the request was made on four separate occasions by different individuals, both within and without Bang Chan. The intent of these requests were difficult to ascertain. Since the requests tended to come up rather suddenly, in the presence of the child, and were always accompanied by laughter, they may well have been said in "jest" or as a threat to the child. On a few occasions the parent took pains to be sure the child understood what was being said, in which case the child responded with screaming. Also, Europeans have traditionally been used as bogey men in the disciplining of children. (I myself have occasionally been addressed as a malevolent spirit by youngsters.) On the other hand, because children of poor families have been known to be given to individuals of high status, and because Occidentals are automatically assigned such status, it is not altogether unlikely that the parent was sounding me out as a potential patron of the child.

The problem with all the above, however, is that it was unknown to what extent they represented typical or deviant attitudes and responses. The Sentence Completion item, *"We want to give our child to him because . . ."* was selected for use in the SCT administered to a larger, representative sample of villagers because, being an extreme phrasing of these attitudes, it might shed light on the villagers' general readiness to accept them as well as their justifications for them. Of the fifty-six informants who responded to the item, 79 percent accepted the premise and 21 percent rejected it, *i.e.*, "I do not want to give my child to anybody." Of the forty-five individuals who accepted the premise, nineteen said it was good for either the child or the parent, *i.e.*, "that person was good, and he wanted that person to teach his child to be good"; "I would get some money by giving it away"; "I could not stand the child anymore." And eighteen said it was justifiable, *i.e.*, "because of poverty"; "I did not have the means to rear the child."

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intrapsychic forces, tempered by the investigator's capacity to see through them. Exactly what role they play in the fashioning of the final research product can probably never be fully determined since informants may not know or will not tell you what they "think" of you; and they are likely to be even less aware of how their thoughts have influenced their responses. Similarly, despite his training in self-consciousness, the investigator never has complete command over all the factors that prompted him to pursue a particular course of action in the field or an interpretive bent during the write-up. The problem is further complicated because there are numerous things which occur in the field that have little to do with the research as such, but which often impinge upon it, for example, an informant becoming markedly more aggressive during an interview when he learns that you have just returned from seeing a villager whom he dislikes. (This kind of information when it is available is not without interest. But no field worker is so omniscient as to have such complete knowledge of the likes, dislikes, and psychodynamics of every informant and thereby comprehend every turn in his behavior.) Yet, despite these ultimate limitations, the investigator can try to make as explicit as possible those human factors that he perceives as influencing the nature of the research experience. We will proceed from the relatively obvious to the more subtle considerations that bear on the materials being presented.

Villagers' Attitudes Toward the Investigators

Perhaps the major factor conditioning the villagers' attitude toward the research was the fact that other Cornell University investigators had worked in the community prior to my arrival. This meant several things: that precedents had been set for asking villagers personal and impersonal questions; that friendly, but generally not intimate, relationships had been established with several key villagers, notably those recognized as informal community leaders; that the villagers had come to accept the presence of Europeans as a normal part of their lives; and that our presence was seen as essentially a good thing. Not only were the *farang* (the Thai term for Occidentals) a source of novelty with their strange interests and long noses, as well as a source of prestige (for having singled out Bang Chan as the community being studied by "American professors"), but they were also a source of considerable practical help. Earlier Cornell workers had given funds to the Bang Chan monastery and school, had helped obtain vaccine to prevent a diphtheria epidemic, and had contributed added income to a few families in the form of rent for the "Cornell office" or salaries for the boys serving as the research team's boatmen. Perhaps the most important contribution the members of the research team made to the community, as

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123 perceived by the Bang Chaners themselves, was to act as a source of advice and practical knowledge. The kinds of counsel villagers sought from the field workers varied considerably. Some wanted help in deciding whether it was more profitable to raise chickens or turkeys, another wanted us to obtain information for him on the laws governing land ownership. However, some of their requests simply could not be met, *i.e.*, "Tell me some of the modern, scientific ways to get a woman to fall in love with you"; "Can you get me one of those 'machines' that prevents children?"

Not all villagers of course viewed the Cornell activities in these terms; the vast majority in fact accepted our presence with no marked sense of involvement of any sort. The *farang* and their Thai associates were perceived by this majority group simply as people with their own interests whose presence might prove beneficial, and toward whom one should behave tolerantly and coöperatively. Interestingly enough, during all the time I worked in the community I encountered only two cases in which villagers actively expressed disapproval or annoyance at "Cornell." In one case, a villager was deeply affronted because he felt that a Thai research associate whom he knew in the village had snubbed him during a chance meeting in Bangkok. In the other case, involving my own research, a villager complained that we had wasted his time asking him to take the Sentence Completion Test: "The questions they asked me had no use at all. They did not ask about food, or making a living, or anything important. I have more important things to do with my time." There may have been other villagers whose feelings were not too unlike those of this individual. However, this was the only case that came to my attention of a villager actually articulating his displeasure toward the research, despite my active search for any indication of negative attitudes on the part of respondents. In this connection, it might be noted that of the 123 villagers who were approached to take the Sentence Completion Test, only two gave us outright refusals. One, the Chinese tailor, said he could not handle Thai well enough (he was right) and did not like to talk to people; the other, a girl of twenty, would out of embarrassment run out the rear door of her house every time she saw us paddling up to the front. The generally open and accepting attitude of other villagers toward my research requests, however, was very similar to that given to earlier researchers, and was undoubtedly conditioned by the precedents they had established.

Given the above considerations, my entry into the community did not elicit any kind of special response from the villagers. For most, I was simply another representative of "Cornell" who had come to study their "way of life"—a friendly, interesting, and harmless soul who, if the need arose, might be of some help. If and when I came to visit them, they would find out precisely what I came to study and what I was like. But they clearly

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were not waiting for my visits with any keen sense of anticipation. The 123
dominant attitude was one of conditional acceptance which could easily turn to active, amiable interest once a face-to-face encounter had been initiated. In general, they expected me to initiate the contact. This somewhat passive attitude was in part a result of the feelings of *kreeŋcaj* (humbleness and self-effacement) that they had toward social superiors, a role they automatically assigned to me. In part it was probably also a legacy from the role of respondent (a person who reacts, rather than initiates) that they had developed with earlier field workers and which had become part of their normal expectations toward Cornell personnel. There were of course villagers who from the very beginning actively sought me out and tried to develop special kinds of relationships. The person who tried to sell me the idea of building on his land a newer, more expensive "Cornell Office" was one such individual. Less business-minded was the villager who occasionally would stop by at the office to tell me not to see any informants that day: he knew of a special ritual being performed that he thought I would be interested to see instead. Still another villager approached me with the proposition that he knew more about what was happening in Bang Chan than anyone else and that I should not believe what people told me until I had checked with him; I was never able to discover what this person's motives were, other than to satisfy his own self-image.

Several relationships developed that had little to do with the services we could perform for each other or even with the research itself but which seemed based simply on the mutual regard we felt toward one another. This area of "friendship" is perhaps the most difficult to talk about because its limits were always set, in some latent and undefinable way, by the facts of cultural differences. No matter how relaxed and enjoyable a relationship might be, it was always colored by awareness of the possibility that the other person might not understand. Potential lack of understanding, however, was not always detrimental: sometimes it helped to underscore the fact that *despite* possible miscommunication, we could enjoy and respect each other. Here "friendship" was based in part on the willingness to appreciate each other's differences.

What qualities of the author these villagers considered attractive—over and above the social and service characteristics he shared with other Cornell people—can only be surmised. It is clear that despite the fact that for most purposes villagers lumped all Cornell personnel into the general category of *farang*, many Bang Chaners made sharp personal distinctions among us. My field assistant, partly for his own amusement and partly at my request, asked a number of villagers for their opinions of the different *farang*. Included among his informants were some of the same people toward whom I felt especially close. (It should be noted that these "close

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123 friends" never numbered more than eight or ten people, out of a total population of 1,771.) Although their opinions differed in detail and covered a considerable range, they seemed to agree that I had a *good heart*. One villager said that he knew I had a good heart because children like me, "and children are only attracted to people who have good hearts." On the other hand, another more critical person said that my personality was just like that of a child, "because he always shows his feelings. He does not know how to be cool." The contrasts the villagers saw between myself and other researchers were particularly instructive. Of another field worker, an informant said: "he is not a kind person like *Aacaan* Herb, but he knows how to treat people in the Thai way. *Aacaan* Herb does not know how. He laughs too loud and does not use flattering words. He does not help me as much as the other person either." Yet, in contrast, another villager said: "I like *Aacaan* Herb because he likes me. He tells funny stories. He is not like some of the other *farang* who leave as soon as they get information from you."

123 The ultimate importance of these personal assessments are not easily
124 determined. One villager perceptively noted, for example, that although
[115] the "boss" of the Cornell team was a "good person," it really did not make any difference whether he was good or bad "because he is the 'boss' and bosses have to be respected." Of more direct relevance to the research was
[125] the fact that those individuals whom I counted among my warmest friends were not necessarily my best informants; in fact, some became inordinately anxious and evasive while taking the Sentence Completion Test and TAT. On the other hand, some villagers whom I had never seen before responded to these tasks with obvious enthusiasm. Even the villager who complained about my having wasted his time was a good informant, in the sense of appearing stimulated by and genuinely involved in responding to the sentence cues. It is clear, however, that villagers who liked me were the most approachable of informants, and were more ready, at least initially, to acquiesce to interview requests. The crucial factor here may well be the difference between responding to the field worker versus responding to the research; that is, even though all the respondents were originally induced into being interviewed as a favor to me—and their willingness was in part a function of how much they liked me—such favors did not necessarily carry over to the substantive purposes of the interview: reacting to my queries in a concerned and committed way. Thus, some informants went through the entire interview experience carefully fulfilling the interpersonal "obligation" but all but ignoring its content; others were so stimulated by the content that their initial attitudes toward me, positive or negative, became largely irrelevant. The vast majority of informants of course fell between these two extremes; and in no case were either the interpersonal or substan-

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tive considerations completely ignored. In this regard, it must be remembered that for much of the research I was dealing with informants who were selected not for their readiness to give revealing information but for their social psychological representativeness as adult Bang Chaners. Under such conditions, it was inevitable that there should be people who cared little about me or my purposes, just as there should be people who felt the precise opposite. 123 • 124

One aspect of the villagers' attitudes deserves special mention. This concerns their perception of me as an *aacaan*, or "teacher." This perception had significant effects, both positive and negative, on their behavior during the interviews. On the positive side, many informants were genuinely flattered by being asked for information that would contribute to "knowledge." Precisely how their thoughts and opinions might contribute to "knowledge"—or as I sometimes told them, "science"—was not too clear in their minds. But the fact that I was a "teacher" who had crossed the seas and would spend months asking them questions clearly indicated the seriousness of my business. This definition had a marked influence on their whole orientation to the interviewing situation in that they generally approached it with an attitude of earnestness, and on occasion, even solemnity. In fact, my "rapport time" with informants was very often spent in trying to mitigate their expectations about the interview so that they would respond to the substantive questions in a relaxed and easy manner. Usually these efforts were successful and the interview proceeded as a well-balanced combination of seriousness and *sanug*. The most frequent comment of informants after the Sentence Completion interviews was, "It was much easier than I thought it would be." On the negative side, however, informants would sometimes use their solemn definition of the interview as a means of resisting participation in it. Their resistances would take the general form of pleading that they were only ignorant peasants who did not know much about anything; that if I wanted a "true" picture of the way peasants "think," I ought to see more intelligent informants; that their information would "spoil" my results, and the like. Again, I was usually able to allay such protestations by emphasizing the simplicity and "sanug-fulness" of the experience. However, sometimes informants took me literally and produced responses which were "simply" literal restatements of what I had asked them or which had no intelligible relationship to the questions. Once, when I stopped an interview to clarify my purposes, an informant asserted, "But I am giving you simple answers"; in another instance the informant smiled wryly and said, "But I told you I was not very intelligent." A few informants were genuinely interested in the interview but simply lacked the wherewithal to deal with the material. If asked, however, to make a judgment on whether the villagers' perception of me as

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123 124 a "serious-minded teacher" generally worked to the advantage or disadvantage of the research, I would definitely answer, "the former."

114 Perhaps even more important than the villagers' attitudes toward the author were their attitudes toward the Thai field assistants who worked with me at various times. It was through the field assistant that many villagers had their actual contact with the research and through him (or her) that I obtained a large part of my data.[1] Because the role of field assistant requires such distinctive qualities—"competence" in a foreign language, willingness to work with peasants and an appreciation of them, a desire to learn the way "other people" live—it was not easy to obtain or retain individuals to work with in Bang Chan. In a country such as Thailand where the term "social science" was virtually unknown until a few years ago, the position of "research assistant" simply offers no occupational future. Consequently, I had six different assistants working for me at different times during almost two years in the field. Two of these individuals were with me for less than three weeks. (One left the rice fields of Bang Chan for a position at the Thai Embassy in Rome; the other just did not like peasants.) Two were extremely able female graduate students in Education who worked only on Sundays and holidays, primarily with the younger village women. Out of both loyalty to me and a genuine interest in, almost love for, the villagers, they stayed on until the research was completed. The fifth, my major assistant, took three months to find, but he remained with me for fourteen months. When he left to work in Burma ("because I have never been to Burma") his place was taken by a very competent and sophisticated assistant district officer whom I "borrowed" from the Ministry of Interior. This last chap saw me through the life histories. Although he was excellent in the highly personalized setting of the life history interviews, his polished urban manner would have been too overbearing for the majority of informants during the earlier, more sensitive stages of the research. While this coming and going of field assistants,

12 114 [1] During the early stages of field work I was completely dependent on my assistant-translators, despite six months language training prior to leaving for the field. Later, I gained enough control over Thai to participate actively in the interviews. In order to minimize translation errors, however, it was decided to conduct and record all *formal* interviews (those involving the Sentence Completion Method, TAT, and life histories) completely in Thai, and translate later. The reasons for this are more fully discussed below. In effect, this meant training the assistant to carry the burden of the Sentence Completion interviews, the first large block of the research. By the time we reached the life histories, the interviews were taking the form of the informant replying directly to both myself and the assistant. All formal interviews were based on carefully prepared schedules, including even such matters as instructing on seating arrangements. Only a portion of the total data of course came from these formal interviews. All the preceding materials, for example, were based directly on my own observations, or on the small but crucial verbal events that occurred outside the interviews and which actually comprised the interactive substance of day-to-day life.

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extent by becoming succoring females—taking care of the less fortunate, seeking opportunities where they can help others, and the like.

The relevance of these remarks to the work of the assistants in Bang Chan is that they represent the attitudes the girls brought into play in their relationships with the villagers. In the eyes of Bang Chaners, they were well-educated, high status city girls who combined the finest qualities of the Thai woman. They were not only clever because they carried clipboards and spoke two languages but they were "good" girls who used "sweet words" and proper terms of address and "brought us medicine when we were ill. They knew how to help farmers." In contrast to my own practice—which was to give villagers aspirin only if they explicitly asked for help, or if the problem was more serious to plead incompetence—their actions were entirely spontaneous. In the same way, villagers would often wonder why after working all week at the university, these girls would spend their Sundays and holidays in Bang Chan. The answer was not hard for them to find: "These girls have much progress. They want to help the nation and themselves. So they come here and work for *Aacaan* Herb. This will help them go to America. And then they will have more progress." Although this motive may have entered into the assistants' decisions, a more important reason was the simple pleasure they derived from listening to villagers bare their problems and preoccupations. By giving of their time and interest they were fulfilling their own best image of themselves.

A final word should be said about the various relationships existing among the assistants and myself. The relationships that developed among the assistants themselves was perhaps the ideal Thai adjustment to the unique situation in which these three young, unmarried people found themselves: they began to treat each other like brothers and sisters. Theirs was not a perfect sibling relationship—not even in the fictive sense, for they were keenly aware of their differences in background and of the desirability of keeping romantic considerations out of the relationship. However, their very differences in background helped form a bond of mutual respect.

Their attitudes toward the author were more complicated. Although in many ways they treated me too as a sibling, their attitudes were forever colored by the fact that I was a *farang*. On the positive side, this meant that they respected me for my technical training and knowledge, and for my obvious concern about learning as much as I could about the villagers. By the same token, however, they would frequently become annoyed by my inability to see things which in Thai terms were obvious, or by my insistence on probing matters that in their terms were either unanswerable or better left unexamined. Their attitudes toward me were not too different

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from those of the villagers, except that because our relationship was considerably more sustained and intellectually stimulating (they wanted to know about the village almost as much as I did), it was more intimate and unguarded. My closest friend in Thailand was not a villager but my male field assistant.

Investigator's Attitudes Toward the Villagers

Anthropological field work has been referred to variously as "a period of stepped-up socialization," "the ultimate test of the value and limitations of empathy," and more simply "the most rewarding part of the anthropological endeavor." It is all these things. However, perhaps its most distinctive characteristic is that it is a period of intensified self-control. It involves the willingness to suspend one's normal and familiar patterns of behavior in deference to patterns which are appropriate to the culture being studied, or at least not too incongruent, and which are aimed at one's overriding purpose in being there: to obtain data.[3] The rewards of field work are of course immediately apparent: to encounter directly a different arrangement of the human experience. But field work also involves the psychological price of being temporarily willing not "to be oneself." There are of course numerous instances within one's own culture when one does not behave like "oneself," but simply assumes the pose associated with one's role. What is distinctive of field work is the highly *sustained* quality of one's "acting"; the researcher must be *continuously* concerned with tailoring his actions to suit others' preferences. The problem is complicated further by the fact that in field work the preferences of others are usually only slightly known; in fact, the discovery of such preferences is part and parcel of the very process of field work. Thus, the researcher tends to be even more hesitant and concerned with keeping himself under rein. It should be noted that "not being oneself" is not identical with "not being true to oneself." Indeed, the ideal adaptation to the psychic requirements of the field situation may be to feel any way one wants to *feel* toward one's informants, but to be sure to *act* properly toward them.

My overt behavior toward the villagers involved assuming something of a social pose, but a relatively straightforward and simple one. I attempted to present myself as an interested, uncritical, and mildly bewildered young

[3] I am not speaking here simply of functioning comfortably in an alien culture. Cultures differ radically in the degree of conformity to or deviance from prevailing patterns that is permitted individuals; and in this respect, Thai culture is extraordinarily tolerant of personal deviance. However, this is not the same as living in a foreign culture when one's *raison d'être* is to induce members of that culture to coöperate, provide information, and confide in oneself. Here it is incumbent upon the outsider to make some adjustments in his normal behavioral responses.

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man who wanted their help for the sake of "knowledge." I came to Thailand because a very wealthy American who manufactured automobiles (The Ford Foundation) had decided to make merit by giving money to universities as well as to monasteries and hospitals; I had applied for a fellowship, and he had given me the money.[4]

In my actual contacts with villagers, I tended to be much more docile and unassertive than is my wont, often to the extent of appearing diffident. Although in the relationships with my assistants I did not hesitate to express my opinions and evaluations of things—often in an excitable and seemingly aggressive way, which is one of my "natural" and extremely non-Thai modes of expression—I tried to keep my comments to villagers free of any evaluation. The only time I really let myself go was in laughter, which villagers liked but which they sometimes thought was undignified. To the countless little frustrations that occur in the field—spending an hour with an informant "making rapport" only to be told that he was too tired to take the TAT; seeing an informant get up at the high point of an interview, say "I must go," and simply leave—I responded either with giggling or stoicism, never anger. This latter posture was particularly difficult to maintain. When the owner of the "Cornell Office" asked me for three times the agreed upon cost of rent and board, I answered first by giggling and then by changing the subject, although neither was in any way representative of my genuine feelings. I later paid the original amount through a go-between, and nothing further was said.

Not all my behavior was oriented toward controlling such feelings, and not all of it was by any means intended as a disguise. In fact, the role of being an "interested, uncritical, and mildly bewildered young man" was not only the best way to present myself to the villagers from the point of view of effective research, but was often the way I felt. (The bewilderment was effective to the extent that it often elicited clarifications and specifications from informants who wanted to be sure I understood.) Similarly, my expressions of laughter were quite consistent with village patterns, and they could not easily be feigned. Perhaps one of the most enjoyable aspects of the pose was when I provided villagers with accurate and truthful answers to questions they might ask, but in an idiom that I thought would be most meaningful to them, *e.g.*, Henry Ford's merit-making activities.

[4] The source of my funds was of never-ending interest to the villagers. One Bang Chaner said he understood what the source of my funds was, but did not quite understand how I actually obtained them. "How does the money get into your wallet?" I explained that prior to my departure from the United States, I made arrangements with my benefactor's secretary to have the money deposited in a bank in Bangkok. And whenever I needed money, I would write a check and obtain the *baht* equivalent of the amount I had written. At this explanation, the villager broke out into a broad smile and said: "That's wonderful. It sounds just like Communism!"

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123 My attitude here was not patronizing, any more than was theirs when faced with a culturally complicated question from me. Such rephrasings were simply easy and "sanug-ful" ways of communicating our points.

An investigator's feelings toward the people whom he is studying, as distinguished from his overt behavior, are significant only to the extent that they might affect the nature and interpretation of his data. It is the writer's belief that except where indicated, my feelings toward the villagers did not influence my description of them in any significant way. However, because I am dealing here with rather subtle materials and because, irrespective of intentions, personal feelings can be insidious in their intrusion, a few words should be said about my sentiments toward the villagers.

My dominant feeling toward them was shaped by the intellectual challenge they presented me. There were things they did that I simply did not understand, that I struggled with for months, and only some of which resulted in solutions coherent enough to be presented here. There were [156] other things they did that I never managed to comprehend, but which I just came to respect as their way of functioning, *e.g.*, a villager stopping himself in the middle of a conversation and, without a *single* word of explanation, leaving. What was "incomprehensible" was not only that he did this, but that the other villagers in attendance accepted his behavior as thoroughly normal. When asked how they felt about his leave-taking, the answer was almost invariably, "*Chaoj-chaoj*" (cool, indifferent). When asked more precisely, "Well, weren't you surprised by his suddenness; that he just turned his back and left?", they answered. "No, he must have had somewhere to go." What was "challenging" here and in the literally hundreds of other events of the same order was that the act was contrary to one of my most fundamental *assumptions* about the nature of human contact: in this case, that there should be some cue indicating the imminent termination of the relationship. Perhaps there was a cue, but one so subtle as to be impossible for me to spot. However, it was events of this kind, occurring week after week, that made the research the intellectually exciting experience it was.

On the less cerebral level, my feelings toward the villagers were more ambivalent. On the negative side, I was annoyed by their unabashed self-seeking, their manipulation of each other as well as myself, their ambiguity, and the relative lack of trust that many of them had in others, even those who were supposedly closest to them. Much of this was explicable in terms of their life histories and, to a lesser extent, in terms of their poverty; nonetheless, they were realities which I as a human being (as distinguished from an anthropologist) reacted to subjectively. On the [156] positive side, I admired them for their easy acceptance of themselves, for their down-to-earth quality, for their tolerance of others, and for their use of social forms, which, although often lacking in depth, emphasized the

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dignity of each person. Particularly attractive were the older villagers who, having made their peace with life, would freely articulate their thoughts and feelings about themselves and their world.

Again, the relevance of these personal, subjective considerations to the research results is problematic and I would hope inconsequential. They have been presented here because despite its avowed purpose, field work is always both a human experience and a research experience.

Fashioning an SCT For Bang Chan

In this section we shift our attention from the human and interpersonal dimensions of field work to the more technical area of the development and application of the Sentence Completion Technique in Bang Chan.[8]

To begin, it is well to keep in mind a few important historical considerations. The Sentence Completion Technique (hereafter referred to as the SCT) comes out of an intellectual tradition whose premises and intellectual style the author is familiar with but does not necessarily share; that is, the SCT was developed and has been used almost exclusively in the context of the "testing and measurement" tradition of clinical and educational psychology. This was a tradition, beginning with the work of Galton during the latter part of the nineteenth century, that appropriately emphasized the precise and objective measurement of human capacities and traits but which, as it developed through the years, tended to make "the test"—a shorthand, simplistic, preferably quick and self-administered summary of the traits or persons being studied—an end in itself. The I.Q. test, with its single numerical summary of a person's mental capacities, is perhaps the ultimate expression of this tradition.

The individuals who developed and refined the SCT (originally Payne 1928 and Tendler 1930; in more recent years, Rotter 1951, Sacks and Levy 1952, Levy 1952, Holsopple and Miale 1954, Burwen, Campbell and Kidd 1956, Trites 1956, Zimmer 1956, Benton, Windler and Erdice 1957, and Rohde 1957) have all operated in terms of this intellectual orientation. Reading their work and other SCT literature reveals a recurrent concern with how the SCT should be administered and coded, with whether short items are better than longer ones, with what other tests and measures the instrument should be correlated, and the like. However, *nowhere* can one find a statement of why the test works (to my knowledge, the discussion in this book is the first to be addressed to this question) and no one, except Hanfmann and Getzels (1953) and Davids (1955) raises the crucial issue

[8] The basic *theory* behind the Sentence Completion Technique and the rationale for the analysis of the research *results* are presented in the next chapter. Our concern at this point is more empirical and focuses on the actual construction of the instrument for use in Bang Chan and on some of the problems and resolutions encountered in its application.

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each person's own ideas, not those of other family members, it would be best to find somewhere we can be by ourselves.[11] Every informant in the sample eventually accepted our request for privacy with complete understanding. Also, it was usually easy to find an isolated spot: underneath the house, a buffalo shed, in a grove of trees, or if necessary in the boat. However, because Bang Chan notions of privacy do not apply to children, approximately one-third of the interviews were conducted with children in attendance at one point or another. The first time a child appeared, we made an attempt to shoo him away. This, however, was usually futile: he would leave and then return; only the boredom of our adult conversation would eventually drive him away. In the case of nursing children, we would always wait until the mother was free, although if the child wanted the breast during the interview we would simply continue and "ignore" his presence; his mother seemed to, at least at the conscious level.

One of the more important administrative tasks of the pre-test was to try out various instructions that would be given to *informants* on how to take the SCT. During these trial interviews, we experimented with various versions of the "introductory remarks" and settled on the following as the version to be used with our final 111 informants:

After explaining to the informant that we had come to chat, and after having chatted (which varied from ten minutes to two hours, depending upon the subject matter and the mood of the informant) we reminded him that I had been sent to Bang Chan by Cornell University to study the life and thought of the Thai people: "My professor sent me, and when I return to America, he will examine me on the information that I have gathered. So I would like to ask you for your *personal* help. I know that you can help me and can give me a true picture of the life and thought of Thai farmers. And [with a giggle] I think you can help me pass my examination." At this point, during the regular interviews, I would remind the informant that a few weeks earlier the abbot of Monastery Bang Chan had, on a ceremonially auspicious day, supervised the lottery from which the names of my informants had been selected: [12]

> *Aacaan* Phuang supervised the ceremony and your family was one of the families chosen in the lottery to be interviewed by me. Both *Aacaan* Phuang and I thought that this was the best way to select

[11] Informants were also asked, on the same grounds, not to reveal the items or their responses to other villagers. We are certain that there were several who ignored our request—not out of malice but simply because it was not that important to them. However, since there were so many items on the schedule, covering so many different areas, I doubt whether their reports to other potential informants biased our results in any substantial way.

[12] I am indebted to Robert B. Textor for having originally suggested this method of selecting part of my sample.

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families if I am to obtain the true picture about the people of Bang Chan.

I have something here that is like a game or a puzzle. It is a list of sentences about things that happen every day in life; just plain, ordinary things. These sentences, however, are not complete sentences. They are only half sentences. I would like you to finish these sentences for me. For example, take the sentence: *"When it begins to rain, he. . . ."* I would appreciate your finishing this sentence with anything that comes to your mind. The only thing I ask is that your completion makes sense: that it fits with the first part of the sentence. 125 124

You can make your completions as long as you want; the length of a sentence is unimportant. I want to tell you that with these sentences there is no such thing as a right completion or a wrong completion. All I would like is your own idea on what the completion should be. I expect that different people will give different completions, so all I want is your personal opinion.

I am going to ask other people in this family—except the children, of course—to complete the sentences. But we would like to ask each person one at a time, individually and privately. So I wonder if we can go somewhere where we can have privacy. But before we begin, why don't we try a test sentence. Tell me the completion of the following sentence: *"A boy, crossing a bridge, was showing off to a girl, and he fell into the canal, so he. . . ."*

The Selection and Nature of the Sample

The 111 individuals comprising the SCT sample represent an 11 percent stratified sample of the adult population of Bang Chan (persons over twenty years of age, or 989 of the 1,771 villagers) on four major variables: age, sex, religion, and economic status. The sample is based on a village census gathered by earlier Cornell University researchers and brought up-to-date by me during my first few months in the field. The economic status variable is based on judgments made by the seven hamlet headmen and fourteen assistant hamlet headmen living in Bang Chan, and thus represents an "inside," nonobjective view of a family's economic position in the community.

Several factors entered into the decision to select the sample on a quota rather than random basis. Most important was my decision to select informants from only two of the seven Bang Chan hamlets. This in turn was based on the need to save time. During the period that I was working on the census and traveling through all seven hamlets, I noticed that I was actually spending twice as much time on travel than I was spending with

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IV

The Sentence Completion Technique

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The following discussion details the logical considerations which underlie the analysis of the SCT responses and the procedures which have been devised for such analysis. At the same time it will serve as an introduction to the general nature of the SCT responses.

The analysis rests upon five premises.

How the SCT Works

First, despite its title and appearance, there is nothing particularly esoteric about the Sentence Completion Technique. It is primarily a useful and efficient way of asking questions about matters which are of central concern in personality research—feelings of rejection, failure, anxiety, and the like—but which might be considered sensitive or personal by our informants. That the questions are phrased as incomplete sentences rather than as direct interrogations is an attempt to get at these issues in a psychologically comfortable way. Concomitantly, it is an attempt to circumvent the tendency for individuals to set up resistances and blocks when queried on such matters.[1]

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[1] Whether Bang Chan villagers consider feelings of rejection, failure, and so forth, to be sensitive or private topics is, at bottom, problematic, since we have little reason to assume that they or the members of any non-Western culture share our attitude in this regard. The writer suspects that in some areas Bang Chaners do share Western attitudes about what sentiments should be concealed from (or revealed to) others, and in other areas do not. For instance, Bang Chan men would no more discuss their sexual impulses toward their daughters than would American fathers—in contrast, for example, to Pilaga Indian men (Henry 1955: 265). In contrast, most Bang Chaners seem considerably more reticent than Americans about revealing their aggressive feelings, but are considerably freer in discussing feelings of personal failure. Such discussion, of course, always varies in terms of the degree of intimacy between people.

• [123]

Two general considerations thus seem clear: (a) Bang Chan villagers are precisely like other human beings in that they have a tendency to conceal and reveal certain feelings, although the specific feelings concerned may or may not be the same as those of members of other cultures; and (b) since in the beginning of his research, an investigator really does not know in what areas or to what degree his informants are sensitive, it would seem prudent to use a technique which assumes sensitivity in all areas and attempts to get at these feelings in the least uncomfortable way.

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*125 syntax is in our culture—and except for certain ritual occasions, perhaps in all cultures—one of the basic symptoms of psychopathy. Witness the "word salads" of hebephrenic schizophrenics and the "mental lapses" of aphasics. (See White 1948: 527; Brown 1958: 293; Goldstein 1948; and Jakobson 1957.)

On occasion some of our Bang Chan informants would ignore syntactic considerations and use the sentence cues as triggering devices for their own unanchored thoughts and preoccupations: *"When I realize other people do not like me, I feel . . .* that's happened to me sometimes. When you see that other people don't like you, you should avoid them. The Lord Buddha says. . . ." And then the completion might develop into a brief lecture on morality. At other times, the cue would trigger off an autistic explosion: *"His most unattractive quality is . . .* don't have anything to do with him! He is a wicked person. I do not want to speak to him. He doesn't talk sense. One day while I was fishing, he came along and asked me to have intercourse with him. I cursed him!" (Other data on this informant indicate that she was referring to her estranged husband.) These types of [124] "ungrammatical" responses seem to derive from the social aspects of the [123] interviewing situation—the informant has a friendly listener with a willing [521] ear and thus occasionally ignores the original definition of the SCT task to declaim on his favorite subject[8]—and also from the fact that in social discourse our Thai villagers seem to indulge more in, and have considerably greater tolerance for, autistic thought than do most Americans. That is, the villagers are more accustomed to making and hearing statements that have little apparent "objective" meaning (or in the language of psycholinguistics, "referential" meaning: Brown 1958: 315) but which are symptoms of inner states and preoccupations. The crucial point here is that a listener often does not know—or care—precisely what a speaker is talking about, but simply accepts the other person's utterances as expressions of inner, unknown concerns. Such expressions involve the leaping over of connective thought and syntactic constraints (as in the above example of the lecherous husband) or indifference to the logical currents of the discussion.[9]

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[8] Sometimes his discussions are simply expressions of phatic communion—the desire to indulge in chitchat for its own sake. (See Malinowski 1923: 315; and Hockett 1958: 585.)

[191] [9] It should be remembered that speech is not only a device for carrying on social interaction but also a mechanism for articulating one's inner preoccupations, whether or not other people understand. It is this latter use (which, incidentally, is ontogenetically the more basic: Piaget 1932; and Langer 1942: 35) about which Bang Chaners seem particularly tolerant. In general, a speaker in Bang Chan is not held very responsible for what he says. One rarely hears in the village—except from prying anthropologists—such charges as "I do not know what you are talking about. Explain yourself." For one thing, such a query would not be particularly polite; and in the villagers' scheme of things, what a person says is really his own business, re-

and KY followed by a number.) The center of social life in Bang Chan is the Buddhist monastery or wat and the adjacent government primary school. The community simply consists of the clientele which regularly patronizes Wat Bang Chan and this school rather than other comparable institutions elsewhere in the region. Within the area of the community lives a minority of Thai Moslems constituting about ten per cent of the population. They have their own mosque which happens to be just outside Bang Chan, but they attend many secular and some Buddhist functions at Wat Bang Chan. A number of small stores, which also serve as coffee houses and men's clubs, are used as neighborhood centers in different parts of the village. Near the central wat and school, there is also a store, and the house provided by one of the headmen for use as the Project headquarters.

This present interim report of the Cornell Thailand Project includes some of the data necessary for the design of a program to improve health and diet in Bang Chan. Another report, now in preparation, will give the results of a detailed dietary survey made in the community following the health survey reported on here. These two studies together will indicate existing deficiencies in health and diet, and will permit the formulation of recommendations for needed changes in behavior as these can be realized in the context of the village and national culture.

The author of this study, Dr. Hazel M. Hauck, is Professor of Food and Nutrition in Cornell University. She has been associated with the work of the Cornell Thailand Project since 1950. She not only designed and supervised the research on health, nutritional status, and diet in Bang Chan, but during almost a year of field work in Thailand she obtained valuable data on many other topics for the Project's files. Some of her daily work in Bang Chan made little sense to the villagers, but they nevertheless became devoted to her. Her energy, tact and fine spirit in facing the discomforts and difficulties of rough field work in a tropical foreign land inspired both her Thai and American associates. Working with Professor Hauck were Dr. Amusith Rajatasilpin, now a teacher in the School of Public Health in Bangkok; Miss Sapha Indrasud, now in the Ministry of Public Health; Dr. Chumlong Kittivoja, of the Dental School of the University of Medical Sciences, Bangkok; and Miss Saovanee Sudsaneh, who has been doing post-graduate work in nutrition at Cornell and Harvard. To all of these faithful workers, the Cornell Thailand Project is greatly indebted.

Lauriston Sharp, Director
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12 As advoced by the Joint FAO/WHO Expert Committee on Nutrition (1951), this study combined clinical appraisal with dietary surveys. The only laboratory tests done were for hemoglobin content of blood, and examination of stools for parasites. Suggestions for planning the schedule for the clinical appraisal were obtained from the report on the second session of the Joint FAO/WHO Expert Committee on Nutrition (1951), Nicholls (1951) and especially from Professor Dean Smith of the London School of Hygiene and Tropical Medicine (1952).

125 Choice of physical measurements, and of procedures in making them, were influenced by a tentative list of specifications for anthropometric measurement, developed by the Committee on Anthropometry, Food and Nutrition Board, National Research Council (1951).

The schedule used for clinical examinations, and a description of procedures used, are included in Appendix A.

Sampling. - All of the children attending the Bang Chan primary school were examined. Three or four children who were listed on the school rolls were not present at any time during the period when examinations were in progress, and were considered by the teachers as non-attending.

Persons in a random sample of households in 5 of the 7 hamlets in the Bang Chan community were also examined. The two most outlying hamlets were excluded from the population to be sampled because of the difficulty, during the dry season, in getting to them or having them come to us. Of 230 households in the 5 hamlets, 31 were included in the random sample. Age and sex distribution of the 166 persons in the sample were roughly similar to distributions for the approximately 1700 persons in the village as a whole, as determined in the census of December 31, 1953. Following is a summary of the age distribution:

[162] [624]

Age in Years	Bang Chan, 7 Hamlets	Random Sample, 5 Hamlets
0-14	38%	41%
15-19	11%	10%
20-59	44%	41%
60 and over	7%	8%

[162] The sample included one Muslim family of 13 members.

In the 31 households, 166 of 184 persons, i.e. 90% were examined. Of the 10% non-response group, half were unavailable, for example away at work when the examinations were in progress. The remaining members of the non-response group

• [129]

[See pp. 51-52--Analyst]

125 included adults of both sexes and some preschool children who
• 123 were unwilling to allow the physician to examine them. The small non-response group included persons of both sexes and a wide range of ages, and would therefore not be expected to bias the sample seriously. In general, rapport and cooperation were excellent.

Reproductive Function in Females

[145] Information concerning menstrual history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 35).

Information on child-bearing history was obtained from women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 36).

Illness and Injury

12 [164] Evidence concerning the nature and extent of illness and injury in Bang Chan was obtained from various sources:

1) direct observation by the physician at the time of the physical examination, or when the physician was asked to visit a sick person in the village;

2) field notes in which information concerning illnesses, accidents and deaths were recorded as research workers learned of them; and

3) information obtained by structured interview in connection with surveys conducted by various persons working on the Cornell Thailand Project.

Adults in households which were included in the random sample were asked after the clinical examination whether any family member had been ill or injured during the past year. If so, the interviewer asked the nature of the illness or injury and what was done. The portion of schedule 6 which relates to this is included in Appendix A.

Some questions on illness were included in a survey of household heads in Hamlet KY-7 (Hanks, 1954) and in a structured interview to which there were 335 respondents from the

[see pp. 51-52--Analyst]

146 164 In addition, the two cases of symmetrical dermatosis observed were not of the pellagroid type and should probably not have been included with the possible signs of nutritional deficiency.

The only instance of thyroid enlargement noted (an obvious thyroid adenoma) was in a 13 year old boy who had always lived in Bang Chan. He knew of no one else in the family with such enlargement.

[125] Five girls and women in the random sample refused to permit the examining physician to palpate the liver and spleen, but he was able to carry out the rest of the inspection.

146 Almost half of the groups examined, 46% of the school children and 47% of the family sample, were free of the possible signs of nutritional deficiency. The remainder had from 1 to 7 such signs. Persons in the random sample were grouped according to age, and the percentage of each group found to have each number of signs is shown in Table 10. Note that most of the

Table 10

Number of Possible Signs of Nutritional Deficiency Occurring in 166 Individual Residents in the Family Survey, Grouped According to Age

Age Group, years	Number of Persons Examined	Percentage of Each Group Found to Have Each Number of Signs			
		0	1	2	3 or more
6 and under	33	94	3	3	0
7-14	34	47	38	9	6
15-19	17	76	18	6	0
20-39	41	32	54	7	7
40-59	27	7	33	22	37
60 and over	14	21	7	21	50
Total Group	166	47	30	10	13

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The age breakdown of the sample is as follows:

41 cases of 20 to 29 years of age
73 cases of 30 to 39 years of age
83 cases of 40 to 49 years of age
68 cases of 50 to 59 years of age
41 cases of 60 to 69 years of age
16 cases of 70 years or more

The occupational status breakdown is as follows:

269 farm operators
24 farm laborers
18 in trade or commerce
10 in service occupations
12 other (2 retired, 2 artisans, 1 traditional doctor,
1 janitor, 1 air force man, 1 policeman,
1 children's caretaker 1 gardener,
1 laborer in irrigation department, and
1 occupation unspecified)

• 123 Respondent Reaction to the Survey

The respondents were in general cooperative and congenial as is substantiated by the following interviewers' ratings:

(1) 93 per cent of the respondents were reported as cordial at first contact;

(2) 96 per cent of the respondents were reported friendly, cooperative, and responsive for all or most of the interview;

(3) 90 per cent of the respondents were reported as speaking freely for all or most of the interview,

(4) 91 per cent were reported as answering to the point of most or all questions, as giving reasonable, applicable answers;

(5) Only 5 per cent of the respondents were reported as giving many guarded, insincere or evasive replies, whereas 15 per cent were reported as giving some guarded, insincere or evasive replies; and 80 per cent of the respondents were reported as giving no guarded, insincere or evasive replies.

114 The interviewing period fell in a relatively quiet season between harvesting and planting of paddy. At that time farmers were readying implements and beginning to prepare for harrowing and sowing the seed-beds. The period coincided with a period of university vacation so as to recruit English-speaking interviewers. The morale of the staff was high at all times.

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121 can later be checked through studies in a nearby control
184 village and by comparison with results of the 1953 agri-
*243 cultural census. Nevertheless most of the problems of rural rice growing communities in central Thailand undergoing technological changes are expected to be found in Bangchan. We are confident, therefore, that the community is an appropriate model for locating agrarian problems and is a good site for a pilot study which is to serve as a base-line for further researches in agricultural economics and other social sciences.

Techniques for Establishing Rapport

• 123 Our first contact with Bangchan residents was made on September 1, 1948, when Professor Lauriston Sharp and the author were driving home from Minburi. We stopped over at a farm house on the side of Minburi Road two miles from the market town and introduced ourselves to a small gathering of farmers. We told them that we were both teachers, Sharp teaching in the United States and Janlekha in the nearby Kasetsat University, and that we were looking for a typical village where "Professor Sharp might study the real life of Thai farmers so that he could tell his American students how we live and work."

The place where the conversation was taking place was on the periphery of Bangchan village -- the western tip of Hamlet 4, Bangchan Commune. While one of the farmers was explaining the general condition to us, he was interrupted

123 by another farmer who was identified as Headman Weg of Hamlet 6 of the same commune. Weg said his hamlet has more people and more buffaloes, and invited us to his home which is on the other extremity of the village. Arrangement was made for a boat to carry us there on the appointed date two days later. Thus we were invited into the village by one of the leading residents who took pride in the possibility of a study of his village by an American professor.

124 At the beginning, we sought from the villagers only simple information. After the first month, when it became clear that confidence had been won, more intimate questions concerning economic matters were raised. Thai peasants do not take questions about family relationship or age as intimate questions; they even enjoy answering them. It was noticed, however, that some types of questions brought better response than others. We did not attempt to get all the information we needed at the first interview, and only the topics which appeared to interest the respondent were pursued. We did not set any rigid rule on the length of an interview period but left it up to the apparent disposition of the interviewee. It was observed, however, that normally distraction began to set in after the first half-hour. We usually stopped at this point. If the conversation had to be continued, we made it apparent that business was over by laying aside our pencil and notes. In every possible way we tried not to offend respondents. Not infrequently we brought an interview to an end within the first few minutes

124 when only a slight sign of distraction was noticed. Our daily visits to this small concentration of population gave re-interviewing a much higher advantage over a prolonged interview. Experience with Bangchan people revealed that occasional non-response was not due to the subject matter but rather to the approach and circumstances. With a more tactful approach and under a slightly different circumstance in a subsequent interview, we were able to obtain most of the information we sought but did not get in the previous interview.

• 123 To return the hospitality rendered us we offered small personal services like a lift or taking the sick to Bangkok hospitals. We tried to avoid monetary gifts to individuals which might lead to distorted information intended to please us, but we did give monetary gifts to public institutions like the school at an opportune time. We were particularly anxious to help the community as a whole especially in the fight against epidemics. Incidentally, Bangchan will always remember our active part in bringing the veterinarians to the village in time to check the spread of rinderpest in the end of 1948. From then on the villagers tended to think of us as a most effective means to communicate with high officials in Bangkok. This conviction was reinforced by subsequent visits of top level officials to the village which were unprecedented. In the second period of study in 1952-54, we were able to render medical aid and advice. We also played a significant role in the campaign

123 to get government support for the new school building.

Our non-official status relieved us from the responsibility of direct action and thus gave us the immunity from any criticism when sought help had not been responded, while in any event we enjoyed the privilege of the contact men. In the eyes of Bangchan villagers, we were equated with high officials and were given due respect. At the same time, as willing contact men, we were also thought of as good friends of Bangchan.

We did not, for a moment, seek to be admitted as if we were local people, which would appear to be artificial and which might be interpreted as insincerity. It seemed to us, nevertheless, that our sincere treatment of the villagers with some reservation as our equals -- a rare privilege in their experience -- was the most important factor militating in favor of our good rapport with Bangchan.

Techniques for Gathering Informations

12 Various techniques were used in securing information, each adopted with a view to procuring the best possible result under different circumstances. In general, information may be classified according to the methods used in obtaining it as follows: (1) structured questionnaires and check lists;[4] (2) informal interviews; (3) daily records of research workers; and (4) supplemental written records made by local residents.

4. See Appendix B.

interest of improved maternal and child health, a few suggestions are made.

Purpose and Method

The purpose of this study is to set down the ethnographic data concerning childbirth in Bang Chan, following out the economic, social, religious, and cosmological aspects as needed to clarify the behavior and the psychological attitudes noted. The hope is that not only anthropologists but persons working in programs of maternal and child health will find the data useful.

The data were gathered from Buddhists and Muslims in Bang Chan by interviews and direct observation. Because Dr. Hazel Hauck, in the course of nutritional studies also made inquiries "from the standpoint of anthropological study rather than because of an assumed relation to nutrition or health" (1958:3) she first opened up the broad outlines of the subject. The author, with Dr. Saovanee as an interpreter of unusual competence, and Dr. Saovanee herself then pursued the subject further, including interviews at the Minburi Health Center and at Cha Choeng Sao.

A few comparative references such as to McFarland's dictionary and Phya Anuman's researches are given, but the focus is always kept on Bang Chan. Though many of the findings will have a certain pertinence in Bangkok, the fact that Kaufman found striking differences in Bang Khuat only 8 kilometers away shows how cautious generalizations must be.

The transliterations of Thai words are only approximations, based on the system promulgated by the Royal Institute of Thailand; the tones have been omitted. With the translation always adjacent and a glossary provided at the end of the volume, the author feels there should be little confusion. Proper names which are generally known in a different transcription are left in their familiar form. In referring to works by Thai authors western custom is followed but in referring directly to the authors themselves Thai custom is followed, as it should be in direct address.

125 nutritional floor for this population, beneath which mainten-
146 ance of health cannot be assumed. From this table, allowances were estimated for persons of each age and sex, for Groups A and B (Table 17, p.105). Estimates were made for each quarterly period or Round, during which each family was visited once, and these were averaged to obtain mean per capita allowances for each group for the year (Table 18, p. 108). In each group, one woman was in late pregnancy during the third Round, and a new infant had been added to each group in the fourth Round. Since young infants in Bang Chan are given little more than mother's milk, allowances for the fourth Round were adjusted to account for an additional nursing mother, but not for the infant itself. Differences in estimated per capita allowances for Groups A and B were trivial (Table 18, p.108), hence we felt justified in comparing the estimated food and nutrient intakes of the groups as originally planned, even though Group B contained 5 persons not matched with persons in Group A.

Method of Collecting Data

124 The procedures we planned to use were first pretested
125 in several households to give the observer experience and to be sure that the method would actually work under conditions in Bang Chan. Following the pretest, each family chosen was told in a preliminary interview, what the observer wished to do, and in what ways family members would be expected to cooperate (Appendix C, p. 109). All families that were asked to participate in the study consented. They were not notified in advance just when the observer would visit. Observations on each family included food intake for a 24-hour period, 4 times during the year: twice during the rainy season, and once each during the cool and the hot, dry seasons.

Survey days were planned so as to avoid special festivals when food preparation might be unusual. Six of the 44 survey days fell on (1)wan (4)phra, the weekly holy day. The families visited on (1)wan (4)phra did not, however, take food to the temple on those days, hence food preparation and consumption was probably not unusual.

Alternate visits to the families in Groups A and B were planned so that seasonal variations in food supply would not be apt to account for any observed differences in food intake. Again, our plan could not be fully carried out. Occurrence of cooperative transplanting and other interfering circumstances made some modifications in schedule necessary. Since the objective was to learn about the usual family food intake, the study was not carried on when several members of the family were away from home, or when the participating family was preparing to feed neighbors who were helping with farm work. In such a case, the field worker would go to the nearest

124 125 participating household which had not been visited during that Round of the study. The order and dates of visits to Groups A and B, data from which were used in calculating food and nutrient intakes are shown in Table 7. During three periods of about one month each all visits were to families in Group A, hence some differences in the use of foods between the two groups might be attributed to the order of visits.

Table 7. Order and Dates of Visits to Households Participating in the Dietary Study[1]

Round	Date	Group	Household No.	Round	Date	Group	Household No.
I	May 26, '53	A	67	III	Nov. 26, '53	A	67
	June 4, '53	A	222		Dec. 3, '53	A	222
	June 11, '53[2]	A	2		Dec. 10, '53	A	2
	June 24, '53	A	12		Dec. 17, '53	B	21
	July 2, '53	B	21		Dec. 21, '53[2]	B	23
	July 8, '53	B	23		Jan. 7, '54	A	103
	July 16, '53	A	103		Jan. 14, '54	A	12
	July 23, '53	B	16		Jan. 18, '54	B	16
	July 31, '53	B	25		Jan. 28, '54	B	25
	Aug. 6, '53	B	20		Feb. 4, '54	B	20
	Aug. 13, '53	A	215		Feb. 10, '54	A	215
II	Aug. 27, '53	A	222	IV	Feb. 18, '54[2]	A	67
	Sep. 3, '53	A	2		Feb. 25, '54	A	222
	Sep. 10, '53	A	67		Mar. 4, '54[2]	A	2
	Sep. 24, '53	B	21		Mar. 9, '54	B	23
	Oct. 1, '53[2]	B	23		Mar. 18, '54	B	21
	Oct. 15, '53	A	103		Mar. 24, '54	A	103
	Oct. 22, '53[2]	A	12		Apr. 1, '54	A	12
	Oct. 29, '53	B	25		Apr. 5, '54	B	16
	Nov. 5, '53	B	20		Apr. 25, '54	B	25
	Nov. 12, '53	A	215		Apr. 30, '54	B	20
	Nov. 19, '53	B	16		May 8, '54	A	215

1. Two visits, data from which could not be used due to abnormal circumstances, are not included.

2. (1)wan (4)phra, the Buddhist holy day.

124 On the basis of experience during the pretest, the ob-
125 server began the 24-hour period of observation with an unannounced visit in the afternoon, in time to see the preparation for the evening meal. This proved to have several advantages. A householder whose home had been visited at the evening meal, and who anticipated the observer's return before breakfast, could restrain the dog, if necessary; or the homemaker might postpone washing the rice until the observer arrived to weigh it. Without such cooperation on the part of the homemaker, our records would have been much less complete
[405] than they were. Since few village families had clocks, the time when the homemaker said she would start breakfast was always approximate.

125 Foods were weighed in both the raw and cooked states,
262 and foods given to priests, fed to animals, left over, etc. were weighed so that the actual amount eaten by the family could be calculated. Previously cooked foods included in the survey meals were weighed and raw weights estimated from information obtained in other observations. If possible, snacks were weighed. School children and others who ate snacks away from home were asked to report them to the obser-
128 ver, and weights were estimated. The guides prepared for
262 the observer are included in Appendix C, pp. 110-111. Data were recorded on the schedule, shown in Appendix C, pp. 116-120. and essential information such as the weights of food, after allowing for weight of containers, was later transferred to the shorter form shown in Appendix C, p. 121. As examples some of the data obtained on 3 of the 14 survey days are shown. Examples of notes on procedures in food preparation are included with these records. For examples of notes on the food intake of individuals see Appendix A, p. 97.

Calculation of Nutritive Value of the Diets

Figures from the original records were transferred to the Form for Calculating Raw Weights of Foods Eaten (Appendix C, p. 121), and the edible portion of each raw ingredient consumed was calculated by adjusting the gross amounts according to the use made of the cooked food and the number of family members present. Procedures followed are outlined in Appendix C, pp. 113-115[1]

Few analyses of Thai foods had been made in Thai laboratories, and most of these were for proximate composition only. Therefore, data from other available sources were used. Since Handbook No. 34 of the United States Department of Agriculture "Composition of Foods Used in Far Eastern Countries" (Leung

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[114] 1. Many of the calculations were checked by Mrs. Mary Barkley Campbell, who made independent use of the data.

128 per day were calculated for Groups A and B by Round and for
262 all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

124 General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

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194 Although our sample was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the
[934] main source of income. Families in Group B had a greater
[934] capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive
[801] fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

125 From the viewpoint of parents, the "peak of life" was
511 the time when children were no longer dependent, but produc-
542 tive, unmarried workers whose earnings stayed within the
734 family. Household 16 was such a family, forward looking,
443 progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analysis]

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

APPENDIX C

Guides Prepared for the Observer Who Carried Out the Dietary Study

Preliminary Visit to Participating Households

Households selected for dietary study are to be visited in advance, acquainted with the procedure which we wish to follow, and asked for their cooperation.

The following points should be emphasized:

1) Meals should be prepared as usual both in amount and kind. Workers wish to know how much food and what kind, the family eats.

2) Each item of food which enters into the meal preparation will be weighed before cooking.

3) Each prepared food (as cooked rice, fried fish, curry, etc.) will be weighed when the preparation is finished.

4) Amounts of prepared food given to priests, fed to animals or left over, must be weighed, so that the amount of food actually eaten by the family can be calculated.

5) As often as possible survey members would like to be present during the meal, but will not accept food from the household.

6) Each member of the family will be asked to report to the survey worker what is eaten between meals. If the snack is eaten at home, it should be brought to the survey worker first, to be weighed. If the snack is eaten away from home, individuals are asked to tell the survey worker as clearly as possible what was eaten, and how much.

Preliminary information to be obtained at this interview:

1) Usual number of meals taken by the family at this season.

2) Usual time of meals.

3) Time when food preparation is started in the morning, and when evening meal is over.

The family should be told that the survey workers will come sometime during the next two weeks. They should not be told which day, as that might lead them to make some changes in their usual diets, either consciously or unconsciously.

The schedule of visits should be such that each day of the Buddhist "week" will be appropriately represented, i.e. the day before the holy day, the Buddhist holy day, and the 5 or 6 days which follow. Days of special festivals should not be included in the dietary survey, although the investigators should attend many of these, and record observations on the foods served.

Dietary Survey Proper: General Procedures, with Alternative Suggestions

Twenty-four hour period. - Each visit should cover a 24-hour period. After preliminary experience, a good plan seems to be to go in the early afternoon, in time to see the preparation for the evening meal, and to return early the next day, remaining until the 24-hour period is up. This plan has several advantages over making one's first appearance before breakfast:

1) The homemaker may be introduced to the procedure at a time when she is less hurried than she is apt to be in the morning, when she must have food ready for the priests at a fairly definite time.

2) Scales and other equipment may be left overnight, so that these need not be carried before dawn, along with food and water for the survey worker.

3) The risk that food preparation will be started before the worker comes is less if the homemaker expects the survey worker before breakfast.

4) If the worker's visit is anticipated, someone at the house will restrain the dog if necessary.

5) For the more remote households, arrangements can probably be made to stay overnight at the home, or nearby, without previous notification as to the exact date of one's visit.

Because the observer may leave in the afternoon before children return from school, she should ask about snacks eaten away from home on the first afternoon, so that record will be obtained of such snacks eaten on one day, though not necessarily during the same 24-hour period as the other meals recorded.

Number of Visits. - Aim to visit each of the 11 families once each 3 months, i.e. 4 times in the year. This means once during the cool season, once during the dry season, and twice during the rainy season, i.e. early and late. From May 25, 1953 to the end of April 1954 there are 49 weeks. In a schedule calling for one survey day each week, this would allow 5 weeks for unforeseen circumstances which might interfere,

or for planning time off because of holidays, celebrations, etc.

Scheduling of Visits. - Plan to see the families in rotation, going to those in groups A and B on alternate weeks, so that seasonal variation in food supply will not be a major difference between the two groups. The survey worker must have in mind another nearby home, however, which might be visited if the original plan cannot be carried out on a given day.

The survey worker should not give advance notice of the exact day when she plans to come, unless the householder has specifically requested this. Even when notice is requested, it need not be long in advance, i.e. one could stop by in the morning and ask if it would be all right to come back in the afternoon to watch supper preparation.

Directions for Use of Schedule 8 on Which Data Obtained During the Dietary Survey Are to be Recorded.

Most of the items in this schedule may be filled in from census information or by direct observation by the survey worker. The worker will need to enquire re item E. the makeup of the food consumption unit, and J 4, the cost of raw foods purchased. The survey worker should try to observe other items during the day, and fill in by inquiry, if necessary, at the end of the day. Note whether information was obtained by observation (ob) or inquiry (q).

A. Hamlet and house number should be written in from the census information, and should correspond to that on schedule 3 for the same household.

B. Each Household to be visited for dietary survey will be given a key number in advance. This number should be inserted here.

C. Head of household (from census information).

D. Religion. - Some dietary practices are associated with religion, therefore indicate whether the household is Buddhist or Islam by checking the appropriate space.

E. Composition of food consumption unit: List here all persons whose food is prepared in the kitchen which the observer is visiting. Note that all persons living in one household (i.e. at the same house number) may not belong to one food consumption unit.

F. Source and treatment of water. - Find out, by observation if possible, from what source or sources water is obtained for drinking and food preparation, at this season. Note

whether or not water is boiled or treated otherwise before use.

G. Garbage disposal. - While making the dietary survey, the observer should note what is done with garbage. Is edible waste given animals? Is garbage disposal carried out in such a way that it will not attract flies, etc.?

H. Protection of food against contamination. - The observer should note what means are used by the householder to protect both staple and perishable foods from contamination by insects and animals. If the householder's practices are not consistent, the observer should note this, either on the schedule, or in her note book. In the latter case, the schedule should be plainly marked "see notes."

I. Family member observed at meal time. - We have been unable to think of any plan for weighing foods consumed by individual members of the family without disturbing the customary eating procedures. The observer may be able, however, to get some idea as to how food is distributed in the family, by observing one person at a time, and recording her estimate of the individual food intake.

The person chosen for observation should be one of the family members who would be most vulnerable to an inadequate food supply, for example a pregnant or lactating woman, a young baby, a growing child or an old person. The observer should fix her attention on the person to be observed, throughout the meal, and should record as well as possible the amounts eaten of each type of food. Record amounts taken onto the plate, amounts left on the plate at the end of the meal, number of bites or spoonfuls of each item eaten a) directly from the serving dishes and b) after the food is put on the plate. Check your estimates of amount eaten by the person observed with reference to the total prepared for and consumed by the family.

From observations of this sort we hope to get information on questions such as the following:

1. When a child is said to eat all adult food, does this mean that the kinds of "with-rice" and the proportions of rice to "with-rice" are the same for him as for adults?

2. If a pregnant or lactating woman says she eats as usual except for the hot tastes, does this mean a) that she omits or decreases intake of peppery foods and eats no more than usual of other foods or b) that she omits or decreases intake of peppery foods and eats more rice and/or less highly seasoned "with-rice" items? In the case of a child, note carefully any remarks made by adults urging him to eat more of, or suggesting that he eat less of a given item.

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
Bang Chan

SUMMARY

129 125 Information on health, care, and diet of mothers and small children in Bang Chan, Thailand, was obtained primarily by interview, although some direct observations were made. In general, three areas of inquiry were included in this study: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project.

In all, 66 mothers of young children were interviewed. Information on diet during pregnancy, postpartum, and lactation was obtained from women who were either in the stage under discussion or had only recently passed through it.

The description of child feeding practices is based on records obtained concerning 57 children from birth to two years of age, a majority of whom were visited from 5 to 7 times.

Information on growth in height and weight is based on observations made on 71 children, most of whom were weighed and measured 6 or 7 times. Observations were made for 30 of these children both before and after weaning.

843 During pregnancy most women in Bang Chan continued to eat as usual. A few expressed cravings for certain foods, and a minority thought some kinds of food should not be eaten during pregnancy.

846 During the postpartum rest period most women ate a very restricted diet. Rice and fish, with salt, were the foods considered by all informants to be appropriate for this period.

853 As a rule, diet during lactation, after the mother resumed her usual work, was the customary family diet. A minority of informants mentioned foods which should not be eaten by a nursing mother.

164 844 Evidence of the need to improve diets in this region was provided by the occasional occurrence of beriberi or the history of beriberi among mothers as well as by medical inspection and family dietary studies.

853 Breast feeding was the rule in Bang Chan. For a majority of infants observed, breast feeding was continued into the second year, and some were breast fed for more than two years. Few received animal milk after weaning.

INTRODUCTION

121 In the study of food habits and health in Bang Chan, Thailand, mothers and small children were the focus of special attention. We were interested in these groups not only for their own sake, but because in an area where frank deficiency disease was not common, inadequacies in the diet might be reflected in the condition of these vulnerable groups to a greater extent than in the general population. Food habits in this rice producing village have been described (Hauck, Sudasaeh, and Hanks, 1958; Hauck and Hanks, 1959) and information has been presented on nutrient intakes of 11 families (Hauck, Sudasaeh, and Hanks, 1958; Hauck and Sudasaeh, 1959).

122 In the present paper, general procedures are described first, followed by sections on 1) health and care of mothers and 2) of infants, 3) diet of mothers during pregnancy, postpartum, and lactation, 4) feeding of infants and small children, and 5) growth in height and weight of infants and small children in Bang Chan.

PROCEDURES

124 Some of the information presented herein was obtained by direct observation, but much of it resulted from interviews, usually with the mother. One of our first tasks, therefore, was to develop appropriate schedules for such interviews.

Schedules for Interviews.

During the early weeks of getting acquainted in the community, we had preliminary unstructured interviews with a number of pregnant women and mothers of young babies. Frequently the child's father, a grandparent, or other family member would be present. Informants were encouraged to discuss infant feeding, common customs associated with childbirth, and other subjects
125 of interest to the research group. From the information so obtained and from conversations with workers at the Mother and Child Health Center in Bangkok, two schedules were drawn up. In general, both schedules included three areas of inquiry: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project. In this category some items were included because of their interest from the standpoint of an anthropological study rather than because of any assumed relation to nutrition or health.

One schedule was designed to obtain information about the mother before and after the birth of a given child (Appendix p. 53) and the other for information pertinent to the nutrition and health of the child from birth onward (Appendix p. 58). Clinical history and food intake were included on both schedules. Spaces were allowed to record height and weight of infants and young children at each visit. Questions about cultural customs were included on both schedules, but most such information is reported elsewhere (Hanks, 1959). Descriptions of procedures used in the interviews and observations are included in the Appendix (p. 58). 125

Subjects.

At the beginning of the study we located as many households as possible in which there were pregnant women or young babies. The question, "What families in Bang Chan have young babies or are expecting babies?", was asked of the headman of each hamlet, of groups in a village store, and of families where we visited. We were able to follow up most of the leads obtained in this way. If possible the mother was visited sometime before the baby was born; soon after the birth (i.e. within a few days); and then when the infant was 1 month of age, 3 months of age, and at 3-month intervals thereafter. If the first interview occurred after the baby was born, the mother was asked about her diet during the pregnancy, the occurrences at the infant's birth, and his food intake up to the time of the first interview. 124 • 125

In all, 68 mothers of young children were interviewed. The first interview with 17 mothers was held during pregnancy; 36 others had infants less than one year old when first seen, and for 15 the youngest child was over one year of age. For various reasons, such as death of the infant, removal from the village, or failure to find mother and infant at home, complete records were not obtained in all instances. Moreover, after some experience we limited questions concerning pregnancy and postpartum care to women interviewed at these times or to women whose infants were under one year of age. The descriptions of diet during pregnancy, postpartum, and lactation are based on interviews with from 30 to 50 informants.

In order to obtain more information, particularly about infants going through the weaning period, older babies in the same households, or in the neighborhood of the households with young infants, were weighed and measured and their food intakes recorded. For these additional children the 3-month interval was usually followed, but they were not necessarily visited at the ages of 6, 9, 12 months, etc.

The description of child feeding practices is based on records concerning 57 children from birth to two years of age, a majority of whom were visited from 5 to 7 times.

124 125 Information on growth is height and weight is based on observations of 71 children, most of whom were weighed and measured 6 or 7 times. For 30 of these children, observations were made both before and after weaning.

HEALTH AND GENERAL CARE OF MOTHERS

145 Information obtained on menstrual history of girls and women in Bang Chan has been reported previously (Hauck, 1956). The median and modal reported age at menarche was 15 years with a range from 13 to 19 years.

163 Most married women in Bang Chan had children, and of 438 pregnancies reported by 84 mothers, over 90 per cent resulted in live births (Hauck, 1956).

843 164 Clinical History and Complaints During Pregnancy.

Most of the women interviewed reported no history of disease which might affect, or be affected by, nutritional status.

Four women had a history of beriberi; 3, a history of malaria; and one had active tuberculosis of which she later died. In relation to the current pregnancy, 6 women had minor complaints such as nausea in early pregnancy, faintness, and leg cramps. The physician considered these as probably physiological. Of the 4 women with more serious complaints, one who said she had pain in the abdomen and legs and difficulty in walking had manifest beriberi when seen a few days after delivery.

844 846 125 Delivery and Care of Mothers After Childbirth.

Information was obtained from 49 mothers concerning delivery and care after childbirth. For 43 of these women, ages reported were as follows:

Reported Age (years)	Number of Mothers
20 or under	7
21-25	11
26-30	12
31-35	6
36-40	6
over 41	1

The mothers interviewed had borne from 1 to 12 children. For 8 of them, this was the first child; but 25, a majority,

One infant had congenital stridor when seen by the physician[1] at 2 months, but the difficulty in breathing had disappeared spontaneously before the baby was next visited at 3 1/2 months of age.

Illness in Early Infancy.

One infant that died on the fifth day was seen when one day old, at which time neither mother nor physician made any adverse comment on its condition. The mother, who was not living with her husband, returned to her work outside the village a week after delivery, and we were unable to talk with her again. So far as we could learn from neighbors, this infant had none of the symptoms concerning which we routinely inquired; namely, convulsions, vomiting, diarrhea, or fever.

A third infant in this series died when he was nearly 2 months old. At 13 days of age, when first seen, this infant had white patches on his tongue which were diagnosed as monilíasis. When the physician saw the child again at 6 weeks of age he made no adverse comments on its condition. Emotional reaction to the infant's death was such that we were unable to get a clear description of events which led up to it from either parents or neighbors.[2]

Three infants had skin infections when seen within a few days after birth. The physician commented that skin was more susceptible to infection when moist than dry and that the babies had become very warm. The weather was hot, and babies were bundled up and/or were near the fire. He gave directions for keeping the skin clean and dusting with sulfa powder.

No deaths from tetanus occurred in this series, although infantile tetanus was prominent among causes of death of infants under one month old (Hauck, 1956).

Medicine Given to Babies During the First Few Days of Life.[3]

On this point, information was obtained concerning 36 of 40 babies seen before they were 6 months old. Thirty of these were given medicine, sometimes more than one kind. Most of the

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1. A physician was present at all interviews with pregnant women and mothers with very young infants.

2. Although the mother had children by a previous marriage, this was the first child of this union, born after the parents had lived together for 9 years. The mother was 41 years old.

GUIDES FOR THE INTERVIEWER AND DESCRIPTION OF ITEMS IN SCHEDULES

General Guides for Interviewer.

Schedule 4 was designed so that one form might be used to record all relevant information concerning the mother before and after the birth of a given child. 125 124

Schedule 5 was designed so that one form might be used to record all available relevant information concerning each child's history from birth onward.

At the initial interview the informant should be asked first about the situation at that time. For example, if the mother has a baby 6 months old, she should be asked about the child's food intake at that time, then what he was fed at an earlier age, for example 1 or 3 months, and finally the questions relating to the baby's birth and first few days of life. Similarly, the mother should be asked first to tell about her own present diet (in this case recorded under Food Habits during Lactation on Schedule 4) then concerning her care and diet at delivery and in the early postpartum period, and finally information concerning her health and food habits during the pregnancy which resulted in this baby.

Ideally, one would have the first interview during pregnancy and follow with records of interviews obtained periodically after the birth of the baby. To gain an idea of the present situation and practices in the village more rapidly, however, parents of infants under one year of age should be asked to furnish information about the infant's earlier history, including the mother's diet and condition prenatally.

The date of interview, in relation to the date of birth, indicates whether a given series of answers relate to the situation at the time of interview, or to an earlier situation, described from recall.

Schedules 4 and 5 relating to a given infant should be identified by the same Roman numeral, as I, in the upper right hand corner. Schedules 5, relating to other children under 3 years of age, from the same mother, should be identified as II, III, etc. An example follows showing information to be obtained at each of 3 interviews with the same mother when the first interview is held during pregnancy and she has two older children under 3 years of age.

Description of Items on Schedule 4.

Date. The date of first interview was entered on line 1. 125 124

1-3. Identification. Name of woman, name of husband, and their residence.

4. Years of marriage. To avoid embarrassment in cases where there had been no legal ceremony, the question was phrased to mean "How long have you had a house?"[1]

5. Present pregnancy. The woman's own estimate of the duration of the present pregnancy in months.

6. Pregnancy, illness during. The physician asked questions,[1] recorded description of symptoms, and commented on nature of illness.

7. Objective signs of deficiency. If the woman's complaints suggested dietary deficiency, the physician examined the patient for objective signs such as absence of knee jerk, changes in hair, skin, eyes, lips, tongue, gums, etc. and recorded his findings or dictated them to the recorder.

8. History of malaria, beriberi, tuberculosis and other disease. The physician asked questions which would lead the patient to describe past illnesses. Advanced symptoms of the diseases listed are sufficiently marked and characteristic to permit the patient to describe them so that the physician would recognize them with reasonable certainty. Furthermore they have a direct bearing on the nutritional history. Under "other disease" such items as chronic diarrhea and symptoms of diabetes were entered.

Postpartum interview, date. If the first interview was obtained during pregnancy, this date was different from the one above. If the first interview was after the birth of the child, this date was the same as the one above. From this date and the date of delivery, one can tell whether the information obtained was recent or recalled, and if recalled, from what time in the past.

9. Delivery.

a. Date. If the delivery was very recent the recorder could ascertain the day of birth (as last Friday) and record it at once according to the Western calendar. Otherwise, the date according to the Thai calendar was recorded, and this was later translated.

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1. The investigator decided on an appropriate way to phrase each question and used the same words consistently.

125
124 b. Where. This was designated as "home", "Mother's home", "midwife's home", etc.

c. Type. Anything unusual about the delivery was noted; otherwise it was considered normal.

d. Confined by. If a local midwife attended the mother, the midwife's name was given here. If a nurse, midwife, or physician from outside the village attended the mother, this fact was noted.

10. (2)juu (1)faj.

a., c., d., e., f. The custom of having the mother rest for a number of days in front of a fire is an old one in Thailand. If the mother was visited while she was still resting, the wood fire, if used, was in evidence. If not, the mother was asked if she was using a hot water bottle, hot ashes chamber, or other heating device. From experience one infers that those who do not actually have a wood fire but who used a hot water bottle or hot ashes chamber may reply either "no" or "yes" to the question apparently depending on their attitude toward the practice. If they considered it a good custom, but inconvenient, or if they were hesitant to break with tradition, they might regard the hot ashes chamber or hot water bottle as a modern form of (2)juu (1)faj and therefore reply "yes". If, however, the mother considered the practice of (2)juu (1)faj old fashioned, she might reply "no", yet be using a hot ashes chamber.

b. Days rest. The number of days of comparative rest was recorded. If the mother observed (2)juu (1)faj, this was the same as the days (2)juu (1)faj.

g. Activity. This item was included because of some concern on the part of the instructor in midwifery at the Maternal and Child Health Center in Bangkok because some mothers were relatively inactive, lying on a board before the fire for a number of days. If the mother sat up, went to the latrine, or got off her bed to get things for herself, this item was checked.

h. Bathing. Some mothers did not bathe but had their bodies rubbed with tumeric. This item, suggested by the midwife at the Maternal and Child Health Center in Bangkok, was included to see whether or not there was any general feeling that the mother should not be bathed.

11. Medicine. In our preliminary interviews we learned that mothers often took medicine after childbirth and that frequently this was mixed with liquor. This item was included to learn which medicines were most commonly used and the extent of the practice of taking medicine with liquor at this time.

12. Water. Contaminated water is a possible source of disease in Bang Chan. This item was included because we learned from preliminary interviews that during the (2)juu (1)faj period special precautions might be taken with respect to the source, treatment, and temperature of water consumed by the mother and baby.

13. Milk stimulation. How. In our early interviews we encountered several cases in which we were told that the child was not put to the breast because the mother had no milk. Medicine, local applications to the breast, and certain foods reputed to stimulate milk flow were all used. We wished to know what, if anything, was done with the idea of milk stimulation specifically in mind. 125 124

14. Colostrum. In our early interviews we encountered some cases in which the first mammary secretion was considered unsuitable for the child. It was expressed and discarded. Any ideas as to whether or not colostrum was good for the baby were entered here.

15. Complaints. The physician asked "How, how do you feel?".

16. Objective signs of deficiency. Same as item 7, except that this question related to the post partum period.

Food Habits. The date of interview was entered in the appropriate space, A, B, and/or C. These dates might all be different if the first interview occurred during pregnancy, or they might be all the same if the interview were held during lactation and information concerning food habits during pregnancy and postpartum obtained by recall. Items 17-38 included the categories of food which were noted in the dietary records obtained in 1948-49 (Sharp et al.,1953), grouped roughly according to nutritive value. Frequency with which a given type of food was eaten was indicated by checks in columns labeled: D (daily), F (frequently, i.e. not every day, but at least every week), O (occasionally, i.e. at relatively long intervals) and N (never). Items in these latter categories might be so placed because they must be purchased and were relatively expensive, or because the individual did not like the food. In the latter case, the recorder wrote in D for "dislike" following the item. Note that item 27, Foods disliked, refers to aversion to a given type of food at this period but not always.

17. Rice. See Glossary, p. 51, for description of these preparations.

18. Fish.
a. Fresh
b. Dried
c. Salted
These three categories were included since in preliminary interviews we found that at some times one form might be used to the exclusion of the others; also, salted fish is used in very small amounts. Thus if salted fish only were used during (2)juu (1)faj, this category would be checked. If, however, fish was eaten daily but the fish might be sometimes fresh, sometimes dried, or sometimes salted, the appropriate categories were bracketed together under the appropriate column and one check mark entered.

125 19. Egg.

124 20. Poultry.

Most farmers in Bang Chan raised poultry, but in many households most of the eggs produced were sold. We wished to know whether these foods, though a cash crop, were used by mothers.

21. Meat
a. Pork. Few farmers in Bang Chan raised hogs. Pork, if eaten, was generally purchased.
b. Beef, dry.
c. Beef, fresh

In Bang Chan "beef" usually meant water buffalo meat. If an animal died, some of the meat might be consumed fresh and the rest dried for future use.

22. Vegetables.
a. Green. In this category were included the green leafy vegetables such as swamp cabbage but not items such as green egg plant which although green on the outside are not rich in carotene.
b. Other. All vegetables other than the green leafy ones were included in this category.

23. Fruit.
a. Bananas. Since they were grown by all farmers in Bang Chan, were placed in a separate category.
b. Coconut. Was used frequently in the form of coconut milk and coconut cream in food preparation. Since coconut was one of the chief sources of fat in this area, it was put in a separate category.
c. Other. If other fruit was eaten daily or frequently, the kind of fruit was entered under the appropriate column.

24. Legumes.
a. Dry beans, peas.
b. Peanuts.

Although, according to the records obtained in 1948-49 (Sharp et al., 1953) dry legumes were seldom used in Bang Chan, increased use of legumes had been suggested as a means of increasing both protein and thiamine in the Thai diet. We had also observed dry beans of several varieties for sale in the village, and we wished to get some idea as to the extent to which they were used.

25. Other foods. The most frequently mentioned "other foods" were sweets. 125 124

The interviewer usually began by asking "what foods do you eat?" or "During pregnancy what did you eat?". After the informant had replied, he would ask about specific food categories not mentioned by the informant to be sure they had not been forgotten, then would sum up the information before going on to the next question.

26. Foods craved.

27. Foods disliked.

28. Foods believed to be good for.

29. Foods believed to be bad during.

Items 26-29 were included to get information on beliefs and reactions toward specific types of food during pregnancy, the postpartum period, or lactation. Such ideas might either favor or hinder the introduction of any changes in diet which might be considered desirable.

30. Relation to usual diet. The interviewer asked how the diet at this time compared to the mother's usual diet.[1] The reply was usually entered as "same" or "restricted." If "restricted", items listed under 29 "believed to be bad during" indicated changes from the usual.

Initials of the interviewer and recorder were entered under the appropriate column (as pregnancy, postpartum) and the name(s) of the principal informant(s) entered below.

At the conclusion of the interview the recorder rechecked the Schedule to see that all appropriate spaces had been filled. To indicate that a question was asked or an examination made but the answer or results were negative, a zero was entered. Thus if the mother said she had not been ill during pregnancy, a zero was entered after item 6. If the physician examined for objective signs of deficiency but found none, a zero was entered after item 7 (for pregnancy) or after item 16 (postpartum).

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1. The investigator decided on an appropriate way to phrase each question and used the same words consistently.

125
124 Description of Items on Schedule 5.

1-6. Identification. (Same as for schedule 4).

7. Complications of delivery. The physician asked "Was it easy to deliver?"[1]

8. Condition at birth. "How about the condition of the baby after delivery?"[1]

9. Eye prophylaxis. "Were drops put in his eyes early?"[1]

10. Condition after birth.

a. Convulsions. "Did the baby have convulsions soon after delivery?"[1]
b. Vomiting.
c. Diarrhea.
d. Fever.
e. Other.

Symptoms, especially those associated with or which might lead to nutritional disorders in young infants, were listed so that answers might usually be recorded by a check mark, if the symptom was present, or a zero, if absent. Small spaces were left for writing in comments, if necessary, as well as a space for occurrence of other symptoms in the infant.

11. Smallpox vaccination.
a. "Has the baby been vaccinated?"[1]
b. "What was the age of vaccination?"[1]
c. "Was it successful?"[1]

12. Physician's comments on first examination. If the interview was held within a few days after birth, the physician's comments on the condition of the baby were written here. In practice, comments were recorded only when the baby appeared to depart from the normal in some significant way.

13. Early treatment of baby.
a. Medicine. If the new born baby was given medicine, either purchased or prepared at home or by the midwife, the nature of the medicine was noted.
b. Food and water. Here the recorder noted the kind of food, if any, which was offered before lactation was established; also the source and treatment of water given as "boiled rain water", "boiled canal water", etc.
c. Put to breast. (day and time). The physician asked when the mother began to breast-feed her infant. If she

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1. The investigator decided on an appropriate way to phrase each question and used the same words consistently.

said this was on the 3rd, 4th, or 5th day after the baby was born and that she did not let him suck at all until she had milk, a check in the appropriate blank was used to answer the question. If, however, the baby was put to the breast before the milk flow was established, the number of times this was done was entered in the appropriate space. Thus, a mother might put the baby to the breast once on the second day and frequently on the 3rd or 4th days. 125 124

14. Cradle, ventilated. A number of different types of cradles are found in Bang Chan, i.e. those woven of fiber, those made of wood with slatted sides, those with a wooden frame and string side, and those of cloth. If the cradle was in evidence the recorder checked yes or no according to whether or not it allowed fairly good circulation of air about the baby.

15. Cultural Customs.

a. Offered to spirit. The custom of offering the baby to the spirits was noted during the 1948-49 study. This item was included to find out how common this practice was in Bang Chan.

b. By. The name, or relationship, of person offering the child to the spirit was noted here.

c. Items on tray. If the child was offered to the spirits, it was customarily put into a winnowing tray together with various items which were supposed to influence its progress and well-being in later life. For example a pencil, exercise book, needle and thread (for a girl) were frequently placed on the tray. The tapered bamboo used by the midwife to cut the cord, and the clod of earth or the rhizome on which the cord was laid at the time of cutting, were also put on the tray.

If the interview was carried out at the time when the baby was on the tray, interviewers noted and recorded items actually on the tray with the baby. If the interview was carried out at a later date, the interviewers asked what was placed on the tray. Should the informant fail to mention any of the common items used, the interviewer asked about these specifically, i.e. "Did you put a pencil on the tray?", "an exercise book?" to be sure that the informant had not forgotten to mention the item. Comments of interest made by informants with respect to this custom were recorded here if there was space; otherwise they were noted in the interviewer's notebook.

d. Head shaved. This was usually done at about one month of age. Concerning infants this age or older the interviewer asked about the head shaving (which might be obvious). If the head had been shaved, the age at which this was done, by whom, and whether or not there was any attendant ceremony were recorded.

On the lower half of schedule 5 were spaces for recording 4 interviews (A, B, C, and D) concerning the child's feeding, together with information on age, length, and weight on the date of each interview.

125 16. Age. Age was obtained from the birth date (item 4) and was figured by a member of the team according to the western 124 system.

17. Length or height in cm. Height was measured on a locally made wooden measuring device hinged so as to fold (4 sections, each 50 centimeters long) and provided with a sliding set square. Divisions on the scale were burned into the wood. An infant was measured by putting the device on the floor and placing the baby on it. The knees were pressed down so that the backs of the knees were in contact with the scale. One of the research group then placed a flat-surfaced object such as a book perpendicular to the scale against the soles of the feet, while another brought the set square in contact with the infant's head. The readings at both feet and head were recorded and one was subtracted from the other to determine the length of the baby.

Measurements of babies are less exact than for older children, since babies often squirm and struggle during the measuring procedure.

18. Weight. Babies were usually weighed on a scale with a capacity of 15 kilograms in 50 gram divisions. The baby was placed on a pillow or cloth on the platform of the scale and the weight recorded. The pillow or cloth and any garments which had been on the baby were then weighed and this weight recorded. The second weight was subtracted from the first to obtain the weight of the baby.

During the dry season, when boat travel was not possible and visits to the households had to be made on foot, only a bathroom scale was carried. An infant was weighed in the arms of an adult, and the weight of the adult subtracted from the total. Divisions on this scale represented one-half kilogram, but values could be interpolated to one-fourth kilogram. No very young infants had to be weighed on this less exact scale.

The weight of the babies and young children can be considered as approximate only. No attempt could be made to weigh the baby just before a feeding or just after excretions had occurred as could be done with older children. The observed weight of an infant or young child at any given time is affected by variations in these conditions. Nevertheless, the recorded figures give a reasonable idea of the size of Bang Chan infants at various ages, and the rate of growth of an individual child.

Food eaten by the child was recorded by checking the appropriate column, D (daily), F (frequently, i.e. not every day, but at least every week), O (occasionally, i.e. at

relatively long intervals) and N (never). If the informant volunteered that a given food was never eaten or only occasionally eaten because the child disliked or refused it, this information was noted. 125 124

19. Mother's milk.

20. Cow's milk. If cow's milk was being fed to the baby, the brand and type of milk (as Bear brand condensed, Bear brand dried, etc.) was written in the space allotted to the interview together with a check indicating frequency of use.

21. Water.

a. Boiled. If the baby was given boiled water daily or sometimes, the appropriate column D, F, or O was checked. If raw water was used, this item was checked N (never).

b. Rain.

c. Canal. Items b and c indicated the source of the water which might be used either raw or boiled as noted under a.

22. Rice. See glossary, p. 51, for description of these preparations.

23. Banana.

a. Since (3)kluaj (4)nam-(4)wa is a type of banana frequently used for baby feeding this was named specifically.

b. Other. The name of any other types of bananas used was entered in the appropriate column, with a check indicating frequency. Thus, if on second interview the interviewer learned the (3)kluaj (3)hauam were given occasionally, "hauam" was written in the B column opposite "other" and a check entered under "O".

c. Crushed.

d. Baked.

e. With Rice. Items 23, c, d, and e represented ways in which bananas were frequently prepared for infant feeding. If the interviewer learned that other methods were used, these were described separately in the field notes with a marginal footnote on schedule 5 to call attention to this.

24. Vegetables.

a. Green. In this category were included the green leafy vegetables such as swamp cabbage but not items such as green egg plant which, though green on the outside, are not rich in carotene.

b. Other. All vegetables other than the green leafy ones were included in this category.

25. Fish.

a. Fresh.

b. Dried.

c. Salted.

125 124 These three categories were included since in preliminary interviews we found that one form might be considered appropriate and another inappropriate for a child of a given age. Thus, if fresh fish were given daily or frequently but dried or salted fish were never given the child, this could be recorded. If, however, the child were given any type of fish which was prepared for the family, the appropriate categories are bracketed under the column in which the interview was being recorded and a check entered to indicate frequency.

28. Egg.

27. Poultry.

Most farmers in Bang Chan raised poultry but in some cases most of the eggs produced were sold. We wished to know whether these foods, though a cash crop, were used in baby feeding.

28. Meat. If meat was fed to the baby, the type, as pork, dry beef, fresh beef, was indicated under the appropriate column.

29. Other fruit. Two spaces were left for fruit so that if fruits other than bananas were given to the baby with any degree of frequency, the name(s) of the fruit(s) might be entered.

30. (2)kha-(5)nom. This term, used rather generally for sweets, crackers, etc.,was included as a category since we learned in our preliminary interviews that some parents gave (2)kha-(5)nom to children at a fairly early age. Two spaces were allowed so that the names of (2)kha-(5)nom commonly given to a child might be entered.

31. Exposure to sunlight. Several considerations led to inclusion of this item.

a. The teacher of midwifery at the Maternal and Child Health Center in Bangkok told us that some Thai mothers whom she had observed tended to put the child in direct sunlight facing the sun. She believed this to be bad for the baby's eyes and also to cause the baby to perspire overmuch. Mothers might then wipe perspiration off the baby with soiled clothe. She believed this to be a factor in the skin infec - tions seen in babies.

b. The reported high incidence of bow legs among children in the Bang Chan primary school and elsewhere in Thailand, which Dr. Woog (1939) attributed to unsuitable diet for infants and small children and to the practice of encouraging babies to stand and walk prematurely, might also be related to inadequacy of vitamin D. In Bang Chan, many houses had low hanging eaves which permitted little access to sunshine unless the baby was taken outside the house.

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32. Foods good for baby. 125
124

33. Foods not good for baby.

Items 32 and 33 were included to get information on beliefs and reactions toward specific types of food during infancy and early childhood. Such ideas might either favor or hinder the introduction of any changes in diet which might be considered desirable.

34. Teaching baby to eat. Techniques used in introducing new foods into the child's diet were entered here or reference made to more complete writeup in the interviewer's notes.

35. Weaning procedure. When a young child (under 3 years old) had been weaned, the informant was asked how the weaning was accomplished. Age at weaning was also entered here.

36. Age at which baby eats adult food. This was interpreted to mean that the child eats all types of food which adults in the family eat.

37 and 38. Circumcision. This question was later found to be inappropriate for this age group. In Bang Chan, Moslem boys were circumcised at about 11 years of age.

Initials of interviewer and recorder were entered in the appropriate place on the line marked "interviewed by", and the name(s) of the principal informant(s) entered below.

4:Phillips E-4,5 (1956-1957) 1966
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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their cooperative labor mount up on the threshing floors. The sense of familial solidarity and interdependence, and its associated feelings of love, is experienced by all.[10] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[10] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp et al. 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, interdependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

4:Phillips E-4,5 (1956-1957) 1966
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as do rejected lovers who fear suffering again. Without strong bonds, they develop no sense of guilt for those they injure and stand ultimately responsible only to themselves, individuals among individuals who differ mainly in the amount of influence they wield. Thus Dang [the informant] can make demands of others but feels little obligation toward them. As he left his father and uncle with scarcely a second thought, so others can leave him. Of course, as was indicated by Dang's projective test data, this form of individualism is not entirely without its psychic toll. But on the level of action and conscious decision, the moral for a Thai runs: invest not thy love in a shadow.

The piece by this writer (Phillips, 1959) is essentially an amplification of some of the findings of the above paper and a confirmation, in the life histories of two other informants, of their typicality. The paper was confined to an examination of the development and expression of the needs for dependence and independence in the lives of these villagers. Three major points emerged from the analysis. First, the most common expression of dependence was in the area of subsistence and economics, in the individual's desire to attach himself to others who would give him sustenance in return for services rendered. Over and over again, the informants viewed their relationships with other people, particularly kin, in terms of the others' economic value to themselves. However, this mode of dependence was not so much an overriding compulsion as it was a basic postulate about human relationships: the measure of another person's love was explicitly the degree to which in material terms he served the self. The second point, in contrast to the above, was that marriage was seen as the means by which a person could free himself from the obligations of economic dependence. This freedom has two aspects: freedom from the frustrations caused by others; and freedom to set oneself up as master of one's own household, thus reaping the psychological satisfactions—status, power, and prestige—of having others dependent on oneself. The third and perhaps most striking point concerned the fact that all these informants spent their childhoods being shuttled from one family to another. Although this experience may not have been culturally modal, it occurred with sufficient frequency to be a possibility for every Bang Chan child. It was further suggested that in part such experiences taught villagers at a very early age that they had to fend for themselves, and that the experiences served as psychological prototypes for the sense of fragility of social relationships that is so characteristic of village life.

In contrast to most of the literature cited above, the last two articles are based on data which are products of interviews heavily weighted toward the psychologically expressive. Two of the informants admitted that they told us things that they had never shared with anyone, and the agitation (a

4:Phillips E-4,5 (1956-1957) 1966
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non-histrionic agitation) [9] with which they reported some of their experiences suggested that this was indeed the case. I mention these considerations because the kind of material to come out of the interviews was perhaps not what one would expect from typically affable, easygoing Thai peasants. However, it must be recognized that the material focused only on the private sector of their lives, and indeed a very narrow area of this sector. Thus, although the articles may have been more analytic than previous efforts, they were also considerably more limited in scope.

I have attempted above to describe and evaluate almost all the available literature on Thai personality. There are a few additional sources which might be cited (Ratanakorn 1955, Boesch 1956, Mosel 1957), but their major concerns seem so tangential to our present purposes that it would add little to discuss them. By way of summary, the following points should be noted. The Thai language psychological literature is for the most part an unself-conscious, non-analytic folk literature, and as such is a rich source of data rather than a source of ideas on Thai personality. Illustrations of the value of the literature as data were provided in the text. However, since these data are primarily the product of an urban literati it is difficult to determine precisely to what extent they are also descriptive of peasants, although many of the traits reported seem apposite. There are no psychologically oriented Thai language essays dealing exclusively with villagers. The English language literature tends to be more analytic and broad-ranging in its concerns. Excluding Tirabutana's autobiography, these efforts seem to fall into one of three categories: (1) itemizations of manifest traits with little attention given to the psychodynamics involved (Thai psychologist, Phillips in Cornell Thailand Handbook, Textor); (2) sensitive psychological reflections on incomplete or specialized ethnographic data (R. F. Benedict, leMay); and (3) analyses of a limited set of private psychological issues from a few informants. (Hanks and Phillips, Phillips).

Psychological Dimensions of Village Interaction

Most personality portrayals proceed either by discussing how people behave in terms of a specific set of analytic issues, such as aggression,

[9] This is important simply because when opportunity permits—and the life-history situation is clearly such an opportunity—villagers love to tell a good story: full of histrionics, feigned exaggerations, and emotional flourishes. However, our informants were not given to theatrics during the interviews; on the contrary, they tended to tell their stories with an almost poignant seriousness. The fact that we were the first people ever to take such a direct, personal interest in them as individuals played a crucial role here. Being asked to reveal for the first time how they felt about their early lives, their families, and themselves was cause not only for pride but trust, and they often used the interviews as a way of unburdening themselves.

4:Phillips E-4,5 (1956-1957) 1966
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123 friends" never numbered more than eight or ten people, out of a total population of 1,771.) Although their opinions differed in detail and covered a considerable range, they seemed to agree that I had a *good heart*. One villager said that he knew I had a good heart because children like me, "and children are only attracted to people who have good hearts." On the other hand, another more critical person said that my personality was just like that of a child, "because he always shows his feelings. He does not know how to be cool." The contrasts the villagers saw between myself and other researchers were particularly instructive. Of another field worker, an informant said: "he is not a kind person like *Aacaan* Herb, but he knows how to treat people in the Thai way. *Aacaan* Herb does not know how. He laughs too loud and does not use flattering words. He does not help me as much as the other person either." Yet, in contrast, another villager said: "I like *Aacaan* Herb because he likes me. He tells funny stories. He is not like some of the other *farang* who leave as soon as they get information from you."

123 The ultimate importance of these personal assessments are not easily
124 determined. One villager perceptively noted, for example, that although
[115] the "boss" of the Cornell team was a "good person," it really did not make any difference whether he was good or bad "because he is the 'boss' and bosses have to be respected." Of more direct relevance to the research was
[125] the fact that those individuals whom I counted among my warmest friends were not necessarily my best informants; in fact, some became inordinately anxious and evasive while taking the Sentence Completion Test and TAT. On the other hand, some villagers whom I had never seen before responded to these tasks with obvious enthusiasm. Even the villager who complained about my having wasted his time was a good informant, in the sense of appearing stimulated by and genuinely involved in responding to the sentence cues. It is clear, however, that villagers who liked me were the most approachable of informants, and were more ready, at least initially, to acquiesce to interview requests. The crucial factor here may well be the difference between responding to the field worker versus responding to the research; that is, even though all the respondents were originally induced into being interviewed as a favor to me—and their willingness was in part a function of how much they liked me—such favors did not necessarily carry over to the substantive purposes of the interview: reacting to my queries in a concerned and committed way. Thus, some informants went through the entire interview experience carefully fulfilling the interpersonal "obligation" but all but ignoring its content; others were so stimulated by the content that their initial attitudes toward me, positive or negative, became largely irrelevant. The vast majority of informants of course fell between these two extremes; and in no case were either the interpersonal or substan-

4:Phillips E-4,5 (1956-1957) 1966
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tive considerations completely ignored. In this regard, it must be remembered that for much of the research I was dealing with informants who were selected not for their readiness to give revealing information but for their social psychological representativeness as adult Bang Chaners. Under such conditions, it was inevitable that there should be people who cared little about me or my purposes, just as there should be people who felt the precise opposite. 123 124

One aspect of the villagers' attitudes deserves special mention. This concerns their perception of me as an *aacian*, or "teacher." This perception had significant effects, both positive and negative, on their behavior during the interviews. On the positive side, many informants were genuinely flattered by being asked for information that would contribute to "knowledge." Precisely how their thoughts and opinions might contribute to "knowledge"—or as I sometimes told them, "science"—was not too clear in their minds. But the fact that I was a "teacher" who had crossed the seas and would spend months asking them questions clearly indicated the seriousness of my business. This definition had a marked influence on their whole orientation to the interviewing situation in that they generally approached it with an attitude of earnestness, and on occasion, even solemnity. In fact, my "rapport time" with informants was very often spent in trying to mitigate their expectations about the interview so that they would respond to the substantive questions in a relaxed and easy manner. Usually these efforts were successful and the interview proceeded as a well-balanced combination of seriousness and *sanug*. The most frequent comment of informants after the Sentence Completion interviews was, "It was much easier than I thought it would be." On the negative side, however, informants would sometimes use their solemn definition of the interview as a means of resisting participation in it. Their resistances would take the general form of pleading that they were only ignorant peasants who did not know much about anything; that if I wanted a "true" picture of the way peasants "think," I ought to see more intelligent informants; that their information would "spoil" my results, and the like. Again, I was usually able to allay such protestations by emphasizing the simplicity and "sanug-fulness" of the experience. However, sometimes informants took me literally and produced responses which were "simply" literal restatements of what I had asked them or which had no intelligible relationship to the questions. Once, when I stopped an interview to clarify my purposes, an informant asserted, "But I am giving you simple answers"; in another instance the informant smiled wryly and said, "But I told you I was not very intelligent." A few informants were genuinely interested in the interview but simply lacked the wherewithal to deal with the material. If asked, however, to make a judgment on whether the villagers' perception of me as

4:Phillips E-4,5 (1956-1957) 1966
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123 a "serious-minded teacher" generally worked to the advantage or disadvan-
• 124 tage of the research, I would definitely answer, "the former."

114 Perhaps even more important than the villagers' attitudes toward the author were their attitudes toward the Thai field assistants who worked with me at various times. It was through the field assistant that many villagers had their actual contact with the research and through him (or her) that I obtained a large part of my data.[1] Because the role of field assistant requires such distinctive qualities—"competence" in a foreign language, willingness to work with peasants and an appreciation of them, a desire to learn the way "other people" live—it was not easy to obtain or retain individuals to work with in Bang Chan. In a country such as Thailand where the term "social science" was virtually unknown until a few years ago, the position of "research assistant" simply offers no occupational future. Consequently, I had six different assistants working for me at different times during almost two years in the field. Two of these individuals were with me for less than three weeks. (One left the rice fields of Bang Chan for a position at the Thai Embassy in Rome; the other just did not like peasants.) Two were extremely able female graduate students in Education who worked only on Sundays and holidays, primarily with the younger village women. Out of both loyalty to me and a genuine interest in, almost love for, the villagers, they stayed on until the research was completed. The fifth, my major assistant, took three months to find, but he remained with me for fourteen months. When he left to work in Burma ("because I have never been to Burma") his place was taken by a very competent and sophisticated assistant district officer whom I "borrowed" from the Ministry of Interior. This last chap saw me through the life histories. Although he was excellent in the highly personalized setting of the life history interviews, his polished urban manner would have been too overbearing for the majority of informants during the earlier, more sensitive stages of the research. While this coming and going of field assistants,

12 [1] During the early stages of field work I was completely dependent on my assistant-
114 translators, despite six months language training prior to leaving for the field. Later, I gained enough control over Thai to participate actively in the interviews. In order to minimize translation errors, however, it was decided to conduct and record all formal interviews (those involving the Sentence Completion Method, TAT, and life histories) completely in Thai, and translate later. The reasons for this are more fully discussed below. In effect, this meant training the assistant to carry the burden of the Sentence Completion interviews, the first large block of the research. By the time we reached the life histories, the interviews were taking the form of the informant replying directly to both myself and the assistant. All formal interviews were based on carefully prepared schedules, including even such matters as instructing on seating arrangements. Only a portion of the total data of course came from these formal interviews. All the preceding materials, for example, were based directly on my own observations, or on the small but crucial verbal events that occurred outside the interviews and which actually comprised the interactive substance of day-to-day life.

4:Phillips E-4,5 (1956-1957) 1966
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("we" or "generalized I")[9] and *khon raw* ("we people"). However, I used two other terms, *khon* ("people") and *khaw* ("he," "she," or "they") in those items most descriptive of the expression of ego-alien sentiments: that is, those sentiments which, on the basis of my knowledge of the villagers, I expected to be most readily denied as being self-referring. Thus, an aggression item read: *"Khon most often get angry when . . . ,"* instead of *"Raw most often get angry when. . . ."* To simplify matters for the reader, later SCT materials which list both the original English language item and the English translation of the Thai translation will also include the Thai pronouns that were used in the various items.

The third stage of the SCT construction involved the pre-testing of the SCT schedule with ten villagers. A major aim of these trial interviews was to examine the quality of all the items. I was particularly concerned with how well informants understood the items and with identifying those items which interested them, those which required revision, those which brought forth revealing material, and those which elicited useless information.

The second purpose of the pre-test was to train my assistant in how to conduct the SCT interviews. Of principal concern was to try to minimize the effects of the interpersonal situation on the informant. Such effects can never be fully cancelled out, but they can be controlled to the extent of insuring that the data obtained represent the informant's product, not the product of ideas the interviewer might introduce into the situation. The major task of the training period, therefore, was instructing of the assistant in elementary interviewing techniques.[10]

The instructions also included such considerations as seating arrangements: try to locate the informant so that the canal—where people paddle by and can be waved to—is in our line of sight, not his. Ideally, he should be able to observe only the interviewers. If interviews are to be conducted in boats (later, eight of them were) the boat should be pulled off into one of the canal tributaries to minimize the disturbance from canal traffic. In general, privacy can be obtained by telling informants that since we wanted

[9] *Raw* as a "generalized I" is not as ear-catching in Thai as it is in English. Thus, although *raw* can always mean "we," it is a perfect synonym, not a substitute, for "I" when the speaker wishes to indicate less self-reference. Another way of putting it is that when it is used to mean "I," the ordinary "we"-"I" contrast is psychologically inoperative; *raw* simply becomes an attenuated form of "I."

[10] The techniques which I had the most difficulty impressing on my assistants concerned such seemingly simple matters as the following: never afford the informant any hint of a response; if his first few responses are wild, repeat the instructions, and pick up the interview where it was left off, adding the items with the strange responses at the end; do not hesitate to encourage the informant with comments such as "that is fine"; if the informant gives funny responses, smile but do not laugh; if he is hesitating too long on an item, simply repeat the item as a prod; if he does not respond after three repeats, go on to the next item, and the like.

4:Phillips E-4,5 (1956-1957) 1966
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124 each person's own ideas, not those of other family members, it would be best to find somewhere we can be by ourselves.[11] Every informant in the sample eventually accepted our request for privacy with complete understanding. Also, it was usually easy to find an isolated spot: underneath the house, a buffalo shed, in a grove of trees, or if necessary in the boat. 124 However, because Bang Chan notions of privacy do not apply to children, 858 approximately one-third of the interviews were conducted with children in attendance at one point or another. The first time a child appeared, we made an attempt to shoo him away. This, however, was usually futile: he would leave and then return; only the boredom of our adult conversation would eventually drive him away. In the case of nursing children, we would always wait until the mother was free, although if the child wanted the breast during the interview we would simply continue and "ignore" his presence; his mother seemed to, at least at the conscious level.

124 One of the more important administrative tasks of the pre-test was to try *125 out various instructions that would be given to *informants* on how to take the SCT. During these trial interviews, we experimented with various versions of the "introductory remarks" and settled on the following as the version to be used with our final 111 informants.

124 After explaining to the informant that we had come to chat, and after 123 having chatted (which varied from ten minutes to two hours, depending upon the subject matter and the mood of the informant) we reminded him that I had been sent to Bang Chan by Cornell University to study the life and thought of the Thai people: "My professor sent me, and when I return to America, he will examine me on the information that I have gathered. So I would like to ask you for your *personal* help. I know that you can help me and can give me a true picture of the life and thought of Thai farmers. And [with a giggle] I think you can help me pass my examination." At this point, during the regular interviews, I would remind the informant that a few weeks earlier the abbot of Monastery Bang Chan had, on a ceremonially auspicious day, supervised the lottery from which the names of my informants had been selected: [12]

> *Aacaan* Phuang supervised the ceremony and your family was one of the families chosen in the lottery to be interviewed by me. Both *Aacaan* Phuang and I thought that this was the best way to select

* [125] [11] Informants were also asked, on the same grounds, not to reveal the items or their responses to other villagers. We are certain that there were several who ignored our request—not out of malice but simply because it was not that important to them. However, since there were so many items on the schedule, covering so many different areas, I doubt whether their reports to other potential informants biased our results in any substantial way.

[12] I am indebted to Robert B. Textor for having originally suggested this method of selecting part of my sample.

4:Phillips E-4,5 (1956-1957) 1966
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families if I am to obtain the true picture about the people of Bang Chan. 124

I have something here that is like a game or a puzzle. It is a list of sentences about things that happen every day in life; just plain, ordinary things. These sentences, however, are not complete sentences. They are only half sentences. I would like you to finish these sentences for me. For example, take the sentence: *"When it begins to rain, he. . . ."* I would appreciate your finishing this sentence with anything that comes to your mind. The only thing I ask is that your completion makes sense: that it fits with the first part of the sentence. 125* 124

You can make your completions as long as you want; the length of a sentence is unimportant. I want to tell you that with these sentences there is no such thing as a right completion or a wrong completion. All I would like is your own idea on what the completion should be. I expect that different people will give different completions, so all I want is your personal opinion.

I am going to ask other people in this family—except the children, of course—to complete the sentences. But we would like to ask each person one at a time, individually and privately. So I wonder if we can go somewhere where we can have privacy. But before we begin, why don't we try a test sentence. Tell me the completion of the following sentence: *"A boy, crossing a bridge, was showing off to a girl, and he fell into the canal, so he. . . ."*

The Selection and Nature of the Sample

The 111 individuals comprising the SCT sample represent an 11 percent stratified sample of the adult population of Bang Chan (persons over twenty years of age, or 989 of the 1,771 villagers) on four major variables: age, sex, religion, and economic status. The sample is based on a village census gathered by earlier Cornell University researchers and brought up-to-date by me during my first few months in the field. The economic status variable is based on judgments made by the seven hamlet headmen and fourteen assistant hamlet headmen living in Bang Chan, and thus represents an "inside," nonobjective view of a family's economic position in the community.

Several factors entered into the decision to select the sample on a quota rather than random basis. Most important was my decision to select informants from only two of the seven Bang Chan hamlets. This in turn was based on the need to save time. During the period that I was working on the census and traveling through all seven hamlets, I noticed that I was actually spending twice as much time on travel than I was spending with

4:Phillips E-4,5 (1956-1957) 1966
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informants. This was due to the widely dispersed nature of Bang Chan homesteads and to the fact that the headmen and assistant headmen for whom we were looking often were not in, requiring that we return a second and even a third or fourth time. (Appointments in the village can be made, but they are almost never kept.) There was no reason to suppose that regular informants would live any closer to the Cornell "Office," or would be any more homebound than these individuals. Since it was imperative to get on with the research, I decided to select the sample from the hamlet in which the "Office" was located and the one immediately adjacent to it. Although these two hamlets appeared similar to other Bang Chan hamlets in most respects, they contained a larger percentage of wealthier villagers, a smaller percentage of poorer ones, and more Moslems than did other hamlets. Since at the time I thought that wealth or religion might be crucial variables—for example, on such SCT items as *"The most important thing in his life is . . ."*—and since, if I had selected a completely random sample from these two hamlets I would probably have obtained too many Moslems or too few poor villagers, I decided to invoke quota considerations in the selection of informants. As it turned out later, after the data were gathered and examined, there were no notable differences in the responses of informants from different economic or religious categories to these and to most other items. This is one of the reasons that the data below are being handled in modal terms, rather than in terms of intra-sample differences. Also, my sample was much too small to consider such potential differences as anything more than heuristic. However, at the time I felt that it was necessary to have the representation on these particular variables absolutely correct.

Another factor pointing to a quota sample was the desirability of having some Buddhist monks as informants. Since on a random basis, the likelihood that any monks would have been in our sample was literally 1 in 296, it was decided simply to ignore chance considerations in order to include some of these individuals; seven of the SCT informants were monks. Similarly, there were other villagers with special attributes that I felt merited inclusion: the two male school teachers were two such individuals, as was the villager who had a reputation for being a *nagkleeng*. A young man who had been to Korea with the Thai army was also such a person.

To a certain extent, random factors did enter into the inclusion of a number of informants in the sample. This was one of the functions of the lottery, referred to earlier, conducted by the abbot of Monastery Bang Chan. However, the persons chosen by lot served mainly as a "core" group from which to select those individuals who would fulfill the criteria that had been established. When the persons in this group had been exhausted

4:Phillips E-4,5 (1956-1957) 1966
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in terms of meeting these criteria, or when they were no longer available,[12] I went to other villagers. All told, 64 percent of the sample (72 of the 111 informants), equally divided between the two forms of the SCT, were chosen from this "core" or randomly selected group.

[12] During the SCT portion of the research, 20 percent of the households originally selected for interviewing in the lottery in effect dissolved. Note that the units of the lottery were households, not individuals. The reason for this was twofold: (a) I had originally thought of the possibility of doing some intra-familial comparisons, and wanted to be sure I would have the data should such comparisons eventually appear worthwhile; (b) more important, because of the possibility that older members of families would feel affronted should I ask for their children rather than for them, it seemed advisable to have as many informants as possible from the same family unit. This consideration was not to be taken lightly. Some Bang Chaners, for their own peculiar reasons, felt honored to be interviewed by the *farang*. To enter their house, and then in effect ignore them because they were not members of the sample would have been an insult.

It should also be noted that although the purpose of the lottery was in part to select a portion of the sample, an even more important purpose was the religious sanction that it gave to the research in the eyes of some villagers.

4:Phillips E-4,5 (1956-1957) 1966
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[125] syntax is in our culture—and except for certain ritual occasions, perhaps in all cultures—one of the basic symptoms of psychopathy. Witness the "word salads" of hebephrenic schizophrenics and the "mental lapses" of aphasics. (See White 1948: 527; Brown 1958: 293; Goldstein 1948; and Jakobson 1957.)

On occasion some of our Bang Chan informants would ignore syntactic considerations and use the sentence cues as triggering devices for their own unanchored thoughts and preoccupations: *"When I realize other people do not like me, I feel . . .* that's happened to me sometimes. When you see that other people don't like you, you should avoid them. The Lord Buddha says. . . ." And then the completion might develop into a brief lecture on morality. At other times, the cue would trigger off an autistic explosion: *"His most unattractive quality is . . .* don't have anything to do with him! He is a wicked person. I do not want to speak to him. He doesn't talk sense. One day while I was fishing, he came along and asked me to have intercourse with him. I cursed him!" (Other data on this informant indicate that she was referring to her estranged husband.) These types of [124] "ungrammatical" responses seem to derive from the social aspects of the [123] interviewing situation—the informant has a friendly listener with a willing [521] ear and thus occasionally ignores the original definition of the SCT task to declaim on his favorite subject[3]—and also from the fact that in social discourse our Thai villagers seem to indulge more in, and have considerably greater tolerance for, autistic thought than do most Americans. That is, the villagers are more accustomed to making and hearing statements that have little apparent "objective" meaning (or in the language of psycholinguistics, "referential" meaning: Brown 1958: 315) but which are symptoms of inner states and preoccupations. The crucial point here is that a listener often does not know—or care—precisely what a speaker is talking about, but simply accepts the other person's utterances as expressions of inner, unknown concerns.[4] Such expressions involve the leaping over of connective thought and syntactic constraints (as in the above example of the lecherous husband) or indifference to the logical currents of the discussion.[5]

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[3] Sometimes his discussions are simply expressions of phatic communion—the desire to indulge in chitchat for its own sake. (See Malinowski 1923: 315; and Hockett 1958: 585.)

[4] It should be remembered that speech is not only a device for carrying on social [191] interaction but also a mechanism for articulating one's inner preoccupations, whether or not other people understand. It is this latter use (which, incidentally, is ontogenetically the more basic: Piaget 1932; and Langer 1942: 35) about which Bang Chaners seem particularly tolerant. In general, a speaker in Bang Chan is not held very responsible for what he says. One rarely hears in the village—except from prying anthropologists—such charges as "I do not know what you are talking about. Explain yourself." For one thing, such a query would not be particularly polite; and in the villagers' scheme of things, what a person says is really his own business, re-

admit in response to a direct question* that they have a debt. Confidence in the validity of these responses as an index of indebtedness is increased since the expected correlation between indebtedness and ownership of buffalo is reflected in the survey data.

TABLE 23. INCIDENCE OF REPORTED DEBT IS HIGHER AMONG VILLAGERS WHO REPORT OWNERSHIP OF MORE BUFFALOES

	Reported Ownership of Buffaloes		
	None (81)	One to three (155)	Four or more (97)
"...Do you now have a debt?			
Yes	49%	56%	69%
No	51	44	31

When the use of agricultural innovations is examined for those farmers who say they have a debt, compared with those who deny it, it becomes apparent that there is a relationship only between indebtedness and use of the motor but not with any of the other mentioned innovations. Seventy-nine per cent of the male farmers who said they have a debt own or use the motor; among those who claim they have no debt the proportion owning or using the motor is significantly less (60 per cent).

TABLE 24. INCIDENCE OF MOTOR USE IS HIGHER AMONG FARMERS WHO REPORT INDEBTEDNESS

	"...Do you now have a debt" Yes (125)	No (105)
Motor		
Has used it	79%	60%
Never did	21	40
Tilapia		
Has tried it	37%	33%
Never did	63	67
Fertilizer		
Has used it	14%	16%
Never did	86	84
Mushrooms		
Has tried them	45%	48%
Never did	55	52

**Male farmers only

* The question: "...I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?" Janlekha's M.S. thesis, ibid., reports a similar distribution of indebtedness for his sample of 96 farmers.

6: Goldsen and Ralis Z-4.5 (1955) 1957
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APPENDIX A

March 1956

HOW THE BANG CHAN SURVEY WAS CONDUCTED

How the Study Came to be Made

121 The survey conducted in May 1955 was part of a program* for testing diverse techniques of data-gathering in cultures substantially different from U.S. and Western European cultures, where the survey method of gathering data had been developed and tested.

114 The survey questionnaire was developed and the field work carried out with the help of area specialists of the Cornell Research Center in Bangkok. Mr. Robert B. Textor and Mr. Loebonga Sotabhaya of the Cornell Thai staff assisted the field director and recruited the English-speaking Thai university students who interviewed for the survey.

The Questionnaire

12 After a period of training interviewers about the questionnaire and techniques of interviewing, the questionnaire was pretested in a rural community near Bang Chan. Then the staff, consisting of the field director, his deputy, and five Thai interviewers, among them one woman, moved to Bang Chan to carry out the survey.

124 Thai and English-language versions of the schedule were drawn up, but of the 335 interviews conducted in the survey, 125 the overwhelming majority was conducted in the Thai language rather than through an interpreter.

The Interviewers

124 The interviewers were a mixed group: one Thai-speaking American anthropologist; one trained Thai anthropological field worker; two Thai Christians (one a theology, the other a medical student); one Thai Buddhist medical student, one Thai Buddhist female social worker; and an American sociologist who used the Thai interviewers as interpreters.

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[122] * The Cornell Cross-Cultural Methodology Project for the Development and Testing of Improved Methods to Study Underdeveloped Areas is supported by a grant from the Rockefeller Foundation and is a project in the Department of Sociology and Anthropology.

On the average, an interview took about 40 minutes. Interviews ranged from about 20 minutes to one and a half hours. During the first days of interviewing the duration of an interview was on the average a little longer, and decreased as the interviewers became familiar with the instrument. For the first four days of interviewing, the daily output of interviews amounted to an average of 23; from the fifth day on the daily average output increased to 32 interviews. 124 •

The survey focussed mainly upon factors associated with the acceptance or rejection of certain changes in the village. The questionnaire was designed to permit: (1) a check on whether a question was meaningful to the respondents in the sense of its analytic significance in the study design; (2) testing the relative analytic sensitiveness of different types of question and answer categories; (3) collecting data whose manifest content was identical to content which had been investigated in other field stations; (4) collecting data, which, while differing from the manifest content covered in other field stations, nevertheless, had the same conceptual significance in this particular culture analysis; and (5) collecting specific information of interest to the area specialists assisting the Methodology Study. 125

Sampling

Problems of sampling were minimal. The entire area previously studied by Cornell anthropologists, consisting of seven hamlets, constituted the universe from which respondents were to be selected. The sampling unit was a household, defined as a single person or a group of persons constituting an economic unit and customarily using the same kitchen. Interviewers were instructed to select the head of the household as respondent. The head of the household was defined as that resident whom other members considered to be the head. If the head of the household was unavailable, interviewers were instructed to substitute "an articulate member of the household," defined as a person in a given household eligible to substitute as head. The majority of the respondents (85 per cent) were the actual heads of their households; substitutions were made only in the remaining 15 per cent of the cases. Interviews were gathered from all but one of the 336 households in the Bang Chan area studied.

The sample obtained is composed of 243 males and 90 females, of 298 Buddhists and 35 Moslems. As far as ascertainable, the respondents reported their place of birth as follows: 125 621

140 were born in Khanhajaav Commune
116 were born in Bang Chan Commune
11 were born in Minburi Commune
30 were born outside of the three above communes

6: Goldsen and Rallis Z-4.5 (1955) 1957
AO7 Central Thai AO7

APPENDIX C

Cornell Methodology Project,
Bangkok
2 May 1955

Interviewer Guide

Bang Chan Survey 1955

I. INTRODUCTION 121

This survey is a multipurpose study. One of its objectives is to help determine HOW one can best use a technique such as a survey for community research in South East Asian villages. A survey is one of several techniques used in community research by Western social scientists. The study of a community permits to acquire knowledge about what is essential and important in the life of a village and town. Once a store of knowledge is available and described, the door is being opened for the introduction of innovations and improvements based on scientific knowledge and not based on hunches and speculative thinking. However, the instruments of social science research still bear great limitations. Life processes are the laboratory of research. Thus, dynamic processes are faced which make research complex.

Another objective of this survey is to study the meaning in a given cultural setting of variations in question wordings, different types of answer categories, and various types of questions in terms of question structure.

Finally, an attempt is made as well to collect some data from a typical rice village in the hinterland of Bangkok for supplementing cultural anthropological hypotheses and findings.

This interviewer guide is to assist the interviewer in his task. Here anticipated difficulties and weaknesses in this survey are brought to light in order to make it easier for the interviewer to avoid traps inherent in field situations. 125 124
First of all, it should be noted that replies to ALL QUESTIONS ARE REQUIRED. It means that a given number for each question or subquestion must be ENCIRCLED ON THE ANSWER SHEET OR THE RESPONDENT'S REPLY MUST BE REGISTERED IN THE PLACE PROVIDED FOR. Unless strict adherence to this rule is obtained from each interviewer, questionnaires will contain omissions and become valueless. Such questionnaires would signify a loss of effort, a loss of time, and unnecessary exposure of respondents to interviews. Secondly, an interviewer who has any doubts about procedural points, should discuss them without any hesitation either with the field director, or with his deputy, Mr. Textor, or with Mr. Civ, who, all three, consider it their responsibility to clarify all possibly confusing matters and to give such training to each interviewer as to enable him to perform his task with ease.

II. DEFINITIONS

Definitions are here provided only for a few basic terms within the context of this survey. An attempt will be made to discuss the many concepts contained in the questionnaire before the beginning of the actual field work, as the desirability to keep this guide short makes it unadvisable to go into lengthy details at the present time.

A household is a single person or a group of persons making one economic unit and distinguished as one kitchen unit. It is likely that members of the same household sleep under one roof (or roofs) belonging to one person, but the main criterion of the definition is the kitchen unit. With each kitchen goes one household. There is occasionally more than one household under one roof; this is found when more than one kitchen is encountered in one dwelling unit.

The head of the household, shortly referred to as HH, is the person whom other members of the household consider to be the head and who lives in this household - we exclude absentee heads of households.

Relationship to the HH is to be designated as whatever applies among the following categories: husband, wife, son, daughter, father, mother, mother-in-law, or "other relative."

Respondent, shortly referred to as R., is the person being interviewed. The R. should preferably be the HH, or, in the absence or nonavailability of the HH, an articulate adult member of the household.

Articulate member of the household is a person in a given household who could be considered eligible to substitute as R. for the HH. An articulate member of the household is another member of the same household as the HH. Such an articulate member should be an adult in the position to express himself without unusual difficulties and he is expected to have a scope of views not much less limited than those of the HH.

III. PROCEDURE

Our survey will be conducted in Bang Chan, shortly referred to as BC. This is a rice village about 20 miles from Bangkok. The Cornell Research Center has been working in this village for many years and friendly relations have been established all over. Senior members of the Cornell Research Center have taken great pain in maintaining good rapport with the villagers and are, naturally, anxious that nothing should occur to damage the established fine relations. Each interviewer is expected to keep this in mind all the time while in BC.

The basic unit in the social structure of BC is the household. A number of households is grouped in a hamlet under a headman. We will bring our survey altogether into seven hamlets. The total number of households as defined by us above will be in the neighborhood of 350. Our target is to secure one interview from each household kitchen unit. 124 • 621

Field conditions will be arranged such as to give each interviewer the best possible comfort and working facilities. Tentatively, interviewing time is set for 8 to 11 and 16 to 19 hours. However, weather and the experience of the first interviewing days will dictate the fixing of a more definite or a more flexible time schedule. After the end of each morning and afternoon interviewing period, the interviewers will deliver their completed interviews to Mr. Civ who will check the same for completeness. 124

Interviewing areas will be assigned and designated to each interviewer in due time. Then, the interviewer will proceed similarly or just as reported in notes on a trial interview by Mr. Civ: "I saw a man sitting on the ground in front of the house. With a smiling face, I made a Thai salute and said: Hello! Good morning, Sir, I would like to ask for your permission to ask you something about the life of Thai farmers as well as about the way of life in general... Sitting down near the R., I said smoothly: Excuse me, Sir, are you the HH?... How many kitchens do you have in your house? Only your family living in the house?... Thank you, Sir... Now, I am starting the questions, please be kind enough to answer, you will of course."

Should the potential R. ask the interviewer about his activity, the suggested reply is: I am doing research for the Cornell University.

Should the HH tell the interviewer that he has no time at the given moment, then the interviewer will attempt to fix an hour at the convenience of the HH.

Should any difficulty arise, it is suggested that the interviewer report the trouble as soon as practicable to the field director or his deputy.

Each interviewer is required to adhere rigorously to the phrasing of the questions in the questionnaire. Below, indications are provided for probing in situations, where it might be advisable. Probing is using some unbiasing short phrases for strengthening the question stimulus. Just what exactly is included in a probe will depend on the given situation, the nature of the R. and the degree of rapport between interviewer and R. At times, a short period of silence of perhaps 15 to 20 seconds might well produce the desired stimulus and make the R. speak after his first initial hesitation.

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125 Each interviewer is actually given three instruments to work with: (1) The questionnaire according to which he asks the given questions VERBATIM AND IN THE ORDER INDICATED, (2) The answer sheet on which he registers IMMEDIATELY AFTER EACH QUESTION RESPONSE the obtained replies, and (3) the interviewer checkform which is filled out after the completion of the entire interview, as soon as practicable.

IV. DISCUSSION OF QUESTIONS

The questionnaire consists of 66 questions according to the devised numbering system. Actually, many of the questions are frequently made up to include one or more subquestions. EACH QUESTION REQUIRES AN ENTRY ON THE ANSWER SHEET. However, 28 questions contain subquestions which are conditional. These are to be asked only in the case that a given condition is fulfilled in the response to the main questions. The conditional subquestions carry the following numbers: 3c, 6b, 9 b and c, 10 b, 12 b, c, and d, 14 b, 16 b, 18 b, 19 b, 20 b and d, 26 b, 27 b, 29 b, d, f, and g. 33 b, 36 b and c, 37 b, 40 b, 41 b, 42 b and d, 47 b and d, 49 b, 56 b and c, 57 b, 62 b and c, 63 b,c, d, 64 b, c, d, e, f, and g, and 66 b.

Six questions should be addressed to FARM OPERATORS ONLY. These questions are: 9, 12, 16, 17, 18 and 41. ALL OTHER QUESTIONS SHOULD BE ASKED OF ALL Rs.

The questions are formulated in such a way as to provide certain answer categories. These are: yes-no, agree-disagree, right-wrong, calibrated, multiple choice and open-ended categories. The way to handle these answer categories has been discussed in length.

At this point, attention is directed to the open-ended reply category, because it is more difficult to deal with. One procedure would be to write down verbatim a response obtained from the R. However, a R. might, at times make a speech and the interviewer would then not be in the position to register all that is said. He would not, furthermore, consider it necessary to register what had been said not connected with the question asked. Therefore, the interviewer would likely to be summing up the response. Such pertinent summaries are most important and frequently made. In this questionnaire, it had been attempted to anticipate the response categories to open-ended questions on the answer sheet to a great extent, as they are likely to fall in given patterns. In such cases, the likely answer categories are found on the answer sheet. On the other hand, open-ended questions remain to be filled in by the interviewer, when lines instead of categories are found on the answer sheet. Here, a verbatim rotation of the R.'s pertinent points is essential. In case of doubt, each interviewer is encouraged to discuss such

125 items the same day with Mr. Textor or with Mr. Civ. As the space provided on the answer might not be sufficient for this • 124 purpose, the back page of the interviewer checkform should be used and an asterik should be placed in the space provided for the reply on the answer sheet. It is expected that for these questions one to three line replies would be of normal length. Such replies, posted on the backpage of the interviewer checkform, can be written in Thai and sufficient space should be left between the various notations for an English translation to be fitted in.

Before an item by item discussion of the questions, just two more remarks about probing. Probing is chiefly used in two kinds of situations: (a) when a R. is slow in replying to a question, or seems not to have understood a given question, or when he might try to avoid a reply by stating that he does not know (D.K.) or "does not recall"; in such cases the question or relevant parts of it are repected verbatim; and (b) when a R. gives an irrelevant answer and the interviewer is prompted to probe with the intention to stimulate a response to the point of the question; here, usually more probing will be necessary than under (a).

DO NOT PAY ANY ATTENTION TO THE "CLM." COLUMN NUMBER DESIGNATIONS which follow question numbers on the answer sheet.

Qu. 2: Write in the precise age obtained on the line behind the corresponding age group. Below, you find a table of the zodiac years ranging from 24 to 73, which will provide you with a check and an adjustment of the frequently approximative age indicated by the R. For instance, assume that a R. says he is 50 years old, when you ask him: How old are you: You then ask him in what zodiac year he has been born. Assuming his reply is "khaan," you then read from below table "53 years" and this is the age which you register in the line behind: " 50 to 59 age group.

[805] Table of zodiac years

nanee	24, 36, 48, 60, 72	chalua	30, 42, 54, 66, 78
woog	23, 35, 47, 59, 71	khaan	29, 41, 53, 65, 77
rukha	22, 34, 46, 58, 70	tho	28, 40, 52, 64, 76
coo	21, 33, 45, 57, 69	maroong	27, 39, 51, 63, 75
kun	20, 32, 44, 56, 68	maseng	26, 38, 50, 62, 74
chuad	31, 43, 44, 67, 79	mania	25, 37, 49, 61, 73

Qu. 6: You ask the R.: Do you smoke and offer him simultaneously a cigarette.

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Qu. 7: Some reply to this question is desirable and probing might be at times required. In the case that one reply to the point is obtained, no further probing is necessary. If there is no answer or an answer not to the point, probe once by repeating the question and, if necessary, by adding: You probably can tell me something about the new things.

Qu. 8, 9c, 11, 12 b, 13, 15 c, and 16 b ARE AS WELL QUESTIONS where probing might occasionally be required. When we talk of fertilizer, we have exclusively artificial fertilizer in mind and not manure or compost.

Qu. 17 a, 17 b, 17 c, and 17 d are provided with lines behind the given answer categories on which the figures in roj or tang respectively should be registered in the corresponding place just as you handle this in Qu. 2.

Qu. 18 b: This is perhaps a difficult question for some Rs., as simple as it might look. Probing-eventually the use of a silence period for stimulating embarrassment and response-is recommended, when no fast reply is forthcoming.

Qu. 46 and 47: Pretests have indicated that the concepts of public welfare work and the distinction of what are contributions in connection with the Wat or religious activities and other contributions are not very clear in the minds of many Rs. Proceed according to the principle of sound logic for obtaining replies to Qu. 46 as distinguished from Qu. 47. In these questions some explaining might be exceptionally well justified.

Qu. 58: City limits of Bangkok are defined as follows: Present city limits at Km 11, Lard Prow.

Qu. 62 b and 64 c: Probe for each duty and job. You can consider this like a multiple choice question, as the same R. might refer to more than one duty or more than one job held.

Qu. 66 b: This last question is again an open-ended question of the projective type. It is expected that respondents will have no difficulties in expressing their wishful thoughts. You can probe freely, if need arises.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

123 by another farmer who was identified as Headman Weg of Hamlet 6 of the same commune. Weg said his hamlet has more people and more buffaloes, and invited us to his home which is on the other extremity of the village. Arrangement was made for a boat to carry us there on the appointed date two days later. Thus we were invited into the village by one of the leading residents who took pride in the possibility of a study of his village by an American professor.

124 At the beginning, we sought from the villagers only simple information. After the first month, when it became clear that confidence had been won, more intimate questions concerning economic matters were raised. Thai peasants do not take questions about family relationship or age as intimate questions; they even enjoy answering them. It was noticed, however, that some types of questions brought better response than others. We did not attempt to get all the information we needed at the first interview, and only the topics which appeared to interest the respondent were pursued. We did not set any rigid rule on the length of an interview period but left it up to the apparent disposition of the interviewee. It was observed, however, that normally distraction began to set in after the first half-hour. We usually stopped at this point. If the conversation had to be continued, we made it apparent that business was over by laying aside our pencil and notes. In every possible way we tried not to offend respondents. Not infrequently we brought an interview to an end within the first few minutes

124 when only a slight sign of distraction was noticed. Our daily visits to this small concentration of population gave re-interviewing a much higher advantage over a prolonged interview. Experience with Bangchan people revealed that occasional non-response was not due to the subject matter but rather to the approach and circumstances. With a more tactful approach and under a slightly different circumstance in a subsequent interview, we were able to obtain most of the information we sought but did not get in the previous interview.

123 To return the hospitality rendered us we offered small personal services like a lift or taking the sick to Bangkok hospitals. We tried to avoid monetary gifts to individuals which might lead to distorted information intended to please us, but we did give monetary gifts to public institutions like the school at an opportune time. We were particularly anxious to help the community as a whole especially in the fight against epidemics. Incidentally, Bangchan will always remember our active part in bringing the veterinarians to the village in time to check the spread of rinderpest in the end of 1948. From then on the villagers tended to think of us as a most effective means to communicate with high officials in Bangkok. This conviction was reinforced by subsequent visits of top level officials to the village which were unprecedented. In the second period of study in 1952-54, we were able to render medical aid and advice. We also played a significant role in the campaign

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In our second visit during 1952-53 our informants appeared to talk more freely on the topic of debts, especially when they were interviewed on the kinds and amounts of special expenses and receipts. At the beginning we did not ask our sample-operators direct questions on the amount of credit purchase or loan they were having. Only casual information pertaining to debts that arose during the discussion of related topics was noted and filed separately by the informant and also by the person referred to both as a lender and as a borrower. It was noticed that while most informants did not want to lay bare the whole situation of their debts, they were rather cooperative and sometimes even eager to make partial statements as long as an answer to the blunt question "How much do you owe now?" could be avoided. For example, one of the 96 sample-operators was telling the author the amounts of outstanding debts of some of his fellow operators (ranging from 3,000 baht to 15,000 baht) and proceeded on to generalize that rice farmers had to go into debts at one time or another. The author, thinking that that was the most opportune time to ask the man about his own debts, raised the blunt question just mentioned. The informant replied, "Just about the same amounts as these people are owing." He then changed the subject, indicating an unwillingness to give the exact amount of his outstanding debts. In the conversation that followed, however, he eagerly stated that he had been able since 1948 to clear off as much as 21,000 baht of debts. When asked how much a proportion

• 124 426 511 that was to the total amount of his debts, he paused to calculate and then said it was exactly three-fourths of the total. The author then asked whether he was right in figuring that the man's current outstanding debt was 7,000 baht. The informant admitted that that was the correct figure.

There were, however, some twenty farm operators in our sample who took the author as one of their family members, and were thus very cooperative in giving any information that the author wished to have. Thus, by the end of 1952 we had a considerable amount of data on loans. Constantly checking available information in the files, from the dry season of 1953 onward the author put more effort in getting the debt situation of each of our 96 sample-families, concentrating first on the extent of loans and their respective interest rates. During the inundation period of 1953, effort was shifted to getting information about credit purchases and their respective rates of interest which were brought up to date as of December of the same year. Information on loans was also brought up to date at this same time which may be considered as the end of business year because the early varieties of rice were being harvested at this time of the year. Table 60 shows the classification of farm operators according to kind of debts involved as of the time immediately preceding the sale of the early varieties of rice.

*128 426 511 It is seen that there were only two non-responses out of the total of 96 sample-families. Among these 94 farm

[TEXT CONTINUED ON PAGE 346]

One other aspect of (1)ngaan which should be mentioned
952 in connection with food and health is the opportunity for con-
796 tamination of food. The villagers did not associate sanitation
751 with health, hence the hazards of a community meal which many
[753] persons helped to prepare were many. Two incidents observed the day before an ordination in early April, will illustrate. In the final stage of making Chinese noodles, rice flour paste was extruded through a perforated disk into an enormous pot of boiling water. When done, the product was removed with a fish net, and plunged into the canal to cool, after which women helpers spread it out on banana-leaf covered trays. Dishes were also washed before use in the canal, which was then too low for boats. Since, however, many people drank untreated canal water at this season (see p. 28), the added hazards for the participants caused by these procedures may have been slight.

262 In summary, food plays a major role in ceremonies and
792 festivities, which are concentrated in the 3 months' dry season. Proposals for dietary improvement in Bang Chan must take into account not only the possible effects of the (1)ngaan season on the total nutrient intake, and on opportunity for exposure to contaminated food, but also the importance of these affairs from the standpoint of merit and prestige, and the relatively great financial burdens which villagers therefore undertake because of them.

QUANTITATIVE DIETARY STUDY: FOODS EATEN AND ESTIMATED NUTRIENT INTAKE OF SELECTED FAMILIES IN BANG CHAN

Procedure

121 Selection of the Sample
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Medical inspection designed primarily to discover possible signs of nutritional deficiency was carried out in advance of the family dietary study. The suggestion of Grant (1948) that matched groups, of contrasting economic or other status be studied, appeared to be appropriate to the situation in Bang Chan. Our hope was to be able to select from the random sample of families given medical inspection (Hauck, 1956) a group of families (A) in each of which several members had clinical signs which might be evidence of malnutrition, and a group of families similar in age and sex distribution (B) in each of which the members were largely or wholly free from such signs.

125 When the medical inspection of the random sample was
146 complete, however, too few of the families were found to meet our criteria for inclusion in Group A, i.e. the group of apparently less well nourished families. Additional families for

125 this group were located by checking the list of school children, all of whom had been examined, for instances in which 2 or 3 children in one family had signs possibly indicative of malnutrition. The remaining members of their families were then examined. Families appropriate for Group B were chosen from those in the random sample.

Note that the groups for inclusion in the weighed dietary study were selected on the basis of apparently contrasting nutritive status. They did not represent a random sample of village families, although 7 of the 11 families included in the dietary study were in the random sample chosen for the medical inspection. In the absence of recommended dietary allowances for Thai, study of food intakes of two such groups seemed likely to yield more useful information than would be obtained from a dietary survey of a random sample of the population.

The groups chosen for study included 11 households, 6 in Group A and 5 in Group B, with 30 members in each group, paired so far as possible according to age and sex. When the survey was begun, however, 2 additional members were found in the households in Group A and 7 additional members in Group B. These were relatives and hired helpers who remained in the households throughout the survey year. The field worker who carried out the dietary study rearranged the matching plan somewhat, so that 32 reasonably well matched pairs were obtained (Table 6). In planning this rearrangement, the observer had in mind pairing persons of similar size, so far as possible, in addition to pairing by sex and approximate age.

Estimation of Caloric and Nutrient Allowances

Because of the 5 additional unmatched persons in Group B, males aged 23, 15 and 4 years, and females aged 79 and 82, some means was sought of checking the validity of comparing calculated per capita food and nutrient intakes for the two groups. By selecting matched groups differing in apparent nutriture, we had hoped to avoid comparing calculated nutrient intakes with an arbitrary standard, but comparison of estimated per capita nutrient needs of the two groups appeared to provide one means of checking the probable comparability of our groups, even though their members were not all matched as originally planned. No nutrient allowances had been proposed for Thai, however, so Nicholls' (1951, p. 315) allowances for people in the tropics were modified by taking into account information in Recommended Dietary Allowances of the National Research Council, Food and Nutrition Board (1953) and FAO recommendations concerning caloric requirements (FAO Committee on Caloric Requirements, 1950). The resulting basic table of allowances for Thai people in Bang Chan (Table 16, p. 104) is conservative, and probably represents something like a

[Text continues on page 57 --- Analyst]

125 Table 6. Persons in the Two Groups of Families in the Dietary Survey, Matched According to Age and Sex, So Far As Possible

Group A (6 families, 32 persons)			Group B (5 families, 37 persons)		
Code Number	Sex	Age	Age	Sex	Code Number
521	M	63	64	M	711
621	M	52	53	M	701
995	M	50	48	M	601
991	M	41	42	M	751
981	M	38	39	M	731
971	M	30-33	25	M	603
523	M	23	20	M	605
623	M	21	20	M	713
522	F	60	59	F	712
622	F	49[1]	49	M[1, 2]	703
996	F	44	44	F	602
992	F	37	38	F	732
982	F	35	39	F	752
905	F	31	31	F[2]	704
525	F	20[2]	22	F	604
986	M	15[2]	15	M	606
309	M	12	13	M	754
206	M	11	12	M	485
184	M	10	10	M	755
153	M	10[3]	13	M[2, 3]	705
266	M	10	7	M	167
524	M	5	6	M	733
483	F	13	15	F	702
320	F	12	10	F	229
130	F	10	10	F	128
107	F	8	8	F	180
187	F	7	7	F[2]	706
997	F	83	16	F[3]	753
983	F	6	6	F[2]	707
984	F	3[1]	4	M[1]	756
972	M	1	2	M	735
985	M	3 mo.	3 mo.	M	757
			23	M[2, 4]	709
			82	F[4]	758
			79	F[2, 4]	708
			15	M[4]	714
			4	M[4]	734

1. Not matched by sex.
2. Extra persons who were not in groups as selected.
3. Not matched by age. In the case of the 10 and 13 yr. old boys, actual body sizes were comparable.
4. No corresponding person in Group A.

125 nutritional floor for this population, beneath which maintenance of health cannot be assumed. From this table, allowances were estimated for persons of each age and sex, for Groups A and B (Table 17, p. 105). Estimates were made for each quarterly period or Round, during which each family was visited once, and these were averaged to obtain mean per capita allowances for each group for the year (Table 18, p. 108). In each group, one woman was in late pregnancy during the third Round, and a new infant had been added to each group in the fourth Round. Since young infants in Bang Chan are given little more than mother's milk, allowances for the fourth Round were adjusted to account for an additional nursing mother, but not for the infant itself. Differences in estimated per capita allowances for Groups A and B were trivial (Table 18, p. 108), hence we felt justified in comparing the estimated food and nutrient intakes of the groups as originally planned, even though Group B contained 5 persons not matched with persons in Group A.

Method of Collecting Data

124 The procedures we planned to use were first pretested
125 in several households to give the observer experience and to be sure that the method would actually work under conditions in Bang Chan. Following the pretest, each family chosen was told in a preliminary interview, what the observer wished to do, and in what ways family members would be expected to cooperate (Appendix C, p. 109). All families that were asked to participate in the study consented. They were not notified in advance just when the observer would visit. Observations on each family included food intake for a 24-hour period, 4 times during the year: twice during the rainy season, and once each during the cool and the hot, dry seasons.

Survey days were planned so as to avoid special festivals when food preparation might be unusual. Six of the 44 survey days fell on (1)wan (4)phra, the weekly holy day. The families visited on (1)wan (4)phra did not, however, take food to the temple on those days, hence food preparation and consumption was probably not unusual.

Alternate visits to the families in Groups A and B were planned so that seasonal variations in food supply would not be apt to account for any observed differences in food intake. Again, our plan could not be fully carried out. Occurrence of cooperative transplanting and other interfering circumstances made some modifications in schedule necessary. Since the objective was to learn about the usual family food intake, the study was not carried on when several members of the family were away from home, or when the participating family was preparing to feed neighbors who were helping with farm work. In such a case, the field worker would go to the nearest

124 participating household which had not been visited during that
125 Round of the study. The order and dates of visits to Groups A and B, data from which were used in calculating food and nutrient intakes are shown in Table 7. During three periods of about one month each all visits were to families in Group A, hence some differences in the use of foods between the two groups might be attributed to the order of visits.

Table 7. Order and Dates of Visits to Households Participating in the Dietary Study[1]

Round	Date	Group	Household No.	Round	Date	Group	Household No.
I	May 26, '53	A	67	III	Nov. 26, '53	A	67
	June 4, '53	A	222		Dec. 3, '53	A	222
	June 11, '53[2]	A	2		Dec. 10, '53	A	2
	June 24, '53	A	12		Dec. 17, '53	B	21
	July 2, '53	B	21		Dec. 21, '53[2]	B	23
	July 8, '53	B	23		Jan. 7, '54	A	103
	July 16, '53	A	103		Jan. 14, '54	A	12
	July 23, '53	B	16		Jan. 18, '54	B	16
	July 31, '53	B	25		Jan. 28, '54	B	25
	Aug. 6, '53	B	20		Feb. 4, '54	B	20
	Aug. 13, '53	A	215		Feb. 10, '54	A	215
II	Aug. 27, '53	A	222	IV	Feb. 18, '54[2]	A	67
	Sep. 3, '53	A	2		Feb. 25, '54	A	222
	Sep. 10, '53	A	67		Mar. 4, '54[2]	A	2
	Sep. 24, '53	B	21		Mar. 9, '54	B	23
	Oct. 1, '53[2]	B	23		Mar. 18, '54	B	21
	Oct. 15, '53	A	103		Mar. 24, '54	A	103
	Oct. 22, '53[2]	A	12		Apr. 1, '54	A	12
	Oct. 29, '53	B	25		Apr. 5, '54	B	16
	Nov. 5, '53	B	20		Apr. 25, '54	B	25
	Nov. 12, '53	A	215		Apr. 30, '54	B	20
	Nov. 19, '53	B	16		May 8, '54	A	215

1. Two visits, data from which could not be used due to abnormal circumstances, are not included.

2. (1)wan (4)phra, the Buddhist holy day.

124
125 On the basis of experience during the pretest, the observer began the 24-hour period of observation with an unannounced visit in the afternoon, in time to see the preparation for the evening meal. This proved to have several advantages. A householder whose home had been visited at the evening meal, and who anticipated the observer's return before breakfast, could restrain the dog, if necessary; or the homemaker might postpone washing the rice until the observer arrived to weigh it. Without such cooperation on the part of the homemaker, our records would have been much less complete [405] than they were. Since few village families had clocks, the time when the homemaker said she would start breakfast was always approximate.

125
262 Foods were weighed in both the raw and cooked states, and foods given to priests, fed to animals, left over, etc. were weighed so that the actual amount eaten by the family could be calculated. Previously cooked foods included in the survey meals were weighed and raw weights estimated from information obtained in other observations. If possible, snacks were weighed. School children and others who ate snacks away from home were asked to report them to the observer, and weights were estimated. The guides prepared for
128
262 the observer are included in Appendix C, pp. 110-111. Data were recorded on the schedule, shown in Appendix C, pp. 116-120. and essential information such as the weights of food, after allowing for weight of containers, was later transferred to the shorter form shown in Appendix C, p. 121. As examples some of the data obtained on 3 of the 44 survey days are shown. Examples of notes on procedures in food preparation are included with these records. For examples of notes on the food intake of individuals see Appendix A, p. 97.

Calculation of Nutritive Value of the Diets

Figures from the original records were transferred to the Form for Calculating Raw Weights of Foods Eaten (Appendix C, p. 121), and the edible portion of each raw ingredient consumed was calculated by adjusting the gross amounts according to the use made of the cooked food and the number of family members present. Procedures followed are outlined in Appendix C, pp. 113-115.[1]

Few analyses of Thai foods had been made in Thai laboratories, and most of these were for proximate composition only. Therefore, data from other available sources were used. Since Handbook No. 34 of the United States Department of Agriculture "Composition of Foods Used in Far Eastern Countries" (Leung

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[114] 1. Many of the calculations were checked by Mrs. Mary Barkley Campbell, who made independent use of the data.

per day were calculated for Groups A and B by Round and for all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

Although our semple was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

From the viewpoint of parents, the "peak of life" was the time when children were no longer dependent, but productive, unmarried workers whose earnings stayed within the family. Household 16 was such a family, forward looking, progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analyst]

125 592 511 434 463 [262] fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and [235] housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household [85] [57] 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so [124] that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed [152] of limited food. The wife was frequently ill. In Household [43] [283] 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the [465] activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of [335] [371] land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

431 262 792 [719] All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

511 [128] Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

APPENDIX C

Guides Prepared for the Observer Who Carried Out the Dietary Study

Preliminary Visit to Participating Households

Households selected for dietary study are to be visited in advance, acquainted with the procedure which we wish to follow, and asked for their cooperation.

The following points should be emphasized:

1) Meals should be prepared as usual both in amount and kind. Workers wish to know how much food and what kind, the family eats.

2) Each item of food which enters into the meal preparation will be weighed before cooking.

3) Each prepared food (as cooked rice, fried fish, curry, etc.) will be weighed when the preparation is finished.

4) Amounts of prepared food given to priests, fed to animals or left over, must be weighed, so that the amount of food actually eaten by the family can be calculated.

5) As often as possible survey members would like to be present during the meal, but will not accept food from the household.

6) Each member of the family will be asked to report to the survey worker what is eaten between meals. If the snack is eaten at home, it should be brought to the survey worker first, to be weighed. If the snack is eaten away from home, individuals are asked to tell the survey worker as clearly as possible what was eaten, and how much.

Preliminary information to be obtained at this interview:

1) Usual number of meals taken by the family at this season.

2) Usual time of meals.

3) Time when food preparation is started in the morning, and when evening meal is over.

The family should be told that the survey workers will come sometime during the next two weeks. They should not be told which day, as that might lead them to make some changes in their usual diets, either consciously or unconsciously.

114 The schedule of visits should be such that each day of
124 the Buddhist "week" will be appropriately represented, i.e.
125 the day before the holy day, the Buddhist holy day, and the 5 or 6 days which follow. Days of special festivals should not be included in the dietary survey, although the investigators should attend many of these, and record observations on the foods served.

Dietary Survey Proper: General Procedures, with Alternative Suggestions

Twenty-four hour period. - Each visit should cover a 24-hour period. After preliminary experience, a good plan seems to be to go in the early afternoon, in time to see the preparation for the evening meal, and to return early the next day, remaining until the 24-hour period is up. This plan has several advantages over making one's first appearance before breakfast:

1) The homemaker may be introduced to the procedure at a time when she is less hurried than she is apt to be in the morning, when she must have food ready for the priests at a fairly definite time.

2) Scales and other equipment may be left overnight, so that these need not be carried before dawn, along with food and water for the survey worker.

3) The risk that food preparation will be started before the worker comes is less if the homemaker expects the survey worker before breakfast.

4) If the worker's visit is anticipated, someone at the house will restrain the dog if necessary.

5) For the more remote households, arrangements can probably be made to stay overnight at the home, or nearby, without previous notification as to the exact date of one's visit.

Because the observer may leave in the afternoon before children return from school, she should ask about snacks eaten away from home on the first afternoon, so that record will be obtained of such snacks eaten on one day, though not necessarily during the same 24-hour period as the other meals recorded.

Number of Visits. - Aim to visit each of the 11 families once each 3 months, i.e. 4 times in the year. This means once during the cool season, once during the dry season, and twice during the rainy season, i.e. early and late. From May 25, 1953 to the end of April 1954 there are 49 weeks. In a schedule calling for one survey day each week, this would allow 5 weeks for unforeseen circumstances which might interfere,

114 or for planning time off because of holidays, celebrations,
124 etc.
125

Scheduling of Visits. - Plan to see the families in rotation, going to those in groups A and B on alternate weeks, so that seasonal variation in food supply will not be a major difference between the two groups. The survey worker must have in mind another nearby home, however, which might be visited if the original plan cannot be carried out on a given day.

The survey worker should not give advance notice of the exact day when she plans to come, unless the householder has specifically requested this. Even when notice is requested, it need not be long in advance, i.e. one could stop by in the morning and ask if it would be all right to come back in the afternoon to watch supper preparation.

Directions for Use of Schedule 8 on Which Data Obtained During the Dietary Survey are to be Recorded.

Most of the items in this schedule may be filled in from census information or by direct observation by the survey worker. The worker will need to enquire re item E. the makeup of the food consumption unit, and J 4, the cost of raw foods purchased. The survey worker should try to observe other items during the day, and fill in by inquiry, if necessary, at the end of the day. Note whether information was obtained by observation (ob) or inquiry (q).

A. Hamlet and house number should be written in from the census information, and should correspond to that on schedule 3 for the same household.

B. Each Household to be visited for dietary survey will be given a key number in advance. This number should be inserted here.

C. Head of household (from census information).

D. Religion. - Some dietary practices are associated with religion, therefore indicate whether the household is Buddhist or Islam by checking the appropriate space.

E. Composition of food consumption unit: List here all persons whose food is prepared in the kitchen which the observer is visiting. Note that all persons living in one household (i.e. at the same house number) may not belong to one food consumption unit.

F. Source and treatment of water. - Find out, by observation if possible, from what source or sources water is obtained for drinking and food preparation, at this season. Note

whether or not water is boiled or treated otherwise before use.

G. Garbage disposal. - While making the dietary survey, the observer should note what is done with garbage. Is edible waste given animals? Is garbage disposal carried out in such a way that it will not attract flies, etc.?

H. Protection of food against contamination. - The observer should note what means are used by the householder to protect both staple and perishable foods from contamination by insects and animals. If the householder's practices are not consistent, the observer should note this, either on the schedule, or in her note book. In the latter case, the schedule should be plainly marked "see notes."

I. Family member observed at meal time. - We have been unable to think of any plan for weighing foods consumed by individual members of the family without disturbing the customary eating procedures. The observer may be able, however, to get some idea as to how food is distributed in the family, by observing one person at a time, and recording her estimate of the individual food intake.

The person chosen for observation should be one of the family members who would be most vulnerable to an inadequate food supply, for example a pregnant or lactating woman, a young baby, a growing child or an old person. The observer should fix her attention on the person to be observed, throughout the meal, and should record as well as possible the amounts eaten of each type of food. Record amounts taken onto the plate, amounts left on the plate at the end of the meal, number of bites or spoonfuls of each item eaten a) directly from the serving dishes and b) after the food is put on the plate. Check your estimates of amount eaten by the person observed with reference to the total prepared for and consumed by the family.

From observations of this sort we hope to get information on questions such as the following:

1. When a child is said to eat all adult food, does this mean that the kinds of "with-rice" and the proportions of rice to "with-rice" are the same for him as for adults?

2. If a pregnant or lactating woman says she eats as usual except for the hot tastes, does this mean a) that she omits or decreases intake of peppery foods and eats no more than usual of other foods or b) that she omits or decreases intake of peppery foods and eats more rice and/or less highly seasoned "with-rice" items? In the case of a child, note carefully any remarks made by adults urging him to eat more of, or suggesting that he eat less of a given item.

114 J. Food preparation and consumption
125

In the schedule, each column has a descriptive heading and a number. On the sheet used for calculating "adjusted consumption," the numbers alone are used.

1. Menu. Record title of meal as "breakfast" or "dinner" and time served. List all foods served at each meal, including leftover foods from the previous day. If foods left over from an earlier meal on the same day are used, note this fact, since weight of raw food, noted when the food was prepared can be used in calculation.

Raw ingredients

2. Kind. Note here the name of each ingredient, and any description needed, i.e. fat or lean pork, hen or duck egg, etc. Since rice is served at each meal the terms "home milled" and polished are listed here. Cross out the inappropriate one.

3. A.P. (as purchased) weight. Record here the weight of the food as it is purchased, or as it comes from the storehouse, garden or canal. If several food items are used in preparation of one dish, bracket these together.

4. Cost. For foods which have been purchased, record cost of the amount used. For example, if 3 fish were purchased for 1 baht, but one only was prepared at this time, record 33 stg. as the cost. If the food was produced at home, grew wild, or was received as a gift, note this.

5. Inedible refuse. Note weight of inedible refuse which is discarded during preparation. If the inedible portion is included in the cooked dish, weigh it later and record the weight in this column.

6. E. P. (edible portion). Add together all weights of inedible refuse for a given item to get the total for item 5. Subtract 5 from 3 to get this figure.

Note on weighing raw food: So far as possible, weigh raw food and inedible refuse on waxed paper (weight negligible) or in standard utensils (enamel plate, plastic bowl, etc.) the weights of which are known. Record: weight of A.P. food on utensil minus weight of utensil equals weight of food. For example, if rice is weighed in a plastic bowl weighing 90 g., and the total weight is 870 g., 870-90 = 780 (g. rice). The observer is less apt to make mistakes if she uses the same containers repeatedly, than if containers used are provided by the household, and vary widely in weight. The balances provided for weighing food are 3 kg./10 g. and 1 kg./4 g. Small amounts of food should always be weighed on the 1 kg. scale, since it is more sensitive than

114 the 3 kg. scale. If a number of items are used in small
125 amounts, weights may be approximated more closely if the items are placed one after another, on a piece of waxed paper, noting each time the added weight causes the indicator to move. Thus the red or green pepper alone might not weigh enough to affect the indicator, but these together with other green or leafy materials used (as lemon grass, coriander leaves and sweet basil) might weigh 8 grams. In a marginal diet, the contributions of such items to the nutritive value of the diet should not be overlooked.

Cooked foods. - For cooked foods, which must often be weighed in a container provided by the family, columns are provided for weight of dish (7), of dish plus food (8) and of food (9). For example, if rice is to be cooked in an aluminum kettle, weigh the empty kettle and record this weight in column 7. When the rice is done, and ready to serve, weigh kettle plus cooked rice, and record this in column 8. Subtract 7 from 8 and get the weight of food, to be recorded in column 9.

Use of cooked food

10. If food is given away, weigh dish and food before and after the food is offered, to get weight of food given away. Record the weights before and after and the difference, in column 10. Specify whether the recipient is priest, neighbor, relative etc. If inedible portion is included, note this and weigh it if possible.

11. Fed to stock. If inedible portion is given, note this and weigh it if possible. Specify if fluid only is given, or if part of the complete dish.

12. Edible waste. Specify if this is fluid only or a representative part of the complete dish.

13. Left over. Specify if this is fluid only or a representative part of the complete dish. Note if inedible portion is included and weigh it if possible. If you must leave in the evening before all family members have eaten, explain that you wish to weigh all left over food, and arrange to have it kept in separate dishes so that you can weigh it in the morning.

14. Food eaten. Weigh the pot or serving dish before and after the meal. At the end of the meal, weigh inedible portions left on plates or in the pot, and correct for those to get the weight of cooked food actually eaten.

15. Persons eating. Record here the number of persons in the consumption unit (item E) minus the number absent from this meal (x), plus the number of guests (y). Thus if there are 6 members of the family, one of whom is away, write 6 - 1 x = 5. Similarly if there are 6 members of the family,

plus a guest, write 6 + 1 y = 7. If one member of this family is away but a guest is present, write 6 - 1 x + 1 y = 6. In calculating, if the number of persons eating a given meal differs from the usual number in the household, the amount of a given food eaten is multiplied by a factor representing the number of persons in the household/number of persons present. Thus if a guest shares the meal in a household consisting of 6 persons, all of whom are present, the weight of each food eaten should be multiplied by 6/7 to get the "adjusted consumption," for which nutritive value is to be calculated. Similarly, if 5 only of the 6 members of the household eat a given meal at home, the weight of each food eaten should be multiplied by 6/5 to get the "adjusted consumption."

16. Methods of preparation. Describe the method of preparation clearly enough so that one who was not present could visualize it. Specify if soaking or cooking water is discarded. Note cooking time and appearance of cooked product when these give a clue as to probable nutritive value. Thus greens which are added at the last, cooked only a short time so that they retain their color, may be expected to retain a maximum amount of their vitamin C. Note type of equipment used.

K. Snacks. Record snacks eaten between meals on the separate sheet provided. Ask persons who eat snacks at home to bring them to you first, to be weighed. Question each member of the family about foods eaten away from home during the day, and record the kind of snack, description, and weight. (Estimated weights should be put in parenthesis, to distinguish them from observed weights.) If the snack was purchased, record the cost. Under "person eating" note the name of the family member who ate each snack.

From these data we hope to get an idea as to the nature and probable nutritive value of snacks, and whether these are eaten by all or most members of the family, or by certain ones only, as by the school children at recess.

SCHEDULE FOR DIETARY STUDIES

• 125 Cornell University Thailand Project 1952-53 Schedule 8
Date.....

A. Hamlet..... House No..... B. Household No.....

C. Head of Household a)..... b)..... Buddhist..... D. Islam.....

E. Food consumption unit. List here the names of persons who usually eat food prepared in the kitchen where observations are being made:

1)..... 5)..... 9).....

2)..... 6).....10).....

3)..... 7).....11).....

4)..... 8).....12).....

F. At this season what kind of water is used for each of the following purposes, and what treatment, if any, is given to it?*

USE	SOURCE				TREATMENT		
	Rain	Canal	Fish-pond	None	Alum, Boil-ing		Other (what)
1. Drinking, adults							
2. Drinking, children							
3. Washing vegetables							
4. Cooking							
5. Washing dishes							

G. How is garbage disposed of? (check)
1. Buried..... 4. Thrown elsewhere.....
2. Burned..... 5. Fed to animals.....
3. Thrown into canal..... 6. Other.....

* Indicate whether answer is obtained by query (q) or observation (obs.)

125 H. Does the householder attempt to protect food against contamination by insects, animals etc? Note means used.

Means used	Type of food: 1) Dry rice and other nonperishable foods	2) Perishable foods & left-over cooked foods
1. Container covered:		
a) Solid cover		
b) Fiber cover		
2. Food safe:		
a) Screened		
b) Ant-proof legs		
3. Other		
4. None		

I. Family member observed at meal-time . . . . . .
Notes re kind and amount of food eaten by this person:

Food Preparation and Consumption — Sept. 25, 1953 — Household No. 21

Menu 1	Kind 2	Raw Ingredients: Wt. A.P. 3	Cost 4: Bt.	Cost 4: Stg.	Ined. Ref. 5	E.P. 6	Cooked Foods: Dish 7	Dish + Food 8	Food 9
Meal Time 4:30 a.m.							800	2990	2190
		2180-800					120	1280	1160
Cooked rice	Polished	= 1380					190	850	660
									4010T[1]
(1) Banaun stew	(leftover)						450	915	465
(2) Sa-(5)noo stew	Coconut meat (to make milk)	700-180 = 520		50		520)			
	Dried chilies	24		15		24)			
	Onion	8		4		8)			
	Galangal (HG)[2]	8				8)			
	Garlic	4		2		4)			
	Lemongrass (HG)	12				12)			
	Berganot rind (G)[2]	4				4)	470	1390	940
	Salt	30				30)	130	312	182
	Serpenthead (C)[2]	320-120=200				200)	130	300	170
	Shrimp paste	6		3		6)	130	260	130
	(2)Sa-(5)noo flowers (G)	550			580-520 = 60	640-150 = 490)			1422T
	Coconut milk					1220-450 = 770)			
	Palm sugar	240-200= 40		24		40)			
Cooked rice	(leftover)						520	800	280
Fried duck egg	1 Duck egg	76			21	240-185 = 55			
	Coconut oil	16		8		16			
	Onion	4		2		4			
	Fishsoy	10		5		10	180	260	80

1. T equals total weight.
2. HG, G and C stand for home grown, gathered and caught, respectively.

Food Preparation and Consumption (continued) Sept. 25, 1953 Household No. 21

Use of Cooked Foods						
Given away 10	Fed to Stock 11	Ed. Waste 12	Left Over 13	Eaten 14	Persons Eating 15	Method of Preparation
Cooked rice 850-190= 660 (to 3 priests)			0	3350	4	Rice, 4:30 a.m. She washes rice two times and lights the fire. Then she puts rice pot on fire at 4:35. Rice water is drained off at 5:00. Rice pot is put on fire again from 5:15 to 5:25.
			(1)Bauaun stew (leftover) 0	465		(1)Bauaun stew is reheated from 5:00 to 5:15 a.m.
(2)Sa-(5)noo stew 312-130=182 300-130=170 260-130=130 482T (to 3 priests)			0	940		(2)Sa-(5)noo stew, 5:20 a.m. Dried chilies (after soaking in water for a while), onion, garlic, galangal, lemongrass, berganot rina, and salt all pounded together. 5:25 She crushes coconut meat with water five times over colander. Shrimp paste is mixed with (4)nam (4)phrig at 5:40. The pot of coconut milk is put on fire at 5:42. (4)Nam (4)phrig is mixed with boiled coconut milk at 5:55. Fish is put into the pot and water from crushed tamarind at 6:00, (2)sa-(5)noo flowers at 6:05. The pot is put down at 6:12 a.m.
			Cooked rice (leftover) 0	280		
			Fried duck egg 0	80		Fried duck egg. The pan is put on fire at 6:15 a.m. Duck egg is mixed with pieces of onion and fishsoy. Coconut oil is put into the pan at 6:20. Stirred egg is fried from 6:20 to 6:25.

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[illegible]
[illegible]

Food Preparation and Consumption (continued) Household No. 222, June 4-5, 1953

K. Snacks

Person eating 1	Time 2	Kind and description 3	Weight (or approx. wt.) A.P. 4	Ined. ref. 5	E.P. 6	Cost 7 Bt.	Stg.
			g.	g.	g.		
June 4/53							
Girl, 8 yrs.	12:00m	She ate a half fruit of pineapple at home. It was bought from the selling boat.	(375)	(195)	(180)		20
June 5/53							
Girl, 8 yrs. Boy, 10 yrs. Girl, 13 yrs.	All day	7:40 - The pot of truffles (gathered from the fields) is put on fire. It is boiled with water and salt. Truffles: 525-72 = 453 gm. Salt: 35 gm. It is finished at 8:28.	453				
Boy, 10 yrs.	8:46	He eats boiled banana (HG)	48				
Girl, 13 yrs.	Early a.m.	She drinks coffee which is bought from the store near the Wat.					40
Father	10:13	He drinks one glass of milk which is bought from the store near Wat.					50

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[126]

Form for Calculating Raw Weights of Foods Eaten

Dietary Survey, Bang Chan — Household No. 12 — Date Jan. 14, 1954

Amounts of foods prepared and eaten — No. persons in household 3

Meal - menu	Raw ingredients				Cooked food	Use of cooked foods					Adjustments-raw wt.		
1	2[1]	3	5	6	9	10	11	12	13	14	For amt. eaten	15	For No. people
4:00 p.m.													
Cooked rice	Polished	610			1640				500	1140		3	
Baked egg plants	3 egg plants	370		370	240				0	240			
Fish "salad"	Lemongrass (HG)[2]	36		36)									
	Holy basil (HG)	44	20	24)	115				0	115			
	1 fish (cooked)	52	12	40)									
	Lime (1/2 fruit)	30	12	18)									
Cooked rice	(Leftover)				250				0	250			
6:55 a.m.													
Cooked rice	Polished	950			2390				800	1590		3	
Roasted fish	2 fish	112			96				0	96			
Cooked rice	(Leftover)				500				0	500			
Chili sauce	Bird pepper (HG)	12		12)									
	Shrimp paste	10		10)									
	Garlic	8		8)	45				20	25			
	Palm sugar	10		10)									
	Lime	12	4	8)									

1. For identification of column numbers, see the original schedule, pp. 118-119 and pp. 113-114 121
2. HG stands for home grown.

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

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Dietary Study, Bang Chan - Nutritive Value of Total Foods Eaten in 24 Hours — Household No. 16 — Date: July 23, 1953 — Persons Eating: 8

Raw Ingredient	Adj. cons.	Calories	Protein gm.	Fat gm.	Carb. gm.	Ca mg.	P mg.	Fe mg.	Vit. A I.U.	B_1 mg.	Ribo. mg.	Niacin mg.	Vit. C mg.
Rice, home milled	3877	14074	295	43	3036	426	8568	46.5	(0)[1]	7.37	1.94	120.2	0[1]
Dried fish	450	864	189	7	0	293		11.3	0	0.27	1.40	20.7	0
Bottle gourd	1535	261	9	3	58	184	276	9.2	1075	0.61	0.77	15.4	154
Swamp cabbage	480	139	14	1	26	350	245	12.0	30240	0.34	0.58	3.4	154
(2)Phag (2)ka-(2)cheed	40	11	1	0	2	66		1.2	2400	0.04	0.08	0.3	28
Coconut milk[2]	1010	735	8	59	42								
Pork fat	36	325	0	36	0	0	0	0	0	0	0	0	0
Fishsoy	48	23	2	2					0	0.01	0.04	1.1	
Shrimp paste	16	19	4	0					0	0	0.02	1.0	-
Chilies, dried	20	49	3	1	6	32	74	0.5	115	0	0	0	10
Garlic	16	15	1	0	4	7	21	0.2	0	0.04	0.01	0.1	2
Bird pepper	10	3	0	0	1	2	-	0.1	600	0.01	0	0	20
Onion	4	1	0	0	0	1	2	0	2	0	0	0	1
Lime	4	2	0	0	1	(2)	(1)	(0)	0	(0)	(0)	(0)	1
Palm sugar	25	96	0	0	24	20	10	2.9	0	0	0	0.3	0
Salt	20	0	0	0	0	46	0	0.1	0	0	0	0	0
Total		16617	526	152	3200	1429	9197	84.0	34432	8.69	4.84	162.5	370
Average/cap.		2077	66	19	400	179	1150	10.5	4304	1.09	0.60	20.3	46

1. ( ) means imputed value; 0 means none or insignificant amount; - means no values available, but probably contains measurable amount; blank space means no information found.
2. See Appendix C, pp. 128-129.

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

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Dietary Study, Bang Chan - Nutritive Value[1] of Total Foods Eaten in 24 Hours — Household No. 12 — Date: Jan. 14, 1954 — Persons Eating:

Raw Ingredient	Adj. cons.	Calories	Protein gm.	Fat gm.	Carb. gm.	Ca mg.	P mg.	Fe mg.	Vit. A I.U.	B_1 mg.	Ribo. mg.	Niacin mg.	Vit. C mg.
Rice, polished	1335	4806	91	9	1053	80	1869	10.7	(0)	1.60	0.40	20.0	(0)
Egg plant	370	89	4	1	20	56	137	1.5	111	0.15	0.19	2.2	19
Fat fish	152	275	28	18	0	56	321	1.5	0	0.09	0.06	6.1	0
Lemongrass	36												
Holy basil	24	23	2	0	4	19	2	0.7	3024	-	0.55	-	1
Lime	22	8	0	0	3	9	5	0.1	0	(0.01)	0	0	6
Bird pepper	7	2	0	0	0	1	-	0.1	402	0	0	0	13
Shrimp paste	6	6	1	0	0				0	0	0.01	0.3	
Palm sugar	6	21	0	0	5	4	2	0.6	0			0.1	
Garlic	4	4	0	0	1	2	6	0	0	0.01	0	0	1
Total		5234	126	28	1086	227	2342	15.2	3537	1.86	1.21	28.7	40
Average/cap.		1745	42	9	362	76	781	5.1	1179	0.62	0.40	9.6	13

1. ( ) means imputed value; 0 means none or insignificant amount; - means no values available, but probably contains measurable amount; blank space means no information found.

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
Bang Chan

SUMMARY

124
125 Information on health, care, and diet of mothers and small children in Bang Chan, Thailand, was obtained primarily by interview, although some direct observations were made. In general, three areas of inquiry were included in this study: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project.

In all, 66 mothers of young children were interviewed. Information on diet during pregnancy, postpartum, and lactation was obtained from women who were either in the stage under discussion or had only recently passed through it.

The description of child feeding practices is based on records obtained concerning 57 children from birth to two years of age, a majority of whom were visited from 5 to 7 times.

Information on growth in height and weight is based on observations made on 71 children, most of whom were weighed and measured 6 or 7 times. Observations were made for 30 of these children both before and after weaning.

843 During pregnancy most women in Bang Chan continued to eat as usual. A few expressed cravings for certain foods, and a minority thought some kinds of food should not be eaten during pregnancy.

846 During the postpartum rest period most women ate a very restricted diet. Rice and fish, with salt, were the foods considered by all informants to be appropriate for this period.

853 As a rule, diet during lactation, after the mother resumed her usual work, was the customary family diet. A minority of informants mentioned foods which should not be eaten by a nursing mother.

164
176 Evidence of the need to improve diets in this region was provided by the occasional occurrence of beriberi or the history of beriberi among mothers as well as by medical inspection and family dietary studies.

853 Breast feeding was the rule in Bang Chan. For a majority of infants observed, breast feeding was continued into the second year, and some were breast fed for more than two years. Few received animal milk after weaning.

INTRODUCTION

121 In the study of food habits and health in Bang Chan, Thailand, mothers and small children were the focus of special attention. We were interested in these groups not only for their own sake, but because in an area where frank deficiency disease was not common, inadequacies in the diet might be reflected in the condition of these vulnerable groups to a greater extent than in the general population. Food habits in this rice producing village have been described (Hauck, Sudsaneh, and Hanks, 1958; Hauck and Hanks, 1959) and information has been presented on nutrient intakes of 11 families (Hauck, Sudsaneh, and Hanks, 1958; Hauck and Sudsaneh, 1959).

128 In the present paper, general procedures are described first, followed by sections on 1) health and care of mothers and 2) of infants, 3) diet of mothers during pregnancy, post-partum, and lactation, 4) feeding of infants and small children, and 5) growth in height and weight of infants and small children in Bang Chan.

PROCEDURES

124 Some of the information presented herein was obtained by direct observation, but much of it resulted from interviews, usually with the mother. One of our first tasks, therefore, was to develop appropriate schedules for such interviews.

Schedules for Interviews.

During the early weeks of getting acquainted in the community, we had preliminary unstructured interviews with a number of pregnant women and mothers of young babies. Frequently the child's father, a grandparent, or other family member would be present. Informants were encouraged to discuss infant feeding, common customs associated with childbirth, and other subjects
125 of interest to the research group. From the information so obtained and from conversations with workers at the Mother and Child Health Center in Bangkok, two schedules were drawn up. In general, both schedules included three areas of inquiry: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project. In this category some items were included because of their interest from the standpoint of an anthropological study rather than because of any assumed relation to nutrition or health.

One schedule was designed to obtain information about the mother before and after the birth of a given child (Appendix p. 53) and the other for information pertinent to the nutrition and health of the child from birth onward (Appendix p. 56). Clinical history and food intake were included on both schedules. Spaces were allowed to record height and weight of infants and young children at each visit. Questions about cultural customs were included on both schedules, but most such information is reported elsewhere (Hanks, 1959). Descriptions of procedures used in the interviews and observations are included in the Appendix (p. 58). 125

Subjects.

At the beginning of the study we located as many households as possible in which there were pregnant women or young babies. The question, "What families in Bang Chan have young babies or are expecting babies?", was asked of the headman of each hamlet, of groups in a village store, and of families where we visited. We were able to follow up most of the leads obtained in this way. If possible the mother was visited sometime before the baby was born; soon after the birth (i.e. within a few days); and then when the infant was 1 month of age, 3 months of age, and at 3-month intervals thereafter. If the first interview occurred after the baby was born, the mother was asked about her diet during the pregnancy, the occurrences at the infant's birth, and his food intake up to the time of the first interview. 124 125

In all, 68 mothers of young children were interviewed. The first interview with 17 mothers was held during pregnancy; 34 others had infants less than one year old when first seen, and for 15 the youngest child was over one year of age. For various reasons, such as death of the infant, removal from the village, or failure to find mother and infant at home, complete records were not obtained in all instances. Moreover, after some experience we limited questions concerning pregnancy and postpartum care to women interviewed at these times or to women whose infants were under one year of age. The descriptions of diet during pregnancy, postpartum, and lactation are based on interviews with from 30 to 50 informants.

In order to obtain more information, particularly about infants going through the weaning period, older babies in the same households, or in the neighborhood of the households with young infants, were weighed and measured and their food intakes recorded. For these additional children the 3-month interval was usually followed, but they were not necessarily visited at the ages of 6, 9, 12 months, etc.

The description of child feeding practices is based on records concerning 57 children from birth to two years of age, a majority of whom were visited from 5 to 7 times.

124 Information on growth in height and weight is based on obser-
125 vations of 71 children, most of whom were weighed and measured 6 or 7 times. For 30 of these children, observations were made both before and after weaning.

HEALTH AND GENERAL CARE OF MOTHERS

145 Information obtained on menstrual history of girls and women in Bang Chan has been reported previously (Hauck, 1956). The median and modal reported age at menarche was 15 years with a range from 13 to 19 years.

163 Most married women in Bang Chan had children, and of 438 pregnancies reported by 84 mothers, over 90 per cent resulted in live births (Hauck, 1956).

843 Clinical History and Complaints During Pregnancy.

164 Most of the women interviewed reported no history of disease which might affect, or be affected by, nutritional status.

Four women had a history of beriberi; 3, a history of malaria; and one had active tuberculosis of which she later died. In relation to the current pregnancy, 6 women had minor complaints such as nausea in early pregnancy, faintness, and leg cramps. The physician considered these as probably physiological. Of the 4 women with more serious complaints, one who said she had pain in the abdomen and legs and difficulty in walking had manifest beriberi when seen a few days after delivery.

844 Delivery and Care of Mothers After Childbirth.

846 Information was obtained from 49 mothers concerning
125 delivery and care after childbirth. For 43 of these women, ages reported were as follows:

Reported Age (years)	Number of Mothers
20 or under	7
21-25	11
26-30	12
31-35	6
36-40	6
over 41	1

The mothers interviewed had borne from 1 to 12 children. For 8 of them, this was the first child; but 25, a majority,

had 2 to 4 children. In each case, the information obtained related to the most recent delivery.

Delivery. - In Bang Chan delivery usually took place at home. Four of the mothers we interviewed went to the home of a relative or relative-in-law. In two of these instances the relative was also the midwife; in the others the mother was apparently seeking a place where she could be more satisfactorily looked after than at home.

Three women went to the Health Center at Minburi, about 3 miles from the center of the Bang Chan community, to have their babies. Two of these mothers expected to be delivered at home but were taken to the Health Center when labor proved long. All 3 returned home either on the day of delivery or the next day and lay by the fire. Two others, both school teachers, told us in advance that they expected or hoped to go to the Health Center, but when labor began they were unable to do so because their babies came so quickly. Aside from the 3 who went to the Minburi Health Center, only one of those interviewed went outside the community to have her baby. Informants usually considered the delivery uncomplicated; although, as noted, some labors were long.

Traditional midwives, who were not professionally trained but had learned from other traditional midwives before them, attended most of the mothers. One woman who was alone delivered the baby herself, one said she had no midwife but did not specify other help, and 2 had the help of women who did not ordinarily practice midwifery. The 3 women who were delivered at the Health Center had professionally trained help. Obstetrics as practiced in Bang Chan has been described by Hanks (1959).

Care of Mother During Postpartum Rest Period. - Traditional behavior during the postpartum rest period has been described by Hanks (1959).

Lying by the fire. - The ancient custom of (2)juu (1)faj[1] (literally to be by the fire) after childbirth was still observed by most women in Bang Chan. The chief difference between the practice as we observed it and as it was described in the Bangkok Calendar[2] for 1865 was in the length of the period. In former times this was as much as a month after the birth of the first child, with shorter periods for successive

1. See Appendix, p. 51 for glossary of Thai terms.

2. The unsigned article entitled "Siamese Obstetrics" was presumably written by the Rev. Dan Beach Bradley, M.D., a Protestant missionary who compiled the Calendar.

853 fish and vegetables, when asked if they did anything to stimulate milk secretion. Other preparations, each mentioned once or twice, were cobra curry, fried (3)kuj (1)chaaj flower, pork soup with (3)kuj (1)chaaj leaves, dried peas and peppers cooked in palm sugar syrup. Some of the medications used were reputed to stimulate milk flow. Three women spoke of peacock brand medicine and one of a Chinese medicine in this connection. With respect to the Chinese medicine, another informant said she took it "to remove the serum which interferes with milk secretion." One midwife put herbs on her daughter's breast and expressed and discarded the "early milk" which was considered bad for the baby. No association appeared to be made between putting the baby to the breast and stimulation of milk flow.

846 312 Drinking water. - Information concerning sources of drinking water used by the mothers was obtained from 46 mothers of young babies. Of these, 20 used canal water, 23 rain water, and 3 used either one. In general, there was a relation between season and source of water used. Most of the mothers whose babies were born between March and October drank rain water, whereas from November to February a majority drank canal water. Some families had enough water jars to preserve rain water for much of the dry season, whereas others had few or no jars and, therefore, could save only small amounts of rain water on a day-to-day basis. In all instances, the water, whatever its source, was boiled for the mother during the postpartum rest period. Forty-six women said they drank the water hot; one said it was warm. One popular traditional midwife said, however, that if the mother had her baby in the hospital, use of boiled water for drinking and bathing was not necessary.

CONDITION AND CARE OF BABIES AT BIRTH AND IN EARLY INFANCY

125 All information to be reported concerning condition and care of babies at birth and in early infancy relates to infants who were under one year of age when first visited. Thirty infants were seen when they were under 3 months of age.

Condition at Birth.

164 165 The condition of the baby at birth was generally described as satisfactory. One infant who died on the third day, before we saw the mother, was said to have cyanosis, failed to cry at birth, and needed to be "helped" for about one-half hour afterward. Three infants had congenital defects: umbilical hernia, inguinal hernia on the right side, and hemangioma on the right groin.

Exposure of Infants to Sunlight.

854 Even during the rainy season sunshine was usually abundant in Bang Chan, but taking a baby out of doors at an early age was generally thought to involve some risk. Many houses had low or wide eaves, and an infant was usually kept in a cradle in the house where sunlight could not penetrate. When old enough to hold up its head while sitting astride an older person's hip, the infant might be carried about the compound by parents or older siblings. As the question was worded ("When did you take the baby outside the house?" or "At what age did you take the baby with you when you went out for pleasure?") the answer did not mean that the baby was taken out with any degree of regularity at the specified age. Most of the babies in this series had been taken outdoors by the time they were 3 months old, but 4 were a year or older when first exposed to [164] sunshine. Nevertheless, the physician found no evidence of rickets among the infants he examined.

One informant, a school teacher's wife, said she thought that taking the baby into the sunshine was not harmful; in fact she believed it made the baby stronger than usual. She thought, however, that too much exposure to sunshine might "bring cold into the baby" and she spoke of the beret as a protection against this.[1] In Bang Chan, an otherwise naked infant might wear a beret when being taken out of doors.

MATERNAL DIET

Diet During Pregnancy.

843 Of 31 mothers who furnished some information on diet during 262 pregnancy, 17 were pregnant when interviewed, and the remainder had young infants, in most cases under 3 months of age. Eighteen [125] of the interviews were based on schedule 4 (Appendix p. 83) and provided fairly detailed information on the kinds of foods eaten. Other informants gave more general information, such as foods craved or disliked.

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[171] 1. Wellin (1956) mentioned the small woolen cap made or bought by mothers in the Valley of Ica, Peru, for the infant to wear. The cap was put on soon after birth and was worn, off and on, for many months. The function of the cap was to prevent the entrance of cold via the fontanel, which was defined as a particularly vulnerable point of entry. Wellin noted that all infants he saw in maternity wards in the Valley of Ica wore woolen caps.

Three reported eating eggs daily,[1] and about two-thirds of the women had them either occasionally or frequently. Animal foods other than fish or eggs were eaten infrequently by most nursing women.

Our questions about ideas concerning foods during lactation did not uncover any firmly established traditional behavior. No food was considered harmful by a majority of informants. In response to the question as to foods which should not be eaten during lactation, however, 12 kinds of food and 4 attributes of food (sour, hot tasting, raw, fermented) were mentioned 27 times. Jackfruit, the item which occurred most frequently, was mentioned 8 times, corn, 3 times, swamp cabbage and pork, twice each; other items such as legumes, beef, poultry, egg, pineapple, and chico, once only. When asked if they disliked any foods at this time 4 women mentioned a dislike for vegetables. One mother said that cooked foods (in contrast to raw ones) were good for a lactating woman. Our question about foods craved during lactation brought little response.

To sum up, the mother's diet during pregnancy and lactation often approximated the usual diet in Bang Chan. A few women said they craved certain foods during pregnancy and some mentioned foods disliked at that time. A number of food items and attributes of food were considered by some informants to be undesirable during pregnancy and lactation, but no item was mentioned so frequently as to be considered tabooed. During the postpartum rest period, however, a greatly restricted diet was common. Mothers apparently had no idea of special dietary needs during pregnancy or lactation.

FEEDING PRACTICES FROM BIRTH TO TWO YEARS OF AGE

This description of feeding practices is based on 256 interviews concerning 57 infants and small children. The majority of them were visited from 5 to 7 times each. Since, insofar as possible, we saw the babies at 3-month intervals, changes in feeding practices will be described by 3-month periods or multiples thereof. If each visit to a child is considered as unity, the 8 age groups from birth to two years included from 17 to 41 children each with 6 of the age groups including more than 30 individuals. Thus the data obtained may be assumed to provide a reasonable picture of baby feeding practices in Bang Chan, 1952-54, and of significant deviations therefrom.

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1. This does not mean that the mother ate a whole egg at one meal. Frequently one or two eggs might be used to prepare food for the entire family.

but additions of rice water, coconut milk, and salt[1] were more common from 3 to 6 months. A few infants less than 6 months old were given rice from the family pot cooked in the usual manner.[2] No other foods were introduced before 6 months of age.

A majority of infants from 6 to 8 1/2 months[3] of age were given ordinary rice, although for some, excess water was not drained off and special mashed soupy rice was still given to others. Fishsoy, (4)naam (1)plaa, might be added for both salt and flavor. Several mothers said that when the baby had teeth he could begin to eat ordinary rice. At this time also the infant was given some other items which were considered as adult food (Table 2).[4] A few were fed protein-rich foods, i.e. fresh, dried, or salted fish, egg, meat, or poultry, between the sixth and ninth months. One child in this age group was given banana other than (3)khluaj (4)naam-(4)waa (kind not specified), and four infants had fruit other than banana frequently or occasionally. Orange, mango, guava, roseapple, and rambutan were mentioned according to season. Some kinds of (3)kha-(5)nom, which included purchased crackers, biscuits, or cookies as well as some sweet items which we would call desserts,[4] were given also, at least occasionally, to many babies over 6 months of age.

Among infants from 9 to 11 1/2 months of age increasing use of protein-rich foods, primarily fish and egg, was noted. Fruits other than the small (4)naam-(4)waa banana and (3)kha-(5)nom were also given to more infants. A few were given vegetables before one year of age, but none had them daily (Table 3).

Diet During the Second Year of Life.

For most of these babies breast feeding was continued into the second year. By this time almost all were given ordinary rice, and more than half had fish daily with fresh fish being fed more often than dried or salted fish. A few babies between

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1. In Thailand rice is not salted during cooking.

2. See (3)khaaw (5)suaj, glossary p. 51.

3. The nearest half month marked the dividing point between age groups. Thus an infant 8 months 20 days old would be considered as 8 1/2 months old and one 8 months 23 days old would be considered as 9 months old.

4. Neither such (3)kha-(5)nom nor fruit were included in the usual family meals, but school children often bought them as snacks to eat at noon recess (Hauck et al., 1958; Hauck and Hanks, 1959).

Fish, fresh, dried, or salted, depending on the family fare, was a regular part of their diet (Tables 9, 10). One had egg daily, and 10, frequently; but for more than half of them egg, as well as meat or poultry, was an occasional item of diet. All were fed (2)kha-(5)now, and almost half had something in this class of foods daily. Only three had green or other vegetables daily and 5 never ate them. Bananas of the (4)nam-(4)waa variety were eaten by all, but only one had banana daily while more than half had them only occasionally. Four were sometimes given bananas other than (4)nam-(4)waa, the variety which was considered safe for infants and invalids. Two had never had other fruit, but most children of this age were occasionally given other seasonal fruit. The variety of foods other than milk given to these children did not appear to depend on whether or not they had been weaned (Tables 5 - 10).

Weaning.

Some of the children in this series had been weaned before our observations were started, and 19 had not been weaned when last visited. For 30 children the period of observation included weaning (Table 11), and in most cases enough records were obtained so that the effect, if any, of weaning on the weight curve could be ascertained.

Table 11. Age at Weaning for 37 Babies and Number for Whom Weight Records Before and After Weaning were Obtained, Bang Chan, 1952-54.

Approximate Age At Weaning	Number of Babies	
	Total	Weighed Before And After Weaning
(months)[1]		
5	1	0
9	1	1
11	1	1
12	8	4
13 - 14	5	5
16 - 17	2	2
18 - 19	8	7
20 - 22	7	6
25	2	2
28	1	1
36	1	1
Total	37	30

1. Because of the method of choosing children for study, the majority of those observed were under two years of age. We have no basis for judging what proportion of children in Bang Chan were breast fed beyond two years of age.

Methods.

All measurements of infants and children were made by one or more members of the research group. Equipment and procedures are described in the Appendix (p. 58). 124

In all, observations were made on 80 babies. For some of these, however, only one or two measurements were obtained. Such records were inadequate for most purposes of this study. Fairly complete sets of measurements were obtained for 71 babies through a total of 449 visits (Table 14). Since our aim was to obtain as much information as possible about babies from birth onward, the larger numbers of children were in the lower age ranges. 125

Nine babies were measured once or twice but were not followed longer because of removal from the village, inability of a mentally subnormal mother to cooperate, death (2 cases), and in one instance, reluctance to cooperate on the part of the mother of an illegitimate baby.

The investigation covered a period of 18 months, and 7 visits were made at intervals of about 3 months, thus, most of the children were measured 6 or 7 times (Table 15).

Table 15. Number of Times Children Were Weighed and Measured, Bang Chan, Thailand, 1952-54.

Number of Measurements	Number of Children
3[1]	3
4	2
5[1]	6
6[2]	21
7	36
8	3

1. An additional measurement of weight but not of height was made on one child.

2. An additional measurement of weight but not height was made on two children.

Sometimes mother and baby were not at home when the scheduled visit was made. If the household was remote from headquarters it might not be possible to return soon without neglecting other equally urgent work. In other cases the child was visited and the food intake recorded, but the child was unwilling to allow himself to be measured; occasionally the child was

[to p. 33 - Hmong]

125 asleep, and the mother was reluctant to wake him. Thus, for some children only three or four measurements were obtained.

The measurements of height and weight of each child were tabulated by age in months at observation.[1] A child was considered to be the age at his last month's birthday unless he was within 7 days of the next month's birthday. For example, a child who was measured at 2 months 25 days was considered to be 3 months of age, whereas a child who was measured at 2 months 20 days was considered to be 2 months old at the time of measuring.

Results.

145 Growth in Height and Weight Compared to Children Attending
125 Well Baby Clinics. - The mean, median, and range of height and
141 weight of children measured at 1 month, 3 months, 6 months, 9 months of age, and so on, were determined (Tables 16 and 17). These figures include data obtained for all children who were measured at any of the selected ages but not weights and measures made at intervening ages. No marked difference was noted between mean and median values for height and weight. At almost all ages the mean and median values for height and weight of boys were greater than those for girls.

For comparison with these observations, only two reports on height and weight of Thai infants have come to our notice. Both of these dealt with infants and young children attending well baby clinics in Bangkok.

145 Over a period of 5 years, Dr. Montri Mongcolsamai (1939)
141 collected data on height and weight of infants and children who came to the Well Baby Clinic at the Siriraj Hospital. These were described as normal children free from disease and ranging in age from 1 day to 6 years. Most of the children were Thai, most were from Bangkok, and most had been born in the Siriraj Hospital. In all, 2664 children were observed; 3006 measurements of height and 3570 measurements of weight were obtained.

Dr. Montri (1939) grouped the data according to age and sex, reporting mean values for height and weight of children under 1 year of age at monthly intervals and of children over 1 year of age at intervals of 6 months. For example, weights of all male infants who were 1 month old but younger than 2 months were averaged, also, weights of all male children who were 1 year old but younger than 1 1/2 years were averaged. Average weights and lengths of newborn infants and of infants under 1 month of age were included.

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1. The height and weight of each child at each observation were reported by Smith (1958).

[see p. 36-37- Analyst]

In some age groups fairly large numbers of children were observed and in other groups relatively few. None of the groups up to 4 1/2 years of age with whom the children in this series could be compared included fewer than 30 individuals. The numbers of boys and girls measured at each age were about the same.

Dr. Amara Chandrapanond (1957) reported the mean heights and weights of 20 babies who were weighed and measured at monthly intervals over a period of a year. She did not report values for boys and girls separately, but, in general, at each age these fell between those for males and females as reported by Dr. Montri (1939).

In figure 1[1] the median heights of boys and girls in Bang Chan together with the number of individuals who were measured at 3, 6, 9, 12, 15, 18, or 21 months are shown in comparison to the height curves constructed from values reported by Dr. Montri (1939). Corresponding median weights are shown in figure 2.[1] Although the groups are small, the tendency for both height and weight of young children in Bang Chan to be below that of children attending a well baby clinic in Bangkok is clear.

One should note, however, that Dr. Montri characterized the children he observed as "free from disease", whereas some of the children of Bang Chan had colds, skin infections, or other minor disorders which might have affected their weights. Such disorders are very common, and we do not know whether or not they disqualified children attending the Well Baby Clinic from inclusion in the series for which heights and weights were reported.

Graphs of height-age and weight-age were plotted for each child in this study and for small groups of children who were observed regularly over a year or so at the same ages.

Most of the children increased in height in a fairly regular fashion, the slopes of their height curves being about the same as the curve drawn from Dr. Montri's[1] values, although there were individual variations in this. The height curves of many more children of Bang Chan were below than were above the curve drawn to Dr. Montri's values. Of the 35 girls measured, the height curves of 6 were above, 6 were about the same as, and 23 were below the curve drawn to Dr. Montri's values for girls. Of the 36 boys measured, the height curves of 9 were

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1. Mean values reported by Dr. Montri were plotted at 1-month intervals for the first 11 months, then at the midpoint of the intervals he reported. For example, measurements reported for children 1 to 1 1/2 years of age were plotted at 1 year 3 months.

[TEXT CONTINUED ON PAGE 41].

1 [See p.34 - Analyst; 2 [See p.40 - Analyst]

above, 12 were about the same as, and 15 were below the curve drawn to Dr. Montri's values for boys.

[125] Mean heights and weights of groups of children who were observed regularly at 3-month intervals, at the same ages, were determined. The numbers in these groups were small because of difficulties encountered in collecting data precisely according to plan, but curves could be constructed for some such groups covering periods up to 12 months. These were compared to those based on Dr. Montri's values. The curves of mean height for such small groups were fairly smooth with slopes similar to but below the curve drawn to Dr. Montri's data.

For the younger groups of children in Bang Chan, curves for mean weights were generally below those drawn to Dr. Montri's values. Although the groups under 1 year of age were, on the average, about 1 week younger than the children observed by Dr. Montri, adjustment[1] did not eradicate the difference. Differences between mean weights for groups of children 15 months of age and older, in this series and in Dr. Montri's, were less consistent than for the younger children.

Many studies on weight of infants in the tropics indicate that weight gain during the first 6 months or so of life is comparable to that of infants in Europe and America. After 6 months of age, however, the weight curves become flattened (Jelliffe, 1955; Falkner et al., 1958). Both Dr. Montri (1939) and Dr. Amara (1957) noted this tendency in the weights of the Thai infants they studied. Dr. Montri (1939) compared the weights of the Thai children he observed with values reported for Japanese children. He found that up to 6 months of age Thai children weighed as much as Japanese children but that after this age they weighed less. Dr. Amara (1957) compared the weights of the infants she observed with those of American babies and found that after 4 months of age the Thai infants gained weight more slowly. Both of these observers expressed the opinion that Thai babies gained weight more slowly as they grew older because their diets were inadequate.

In general, Thai children are short and light as compared to children in the U.S.A. In the Bang Chan group, for example, at 3 and 6 months the median weights for male infants approximated the 25th percentile of male infants as reported by Stuart and Stevenson (1950). At 9 months, however, the median weight was

1. Dr. Montri calculated that boys 3 to 6 months old gained, on the average, 23 grams per day and that girls gained 22 grams per day; from 6 to 9 months the figures are 7.3 and 7.8; and from 9 to 12 months they are 7.4 and 7.6 grams, for boys and girls respectively. These values were calculated for a week and added to the mean weights of the children of Bang Chan to find out if the difference could be accounted for in this way.

clear evidence of a seasonal effect. If weight gain in Thai infants is related to season, this could be better defined by weighing groups of children at monthly intervals and determining when or if changes in rate of gain occur. 145

Although our records were not made for the purpose of correlating food intake with weight gain, and no quantitative information was obtained on the diets of mothers and babies, we attempted to see if any obvious relation existed between the variety of food eaten by the mother or the child and the child's growth. For this purpose, case studies were made of 7 infants whose records from birth onward were fairly complete. The age at last observation was from about 14 to 18 months. Four of these children had gained at each weighing and weighed more at one year of age than the average infant observed by Dr. Montri (1939). Three were chosen because they had lost weight or failed to gain at some time during the period of observation and weighed less at one year of age than the average infant observed by Dr. Montri. Infants of both sexes were included in each group. No illnesses or abnormalities were recorded in the clinical histories of any of these babies or their mothers. No evidence was obtained from the qualitative food records as to why some infants gained consistently and at a fairly "normal" rate, whereas others gained relatively slowly and failed to gain or lost weight at times (Smith, 1958). A45 262 [125]

Quantitative food records might have provided evidence on this point but our observations were inadequate for this purpose. Such quantitative records should include estimations of the amount of mother's milk obtained by the infants, based on the baby's weight before and after nursing, as well as records of supplementary food given. Analysis of the mother's milk, particularly for the content of the water soluble vitamins which are influenced by the mother's diet, should also help to shed light on the cause or causes of the common failure to gain weight among older infants and small children in Bang Chan. No cases of beriberi occurred among the infants we observed, but in two instances siblings had died of infantile beriberi. [164] [165]

Evidence of protein malnutrition has not been commonly recognized in rice eating areas, but one must consider the possibility that these children may be in a state analagous to pre-kwashiorkor. Development of the clinically recognizable protein deficiency disease may be forestalled when the child learned to feed himself and eats more liberally of rice with some fish and egg. Of the 54 children with kwashiorkor observed by Metrasiri and Metrasiri (1955) in Bangkok, many were weaned earlier than was usual in Bang Chan. Most of them, however, had been breast fed, and 4 were still being breast fed when the disease was diagnosed. 121 [862] [171]

125 SCHEDULE FOR INFORMATION CONCERNING MOTHERS IN BANG CHAN.[1]

Cornell University Thailand Project 1952-53 Schedule 4

No. for child
Date

1. Hamlet.....House No..... 2. Name 1).....

2).....3. Husband's Name 1)..... 2).....

4. Married.....years 5. Present pregnancy..... months

6. Pregnancy, illness during:

7. Objective signs of deficiency:

8. History of:
a. Malaria..... c. Tuberculosis.....
b. Beriberi..... d. Other disease.....

Post partum interview, date.....

9. Delivery:
a. Date..... c. Type.....
b. Where..... d. Confined by.....

10. (2)juu (1)faj:
a. No.....Yes..... e. Hot ashes chamber.....
b. Days rest..... f. Other.....
Kind: c. Fire.....
d. Hot water bottle..... g. Activity.....
h. Bathing.....

11. Medicine used by mother:
a.....
b. With liquor: Yes.....No.....

12. Water: a. Rain..... d. Boiled..... f. Hot.....
b. Canal..... e. Raw..... g. Cold.....
c. Fish pond.....

13. Milk stimulation: How.....

14. Colostrum:..... 15. Complaints:.....

16. Objective signs of deficiency:.....

1. Information obtained from pregnant women and those with infants under one year of age.

Schedule 4 contd.

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FOOD HABITS OF MOTHER Date	Pregnancy A				Postpartum B				Lactation C			
	D	F	O	N	D	F	O	N	D	F	O	N
17. Rice a.(3)khaaw (5)suai[1]												
b.(3)khaaw (1)caan (4)naan[1]												
c.(3)khaaw (3)tom[1]												
18. Fish a.Fresh												
b.Dried												
c.Salted												
19. Egg												
20. Poultry												
21. Meat a.Pork												
b.Dry beef												
c.Fresh beef												
22. Vegetables												
a.Green												
b.Other												
23. Fruits												
a.Bananas												
b.Coconut												
c.Other												
24. Legumes												
a.Dry beans, peas												
b.Peanuts												
25. Other foods												
26. Foods craved												
27. Foods disliked												
28. Believed to be good for:												
29. Believed to be bad during:												
30. Relation to usual diet:												

D = Daily, F = Frequently, O = Occasionally, N = Never

Interview by.....
Informants.....

1. See Glossary of Thai Terms (p. 51).

125 Schedule 4 contd.

SUPPLEMENT TO SCHEDULE 4[1]

31. Age.....years

32. Menstruation: a. Regularity: Yes.....No.....
b. Duration:..... days
c. Interval:..... days
d. Menarche:..... years
e. Menopause:..... years

33. Children: a. Total.....
b. Alive..... Dead.....
c. Stillbirths.....
d. Other: (State which child, age, cause)
.....
.....
.....
.....
e. Miscarriages.....
Age: f. Oldest..... years
Youngest..... years

34. Position in series of the children in this family whose dietary histories were obtained:.....

1. This information was obtained from all adolescent girls and women examined in the random sample of village households, as well as from each mother who gave us fairly complete information concerning the dietary history of one or more children.

SCHEDULE FOR INFORMATION CONCERNING BABIES IN BANG CHAN.[1] 125 •

Cornell University Thailand Project 1952-53 Schedule 5

No. for child
Date

1. Hamlet.....House No..... 2. Name 1).....

2)..... 3. Sex M F 4. Birth date.....

5. Mother's name 1)..... 2)..... 6. Father's name 1)..... 2) .....

7. Complications of delivery.....

8. Condition at birth.....

9. Eye prophylaxis.....

10. Condition after birth:
a. Convulsions..... d. Fever.....
b. Vomiting..... e. Other.....
c. Diarrhea.....

11. Smallpox Vaccination:
a. Yes.....No.....
b. Age.....
c. Result.....

12. Physician's comments on first examination:

13. Early treatment of baby:
a. Medicine.....
b. Food and water.....
c. Put to breast: (Day and times)
1st.....2nd.....3rd.....
4th.....5th.....

14. Cradle, ventilated:
Yes.....No.....

15. Cultural customs:
a. Offered to spirit: Yes...No...
b. By.....
c. Items on tray.....
d. Head shaved.....
e. Age.....
f. By.....
g. Ceremony: Yes.....No.....

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1. Items 7 - 15 used for all infants under 1 year, items 16 - 36 for all children up to 3 years of age at first interview.

Schedule 5 contd.

125 FEEDING OF BABY

Date of Interview	A				B				C				D			
16. Age																
17. Length, cm.																
18. Weight, kg.																
Food	D	F	O	N	D	F	O	N	D	F	O	N	D	F	O	N
19. Mother's milk																
20. Cow's Milk[1]																
21. Water a. Boiled																
b. Rain																
c. Canal																
22. Rice a.(3)khaaw (3)tom[2]																
b.(3)khaaw (2)piag[2]																
c.(3)khaaw (5)suaj[2]																
23. Banana a.(4)nam-(4)waa[2]																
b. Other																
c. Crushed																
d. Baked																
e. With Rice																
24. Vegetable a.Green																
b.Other																
25. Fish a.Fresh																
b.Dried																
c.Salted																
26. Egg																
27. Poultry																
28. Meat																
29. Other fruit																
30. (2)Kha-(5)nom																
31. Exposure to sunlight																
32. Good for baby																
33. Not good for baby																

34. Teaching baby to eat

35. Weaning procedure

36. Age at which baby eats adult food 37.Circumcision 38.Age

D = Daily, F = Frequently, O = Occasionally, N = Never

Interviewed by .....
Informants.....

1. Write in brand and notes on type of milk
2. See Glossary of Thai Terms (p. 51)

GUIDES FOR THE INTERVIEWER AND DESCRIPTION OF ITEMS IN SCHEDULES

General Guides for Interviewer.

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Schedule 4 was designed so that one form might be used to record all relevant information concerning the mother before and after the birth of a given child.

Schedule 5 was designed so that one form might be used to record all available relevant information concerning each child's history from birth onward.

At the initial interview the informant should be asked first about the situation at that time. For example, if the mother has a baby 6 months old, she should be asked about the child's food intake at that time, then what he was fed at an earlier age, for example 1 or 2 months, and finally the questions relating to the baby's birth and first few days of life. Similarly, the mother should be asked first to tell about her own present diet (in this case recorded under Food Habits during Lactation on Schedule 4) then concerning her care and diet at delivery and in the early postpartum period, and finally information concerning her health and food habits during the pregnancy which resulted in this baby.

Ideally, one would have the first interview during pregnancy and follow with records of interviews obtained periodically after the birth of the baby. To gain an idea of the present situation and practices in the village more rapidly, however, parents of infants under one year of age should be asked to furnish information about the infant's earlier history, including the mother's diet and condition prenatally.

The date of interview, in relation to the date of birth, indicates whether a given series of answers relate to the situation at the time of interview, or to an earlier situation, described from recall.

Schedules 4 and 5 relating to a given infant should be identified by the same Roman numeral, as I, in the upper right hand corner. Schedules 5, relating to other children under 3 years of age, from the same mother, should be identified as II, III, etc. An example follows showing information to be obtained at each of 3 interviews with the same mother when the first interview is held during pregnancy and she has two older children under 3 years of age.

EXAMPLE:

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	Mother Schedule 4	Baby Schedule 5, I	Child Schedule 5, II	Child Schedule 5, III
At First Interview:				
	6½ months pregnant	unborn	15 months	30 months
check items:	1-8 and 17-30A	———	1-6, 11-12 16-34A (35-39)[1]	1-6, 11-12 16-34A (35-38)[1]
At Second Interview: 3 mo. later				
	Post-partum	2 weeks	18 months	33 months
check items:	9-16, 17-30B	1-15, 16-33A	16-34B (35-38)[1]	16-34B (35-38)[1]
At Third Interview:				
	Mature lactation	4½ months	22 months	37 months
check items:	17-30C	16-34B (37-38)[1]	16-34C (35-38)[1]	No schedule. Weigh and measure only.

1. Use when appropriate.

Description of Items on Schedule 4.

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Date. The date of first interview was entered on line 1.

1-3. Identification. Name of woman, name of husband, and their residence.

4. Years of marriage. To avoid embarrassement in cases where there had been no legal ceremony, the question was phrased to mean "How long have you had a house?"[1]

5. Present pregnancy. The woman's own estimate of the duration of the present pregnancy in months.

6. Pregnancy, illness during. The physician asked questions,[1] recorded description of symptoms, and commented on nature of illness.

7. Objective signs of deficiency. If the woman's complaints suggested dietary deficiency, the physician examined the patient for objective signs such as absence of knee jerk, changes in hair, skin, eyes, lips, tongue, gums, etc. and recorded his findings or dictated them to the recorder.

8. History of malaria, beriberi, tuberculosis and other disease. The physician asked questions which would lead the patient to describe past illnesses. Advanced symptoms of the diseases listed are sufficiently marked and characteristic to permit the patient to describe them so that the physician would recognize them with reasonable certainty. Furthermore they have a direct bearing on the nutritional history. Under "other disease" such items as chronic diarrhea and symptoms of diabetes were entered.

Postpartum interview, date. If the first interview was obtained during pregnancy, this date was different from the one above. If the first interview was after the birth of the child, this date was the same as the one above. From this date and the date of delivery, one can tell whether the information obtained was recent or recalled, and if recalled, from what time in the past.

9. Delivery.

a. Date. If the delivery was very recent the recorder could ascertain the day of birth (as last Friday) and record it at once according to the western calendar. Otherwise, the date according to the Thai calendar was recorded, and this was later translated.

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1. The investigator decided on an appropriate way to phrase each question and used the same words consistently.

125
124 b. Where. This was designated as "home", "Mother's home", "midwife's home", etc.

c. Type. Anything unusual about the delivery was noted; otherwise it was considered normal.

d. Confined by. If a local midwife attended the mother, the midwife's name was given here. If a nurse, midwife, or physician from outside the village attended the mother, this fact was noted.

10. (2)Juu (1)faj.

a., c., d., e., f. The custom of having the mother rest for a number of days in front of a fire is an old one in Thailand. If the mother was visited while she was still resting, the wood fire, if used, was in evidence. If not, the mother was asked if she was using a hot water bottle, hot ashes chamber, or other heating device. From experience one infers that those who do not actually have a wood fire but who used a hot water bottle or hot ashes chamber may reply either "no" or "yes" to the question apparently depending on their attitude toward the practice. If they considered it a good custom, but inconvenient, or if they were hesitant to break with tradition, they might regard the hot ashes chamber or hot water bottle as a modern form of (2)juu (1)faj and therefore reply "yes". If, however, the mother considered the practice of (2)juu (1)faj old fashioned, she might reply "no", yet be using a hot ashes chamber.

b. Days rest. The number of days of comparative rest was recorded. If the mother observed (2)juu (1)faj, this was the same as the days (2)juu (1)faj.

g. Activity. This item was included because of some concern on the part of the instructor in midwifery at the Maternal and Child Health Center in Bangkok because some mothers were relatively inactive, lying on a board before the fire for a number of days. If the mother sat up, went to the latrine, or got off her bed to get things for herself, this item was checked.

h. Bathing. Some mothers did not bathe but had their bodies rubbed with tumeric. This item, suggested by the midwife at the Maternal and Child Health Center in Bangkok, was included to see whether or not there was any general feeling that the mother should not be bathed.

11. Medicine. In our preliminary interviews we learned that mothers often took medicine after childbirth and that frequently this was mixed with liquor. This item was included to learn which medicines were most commonly used and the extent of the practice of taking medicine with liquor at this time.

12. Water. Contaminated water is a possible source of disease in Bang Chan. This item was included because we learned from preliminary interviews that during the (2)juu (1)faj period special precautions might be taken with respect to the source, treatment, and temperature of water consumed by the mother and baby.

13. Milk stimulation. How. In our early interviews we encountered several cases in which we were told that the child was not put to the breast because the mother had no milk. Medicine, local applications to the breast, and certain foods reputed to stimulate milk flow were all used. We wished to know what, if anything, was done with the idea of milk stimulation specifically in mind. 125 124

14. Colostrum. In our early interviews we encountered some cases in which the first mammary secretion was considered unsuitable for the child. It was expressed and discarded. Any ideas as to whether or not colostrum was good for the baby were entered here.

15. Complaints. The physician asked "Now, how do you feel?".

16. Objective signs of deficiency. Same as item 7, except that this question related to the post partum period.

Food Habits. The date of interview was entered in the appropriate space, A, B, and/or C. These dates might all be different if the first interview occurred during pregnancy, or they might be all the same if the interview were held during lactation and information concerning food habits during pregnancy and postpartum obtained by recall. Items 17-25 included the categories of food which were noted in the dietary records obtained in 1948-49 (Sharp et al.,1953), grouped roughly according to nutritive value. Frequency with which a given type of food was eaten was indicated by checks in columns labeled: D (daily), F (frequently, i.e. not every day, but at least every week), O (occasionally, i.e. at relatively long intervals) and N (never). Items in these latter categories might be so placed because they must be purchased and were relatively expensive, or because the individual did not like the food. In the latter case, the recorder wrote in D for "dislike" following the item. Note that item 27, Foods disliked, refers to aversion to a given type of food at this period but not always.

17. Rice. See Glossary, p. 51, for description of these preparations.

18. Fish.
a. Fresh
b. Dried
c. Salted

These three categories were included since in preliminary interviews we found that at some times one form might be used to the exclusion of the others; also, salted fish is used in very small amounts. Thus if salted fish only were used during (2)juu (1)faj, this category would be checked. If, however, fish was eaten daily but the fish might be sometimes fresh, sometimes dried, or sometimes salted, the appropriate categories were bracketed together under the appropriate column and one check mark entered.

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19. Egg.

20. Poultry.

Most farmers in Bang Chan raised poultry, but in many households most of the eggs produced were sold. We wished to know whether these foods, though a cash crop, were used by mothers.

21. Meat

a. Pork. Few farmers in Bang Chan raised hogs. Pork, if eaten, was generally purchased.

b. Beef, dry.

c. Beef, fresh

In Bang Chan "beef" usually meant water buffalo meat. If an animal died, some of the meat might be consumed fresh and the rest dried for future use.

22. Vegetables.

a. Green. In this category were included the green leafy vegetables such as swamp cabbage but not items such as green egg plant which although green on the outside are not rich in carotene.

b. Other. All vegetables other than the green leafy ones were included in this category.

23. Fruit.

a. Bananas. Since they were grown by all farmers in Bang Chan, were placed in a separate category.

b. Coconut. Was used frequently in the form of coconut milk and coconut cream in food preparation. Since coconut was one of the chief sources of fat in this area, it was put in a separate category.

c. Other. If other fruit was eaten daily or frequently, the kind of fruit was entered under the appropriate column.

24. Legumes.

a. Dry beans, peas.

b. Peanuts.

Although, according to the records obtained in 1948-49, (Sharp et al., 1953) dry legumes were seldom used in Bang Chan, increased use of legumes had been suggested as a means of increasing both protein and thiamine in the Thai diet. We had also observed dry beans of several varieties for sale in the village, and we wished to get some idea as to the extent to which they were used.

25. Other foods. The most frequently mentioned "other foods" were sweets. 125 • 124

The interviewer usually began by asking "what foods do you eat?" or "During pregnancy what did you eat?". After the informant had replied, he would ask about specific food categories not mentioned by the informant to be sure they had not been forgotten, then would sum up the information before going on to the next question.

26. Foods craved.

27. Foods disliked.

28. Foods believed to be good for.

29. Foods believed to be bad during.

Items 26-29 were included to get information on beliefs and reactions toward specific types of food during pregnancy, the postpartum period, or lactation. Such ideas might either favor or hinder the introduction of any changes in diet which might be considered desirable.

30. Relation to usual diet. The interviewer asked how the diet at this time compared to the mother's usual diet.[1] The reply was usually entered as "same" or "restricted." If "restricted", items listed under 29 "believed to be bad during" indicated changes from the usual.

Initials of the interviewer and recorder were entered under the appropriate column (as pregnancy, postpartum) and the name(s) of the principal informant(s) entered below.

At the conclusion of the interview the recorder rechecked the schedule to see that all appropriate spaces had been filled. To indicate that a question was asked or an examination made but the answer or results were negative, a zero was entered. Thus if the mother said she had not been ill during pregnancy, a zero was entered after item 6. If the physician examined for objective signs of deficiency but found none, a zero was entered after item 7 (for pregnancy) or after item 16 (postpartum).

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1. The investigator decided on an appropriate way to phrase each question and used the same words consistently.

125
124 Description of Items on Schedule 5.

1-6. Identification. (Same as for schedule 4).

7. Complications of delivery. The physician asked "Was it easy to deliver?"[1]

8. Condition at birth. "How about the condition of the baby after delivery?"[1]

9. Eye prophylaxis. "Were drops put in his eyes early?"[1]

10. Condition after birth.

a. Convulsions. "Did the baby have convulsions soon after delivery?"[1]
b. Vomiting.
c. Diarrhea.
d. Fever.
e. Other.

Symptoms, especially those associated with or which might lead to nutritional disorders in young infants, were listed so that answers might usually be recorded by a check mark, if the symptom was present, or a zero, if absent. Small spaces were left for writing in comments, if necessary, as well as a space for occurrence of other symptoms in the infant.

11. Smallpox vaccination.
a. "Was the baby been vaccinated?"[1]
b. "What was the age of vaccination?"[1]
c. "Was it successful?"[1]

12. Physician's comments on first examination. If the interview was held within a few days after birth, the physicians comments on the condition of the baby were written here. In practice, comments were recorded only when the baby appeared to depart from the normal in some significant way.

13. Early treatment of baby.
a. Medicine. If the new born baby was given medicine, either purchased or prepared at home or by the midwife, the nature of the medicine was noted.
b. Food and water. Here the recorder noted the kind of food, if any, which was offered before lactation was established; also the source and treatment of water given as "boiled rain water", "boiled canal water", etc.
c. Put to breast. (day and time). The physician asked when the mother began to breast-feed her infant. If she

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1. The investigator decided on an appropriate way to phrase each question and used the same words consistently.

said this was on the 3rd, 4th, or 5th day after the baby was born and that she did not let him suck at all until she had milk, a check in the appropriate blank was used to answer the question. If, however, the baby was put to the breast before the milk flow was established, the number of times this was done was entered in the appropriate space. Thus, a mother might put the baby to the breast once on the second day and frequently on the 3rd or 4th days. 125 124

14. Cradle, ventilated. A number of different types of cradles are found in Bang Chan, i.e. those woven of fiber, those made of wood with slatted sides, those with a wooden frame and string sids, and those of cloth. If the cradle was in evidence the recorder checked yes or no according to whether or not it allowed fairly good circulation of air about the baby.

15. Cultural Customs.

a. Offered to spirit. The custom of offering the baby to the spirits was noted during the 1948-49 study. This item was included to find out how common this practice was in Bang Chan.

b. By. The name, or relationship, of person offering the child to the spirit was noted here.

c. Items on tray. If the child was offered to the spirits, it was customarily put into a winnowing tray together with various items which were supposed to influence its progress and well-being in later life. For example a pencil, exercise book, needle and thread (for a girl) were frequently placed on the tray. The tapered bamboo used by the midwife to cut the cord, and the clod of earth or the rhizome on which the cord was laid at the time of cutting, were also put on the tray.

If the interview was carried out at the time when the baby was on the tray, interviewers noted and recorded items actually on the tray with the baby. If the interview was carried out at a later date, the interviewers asked what was placed on the tray. Should the informant fail to mention any of the common items used, the interviewer asked about these specifically, i.e. "Did you put a pencil on the tray?", "an exercise book?" to be sure that the informant had not forgotten to mention the item. Comments of interest made by informants with respect to this custom were recorded here if there was space; otherwise they were noted in the interviewer's notebook.

d. Head shaved. This was usually done at about one month of age. Concerning infants this age or older the interviewer asked about the head shaving (which might be obvious). If the head had been shaved, the age at which this was done, by whom, and whether or not there was any attendant ceremony were recorded.

On the lower half of schedule 5 were spaces for recording 4 interviews (A, B, C, and D) concerning the child's feeding, together with information on age, length, and weight on the date of each interview.

125 16. Age. Age was obtained from the birth date (item 4)
124 and was figured by a member of the team according to the western system.

17. Length or height in cm. Height was measured on a locally made wooden measuring device hinged so as to fold (4 sections, each 50 centimeters long) and provided with a sliding set square. Divisions on the scale were burned into the wood. An infant was measured by putting the device on the floor and placing the baby on it. The knees were pressed down so that the backs of the knees were in contact with the scale. One of the research group then placed a flat-surfaced object such as a book perpendicular to the scale against the soles of the feet, while another brought the set square in contact with the infant's head. The readings at both feet and head were recorded and one was subtracted from the other to determine the length of the baby.

Measurements of babies are less exact than for older children, since babies often squirm and struggle during the measuring procedure.

18. Weight. Babies were usually weighed on a scale with a capacity of 15 kilograms in 50 gram divisions. The baby was placed on a pillow or cloth on the platform of the scale and the weight recorded. The pillow or cloth and any garments which had been on the baby were then weighed and this weight recorded. The second weight was subtracted from the first to obtain the weight of the baby.

During the dry season, when boat travel was not possible and visits to the households had to be made on foot, only a bathroom scale was carried. An infant was weighed in the arms of an adult, and the weight of the adult subtracted from the total. Divisions on this scale represented one-half kilogram, but values could be interpolated to one-fourth kilogram. No very young infants had to be weighed on this less exact scale.

The weight of the babies and young children can be considered as approximate only. No attempt could be made to weigh the baby just before a feeding or just after excretions had occurred as could be done with older children. The observed weight of an infant or young child at any given time is affected by variations in these conditions. Nevertheless, the recorded figures gave a reasonable idea of the size of Bang Chan infants at various ages, and the rate of growth of an individual child.

Food eaten by the child was recorded by checking the appropriate column, D (daily), F (frequently, i.e. not every day, but at least every week), O (occasionally, i.e. at

relatively long intervals) and N (never). If the informant volunteered that a given food was never eaten or only occasionally eaten because the child disliked or refused it, this information was noted. 125 • 124

19. Mother's milk.

20. Cow's milk. If cow's milk was being fed to the baby, the brand and type of milk (as Bear brand condensed, Bear brand dried, etc.) was written in the space allotted to the interview together with a check indicating frequency of use.

21. Water.

a. Boiled. If the baby was given boiled water daily or sometimes, the appropriate column D, F, or O was checked. If raw water was used, this item was checked N (never).

b. Rain.

c. Canal. Items b and c indicated the source of the water which might be used either raw or boiled as noted under a.

22. Rice. See glossary, p. 51, for description of these preparations.

23. Banana.

a. Since (3)kluaj (4)nam-(4)wa is a type of banana frequently used for baby feeding this was named specifically.

b. Other. The name of any other types of bananas used was entered in the appropriate column, with a check indicating frequency. Thus, if on second interview the interviewer learned the (3)kluaj (5)hausum were given occasionally, "hausum" was written in the B column opposite "other" and a check entered under "O".

c. Crushed.

d. Baked.

e. With Rice. Items 23, c, d, and e represented ways in which bananas were frequently prepared for infant feeding. If the interviewer learned that other methods were used, these were described separately in the field notes with a marginal footnote on schedule 5 to call attention to this.

24. Vegetables.

a. Green. In this category were included the green leafy vegetables such as swamp cabbage but not items such as green egg plant which, though green on the outside, are not rich in carotene.

b. Other. All vegetables other than the green leafy ones were included in this category.

25. Fish.

a. Fresh.

b. Dried.

c. Salted.

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124 These three categories were included since in preliminary interviews we found that one form might be considered appropriate and another inappropriate for a child of a given age. Thus, if fresh fish were given daily or frequently but dried or salted fish were never given the child, this could be recorded. If, however, the child were given any type of fish which was prepared for the family, the appropriate categories are bracketed under the column in which the interview was being recorded and a check entered to indicate frequency.

26. Egg.

27. Poultry.

Most farmers in Bang Chan raised poultry but in some cases most of the eggs produced were sold. We wished to know whether these foods, though a cash crop, were used in baby feeding.

28. Meat. If meat was fed to the baby, the type, as pork, dry beef, fresh beef, was indicated under the appropriate column.

29. Other fruit. Two spaces were left for fruit so that if fruits other than bananas were given to the baby with any degree of frequency, the name(s) of the fruit(s) might be entered.

30. (2)kha-(5)nom. This term, used rather generally for sweets, crackers, etc.,was included as a category since we learned in our preliminary interviews that some parents gave (2)kha-(5)nom to children at a fairly early age. Two spaces were allowed so that the names of (2)kha-(5)nom commonly given to a child might be entered.

31. Exposure to sunlight. Several considerations led to inclusion of this item.

a. The teacher of midwifery at the Maternal and Child Health Center in Bangkok told us that some Thai mothers whom she had observed tended to put the child in direct sunlight facing the sun. She believed this to be bad for the baby's eyes and also to cause the baby to perspire overmuch. Mothers might then wipe perspiration off the baby with soiled cloths. She believed this to be a factor in the skin infections seen in babies.

b. The reported high incidence of bow legs among children in the Bang Chan primary school and elsewhere in Thailand, which Dr. Yong (1939) attributed to unsuitable diet for infants and small children and to the practice of encouraging babies to stand and walk prematurely, might also be related to inadequacy of vitamin D. In Bang Chan, many houses had low hanging eaves which permitted little access to sunshine unless the baby was taken outside the house.

125
124

32. Foods good for baby.

33. Foods not good for baby.

Items 32 and 33 were included to get information on beliefs and reactions toward specific types of food during infancy and early childhood. Such ideas might either favor or hinder the introduction of any changes in diet which might be considered desirable.

34. Teaching baby to eat. Techniques used in introducing new foods into the child's diet were entered here or reference made to more complete writeup in the interviewer's notes.

35. Weaning procedure. When a young child (under 3 years old) had been weaned, the informant was asked how the weaning was accomplished. Age at weaning was also entered here.

36. Age at which baby eats adult food. This was interpreted to mean that the child eats all types of food which adults in the family eat.

37 and 38. Circumcision. This question was later found to be inappropriate for this age group. In Bang Chan, Moslem boys were circumcised at about 11 years of age.

Initials of interviewer and recorder were entered in the appropriate place on the line marked "interviewed by", and the name(s) of the principal informant(s) entered below.

125

[For general information on the Sentence Completion Test used by the author in this field study, with examples of the types of questions employed, see category 116, pp. 8, 86-87, 100, 109-138, and 142-199.]

4:Phillips E-4,5 (1956-1957) 1966
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596 *156 As the reader might by now suspect, it is not easy to determine the basis of the unity of the family. However, of all the factors that keep people living together in amity and affection, two come to the fore: a sense of love, obligation, and respect that is derived from the simple fact of kinship, but which must be continuously confirmed by mutual benefits; and economic considerations.

596 476 The economic foundation of the family is significant not only because the family is in fact the sole economic and occupational unit in the community (with the exception of the monkhood and school) but because the villagers themselves think of the family in terms of its economic functions. People say that they marry for wealth or because of the productive capacities of their spouses;[13] spouses stay together because the economic costs of a split are too great; most important of all, people are keenly *aware* of their economic interdependence. Fathers say that they need children to work in the fields and care for the buffalos, that a family needs a mother so that its members will be fed, that siblings are useful because it is easy to borrow from them (although, as noted earlier, some are unhappy about the intrusion of the kinship tie into what they regard to be a commercial transaction). Many villagers extend this economic, transactional type of thinking to other aspects of the kinship relationship. Thus they say that "the purpose of marriage is to have a companion who will take care of you when you get sick," or very frequently that "my parents went to the trouble of bringing me up so they would have a person to make merit for them when they die." The emphasis here is on independent agents serving each other because it is mutually beneficial.

[581] [598] [581] [593]

*156 181 171 591 The love and affection that people feel for each other is of course grounded in the close associations that one finds in most nuclear families. However, the attitudes of respect that one sees are perhaps more distinctively Thai. Almost all the literature on Thailand refers, at one point or another, to the patterns of respect (*khwaamnabthyy*) existing between people, both within and without the family. These patterns are based, in the first instance, on the status inequalities that exist in almost all social

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[125] [13] In responding to the unstructured Sentence Completion Test item, *"He (she) wants to get a wife (husband) who. . . ,"* for example, thirty-one of sixty informants indicated that they wanted a mate who "was a good worker," "earned a living," "was rich," or otherwise had high socio-economic status. Only two persons said that they wanted a spouse for reasons that could be reasonably defined as sentimental: one woman wanted a husband who "would be a good friend with whom she could discuss things," and a man said he wanted a wife whom "he loved." Other informants gave completions distributed among a variety of categories: "polite, well-mannered, handsome, kind, strong, and good" spouses; and six women wanted husbands who would be faithful.

4:Phillips E-4,5 (1956-1957) 1966
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the parents often do not really care and children can pretty much get away with doing what they want.[14]

With regard to other expressions of the recognition of individual dignity, one rarely sees in Bang Chan any physical or even verbal coercion. (The rare use of whipping, noted above, is to punish transgression, not to implement action.) Other than in horseplay, children do not push each other around; in my twenty-two months in Thailand, I saw not one case of young children in a serious fight, despite the fact that I looked for it. Very rare indeed is the parent who uses force or the threat of force on his child; there is no Siamese equivalent to the American intimidation, "You had better do that or else. . . ." In general, Bang Chaners proceed on the simple assumption that if people, including children, do not do what you ask them, they have good—and more important, private—reasons for responding that way; there is no need for, or interest in, self-justification. The major means of inducing recalcitrants to conform to your wishes is to cajole, wheedle, and flatter them (see particularly the responses to the Sentence Completion items, *"The best way to treat a subordinate is . . ."*; *"The worst way to treat a subordinate is . . ."* in chapter V). A less conscious but more frequently practiced alternative is simply to withdraw support: the parent who turns his back on the child and walks out (particularly evident in our TAT stories),[15] the older sibling who refuses to take his younger ones with him when there is entertainment to be seen, and the like. It must be noted, however, that social disengagement, although frequently utilized, does not always work; often the individual who is left suspended merely accepts the fact and continues about his business. The major point to be recognized is that villagers do not use forms of direct, blatant coercion on others. If soft words or the withdrawal of love will not move them, then their decision, freely determined, must be respected.

Love and affection within the family appear primarily in two forms. Their most typical expression is shown through the gifts, favors, and services people do for each other. The degree of affection that individuals feel toward one another is in fact explicitly measured in these terms. Thus, a father says that of all his daughters, the one who has given him the greatest pleasure is "the one who sells things . . . When she gets money,

[14] In qualification, however, it must be noted that all Bang Chaners are extremely sensitive to social cues—partially as a consequence of having to balance off their individualistic propensities against the demands of the authority system—and here the children ignore their parents only because the latter have indicated by their very halfheartedness that they do not care. The children can, and do, quickly hop to it on the slightest indication of parental seriousness: a stern look, for example. My point, however, is that such looks are comparatively rare.

[15] In another paper, Hanks and Hanks (1963) make the same observation on the basis of behavioral materials.

4:Phillips E-4,5 (1956-1957) 1966
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593 155 *156 • [125] None of the above is meant to imply that 79 percent of the adults of Bang Chan would in fact give away their children. But the relatively high frequency of agreement they exhibited in admitting to such a possibility and the fact that as many as 65 percent agreed that it was either good or justifiable reveals something of the psychological environment within which the Bang Chan child is reared and where he learns his basic orientations toward other persons. The responses to this single stimulus must of course be seen in the context of the more naturalistic, behavioral materials presented earlier. The point of all these illustrations, however, is that they indicate there is nothing sacrosanct about any human tie in Bang Chan, even that which exists between parent and child. If necessity or personal predilection requires, then this tie too may be broken. What is perhaps most significant here, from a developmental point of view, is that the breaking of the tie always exists as a realistic potentiality in the life of the child. Reared in an environment where he learns that no human tie need be permanent or sustaining, the developing child inevitably takes on some of these same patterns of expectation in his own dealings with others. Thus the villager who abandons his spouse or the employee who with little warning leaves his employer are acting in terms of patterns the prototypes of which they either actually experienced as children or came to expect as part of the realities of interpersonal relations in Bang Chan.

593 155 *156 571

779 *156 The second major source of the villagers' loose relationships lacks the developmental reference of the above. To a certain extent it is not even social relational in nature, although our concern with it stems from its having crucial consequences to the social orientations of individuals. I am referring here to the Buddhist emphasis on the primacy of individual action and individual responsibility. Without going into a lengthy discussion of the subtleties of Buddhist doctrine, it is imperative to point out that the principal tenet of Hinayana Buddhism is the complete psychological freedom, isolation, and responsibility of every person. This is not the Occidental idea of "free will," but rather the notion that every person is a free agent, responsible only to and for himself, and that he inevitably reaps the fruits of his own conduct. Buddhist canonical literature is replete with references stressing the centrality of this doctrine. The last words of the Lord Buddha before he left this world to achieve the sublime state of *nibphaan* (nirvana) are said to have been: "Work out your own salvation with diligence." A frequently quoted passage of the *Dhamapada* reads: "By oneself is evil done; By oneself one suffers; By oneself evil is left undone; By oneself one is purified." The whole complex cosmology relating to the accumulation of merit and demerit is phrased in terms of the individual's lonely journey through cycles of interminable existences working out his own moral destiny. Who his progenitors were, what kind of environment he was born

4:Phillips E-4,5 (1956-1957) 1966
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123 friends" never numbered more than eight or ten people, out of a total population of 1,771.) Although their opinions differed in detail and covered a considerable range, they seemed to agree that I had a *good heart*. One villager said that he knew I had a good heart because children like me, "and children are only attracted to people who have good hearts." On the other hand, another more critical person said that my personality was just like that of a child, "because he always shows his feelings. He does not know how to be cool." The contrasts the villagers saw between myself and other researchers were particularly instructive. Of another field worker, an informant said: "he is not a kind person like *Aacaan* Herb, but he knows how to treat people in the Thai way. *Aacaan* Herb does not know how. He laughs too loud and does not use flattering words. He does not help me as much as the other person either." Yet, in contrast, another villager said: "I like *Aacaan* Herb because he likes me. He tells funny stories. He is not like some of the other *farang* who leave as soon as they get information from you."

123 The ultimate importance of these personal assessments are not easily
124 determined. One villager perceptively noted, for example, that although
[115] the "boss" of the Cornell team was a "good person," it really did not make any difference whether he was good or bad "because he is the 'boss' and bosses have to be respected." Of more direct relevance to the research was
• [125] the fact that those individuals whom I counted among my warmest friends were not necessarily my best informants; in fact, some became inordinately anxious and evasive while taking the Sentence Completion Test and TAT. On the other hand, some villagers whom I had never seen before responded to these tasks with obvious enthusiasm. Even the villager who complained about my having wasted his time was a good informant, in the sense of appearing stimulated by and genuinely involved in responding to the sentence cues. It is clear, however, that villagers who liked me were the most approachable of informants, and were more ready, at least initially, to acquiesce to interview requests. The crucial factor here may well be the difference between responding to the field worker versus responding to the research; that is, even though all the respondents were originally induced into being interviewed as a favor to me—and their willingness was in part a function of how much they liked me—such favors did not necessarily carry over to the substantive purposes of the interview: reacting to my queries in a concerned and committed way. Thus, some informants went through the entire interview experience carefully fulfilling the interpersonal "obligation" but all but ignoring its content; others were so stimulated by the content that their initial attitudes toward me, positive or negative, became largely irrelevant. The vast majority of informants of course fell between these two extremes; and in no case were either the interpersonal or substan-

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4

Introduction

121 This investigation was undertaken in connection with the Cornell Thailand Project, one of several studies under the auspices of the Department of Sociology and Anthropology which are focused on the process of cultural change. Bang Chan, the community chosen for intensive investigation, has been described previously (Sharp et al., 1953). The studies to be reported [101] herein were designed to contribute to a baseline description of the community culture and were carried out during the first and second years of a 5-year project, i.e. from September 1952-May 1954.

114 For the clinical examination of the school children and families, the research group consisted of Dr. Anusith Rajatasilpin, Miss Sapha Indrasud, Bua Srisuay, a local villager who assisted in many practical ways, and the author, who assumed major responsibility for planning and directing the work. Dr. Chumlong Kittiveja, of the Dental School, University of Medical Sciences, Bangkok, examined the teeth of the school children. Some data on sanitary practices were collected by Miss Saovanee Sudsaneh, in connection with the dietary survey.

121 The main investigations undertaken fall into two categories: 1) studies of nutritional status and 2) dietary studies, both qualitative and quantitative. In connection with both types of studies, information was collected concerning certain aspects of health and of sanitation in the village. Additional data concerning health practices, illness and death in Bang Chan were recorded by members of the Cornell research group in their field notes. This present report is concerned primarily with presenting findings from all of those sources regarding aspects of the health, sanitation and nutritional status in this rural Thai community.

Methods

Clinical Examination

125 Schedule. - In general, the clinical examination was directed toward discovery of signs and symptoms which might either be indicative of nutritional deficiency or of some disturbance which might be associated with or lead to nutritional deficiency. Certain items, such as cristal height, bicristal diameter, and age at menarche were included because information concerning them would contribute to our knowledge of norms for Thai people, and the clinical examination presented a good opportunity for obtaining such information.

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12 As advoced by the Joint FAO/WHO Expert Committee on Nutrition (1951), this study combined clinical appraisal with dietary surveys. The only laboratory tests done were for hemoglobin content of blood, and examination of stools for parasites. Suggestions for planning the schedule for the clinical appraisal were obtained from the report on the second session of the Joint FAO/WHO Expert Committee on Nutrition (1951), Nicholls (1951) and especially from Professor Dean Smith of the London School of Hygiene and Tropical Medicine (1952).

• 125 Choice of physical measurements, and of procedures in making them, were influenced by a tentative list of specifications for anthropometric measurement, developed by the Committee on Anthropometry, Food and Nutrition Board, National Research Council (1951).

The schedule used for clinical examinations, and a description of procedures used, are included in Appendix A.

Sampling. - All of the children attending the Bang Chan primary school were examined. Three or four children who were listed on the school rolls were not present at any time during the period when examinations were in progress, and were considered by the teachers as non-attending.

Persons in a random sample of households in 5 of the 7 hamlets in the Bang Chan community were also examined. The two most outlying hamlets were excluded from the population to be sampled because of the difficulty, during the dry season, in getting to them or having them come to us. Of 230 households in the 5 hamlets, 31 were included in the random sample. Age and sex distribution of the 166 persons in the sample were roughly similar to distributions for the approximately 1700 persons in the village as a whole, as determined in the census of December 31, 1953. Following is a summary of the age distribution:

[162] [62]

Age in Years	Bang Chan, 7 Hamlets	Random Sample, 5 Hamlets
0-14	38%	41%
15-19	11%	10%
20-59	44%	41%
60 and over	7%	8%

[162] The sample included one Muslim family of 13 members.

In the 31 households, 166 of 184 persons, i.e. 90% were examined. Of the 10% non-response group, half were unavailable, for example away at work when the examinations were in progress. The remaining members of the non-response group

[129]

[See pp. 51-52--Analyst]

125 included adults of both sexes and some preschool children who
123 were unwilling to allow the physician to examine them. The small non-response group included persons of both sexes and a wide range of ages, and would therefore not be expected to bias the sample seriously. In general, rapport and cooperation were excellent.

Reproductive Function in Females

[145] Information concerning menstrual history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 35).

Information on child-bearing history was obtained from women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 36).

Illness and Injury

12 [164] Evidence concerning the nature and extent of illness and injury in Bang Chan was obtained from various sources:

1) direct observation by the physician at the time of the physical examination, or when the physician was asked to visit a sick person in the village;

2) field notes in which information concerning illnesses, accidents and deaths were recorded as research workers learned of them; and

3) information obtained by structured interview in connection with surveys conducted by various persons working on the Cornell Thailand Project.

Adults in households which were included in the random sample were asked after the clinical examination whether any family member had been ill or injured during the past year. If so, the interviewer asked the nature of the illness or injury and what was done. The portion of schedule 6 which relates to this is included in Appendix A.

Some questions on illness were included in a survey of household heads in Hamlet KY-7 (Hanks, 1954) and in a structured interview to which there were 335 respondents from the

A [see pp. 51-52--Analyst]

Among the men and boys in the random sample of households, however, mean height and weight was distinctly less for the age group 15-19 (mean age 17) than for the older age groups (Table 4). A and mean height and weight increased with age among the subgroups. Thus mean height of 4 boys 18 and 19 years old was 157.6 cm., and mean weight 50.2 kg. as compared to 150.1 cm. and 38.5 kg. for 4 boys aged 15-16. Among the 20 men in age group 20-39, 3 were age 20, and 4 either 23 or 24. Mean heights for both of these subgroups were 157 cms. The number of young men examined in Bang Chan is too small to permit judgment as to when adult stature is attained. On the basis of measurements of Siamese males, from the medical service of the Royal Siamese Navy, Dr. Yong concludes that "growth, as regards both height and weight stops at age 22" (Chutima, 1939). According to Zimmerman (1937) rural Siamese boys increase in height steadily until about 19 years of age, at which time they seem to have reached maturity. Adult men in Bang Chan were on the average a little shorter than other groups of Thai men whose measurements were available to us (Table 7). B

Bicristal Diameter. - Some additional information concerning body build is obtained from this measurement. In general, for Bang Chan children of elementary school age (Tables 1 and 2), mean bicristal diameters correspond to hip widths for Iowa school children one to three years younger (Stuart and Meredith, 1946). Mean bicristal diameters of adult men and women in Bang Chan (Tables 4 and 5) correspond approximately to the values for the 10th percentile of the 18 year old boys and girls in the Iowa study. Andrews (1943) found the hip breadth of Central Thai men to be 26.98 ± 1.48 cm., which is similar to the mean of 26.9 cm. for 31 adult males, aged 20-59, in Bang Chan.

Cristal Height. - At the time this study was undertaken, the Committee on Anthropometry of the Food and Nutrition Board, National Research Council had tentatively recommended cristal height as an additional measurement pertaining to the long dimension of the body. Mean values and ranges, for various age groups, are presented in Tables 1, 2, 4 and 5. E

Dental Status

A dentist examined the teeth and mouths of 226 school children, 7 to 14 years of age, in good natural light, using mouth mirror and probe. Teeth of persons in the random sample of village households were inspected by the physician in the course of the clinical examination. Data on dentition and dental health were analyzed by Kamalanathan (1956).

As noted by the Joint FAO/WHO Expert Committee on

[TEXT CONTINUED ON PAGE 21]

[see p.: 16; 20; 9-13; 16, 17; 9-13, 16, 17]

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As noted by the Joint FAO/WHO Expert Committee on Nutrition (1951) the part played by diet in the production of tooth which are unduly susceptible to caries is still controversial, although in general, the importance of nutrition, especially in the formative period, is widely accepted. In accordance with the recommendation of this Committee, caries rates are recorded as a separate item, and are not taken as a criterion of malnutrition.

Dentition. - Median ages of eruption of specific permanent teeth in 240 Bang Chan children, ages 7 to 14, are shown in Table 20 (Appendix B). For this purpose, data on 226 children in the Bang Chan primary school, and 14 additional children between these ages, in the random sample, were included. The percentage of boys and girls at each age, having each specific tooth erupted, was calculated. Median ages of eruption were estimated according to the method suggested by Klein et al. (1937). A graph was drawn for each kind of tooth, for each sex. Cumulated percentages for each specified kind of tooth erupted were represented on the x axis and age in years at one year intervals on the y axis. Median age of eruption was estimated by determining the point at which the age percentage eruption curve cut the 50% perpendicular.

In Bang Chan, as elsewhere, the median age of eruption for specific teeth is lower for girls than for boys. In some cases the difference is slight, in others, from several months to more than a year. The difference is most marked for lower canine teeth.

The average number of teeth, deciduous, permanent and total, at each age, is shown for children 7 to 14 years of age, in Table 21 (Appendix B). For ages 8 to 13, the greater dental maturity of girls than boys is reflected in the larger average number of permanent teeth present at each age.

On the basis of median ages of eruption for specific teeth, and the number of permanent teeth per child at each age level, dental maturity of children in Bang Chan appeared to be approximately the same as for children in other regions, in both eastern and western hemispheres, with which they were compared. Although the average number of teeth at some ages was lower for children in Bang Chan than for American or English children, the differences were neither marked nor consistent (Kamalanathan, 1956).

Caries Incidence. - Caries incidence was found to be low among Bang Chan children as compared to many regions in which surveys have been made. Of 226 children examined by the dentist, 42% (45% of the boys and 38% of the girls) were totally free of caries. When all carious teeth, both deciduous and permanent, were included, the average number of carious teeth per child was 1.8 (1.6 for boys and 2.0 for girls).

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chewing, the extent to which the betel leaves and areca nuts are associated with festival occasions must be taken into consideration. Betel chewing was forbidden in Thailand by the Thai government but the enforcement of this regulation proved impossible and it has been forgotten since World War II.

Nutritional Status

Incidence of Anemia. - Hemoglobin was determined by means of a Sponcer Hb-meter. About 9% of the school children had hemoglobin values below 11.5 g. per 100 ml. but one value only was below 9.75 g. (Table 8). As might be expected since none of the girls in the primary school had passed the menarche, no difference was apparent between values for boys and girls.

Table 8

Hemoglobin Values of 233 Children, Ages 7-14, in the Bang Chan Primary School, 1952-53

	Number of Children	Hemoglobin, grams per 100 ml.					
		Under 9.75	9.75-11.5	11.75-12.5	12.75-13.5	Over 13.5	Not Ascertained
Boys	121	0	10	32	44	33	2
Girls	112	1	10	25	38	37	1
Total	233	1	20	57	82	70	3

In the group of persons 15 years and older, in the random sample of village households, the usual difference in hemoglobin values between males and females is evident (Table 9). About 6% of the males and 25% of the females had hemoglobin values of 11.5 g. or less/100 ml. with one only below 9.75 g. Many of these might be considered as borderline rather than anemic.

[see p.25 - Analyst]

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Table 9

147 Hemoglobin Values of 104 Residents, Age 15 and Older, in Random Sample, Bang Chan, 1952-53

	Number of Persons	Hemoglobin, grams per 100 ml.					
		Under 9.75	9.75-11.5	11.75-12.5	12.75-13.5	Over 13.5	Not Ascertained
Male	48	0	3	7	9	28	1
Female	56	1	13	10	14	11	7
Total	104	1	16	17	23	39	8

146 125 Occurrence of Possible Signs of Malnutrition. - Most of the signs and symptoms included on the schedule for clinical examination were those known to be of value in the assessment of nutritional status (Joint FAO/WHO Expert Committee on Nutrition, 1951). Some items included need to be investigated more fully before their value can be determined. Among the 146 items on the schedule, (Appendix A) the following were not 164 observed in any of the persons examined:

Eyes: photophobia, lachrymation, blepharitis, xerophthalmia, Bitot's spots, gross corneal vascularization.

Face: Folliculosis, nasolabial seborrhea, dyssebacia, suborbital pigmentation.

Lips: Scars of cheilosis and of angular stomatitis.

Tongue: Edema, color change to scarlet or magenta. (In 30 adults, however, such color changes if present would have been obscured by the discoloration from betel chewing.)

Gums: Retraction, loss of interdental papillae.

Parotid glands: Enlargement.

Skin: Perifollicular congestion, petechiae.

Edema

Calf tenderness

Inability to rise from squatting A1 [see p S1-Analyst]

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146 pictured as bowlegged in Chutima's report (1939) are, however,
142 clearly so, and represent more extreme cases than we encountered among the children in Bang Chan in 1952-53. If the incidence of bowleggedness among children in Thailand is indeed decreasing, an investigation into possible causes of the change would be of interest.

142 To the nutrition specialist on the team, who was not Thai, the knee joints appeared to be large. Moreover, although the term "knock knees" was not included on the schedule, it was entered frequently by the physician under comments (Appendix B, Table 22).[A] Whether this condition is related to heredity,
[516] nutritional status, or to some other environmental influence such as the life-time habit of squatting on the heels, is not known.

146 The physician's estimate of general appearance and vitality were recorded early in the examination, before he sought for specific signs. About 80% of all persons examined were rated as "good," and less than 1% as "poor." About half of all persons rated as "good" in general appearance and vitality were without clinical signs, as compared to about 30% of those rated "fair." Of persons with 3 or more possible signs of malnutrition, however, about 2/3 were rated "good" (Appendix B, Tables 23 and 24).[B] As has been observed frequently, such a general appraisal is not correlated with the presence or absence of clinical signs possibly associated with malnutrition. Clearly, in Bang Chan, there is little or no malnutrition of the sort that causes marked apathy.

In summary, a variety of possible signs of malnutrition were noted both in the school children and the persons in the random sample of village households. More than half of the total number examined had one or more signs possibly due to malnutrition, but the only clearly defined deficiency disease encountered was one case of beri beri[1] in a 49-year old man.

Reproductive Function in Females

84 Menstrual History. - Information concerning menstrual
• 125 history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied.

145 Most of the women from whom information on age at menarche was obtained were under 40 years of age. A few could

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1. History of beriberi among nursing mothers and their
[149] infants was obtained in several instances, and cases of beriberi, in both sexes, were seen among persons not included in the population samples which were examined.

[A] [see p. 71-Ans.] [B] [see pp. 72, 73-Ans.]

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Deaths of infants a few days old, with a description of lockjaw, inability to suck, stiff back and clenched hands, were recognized as due to tetanus. The common practice of native midwives is to place the cord over a hard rhizome or clod of earth and to cut it with a tapered piece of bamboo. Thus, infection with the tetanus organism may occur from contact with the soil. Foto that 12 of 26 deaths reported for infants under 1 month, were diagnosed as tetanus or probably tetanus. Zimmerman (1931) summarized important causes of death in Siam, based on the physician's diagnosis made after symptoms were described by the head of the household. Of 1800 deaths which occurred in the 18 months preceding the survey, 2% were diagnosed as tetanus. For the Central area, 3.8% of 495 deaths were from tetanus. Most, if not all of the cases of infantile tetanus could be prevented if native midwives learned to avoid contact of the cord with earth or a soil-coated rhizome. By using sterile scissors for cutting the cord instead of tapered bamboo which must be pressed against another surface to accomplish the cutting, contact with soil could be avoided. Of 335 household heads interviewed, 220 owned scissors of some kind (Ralis, 1955).

Infants several months old, who had some of the symptoms of infantile beriberi, as convulsions and almost voiceless crying, were considered as cases of infantile beriberi only if the mother had symptoms of beriberi, such as numbness or tingling in the extremities, or difficulty in walking, at the time. One mother had lost 3 infants at 3 or 4 months of age, with similar symptoms, but described the symptoms of beriberi in herself at the time of the death of the last baby only. The other two cases were therefore listed as convulsions, cause unknown. The occurrence of infantile beriberi reflects the unsatisfactory nutriture of the mother, whose milk is therefore low in thiamine content. To prevent deaths from infantile beriberi, the general level of nutrition in the village, and particularly the food habits of pregnant and nursing women, should be improved.

Note also the number of deaths from "debility." As the Joint FAO/WHO Expert Committee on Nutrition (1951) has pointed out, the number of early deaths from "congenital debility" becomes insignificant where the health and nutritional status of pregnant women approaches the optimal.

Intestinal Parasitism and Bowel Habits

Intestinal Parasitism. - All school children were provided with tin containers labelled with their names, and asked to bring a stool sample to school. Fourth grade children whose first stool samples were negative, were asked to bring a second specimen. Parasites were found in some of these second

BANG CHAN

125 specimens. In all, specimens were obtained from 189 or 81% of
126 the children and of these 32% were negative. In 128 stools
164 containing parasites, 196 infecting organisms were found, or an average of 1.5 per infected child. Protozoa and helminths which are pathogenic or which may cause severe diarrhea were identified 126 times, and harmless forms 70 times. Of the harmful forms, Ascaris lumbricoides was found in 96 or 51% of the stool samples, Giardia lamblia in 19, or 10%, and hookworm, Endamoeba histolytica, Trichuris trichiura and Diphyllobothrium in 2% or less. Of the harmless forms noted, Endamoeba coli was found in 45 specimens or 24%, Iodamoeba williamsi in 21 or 11%, Endolimax nana and Chilomastix mesnili each in less than 2%. Doubtless the extent of intestinal parasitism in these school children was greater than the figures indicate, since some cases would be missed in examination of single stool specimens collected in this way. One might expect intestinal parasitism to be relatively common, also, among other family members.

125 Bowel Habits. - In connection with the clinical survey,
147 persons examined were asked whether they had "constipation" or
514 "diarrhea" frequently, occasionally, or never, i.e. not within the past 6 months. As the physician phrased the questions concerning "constipation," the replies indicated whether the respondent had daily bowel movements ("never constipated"), or usually had a bowel movement each day ("occasionally constipated") or usually had longer intervals between bowel movements ("frequently constipated"). Replies are summarized in Table 17.

126 Considering the inadequate sanitation in Bang Chan, and
147 the prevalence of intestinal parasitism, the fact that 3/4 of the persons questioned said they "never" had diarrhea, is worthy of note. Most persons who reported having diarrhea,
[146] were troubled occasionally rather than frequently. The fact that nearly 2/5 of those questioned had bowel movements less often than once a day, is not surprising in view of the fact that diets which are relatively low in fibrous foods and in the B complex vitamins frequently result in sluggish behavior of the large intestine. That approximately 3/5 of the respondents in Bang Chan usually had a daily bowel movement is perhaps more noteworthy. Even in areas where diets tend to be much more liberal, some persons usually have bowel movements at intervals of 2 or 3 days or even longer. If such persons have stools of normal character and experience no discomfort, this bowel habit may be considered normal for them.

[See p. 43 - Analyst]

Appendix A

Schedule for the Clinical Examination

• 125

Cornell University Thailand Project 1952-53. Schedule 3.

Date .....

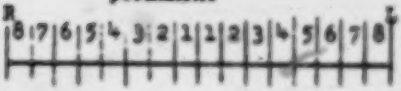
1. Hamlet ..... House No..... 15. Face:
2. Name 1).....
   2).....
   a. Folliculosis .....
   b. Nasolabial seborrhea ....
   c. Dyssebacia .....
   d. Suborbital pigmentation .....
3. Sex M F
4. Birth date ..... 16. Lips:
   Age yr..... Mo.....
   a. Cheilosis .....
   b. Scars of cheilosis .....
   c. Angular stomatitis .....
   d. Scars of angular stomatitis .....
5. Single ..... Married....yr.
6. Weight ..... kg.
7. Height ..... cm. 17. Tongue:
   a. Papillae atrophied .....
8. Bicristal diam. ..... cm.
   b. Papillae hypertrophied .....
9. Cristal Ht. ..... cm.
   c. Edema .....
   d. Color change-scarlet ....
10. General appearance and vitality:
    poor....fair....good.....
    e. Color change-magenta ....
    f. Appearance-fissured .....
    g. Appearance-geographical .....
11. Hemoglobin:
    h. Not ascertained - Betel .....
12. Stool examination:
13. Hair:
    a. Dry and staring .....
    b. Diminution or loss of pigment .....
18. Gums:
    a. Swelling .....
    b. Redness .....
    c. Recession .....
    d. Retraction .....
    e. Loss of interdental papillae .....
14. Eyes:
    a. Photophobia .....
    b. Lachrymation .....
    c. Blepharitis .....
    d. Xerophthalmia .....
    e. Excess conjunctival tissue .....
    f. Bitot's spots .....
    g. Corneal vascularization (gross) .....
19. Parotid glands enlarged ....
20. Thyroid:
    a. Enlarged .....
    b. Scars .....
21. Betel: Yes..... No.....

125 **Schedule for the Clinical Examination (continued)**

22. Teeth

deciduous

permanent



0 - missing ± - just erupting
X - carious ∮ - filled

23. Skin:
- a. Symmetrical dermatosis .....
- b. Phrynoderma .....
- c. Perifollicular congestion .....
- d. Petechiae .....
- e. Xerosis .....
- f. Loss of elasticity .....
- g. Atrophic .....
- h. Ulcers .....

24. Edema: .....

25. Knee jerk absent .....

26. Ankle jerk absent .....

27. Calf tenderness .....

28. Inability to rise from squatting .....

29. Liver enlarged .....

30. Spleen enlarged .....

31. Posture-Winged scapulae .....

32. Skeleton:
- a. Frontal bosses .....
- b. Beaded ribs .....
- c. Wrists enlarged .....
- d. Bowed legs .....

33. Diarrhea:
- a. Frequent .....
- b. Occasional .....
- c. Never .....

34. Constipation:
- a. Frequent .....
- b. Occasional .....
- c. Never .....

35. Menstruation:
- a. Regularity: Yes.... No.....
- b. Duration, ...da
- c. Interval .....
- d. Menarche, ...yr
- e. Menopause .....yr

36. Children:
- a. Total children born .....
- b. Number of children alive now .....
- c. Stillbirths .....
- d. Deaths in utero ...
- e. Miscarriages .....
- f. Other deaths .....
- g. Age of the eldest child .....yrs.
- h. Age of the youngest child .....yrs.

Comments .....

.....

.....

.....

.....
Examiner

Procedures Used in Obtaining Information Recorded on Schedule for Clinical Examination, and Descriptions of Reliable Signs of Nutritive Failure

14 For the clinical portion of the nutrition survey, the team consisted of a Thai physician, who carried out the clinical examination, the nutritionist, who made the physical measurements, a second-class chemist, who did the hemoglobin determinations and served as interpreter, and a local boy who not only propelled the boat but helped in other ways such as giving directions to the children concerning preparations for being weighed and measured. The nutritionist was the only non-Thai on the team. The physician's internship had been served in a hospital in which he had opportunity to see many patients with nutritional disorders.

12 The material which follows is primarily descriptive of the procedures agreed upon in advance of the clinical examination. When different descriptions of a given sign were obtained from the various sources, the criteria which the physician agreed to use, after discussion with the nutritionist, are stated here. Some of the signs described were not observed in any of the persons examined in Bang Chan.

Before beginning the survey, the examining physician and the nutritionist agreed that only signs which could be considered undoubtedly positive should be so recorded.

13 In preparing the schedule, care was taken to avoid 0/25 diagnosis, i.e. the physician was to record what he saw. If the examining physician believed diagnosis or probable diagnosis would be helpful, he recorded this under Comments. Thus Comments included such items as the following:

1. Diagnosis of deficiency disease, together with nature of onset, association with other conditions such as pregnancy, malaria or dysentery.

2. Obvious present disease as trachoma, ring worm etc. or evidence of past disease, as smallpox scars.

3. Complaints such as bloody stools, or other conditions which might affect adversely the general health and nutrition.

The schedule was designed to be used with all ages and both sexes. Items relating to menstrual and child bearing history were placed at the end, to be used for adolescent girls and women.

Comments on the items on the schedule follow:

1. Hamlet and house number. Information given by the school child or householder was checked later with the census data.

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• 125 128 2. Name. The name was recorded according to the Mary Haas system of transliteration, modified for use on a typewriter. Later a code number was given each individual examined.

3. Sex. The appropriate symbol, M or F, was circled.

4. Birth date, when known, was recorded in Thai, according to the Thai calendar. This information was later translated into age in years and months. Information given by school children was checked against that in the school records, which were obtained by the school teachers from the Nai Amphoeo, or district officer. At present, parents are required by law to register the birth of a child within 15 days. In practice, however, the interval between birth and registration is frequently longer, and the recorded date may be somewhat later than the actual birthdate. In preparing height-weight-age tables, age to nearest birthday was used. In a few cases, the birth date as given by a school child and that in the school records differed enough so that age to nearest birthday was in doubt. Data for such children were omitted in preparing the tables.

5. Marital status was recorded either as single, or the number of years married. To avoid embarrassment if there had been no legal marriage, the question was phrased so as to mean "How long have you had a house?"

6. Weight. A bathroom scale with 1/2 kg. divisions, with a magnifying glass over the scale reading so that one might interpolate to 1/4 kg., was used. All persons were asked to stand with the feet squarely on the platform, with the toes not extending beyond it. In order to get weights under as nearly standard conditions as possible, school children and adults were instructed to remove all but a minimum of clothing. All boys, and the younger school girls removed their blouses, belts, and any items in pockets, leaving only short trousers, for the boys, and for the girls, a Thai-style skirt (phasin) or standard western style school costume consisting of cotton skirt with attached bib and shoulder straps. Older girls were asked to remove the outer blouse and belt but were allowed to keep on the under blouse or camisole, as well as skirt. The children did not wear shoes to school.

In the homes, preschool children were usually weighed nude, older girls and women in inner blouse, and phasin or phamung, and the men in trousers only.

Several examples of each type of clothing were weighed. Clothing worn by children whose body weight was 22.5 kg. or less, usually weighed considerably less than 1/4 kg., and would therefore make no detectable difference in the observed weight. Clothing worn by the larger school children and adults weighed, on the average, about 1/4 kg.

School children were asked to empty the bladder before being weighed. To minimize the effect of food, school children were weighed between 10 A.M. and noon. We were unable to carry out these precautions in connection with the survey of persons in a random sample of village households.

7. Height. A locally made wooden measuring device, hinged so as to fold (4 sections, each 50 cm. long) and provided with a sliding set square, was used for measuring height. The individual was told to stand with heels and shoulders against the measuring device, with chin parallel to the floor. Persons old enough to cooperate were asked to take a deep breath and "stand tall." The set-square was brought into contact with the person's head and the height, to the nearest ½ cm., noted. Smaller school children sometimes had to be helped to assume the desired position. An infant was measured by putting the device on the floor, and placing the baby on it. The knees were then pressed down, so that the backs of knees were in contact with the scale. One team member then placed a flat-surfaced object such as a book, perpendicular to the scale, against the soles of the feet, while another brought the set-square into contact with the infant's head.

8. Bicristal diameter was measured with a polvimeter. The subject stood, with heels together, before the examiner, who felt for the highest points of the iliac crests, and placed the polvimeter, with firm pressure. The polvimeter was calibrated in centimeters, but readings were estimated to the nearest 0.5 cm.

9. Cristal height. The height of the iliac crest was taken as the vertical distance of the left iliac spine from the floor. The subject was asked to stand with left side toward the measuring device used for height, and the distance of the set square from it. The examiner felt for the iliac crests, placing her right hand so that the thumb was at the level of the tip of the iliac crest. She tried to see that the subject's pelvis was held level and not tipped. An assistant then lowered the set square to the examiner's thumb, and the height was measured by reading the level of the set square.

10. General appearance and vitality. This item represented the examining physician's impression of the behavior of the subjects. Facial expression, attitude, degree of alertness, and behavior while waiting for the examinations were taken into account. Thus a child with good vitality would appear alert and interested, whereas a child who was rated poor might be apathetic, abnormally subdued or lacking in initiative.

11. Hemoglobin was determined by means of a Spencer Hb-Meter (American Optical Co., Scientific Instrument Division, Buffalo 15, N.Y.). Values were recorded in grams per 100 ml. of blood. Very little resistance was encountered to the finger

125 puncture, although a few adults and two school age children re-
128 fused. No attempt was made to determine hemoglobin for most children under school age.

12. Stool examination. Each school child was furnished with an appropriate container labelled with his name. Pupils were asked to bring the container, with stool sample, to the teacher. Specimens were examined at the Pathology Department of Chulalongkorn Hospital.

13. Hair.

a. Dry and staring. Hair which has lost its normal sleekness and luster, and is dry and brittle.

b. Diminution or loss of pigment. In dark haired
[142] people, an auburn tinge is evident in mild cases. (Note: None of the cases seen in Bang Chan had progressed beyond this to "ginger" or tow-colored hair).

14. Eyes.

a. Photophobia, when present, was always recorded. If obviously due to some non-nutritional eye disease, this fact was recorded under comments.

b. Lachrymation, which is often associated with photophobia, was recorded when elicited by brief eye examination.

c. Blepharitis. Inflammation of the muco-cutaneous junction of the eyelid, with or without scaling and crusting or loss of eyelashes. If blepharitis was obviously associated with some non-nutritional eye disease, such as trachoma, this fact was recorded under comments.

d. Xerophthalmia. The conjunctiva is abnormally dry and appears thickened, yellowish and opaque.

e. Excess conjunctival tissue. Thickening of the bulbar conjunctiva, which appears opaque and yellowish. The tissue is moist. When the subject moves the eye from side to side, a thickened conjunctiva is thrown into a moving ripple of folds.

f. Bitot's spots. An extreme form of thickening of the epithelium of the bulbar conjunctiva. The spots resemble patches of chalk paste which have been striated with a pin.

g. Corneal vascularization (gross). Loops of newly-formed capillaries appear near the corneal margin, and extend onto the cornea. Since a slit lamp, which is necessary for observation of early stages, was not used, gross changes only could be noted.

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15. Face.

a. Folliculosis. Pouting of the sebaceous and pilo-sebaceous follicles of the face.

b. Nasolabial seborrhoea. A scaly or greasy desquamation; flaky accumulations of seborrhoeic material in the nasolabial folds.

c. Dyssebacia. A condition probably representing a severer degree of folliculosis. The pouting sebaceous follicles contain plugs of greasy material. The condition is usually most marked in the nasolabial folds, but in severe cases extends to the nose, cheeks, chin and the whole butterfly area.

d. Suborbital pigmentation. A brownish or greyish-brown area of pigmentation under the eyes, often seen in severe starvation.

16. Lips.

a. Cheilosis. The earliest change in cheilosis is a loss of the normal uniformly shiny appearance of the vermilion of the lips. A somewhat "velvet-like" appearance is associated with a milky "bloom". In more severe cases the lips are reddened, capillaries are engorged and the mucosa at first appears thin and shiny; later, scaling, ulceration and cracking may occur, with crusts of blood and serous exudate.

b. Scars of past cheilosis; Multiple antero-posterior linear scars of the lips; the vermilion of the lips takes on a slightly tissue-paper like appearance.

c. Angular stomatitis. A lesion which varies in severity, ranging from slight scaliness with small cracks in the epithelium at the corners of the mouth to a pale, moist and ulcerated appearance with fissures extending onto the neighbouring skin of the face.

d. Scars of angular stomatitis. Scars in the corners of the mouth.

17. Tongue.

a. Papillae atrophied. The tongue is dry, smooth and glazed, with atrophy of the papillae.

b. Papillae hypertrophied.

c. Edema. Swelling which is evidenced by indentations of the teeth along the margin of the tongue.

125
128 d. Color change - scarlet. A bright red color of the tongue, like that of raw beef.

e. Color change - magenta. The normal pink color of the tongue is changed in the direction of blue or purple.

f. Appearance - fissured. The presence of deep central or lateral fissures which may run antero-posteriorly or transversally.

g. Appearance - geographical. Superficial erosion of the tongue, appearing in irregular patches. These are redder than the unaffected area.

h. Not ascertained - Betel. This category was added to designate cases in which the tongue was so coated from betel chewing that color changes and changes in papillae could not be noted.

18. Gums.

a. Swelling. Swelling of the interdental papillae with an increased tendency to bleeding when the papillae are pressed. Later, the whole gum may be swollen and purplish.

b. Redness (gingivitis). The gums are red and hyperemic, particularly at the margins.

c. Recession of the gums.

d. Retraction. The margins of the gums become detached from the teeth.

e. Loss of interdental papillae. The papillae no longer fill the interdental spaces neatly.

19. Parotid glands enlarged. Mild degrees of enlargement may be detected more readily by observation from above or behind than from in front. Both Smith (1952) and Nicholls (1951)[1] mentioned the association of parotid enlargement with malnutrition in the tropics.

20. Thyroid enlarged. Obvious enlargement was recorded. An item was included for scars of thyroidectomy, if any should be seen.

21. Betel. If the subject chewed betel frequently or habitually, so that the teeth were stained, this item was checked "yes". In the "no" category, may be some persons who have tried

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1. Nicholls, 1951, p. 354.

betel chewing, but have not persisted in it.

22. Teeth. Changes in the teeth were noted by means of a series of symbols on two dental diagrams, one for deciduous and one for permanent teeth. Teeth just erupting, missing, carious or filled were noted. A dentist examined the teeth of the school children, in good natural light, using mouth mirror and probe. Inspection of persons in the random sample of families was carried out by the physician without mirror or probe, therefore the record is of gross changes only. If a tooth was crowned, the physician inquired whether the tooth had been sound or carious before being crowned.

23. Skin.

a. Symmetrical dermatosis. Any skin disorder which had a symmetrical distribution was noted, and the physician's diagnosis recorded under Comments. Pellagroid dermatosis begins as an erythema resembling sunburn and develops into a symmetrical, rough hyper-pigmented dermatosis with sharply defined margins, usually on areas exposed to sunlight. Areas may desquamate with serous exudate in the centre.

b. Phrynoderma. A type of follicular hyperkeratosis which occurs on the back of the arms, on the thighs, abdomen, shoulders and buttocks. Viewed through a lens, the enlarged glands are seen to be plugged. The eruption can be felt by passing the tips of the fingers over it.

c. Perifollicular congestion. Congestion occurs around the hair follicles, frequently limited to the legs and forearms.

d. Petechiae. Pinpoint hemorrhages, which are most apt to occur around hair follicles.

e. Xerosis. Dryness of the skin, diminution or absence of sebaceous secretions, sometimes also of sweat. (Note: Crackled skin was originally included as a separate sign. No clearly defined cases were noted, however, and since the physician was uncertain of the distinction between early stages of crackled skin, and xerosis, the latter term was used to cover all such lesions.)

f. Loss of elasticity. Diminution of suppleness of skin seen as a fine wrinkling, particularly over the calves. When the superficial skin is pinched up and released it returns very slowly to its smooth condition.

g. Atrophic skin. Thinning of the skin, generally most marked on legs below the knee. The skin usually appears smooth, tightly stretched and shiny.

Note: The skin changes known as xerosis, loss of elasticity and atrophic skin, which are associated with defective nutrition, mimic closely the changes in senility.

125 128 h. Ulcers. Single or multiple ulcers, other than those associated with varicose veins, confined to the skin of the legs below the knees.

24. Edema, if present, was noted.

25. Knee jerk. Absence of the knee jerk was recorded.

26. Ankle jerk. Absence of the ankle jerk was recorded.

27. Calf tenderness. The patient's reaction was noted when the calf muscles were squeezed firmly.

28. Inability to rise from squatting. The patient is made to squat with his thighs fully flexed on his legs, and is asked to rise. When this is done with difficulty, the hands grasping the knees and aiding the legs to bring the body into an erect position, the test is positive.

(Note: This test was not applied to persons who were obviously active and had good muscular coordination. Thai customarily sit or squat on the floor, and would be peculiarly aware of such difficulty.)

29. Liver enlarged.

30. Spleen enlarged.

For this part of the examination (items 29 and 30), the subject was asked to lie on his back with his knees flexed, to relax the abdomen and take a deep breath. The physician palpated the costal margins in the usual manner. If liver or spleen were found to be enlarged, the appropriate space was checked, and the description of size and texture of the organ entered under Comments.

31. Posture:

Winged scapulae. The fingers can be placed easily under the inner border or tip of the scapula.

32. Skeleton.

a. Frontal bosses. Protruding forehead, giving the person a "box-headed" appearance.

b. Beaded ribs. A line of enlargement at the costochondral junction of the ribs.

c. Enlargement of epiphyses at wrists.

d. Bowed legs. The subject was asked to stand with feet parallel and together, the body erect. If the space between his knees was more than 1 finger breadth (1.5 cm.) or the legs below the knees curved outward obviously, the person was considered to be bow legged.

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128 e. Knock Knees. The subject was considered to be knock kneed if the knee joints overlapped markedly.

33. Diarrhea. As phrased, the question meant literally "Do your bowels run or not?" If the answer was affirmative, the physician asked further questions to determine about how often this occurred. "Frequent" diarrhea meant that watery stools were passed every week, i.e. that stools seldom were formed. "Occasional" diarrhea meant the passing of watery stools once in a long time, and "Never" meant that diarrhea had not occurred within the past 6 months.

34. Constipation. The question as asked by the physician meant literally "Do you have a stool every day?" The physician checked "frequent" if the subject did not usually have a bowel movement each day; "occasional," if the subject usually had a daily bowel movement, but once in a while a day was skipped. "Never" meant that the subject had a bowel movement daily during the previous 6 months.

Note that this question does not relate to constipation, in the true sense, since it tells nothing of the character of the stool or feelings of the subject, but is confined to the interval between stools.

35. Menstruation.

a. Regularity. This was indicated by a check mark after yes or no.

b. Duration. The question "How many days does it last?" The number of days, as stated by the informant, was recorded.

c. Interval. The replies were grouped into 3 categories: 1) usual interval, i.e. about 1 lunar month; 2) markedly less than 1 month; or 3) markedly longer than 1 month.

d. Menarche. The age in years, at first menstruation, was recorded. Young girls, who appeared adolescent, were asked by the physician if they had menstruated yet. To be sure the question was understood and properly answered, a woman school teacher questioned these girls separately.

e. Menopause. Age, in years, of last menstruation, was recorded for women who had passed the menopause.

36. Children. Appropriate numbers were recorded in each category.

a. Total children born . . . . . .

125
128

b. Number of children alive now . . . . . .

c. Stillbirths . . . . . .

d. Deaths in utero . . . . . .

e. Miscarriages . . . . . .

f. Other deaths . . . . . ., i.e. deaths of children born alive. Notes were made on the age and circumstances of death. When the description was clear, the physician noted the cause of death.

g. Age of the oldest child . . . . . in years.

h. Age of the youngest child . . . . . in years.

The investigator noted whether or not related items such as years of marriage, age of oldest child, age of youngest child, age at menarche, and age at menopause, were reasonably consistent. A few replies were discarded as unreliable.

Schedules Used in Recording Information on Sanitation

• 125

Cornell University Thailand Project, 1952-53,
Schedule 8, Sheets 1 and 2.

F. At this season what kind of water is used for each of the following purposes, and what treatment, if any, is given to it?*

USE	SOURCE			TREATMENT			
	Rain	Khlong (Canal)	Fish-pond	None	Alum	Boil-ing	Other (what)
1. Drinking, adults							
2. Drinking, children							
3. Washing vegetables							
4. Cooking							
5. Washing dishes							

G. How is garbage disposed of? (check)

1. Buried .....
2. Burned .....
3. Thrown into khlong (canal) .....
4. Thrown elsewhere .....
5. Fed to animals .....
6. Other .....

H. Does the householder attempt to protect food against contamination by insects, animals etc.? Note means used.

Means used	Type of Food	
	1) Dry rice -- other nonperishable foods	2) Perishable foods and left-over cooked foods
1. Container covered:		
a) Solid cover		
b) Paachii (fiber)		
2. Food safe:		
a) Screened		
b) Ant-proof legs		
3. Other		
4. None		

* Indicate whether answer is obtained by query (q) or observation (obs.)

• 125 Cornell University Thailand Project, 1952-53, Schedule 6.

3. Toilet facilities:

a) Flush latrine ..... b) Pit ..... c) With cover .....

d) None - Use:	Compound	Fields	Khlong (canal)	Other
For urination				
For defecation				

e) Treatment of feces (for items b. & d. only)

1) None ..... 2) Covered with earth ..... 3) Other ...

f) "Toilet paper" : 1) Newspaper ..... 2) Straw paper .....

3) Cocoanut husks .....

4) Other .....

• 125 Schedules Used in Recording Information on Illness or Injury

Cornell University Thailand Project, 1952-53, Schedule 6.

1. Has any member of the family been ill or injured during the past year? Yes ..... No .....

2. If yes, give details below:

a) Family member	b) Nature of illness or injury:	c) What was done?*

* Include persons asked for help; drugs used, with information from labels if available; and techniques.

Household Questionnaire, KY-7, March-April 1954 (Hanks)

Question: Was there serious sickness in your family during the past year?

If R says that serious illness occurred in his family:

What was the name of person who was ill?

What was the name of the illness?

Names of persons who were called to treat the patient, listed in the order in which they were called.

66

• 125

Cornell Methodology Project: Thailand
Bang Chan Structured Questionnaire

28. a. Your own children, all of them that have ever been born, how many are there?

b. How many of your children are still living?

c. How many of your children have died?

Responses to this question follow:

Children of 331 Household Heads, Bang Chan

Item No.	(28a.) Number born	(28b.) Number still living	(28c.) Number dead
None	24	29	198
1	32	40	44
2 or 3	69	83	56
4 or 5	73	82	17
6 or more	133	97	9
Number of respondents	331	331	324

33. a. Have you ever been to a clinic or a hospital?

b. If YES: In what various places?

c. If R HAS BEEN TO CLINIC OR HOSPITAL: For what various purposes did you go?

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The Innovations

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A. Agricultural innovations. During the past few years, certain innovations have come to Bang Chan which have increased agricultural productivity and improved the level of living. Some of these innovations are listed below.

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[244]

1. The small motor. One innovation is the small engine, gasoline motor, which is used mainly as a water-lifting device for irrigation purposes. In 1950 only five small motors were found in Bang Chan.* Twenty-one per cent of the respondents in the 1955 survey, however, report owning these motors; the majority of the respondents (68 per cent) claim to have used this labor-saving device which is sometimes jointly owned by more than one household and is frequently loaned out.**

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2. Straw mushroom growing. Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per cent of the respondents report that they have engaged in this activity***). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

One advantage in the culture of straw mushrooms is that it permits quickly realized returns. The cycle, from sowing spores in moistened straw to harvesting the mushrooms, takes about two to three weeks. Another advantage is that there is relatively little heavy work or investment required besides the acquisition of straw and spores. A third advantage is a ready market, for the plant is sought by Chinese dealers in Bangkok who supply hotels and restaurants. Bang Chan rice farmers who engage in mushroom growing as a sideline activity sell it either to local middlemen or directly to the Chinese in Bangkok.

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[113] * Sharp, L., H. M. Enoch, K. Lauldhn, and H. B. Textor. Siamese Rice Village. A Preliminary Study of Bang Chan. Thailand, Cornell Research Center, June, 1953.

[125] ** The questions: "Do you own a small engine motor or not? (If 'NO'): Have you ever made use of one in your work?"

[125] *** The question: "Have you ever grown mushrooms, or not?"

3. Tilapia raising. In 1951, FAO suggested to the Thai Government that cultivation of tilapia be encouraged to help meet the rising need for fish in Thailand. Tilapia is a species of fish which multiplies and grows relatively fast. The strain, which came originally from Africa, is popular in Malaya and was expected to be easily marketable, thus a source of added income in Thailand. The Thai Government followed the FAO suggestion in 1952: a few Bang Chan residents dug the special pools required for the fish culture and began to raise tilapia mainly for commercial purposes. About a third (31 per cent of the households*) reported in 1955 that they have engaged in this activity. 177* 178* 228

From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months. [434]

4. Artificial fertiliser. Artificial fertiliser has made its appearance in Bang Chan only recently. Informants in the community reported that only two farmers had tried artificial fertiliser in 1952. In the 1955 survey, 12 per cent of the farmers reported that they have used fertiliser or are using it. This fertiliser is mainly ammonium sulphate sold both by the government and commercial distributors. Only a few farmers (3 per cent) have ever employed it for all, or for the larger part of their fields. The remainder (9 per cent) have used it on a trial basis in only a small part of their fields.** 241 177* 178*

Fertiliser, then, has been tried out on a much smaller scale than either mushroom growing or raising tilapia. Apparently two important barriers operate against its wider acceptance. First, its high cost and the difficulty of purchase and transportation (64 per cent of farmers with ideas on the subject gave these reasons for not using fertilisers); second, popular opinion in Bang Chan declares that artificial fertiliser is not fit for low lands since it washes away and is thus wasted (29 per cent of the farmers with ideas on the subject advanced this as reason for not using fertiliser). In addition, fertiliser yields delayed returns.

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* The question: "Have you ever raised tilapia, or not?" [125] *

** The question: "Have you ever used fertiliser or not? .. To what extent have you used fertiliser on your fields?" [125]

743 #177 #178 B. Institutional Care of the Sick: Equally important as agricultural innovations in raising the level of living of an area such as Bang Chan are the efforts to improve the health and welfare of the population. Since the thirties there has been a clinic in the neighboring market town of Minburi and some Bang Chan farmers used clinics and hospitals in Bangkok before that time. Only about a third (34 per cent) say they have never been to a clinic or a hospital; over a third (37 per cent) have themselves gone for treatment; about one fourth (23 per cent) report having brought a patient there; over one tenth (12 per cent) say they visited relatives there; and a few (3 per cent) say they went there for various other reasons.*

ANALYSIS OF DATA ON AGRICULTURAL INNOVATIONS

121 The central question to which the present analysis directs itself is: What are some of the factors which may be said to account for the fact that certain members of the community are willing to try out these innovations and to continue using them, while others are unwilling even to make the initial attempt? Is there some general pattern to be discerned among the several innovations? Is there any discernible clustering among them; that is, are some community members more "innovation-minded" than others, in the sense that if they try out or accept one innovation they are more likely to accept another? Or are these innovations accepted independently of each other? The following analysis of the survey responses attempts to shed some light on these and related problems.

Factors in Acceptance of Agricultural Innovations

241 402 #177 #178 Use of the small motor is basic to acceptance of other agricultural innovations. Although only a minority of the persons of Bang Chan report that they own a small motor, many more used this machine through joint ownership or borrowing. Indeed, knowing whether a person owns or uses such a motor is a useful indicator of his readiness to accept other agricultural innovations. If he owns or has used a motor, then he is about five times more likely than others to try fertilizer, about two and a half times more likely to try raising tilapia, and about one and a third times more likely to try straw mushrooms.

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[125] * The question: "Have you ever been to a clinic or hospital...? In what various places...? For what various purposes did you go ...?"

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TABLE 1. THOSE WHO OWN OR USE SMALL MOTOR ARE MORE LIKELY THAN OTHERS TO TRY OTHER AGRICULTURAL INNOVATIONS (FARMERS ONLY)

	Owns motor	Does not own motor but uses it	Neither owns nor has used motor
(Total cases)*	(76)	(150)	(108)
Have you ever used fertilizer?**			
Yes	18%	14%	3%
No	82	86	97
Have you ever raised tilapia?			
Yes	53%	29%	22%
No	47	71	78
Have you ever grown mushrooms?			
Yes	47%	49%	37%
No	52	51	64

[125]

* The bases on which per cents are computed appear in parenthesis at the head of each column in this and subsequent tables. Actually the bases vary by a few cases, table to table, since there were always a few respondents who did not answer a given question or whose answers were unclassifiable.

** Asked of farmers only. The bases are:

Owns motor	63
Does not own motor but uses it	141
Neither owns nor has used motor	82
NA	5

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There is some evidence, then, that if a person is willing to try out one agricultural device, such as the motor, he is more likely to try out other agricultural innovations. However, this "clustering" cannot support the hypothesis that there is something like "innovation mindedness" in general, or that acceptance of any innovation in a series is predictive of acceptance of all other innovations in the same series.

Evidence may be cited to substantiate this contention. In the first place, if such a clustering indeed prevailed, one would expect users of any of these agricultural innovations to be more disposed than others to use, as well, certain non-agricultural innovations, such as hospital or clinic facilities, for example.

There is some justification, then, for the inference that initial adoption of innovations such as fertilizer and tilapia, which require increased labor, will depend to some extent upon the availability of some labor-saving device (such as the small motor) which will enable the busy farmer to perform the necessary labor and, perhaps, leave him freer to exercise the care required for these innovations to be successful. Hence the relatively stronger relationship among these innovations. An innovation which does not make these demands, however (such as mushroom growing), is more likely to find acceptance on its own terms and may thus be less dependent for its acceptance upon availability of some sort of labor-saving device.

Innovation and Attitude Towards It

There is further evidence in the survey substantiating the greater "autonomy" so to speak, of the decision to try mushroom culture compared with the decision to try fertilizer or tilapia.

The present study tested the hypothesis that use of these innovations would be related to a favorable attitude toward them. Attitude toward the four innovations was determined by examining responses to the questions: "What is your opinion about fertilizer?" "...about mushroom growing?" "...about tilapia?" Responses were classified according to whether they revealed positive, mixed, or negative affective feelings to each of the innovations.

In general, positive attitudes towards all these innovations are widespread in Bang Chan. About three-quarters of the residents express positive feelings toward mushroom growing and over half express positive attitudes to artificial fertilizer and tilapia raising. (See Table 3.) None of these innovations elicits widespread expressions of *disfavor*, although the respondents are more likely to express an unfavorable attitude to tilapia (29 per cent) than to fertilizer (14 per cent) or to mushrooms (7 per cent)

TABLE 3. THE MAJORITY IN BANG CHAN HOLD POSITIVE ATTITUDES TOWARDS AGRICULTURAL INTRODUCTIONS

Attitude	"What is your opinion about..." Mushrooms	Fertilizer	Tilapia
Positive	76%	59%	37%
Neutral or mixed*	6	3	2
Negative	7	14	29
No opinion	9	16	6
Not ascertainable	2	8	4
Total cases	(333)	(333)	(333)

* The neutral or mixed attitude category comprises responses conveying partly favorable and partly unfavorable feelings such as, "some kind is good, some kind is not so good"; "in some ways I like it, in some ways I dislike it."

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228 Now let us examine the extent to which the decision to try out
241 the innovation is linked to a positive feeling towards it. The decision to try fertilizer and to raise tilapia turned out to be indeed linked with positive feelings towards these innovations. Among those favoring fertilizer, the proportion using it is six times as high as those with neutral, mixed or negative attitudes (18 versus 3 per cent); among those with positive attitudes to tilapia raisers of this fish are twice as frequent in comparison with those having neutral, mixed, or negative attitudes (43 versus 22 per cent). These relationships are shown in Table 4 below.

TABLE 4. ATTITUDES TO FERTILIZER AND TILAPIA RAISING ARE LINKED TO THEIR USE

	Attitude	
	Positive	Neutral, Mixed & Negative
Fertilizer		
Tried it out	18%	3%
Never did	82	97
Total cases*	(168)	(55)
Tilapia		
Tried it out	43%	22%
Never did	57	78
Total cases	(191)	(104)

* [125] * Based on responses made by 293 farmers who expressed a codable attitude to fertilizer.

244 On the other hand, the data revealed no relationship between
*179 attitude to mushroom growing and growing them. The proportion of
*178 users and former users among those who have favorable attitudes and those who have negative attitudes remains relatively constant. Table 5 shows that among respondents with positive attitudes, 47 per cent have tried mushroom growing; while among respondents with negative attitudes, 42 per cent have done so; percentage differences are statistically insignificant.

TABLE 5. ATTITUDES TO MUSHROOM GROWING SHOW NO RELATION TO ITS ADOPTION

	Attitude	
	Positive	Neutral or Negative
	(252)	(42)
Tried mushrooms	47%	42%
Never did	53%	58%

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mushrooms. The following section examines for sociological factors linked to these decisions. For example, are the well-to-do farmers* more apt than the less well-to-do to adopt agricultural innovations? To what extent is literacy a factor in acceptance of innovations? To what extent do differences in literacy, communications habits, cultural contacts and urban orientation account for tendencies to adopt or reject these changes?

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[125]* The following analysis has been made, in most cases, for male farmers only. The distribution of initial acceptance among the three groups of male farmers, females, and male non-farmers is given in the following table.

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TABLE 6. USE OF AGRICULTURAL INNOVATIONS AMONG THREE GROUPS OF BANG CHAN VILLAGERS

	Male Farmers (211)	Male Non-farmers (61)	Females (32)
Tried motor	71%	61%	48%
Didn't try	29	39	52
Tried mushroom growing	46%	33%	41%
Didn't try	54	65	59
Tried tilapia raising	35%	25%	31%
Didn't try	65	75	69
Tried fertilizer	15%	5%	**
Didn't try	85	95	

** Asked of farmers only.

It is apparent, as one would expect, that it is mainly the farmers who try these innovations. Relatively few women (with the exception of tilapia raising) and even fewer non-farmers say they have tried them. Since the absolute number of acceptors among women and non-farmers is too small to bear the separate treatment which would be essential to analyze the factors influencing the use or non-use of innovations, they have been excluded from the following presentation, which refers, thus, to male farmers only.

Economic Level

It could be, of course, that people on a higher economic level are in a better position to try agricultural innovations, since they might more easily afford not only an initial cost but also possible loss in trying out something new.

The survey data provide several indicators of economic level. Among other questions on this subject, all respondents were asked: "Here in your household how many buffaloes do you own?" About one-quarter reported owning no buffaloes at all; a little more than that proportion reported owning four or more; the median number of buffaloes reported was between two and three.

In Bang Chan buffalo are an indication of wealth, as is the amount of land planted to rice. Thus all farmers in the sample were also asked, "Last time you planted rice, how many rai* of rice did you plant?" About a third reported that they planted 19 rai or less; about one-fourth reported that they planted 40 rai or more; the median number of rai reported was 28.3.

If the reported number of buffalo owned is an adequate measure of economic level, then one would expect a high correlation between reported buffalo ownership and reported number of rai planted. If the expectation is borne out the survey data the two indices may be used interchangeably. (Table 7 reports this relationship for the male farmers in the sample.)

TABLE 7. FARMERS# WHO OWN MORE BUFFALOES ARE MORE LIKELY TO CULTIVATE LARGER LAND HOLDINGS

	"...how many buffaloes do you own?"	
	None, one or two (99)	Three or more (111)
"...how many rai of rice did you plant?		
Less than 9	31%**	11
10-19	32	7
20-29	18	37
30-39	15	23
40-or more	3	41

Male farmers only
** Percentages may add to 99 or 101 owing to rounding of figures.

* A Thai land measure; 1 rai = 0.4 acres.

This table shows that in tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertiliser holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic Level			
	High*		Low**	
Owns or used motor (Proportion who have raised tilapia)				
Yes	43%	(89)	33%	(57)
No	25	(21)	17	(40)
Owns or used motor (Proportion who have tried fertiliser)				
Yes	20%	(89)	18%	(57)
No	5	(21)	*	(40)
Owns or used motor (Proportion who have tried mushroom growing)				
Yes	60%	(89)	36%	(57)
No	37	(21)	23	(40)

* Three buffaloes or more
** Two buffaloes or fewer

[231]

Literacy

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

he could write, could only sign his name, or could do neither.* Those who said they could write a letter are considered here to be literate. All others are grouped together as illiterates or on a low level of literacy.

The literacy rating was tested for validity as follows: in Bang Chan literacy is known to be related to age. Ever since 1935** there has been a school in the community. Since that date school attendance has been compulsory. Attendance has been fairly full for the last twenty years, but most older residents have never had the opportunity for formal schooling.

The survey data reflect this correlation between literacy and age. Among farmers under 40 years of age, only 16 per cent were rated as illiterate or barely literate by the survey criterion; while 59 per cent of those of 40 years or older are rated as illiterate. Thus one can have reasonable confidence in the survey response as a rating of literacy.

TABLE 10. LITERACY OF FARMERS DECREASES WITH AGE

	Age	
	Under 40 yrs.	40 yrs. or more
Literacy		
Illiterate	16%	59%
Literate	84	41
Total cases	(79)	(131)

Literacy is linked discernibly to acceptance of the motor and mushroom growing. The proportion of literate farmers who have tried the motor is twice as high as the corresponding proportion among those who are illiterate. It is less strongly linked to the decision to grow mushrooms, and is, at best, weakly linked to the decision to raise tilapia or to use fertilizer.

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* In addition, interviewers asked respondents who said they could write to demonstrate it by writing something on the questionnaire.

** See Siamese Rice Village, op. cit.

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TABLE 21. INCIDENCE OF MOTOR USE IS HIGHER AMONG VILLAGERS WHO REPORT WIDER SOCIAL CONTACTS

	Social Contacts ("...Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?")	
	"More" or "the same" (143)	"Fewer" (53)
Motor		
Has used it	77%	55%
Never did	23	45
Tilapia		
Has tried it	39%	21%
Never did	61	79
Fertiliser		
Has used it	16%	11%
Never did	84	89
Mushrooms		
Has tried them	49%	40%
Never did	51	60

Once again, however, when this link between breadth of social contacts and use of the innovations is examined separately for the literate, compared with the illiterate farmers, we find further substantiation of the previous finding that under certain circumstances contact may act as a substitute for literacy in acceptance of complex innovations. For, although the link between social contacts and use of tilapia remains constant for literate as well as illiterate farmers, it is mainly for those who are illiterate that exposure to wider local social contacts is associated with greater incidence of motor use.

[212]

*178 30
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402 One is tempted to speculate about the significance of this relationship. One possibility deserves further investigation if the data were only available. If one important reason for incurring debts is to secure or to replace capital equipment, then those farmers were willing to make a capital investment, even though they incur a debt, are more likely to use the motor. Conversely, farmers unwilling or unable to contract debts for a basic improvement in their capital equipment might be the ones less likely to adopt an innovation such as the motor.

Other Factors

121 A number of other factors which conceivably might have been expected to differentiate those who tried out these innovations from those who never made an attempt to use them were investigated and proved to have no differentiating power. Factors such as age and family size, for example, were examined to see whether differential acceptance existed among younger compared with older age groups, or small as compared with large families. No such difference appeared. In the same way, the survey's rough measures of community integration and identification, certain religious beliefs and superstitions, certain personality traits, of knowledge of political figures, and willingness to perform industrial work likewise revealed no differential rates of acceptance when groups were compared.

*178 USE OF MODERN HEALTH FACILITIES

743 Improvements in agricultural production must certainly not be
75 viewed as the only efforts worthy of attention to raise the level of living in Ban Chan. Equally important are efforts to train the population to use modern health practices and facilities.

Hospitals have been available since the twenties in Bangkok and a clinic in Minburi since the thirties. Despite these facilities, much curing continues in the traditional way through priests or certain farmers of the locality who have learned from other practitioners to compound medicines, set bones, deliver babies and expel demons.

743 In the present survey the majority of respondents reported that they have sometime in their lives used hospital or clinic
• [125] facilities. To the question, "Have you ever been to a clinic or hospital?" 63 per cent answered affirmatively. Less than half of those who replied indicated having gone for their own treatment or hospitalization, the remainder for other reasons. The distribution of responses is given below.

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[125] •

"Have you ever been to a clinic or a hospital? (If yes) For what various reasons?

No, never went	37%
Yes	63
For treatment or hospitalisation	37*
To bring a patient there	23*
To visit relative(s) or friend(s)	14*
Other reasons	3*

* These responses should not be cumulated since some respondents reported more than one reason for going.

If, indeed, the responses to this question are to be considered a valid index, one would expect respondents who reported having used these facilities also to report a higher incidence of visits to Bangkok, where the available hospitals are located. This expectation is confirmed by the responses to the two relevant questions.

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TABLE 23. INCIDENCE OF TRIPS TO BANGKOK IS HIGHER AMONG RESPONDENTS WHO REPORT VISITS TO CLINIC OR HOSPITAL

"In the past year, how many times did you go to Bangkok...?"	Have you ever been to a clinic or a hospital?"		
	Yes, for treatment (123)	Yes, for other reasons (91)	No (118)
Ten or more times	32%	31%	17%
Two to nine times	40	37	29
Once	13	12	23
Never	15	20	30

The present study now asks what factors are associated with use of modern health facilities.

Demographic Characteristics of Hospital Users

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It is important to answer one question in advance of more detailed analysis. Does an affirmative reply to the question, "Have you ever been to a hospital or clinic" measure need for medical care rather than acceptance of modern health practices.

No direct measure is available of the actual state of health of the survey respondents. But, assuming that older people need medical care more than younger people, then we have an indirect index of whether or not hospital use is higher among people of advanced age. The data show no such relationship.

APPENDIX A

March 1956

HOW THE BANG CHAN SURVEY WAS CONDUCTED

How the Study Came to be Made

121 The survey conducted in May 1955 was part of a program* for testing diverse techniques of data-gathering in cultures substantially different from U.S. and Western European cultures, where the survey method of gathering data had been developed and tested.

114 The survey questionnaire was developed and the field work carried out with the help of area specialists of the Cornell Research Center in Bangkok. Mr. Robert B. Textor and Mr. Loobonga Sotabhaya of the Cornell Thai staff assisted the field director and recruited the English-speaking Thai university students who interviewed for the survey.

The Questionnaire

12 After a period of training interviewers about the questionnaire and techniques of interviewing, the questionnaire was pretested in a rural community near Bang Chan. Then the staff, consisting of the field director, his deputy, and five Thai interviewers, among them one woman, moved to Bang Chan to carry out the survey.

124 Thai and English-language versions of the schedule were drawn up, but of the 335 interviews conducted in the survey,
125 the overwhelming majority was conducted in the Thai language rather than through an interpreter.

The Interviewers

124 The interviewers were a mixed group: one Thai-speaking American anthropologist; one trained Thai anthropological field worker; two Thai Christians (one a theology, the other a medical student); one Thai Buddhist medical student, one Thai Buddhist female social worker; and an American sociologist who used the Thai interviewers as interpreters.

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[122] * The Cornell Cross-Cultural Methodology Project for the Development and Testing of Improved Methods to Study Underdeveloped Areas is supported by a grant from the Rockefeller Foundation and is a project in the Department of Sociology and Anthropology.

On the average, an interview took about 40 minutes. Interviews ranged from about 20 minutes to one and a half hours. During the first days of interviewing the duration of an interview was on the average a little longer, and decreased as the interviewers became familiar with the instrument. For the first four days of interviewing, the daily output of interviews amounted to an average of 23; from the fifth day on the daily average output increased to 32 interviews. 124

The survey focussed mainly upon factors associated with the acceptance or rejection of certain changes in the village. The questionnaire was designed to permit: (1) a check on whether a question was meaningful to the respondents in the sense of its analytic significance in the study design; (2) testing the relative analytic sensitiveness of different types of question and answer categories; (3) collecting data whose manifest content was identical to content which had been investigated in other field stations; (4) collecting data, which, while differing from the manifest content covered in other field stations, nevertheless, had the same conceptual significance in this particular culture analysis; and (5) collecting specific information of interest to the area specialists assisting the Methodology Study. 125

Sampling

Problems of sampling were minimal. The entire area previously studied by Cornell anthropologists, consisting of seven hamlets, constituted the universe from which respondents were to be selected. The sampling unit was a household, defined as a single person or a group of persons constituting an economic unit and customarily using the same kitchen. Interviewers were instructed to select the head of the household as respondent. The head of the household was defined as that resident whom other members considered to be the head. If the head of the household was unavailable, interviewers were instructed to substitute "an articulate member of the household," defined as a person in a given household eligible to substitute as head. The majority of the respondents (85 per cent) were the actual heads of their households; substitutions were made only in the remaining 15 per cent of the cases. Interviews were gathered from all but one of the 336 households in the Bang Chan area studied.

The sample obtained is composed of 243 males and 90 females, of 298 Buddhists and 35 Moslems. As far as ascertainable, the respondents reported their place of birth as follows: 125 621

140 were born in Khanhajaav Commune
116 were born in Bang Chan Commune
11 were born in Minburi Commune
30 were born outside of the three above communes

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• 125
621

The age breakdown of the sample is as follows:

41 cases of 20 to 29 years of age
75 cases of 30 to 39 years of age
85 cases of 40 to 49 years of age
68 cases of 50 to 59 years of age
41 cases of 60 to 69 years of age
16 cases of 70 years or more

The occupational status breakdown is as follows:

269 farm operators
24 farm laborers
18 in trade or commerce
10 in service occupations
12 other (2 retired, 2 artisans, 1 traditional doctor,
1 janitor, 1 air force man, 1 policeman,
1 children's caretaker 1 gardener,
1 laborer in irrigation department, and
1 occupation unspecified)

123 Respondent Reaction to the Survey

The respondents were in general cooperative and congenial as is substantiated by the following interviewers' ratings:

(1) 93 per cent of the respondents were reported as cordial at first contact;

(2) 96 per cent of the respondents were reported friendly, cooperative, and responsive for all or most of the interview;

(3) 90 per cent of the respondents were reported as speaking freely for all or most of the interview,

(4) 91 per cent were reported as answering to the point of most or all questions, as giving reasonable, applicable answers;

(5) Only 3 per cent of the respondents were reported as giving many guarded, insincere or evasive replies, whereas 15 per cent were reported as giving some guarded, insincere or evasive replies; and 80 per cent of the respondents were reported as giving no guarded, insincere or evasive replies.

114 The interviewing period fell in a relatively quiet season between harvesting and planting of paddy. At that time farmers were readying implements and beginning to prepare for harrowing and sowing the seed-beds. The period coincided with a period of university vacation so as to recruit English-speaking interviewers. The morale of the staff was high at all times.

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APPENDIX B

Cornell Methodology Project
Thailand, May 1955

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BANG CHAN STRUCTURED QUESTIONNAIRE (Frequency Distributions)

A. Ser. No. B. Hamlet and H C. Date of Interview D. Name of Respondent [162]

F. Sex
9. male 213
X. female 90

G. Religious Affiliation
0. Buddhist 298
Y. Moslem 35

H. Main Occupation [46]
8. Farm operator 269
9. Farm laborer 24
X. Trade and commerce 18
Y. Service 10
0. Other, Specify_____ 12

I. R is HH or not HH
1. HH 277
2. Not HH 56

J. If not HH, relationship to HH
3. Husband —
4. Wife 41
5. Son 10
6. Daughter 2
7. Father —
8. Mother —
9. Mother-in-law —
X. Other relative 3

1.a. Were you born in Bang Chan Commune, Khanna Yao Commune, Minburi Commune, or outside?

b. If outside, in what province were you born? [166]

1. BC Commune 116
2. KY Commune 141
3. Minburi Commune 11
4. Commune unascertainable 2
5. Outside BC, KY, Minburi 30
7. Unascertainable 33

2.a. How old are you? [162]
b. In what zodiac year were you born?
1. 20 to 29 41
2. 30 to 39 61
3. 40 to 49 85
4. 50 to 59 68
5. 60 to 69 41
6. 70 and over 17

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[872]

3.a. Is there anyone from your house who is now attending nattayum school?

1.	Yes	24
2.	No	309

b. Do you have any children who have not yet entered or not yet finished prathom school?

3.	Yes	201
4.	No	128
--	Unascertainable	4

c. IF YES: Do you plan to send any of these children to nattayum school or not, or is it uncertain?

5.	Plans to send	66
6.	Does not plan to send	83
7.	Unascertainable	52

[863] 4. What kind of occupation would please you the most—farming or some other occupation? If some other occupation, what other occupation would please you the most?

1.	Farmer prefers farming	266
2.	Farmer prefers other occupation	25
3.	R. from other occupation prefers his occupation	25
4.	R. from other occupation prefers farming	8
5.	R. from other occupation prefers another occupation	5
6.	Unascertainable	4

5. How is Baan BC-KT in your opinion? Is it a very good place to live, a fairly good place to live, or not such a good place to live?

8.	Very good	71
9.	Fairly good	254
X.	Not so good	4
0.	Unascertainable	4

[276] 6.a. Do you smoke cigarettes or not?

7.	Yes	208
8.	No	118
--	No Answer	7

b. If yes: Would you say that you smoke more cigarettes than most people in BC-KT, less than most people in BC-KT, or about the same as most people in BC-KT?

9.	More	14
X.	Less	68
Y.	About the same	124
0.	Unascertainable	2

7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are those various new things? [177* 178* 125]

1.	Fertiliser	9	[241]
2.	Small engine	4	[402]
3.	New rice seeds	3	[243]
4.	Tilapia	98	[228]
5.	Other fish, specified	13	[244]
6.	Fish, unspecified	80	[235]
7.	Mushrooms	45	[231]
8.	Poultry	179	
9.	Pigs	21	
X.	Other, specify	68	
0.	Unascertainable	45	

8. Here, some farmers get a lot more rice from one rai of land than others get. Generally speaking, what are the various reasons why this is so? [243] [433]

1.	Fertiliser	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify	53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify	25
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

44

125
[402] b. If no: have you ever made use of one in your work, or not?
3. Yes 145
4. No 106
5. Unascertainable 8

11. What is your opinion about fertilizer?
(See code at end)

[241] 12.a. IF R IS A FARMER: Have you ever used fertilizer or not?
6. Does not apply 17
7. Yes 32
8. No 232
— No Answer 12

b. IF HAS NOT USED FERTILIZER: For what various reasons have you not used fertilizer?
(See code at end)

c. IF HAS USED FERTILIZER: Have you ever used fertilizer in your seed-beds, or not?
9. Yes 20
X. No 13

d. IF HAS USED FERTILIZER: To what extent have you used fertilizer on your fields? On all your fields, or on the larger part of your fields, or on the smaller part of your fields?
1. On all fields 4
2. On larger part of fields 4
3. On minor part of fields 24
4. Unascertainable 1

13. What is your opinion about mushroom growing?
(See code at end)

[244] 14.a. Have you ever grown mushrooms, or not?
1. Yes 143
2. No 188
— No Answer 2

b. IF NO: Do you have any relatives or relative-like neighbors, who have grown mushrooms or not?
3. Yes 141
4. No 44
5. Unascertainable 4

15.a. What is your opinion about tilapia raising?

[228] b. Have you ever raised tilapia, or not?
1. Yes 104
2. No 225
— No Answer 4

15

16.a. ASK ONLY FARMERS: This year just now beginning, will you do anything for increasing your income, outside of rice farming? 125 [434]

3.	Does not apply	13
4.	Yes	162
5.	No	107
6.	Unascertainable	11

b. IF YES: What various things will you do? [224] [235] [228] [241]

0.	Nothing	3
1.	Mushrooms	42
2.	Poultry	51
3.	Fish (Incl. tilapia)	10
4.	Fertiliser	2
5.	Other, specify_____	84
6.	Unascertainable	6

17. ASK ONLY FARMERS:

a. Last time you planted rice, how many rai of rice did you plant? [243] [433]

1.	4 rai or less	14
2.	5 to 9 rai	25
3.	10 to 19 rai	49
4.	20 to 29 rai	65
5.	30 to 39 rai	53
6.	40 to 49 rai	32
7.	50 to 59 rai	19
8.	60 to 69 rai	14
9.	70 to 79 rai	2
X.	90 rai or more	—
0.	Unascertainable	20

b. And what was the total yield?

1.	120 tang or less	15
2.	121 to 300 tang	28
3.	301 to 600 tang	59
4.	601 to 900 tang	59
5.	901 to 1200 tang	56
6.	1201 to 1500 tang	25
7.	1501 to 1800 tang	10
8.	1801 to 2100 tang	10
9.	2101 to 2700 tang	7
X.	2701 or more tang	3
0.	Unascertainable	21

c. How about the year before--how many rai did you plant?

1.	4 rai or less	16
2.	5 to 9 rai	19
3.	10 to 19 rai	51
4.	20 to 29 rai	67
5.	30 to 39 rai	53
6.	40 to 49 rai	26
7.	50 to 59 rai	20
8.	60 to 69 rai	13
9.	70 to 89 rai	5
X.	90 rai or more	—
0.	Unascertainable	23

L6

125 [243] [433]

17.d. And what was the total yield at that time?

1.	120 tang or less	80
2.	121-300 tang	14
3.	301-600 tang	62
4.	601-900 tang	64
5.	901-1200 tang	50
6.	1201-1500 tang	23
7.	1501-1800 tang	10
8.	1801-2100 tang	6
9.	2101-2700 tang	7
X.	2701 or more tang	4
0.	Unascertainable	31

e. And how many rai did you plant two years back?

1.	4 rai or less	18
2.	5 to 9 rai	17
3.	10-19 rai	45
4.	20-29 rai	72
5.	30-39 rai	52
6.	40-49 rai	26
7.	50-59 rai	18
8.	60-69 rai	12
9.	70-89 rai	4
X.	90 rai or more	—
0.	Unascertainable	29

f. And what was the total yield that time?

1.	120 tang or less	20
2.	121-300 tang	24
3.	301-600 tang	48
4.	601-900 tang	69
5.	901-1200 tang	38
6.	1201-1500 tang	8
7.	1501-1800 tang	7
8.	1801-2100 tang	5
9.	2101-2700 tang	4
X.	2701 or more tang	1
0.	Unascertainable	69

[243] [435] 18. ASK ONLY FARMERS:

a. Have the changes in the price of rice during the last two or three years caused you any worry, or not?

7.	Yes	158
8.	No	104
9.	Unascertainable	33

b. IF YES: What are you doing about it?
(See code at end)

[243] 19.a. Do you, at present, have your own home rice mill, or not?

X.	Yes	105
Y.	No	228

b. IF YES: What various things do you do with the polishings?

1.	DA as mill not used	3
2.	Used for feed	79
3.	Used for food	—
4.	They are sold	3
5.	Other, specify_____	3
6.	Unascertainable	2

125 * [243]

c. ASK ALL: During this past year, did your family eat home-milled rice entirely, in major part, in minor part, or not at all? [262]

7.	Entirely	5
8.	For major part	51
9.	For minor part	78
X.	Not at all	199

30.a. As you know, some people have had plenty of chance to learn to read, while others have hardly had any chance. How about you yourself? Are you able to read the Thai language, or haven't you ever had the opportunity to do any reading? [212]

1.	Yes, can read	224
2.	No	239

b. IF R CAN READ: Would you say it is hard for you to read, or easy, or about medium?

3.	Hard	25
4.	Easy	85
5.	Medium	114
6.	Unascertainable	—

c. ASK ALL: How how about writing? How is it with you yourself? Are you able to write Thai, or haven't you ever had the opportunity to do any writing?

7.	Yes, can write	227
8.	No	236

d. IF R CAN WRITE: How much writing do you do? Are you able to sign your name, or can you also write a letter?

9.	Sign name only	63
X.	Can write letter	163
0.	Unascertainable	1

31.a. Suppose there were a factory in Missouri paying 80 Thais per day. Would you apply for a job to work in this factory? [464]

7.	Yes	162
8.	No	159
9.	Unascertainable	12

b. Do you think that someone else from your house would apply for a job there?

X.	Yes	105
Y.	No	211
0.	Unascertainable	17

48

• 125

[789] 22. Have you consulted with a medium frequently, occasionally, seldom, or never?

1. Frequently	7
2. Occasionally	6
3. Seldom	65
4. Never	856

[775] 23. Have you been disturbed by a ghost frequently, occasionally, seldom, or never?

5. Frequently	4
6. Occasionally	8
7. Seldom	58
8. Never	854

[641] 24.a. Excuse me, could you tell me, who is now the prime minister of Thailand? If you know, could you please tell me his name?

1. Correct answer	193
2. Incorrect answer	89
3. DK, cannot recall	111

b. Excuse me, could you tell me, who is now the chief of police of Thailand? If you know, could you please tell me his name?

4. Correct answer	167
5. Incorrect answer	24
6. DK, cannot recall	202

25.a. IF R LIVES IN BC CONCHE: Who is the district officer in Nimburi? If you know, could you please tell me his name?

1. DA, as from Bangkapi	194
2. Correct name of present DO	9
3. Correct name of past DO	—
4. Incorrect name	16
5. DK, cannot recall	111
— No Answer	3

b. IF R LIVES IN KT CONCHE: Who is the district officer in Bangkapi? If you know, could you please tell me his name?

6. DA, as from Nimburi	141
7. Correct name of DO	10
8. Incorrect name	—
9. DK, cannot recall	154
— No Answer	28

[434] [829] [556] 26.a. Throughout the world and here in Bang Chan-Khaeng Tao too, it is common among men that there must be some who are rich and some who are poor and some who are neither rich nor poor. How about you yourself? Are you rich, or poor or neither rich nor poor?

1. Rich	2
2. Poor	66
3. Neither	863

b. IF POOR: Here in BC-KT, do you think there are many or few people who are poorer than you?

5. Many	30
6. Few	31
7. Unascertainable	7

40

27.a. Excuse me, but at present do you have a (wife/husband) who lives and eats with you, or not? [592] 125 •

1. Yes	125
2. Yes, qualified _____	6
3. No	72

b. IF NO: Excuse me, but is this because you are widowed, separated, divorced, or is there some other reason? [589] [586]

4. Widowed	45
5. Separated	9
6. Divorced	1
7. Other, specify	10
— No Answer	7

28.a. Your own children, all of them that have ever been born, how many are there? [592] [162]

0. None	46
1. One	32
2. 2 to 3	70
3. 4 to 5	74
4. 6 or more	133

b. How many of your children are still living?

0. None	57
1. One	50
2. 2 to 3	83
3. 4 to 5	82
4. 6 or more	97
— No Answer	8

c. How many of your children have died? [165]

0. None	196
1. One	48
2. 2 to 3	38
3. 4 to 5	17
4. 6 or more	9
— No Answer	9

29.a. Have you ever been ordained as a priest, or not? [793]

1. Yes	127
2. No	31
— No Answer	2

[792]

[Male Buddhist (130)]

b. IF NO: In the future, do you want to be ordained as a priest, or not?

3. Yes	20
4. No	11

c. ASK ALL: How many sons do you have twenty years old or over? [593] [162]

5. None	176
6. One	56
7. Two	19
8. Three or more	22
— Unascertainable	63

50

• 125 29.d. IF A THAI SONS 20 AND UP: Of your sons over twenty, how many have been ordained as Buddhist priests, or not?

[793]	7. DA	812
	8. None	22
[593]	9. One	58
	X. Two	25
[792]	Y. Three or more	16
[162]	e. Do you have any sons under twenty?	
	9. Yes	188
	X. No	108
	— No Answer	37
[793]	f. IF YES: In future, do you want your sons under twenty to be ordained as priests, or not?	
	Y. Yes	186
[782]	0. No	—
	— No Answer	2

g. IF YES: But aside from your admirable desire to have them ordained, in your true heart how sure is your expectation? Are you very sure or not very sure, or fairly sure that they will be ordained?

1. Very sure	140
2. Not sure	26
3. Fairly sure	12
4. Unascertainable	9
NA	1

h. All over Thailand there are some Thai men who are over 50 but have never been ordained as priests. For what various reasons might this happen?
(See code at end)

[461] 30. Suppose there was some work you could do individually, or that could be done in a small group of two or three, or that could be done in a large group. Which way would you prefer to do the work--as an individual, or in a group of two or three, or in a large group?

8. Individually	60
9. Small group	55
X. Large group	202
Y. Undecided, depends	4
3. Unascertainable	13

[572] 31. Around here in W-KK there are some people who have many close friends and there are other people who have few close friends. And how about yourself? Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?

5. More than most	62
6. Fewer than most	36
7. About the same	156
8. Unascertainable	83

125

32. Last night, when you ate at your own house, did you eat with your hands, with fork and spoon, or with spoon alone? [264]

9. Hands	242
X. Fork and Spoon	11
Y. Spoon alone	73
0. Unascertainable	7

33.a. Have you ever been to a clinic or a hospital? [743]

1. Yes	214
2. No	119

b. IF YES: In what various places?

3. Minburi	156
4. Bangkok	135
5. Other place	7
6. Unascertainable what place.	

c. IF E HAS BEEN TO CLINIC OR HOSPITAL: For what various purposes did you go?

7. Treatment or hospitalisation	123
8. To bring a patient there	77
9. Visit relatives or friends	45
X. Other reason, specify_____	11
0. Unascertainable	—

34.a. During the last year, did it occur to you frequently, sometimes, or never that you had difficulties falling asleep? [513]

1. Frequently	73
2. Occasionally	151
3. Never	109

b. During the last year, did it occur to you frequently, sometimes, or never that you had a headache? [164]

4. Frequently	50
5. Occasionally	174
6. Never	109

c. During the last year, did it occur to you frequently, sometimes, seldom or never that you lost your appetite?

7. Frequently	50
8. Occasionally	173
9. Never	110

d. During the last year, did it occur to you frequently, sometimes, or never that your hands trembled so as to bother you? [164]

X. Frequently	17
Y. Occasionally	93
0. Never	218
— No Answer	5

e. During the last year, did it occur to you frequently, sometimes, or never that your heart beat so fast as to bother you?

1. Frequently	36
2. Occasionally	154
3. Never	141
— No Answer	8

52

• 125 [513] f. During the last year, did it occur to you frequently, sometimes, or never that you had a nightmare?

4. Frequently	16
5. Occasionally	130
6. Never	197

[546] 35. In your life, how many times have you seen a movie, or haven't you ever seen one?

5. Ten times and more	161
6. 4 to 9 times	60
7. 1 to 3 times	75
8. Never	33
— No Answer	4

[426] 36.a. Excuse me, I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?

5. Yes	192
6. No	110
7. Unascertainable	1

b. IF YES: Is your debt now higher, or lower, or about the same as it was two years ago?

8. Higher	64
9. Lower	95
X. About the same	88
Y. Unascertainable	1

c. IF NO: How about two years ago, did you have a debt then or not?

9. Yes	41
X. No	78
Y. Unascertainable	—
— No Answer	1

[441] 37.a. Do you or anybody in your household buy certain products in order to resell them at a profit?

9. Yes	85
X. No	312
Y. Unascertainable	2
— No Answer	6

b. IF YES: Do (you/they) sell things regularly, occasionally or just at festival times?

7. Regularly	31
8. Occasionally	49
9. Just at festival times	5
X. Unascertainable	—

[241] 38.a. And now, I would like to know a little more about fertilizer. Do you think fertilizer is very good, fairly good or bad?

1. Very good	106
2. Fairly good	149
3. Bad	15
4. Unascertainable	63

53

125 •

b. And how about mushroom growing? Do you think mushroom growing yields very good money, good money, or little money? [244]

5. Very good money	68
6. Good money	160
7. Little money	19
8. Unascertainable	98

c. And what about Tilapia. Do you think tilapia raising pays very good money, or good money, or little money? [228]

9. Very good money	15
X. Good money	73
Y. Little money	175
0. Unascertainable	70

39. Do you believe in medicine strongly, somewhat, or not at all? [787]

1. Strongly	12
2. Somewhat	192
3. Not at all	105
4. Unascertainable	84

40.a. Suppose you could do the same work in another rural place and earn 2 more than here. For example, it would be a place 100 kilometers from here. Would you be willing to leave for that place or not? [164]

5. Yes	118
6. No	203
7. Unascertainable	12

.b. IF NO: For what various reasons would you not be willing to go?
(See code at end)

41.a. If you had no land to work in NE-KT would you move to another place or not?

X. Yes	166
Y. No	119
0. Unascertainable	80
-- No Answer	36

b. IF NO: For what various reasons?
(See code at end)

42.a. Some people say that, generally speaking people who live in Bangkok have more genuine and lasting happiness than people here in NE-KT. Do you agree or disagree? [369] [829]

1. Agree	136
2. Disagree	134
3. Unascertainable	63

b. IF AGREE: For what various reasons do you agree?

If Agreement (See code at end)

[125] 42.a. IF DISAGREE: For what various reasons do you disagree?

[369]
[829]

IF Disagreement (See code at end)

[793] 43. Do you agree or disagree that all priests are honest and moral men?
[792]

1.	Agree	197
2.	Disagree	90
0.	Undecided	40
—	No Answer	6

[829] 44. Do you think it is right or wrong for a Thai to marry a Chinese?

1.	Right	55
2.	Wrong	182
3.	Uncertain/able	91
—	No Answer	5

[775] 45. Do you believe that ghosts bother people? Strongly, somewhat, or not at all?

4.	Strongly	40
5.	Somewhat	136
6.	Not at all	121
7.	Unascertainable	28
—	No Answer	5

[653] 46.a. During the past year, have there been any activities for the public welfare in BC Wat, or not, to which you contributed labor?

1.	Yes	231
2.	No	108

b. IF YES: For what various activities did you contribute labor?

_____

_____

c. During the past year or so, have there been any activities for the public welfare in the wat, or not, to which you contributed money or goods?

1.	Yes	288
2.	No	43
—	No Answer	6

[651] d. IF YES: For what various activities did you contribute money or goods?

_____

_____

47.a. How about activities not connected with the wat or with religious ceremonies in the home. During the past year, have there been any such activities for the public welfare in BC-KY, to which you contributed labor, or not?

1.	Yes	94
2.	No	232
3.	Unascertainable	7

47.b. IF YES: For what various activities did you contribute labor? (See code at end) 125 [653]

c. During the past year, have there been any public welfare activities, not connected with the wat or with religious ceremonies in the home, or not, to which you contributed money or goods?

1.	Yes	128
2.	No	197
3.	Unascertainable	8

d. IF YES: For what various activities did you contribute money or goods? (See code at end)

48.a. Have you attended the ceremony of wiseka bucha at Wat BC every year, or only in some years, or only once in many years, or never? [796]

8.	Every year	156
9.	Only in some years	135
X.	Once in many years	21
Y.	Never	14
0.	Unascertainable	7

b. Have you attended the ceremony of gilding the Buddha's footprint at Wat BC every year, or only in some years, or only once in many years, or never?

1.	Every year	225
2.	Only in some years	62
3.	Once in many years	17
4.	Never	9
5.	Unascertainable	20

49.a. Excuse me, this is a strange question, but do you own a pair of shoes? [291]

6.	Yes	136
7.	No	197

b. Of what various materials are your shoes made?

8.	Leather	65
9.	Cloth, canvas	87
X.	Other, specify_____	11
0.	Unascertainable	
—	No Answer	1

50.a. In your household, is there a hatchet, or not? [412]

1.	Yes, hatchet	309
2.	No	24

b. (In your household), is there a pressure lamp, or not? [416]

3.	Yes, pressure lamp	188
4.	No	145

c. (In your household), is there a flashlight or not?

5.	Yes, flashlight	271
6.	No	61
—	No Answer	1

• 125 [412] 30.d. (In your household) is there a pair of scissors of any kind or not?

7.	Yes, scissors	219
8.	No	115

[207] e. (In your household) is there a radio or not?

9.	Yes, radio	47
0.	No	286

[402] f. (In your household) is there a winnowing machine, or not?

X.	Yes, winnowing machine	102
Y.	No	231

[243] [402] g. (In your household) is there a windmill, or not?

1.	Yes, windmill	161
2.	No	172

[805] [405] 31. Do you have a wrist watch, or not?

3.	Yes	79
4.	No	252
--	No Answer	2

[231] a. Here in your household, how many buffaloes do you own?

5.	None	81
6.	One	27
7.	Two	67
8.	Three	41
9.	Four or more	97

b. (Here in your household) how many pigs do you have?

0.	None	321
1.	One	3
2.	Two	2
3.	3 or more	1
--	No Answer	7

[235] c. (Here in your household) how many chickens do you have?

4.	None	35
5.	1 to 2	7
6.	3 to 4	17
7.	5 to 9	31
8.	10 or more	83

d. (Here in your household) how many ducks do you have?

0.	None	308
1.	1 to 2	9
2.	3 to 4	16
3.	5 to 9	28
4.	10 or more	42

57 125

53. Which of the following six qualities do you feel is the best thing for men: Virile, friendly, educated, rich, religious, lazy? [577]

5.	To be virile	2
6.	To be friendly	31
7.	To be educated	98
8.	To be rich	43
9.	To be religious	126
X.	Not to be lazy	57
Y.	Unascertainable	25
—	No Answer	3

54. Do you drink too frequently, occasionally, seldom, or never [272]

1.	Often	22
2.	Occasionally	68
3.	Seldom	158
4.	Never	24

55. Do you drink whiskey frequently, occasionally, seldom, or never [273]

5.	Often	29
6.	Occasionally	73
7.	Seldom	157
8.	Never	14
9.	Unascertainable	—

56.a. In Thailand are many people who smoke opium. Excuse me, during your life have you ever smoked opium, or not? [276]

1.	Yes	45
2.	No	227
3.	Unascertainable	1

b. IF NO: Excuse me, do you think there is anything wrong with smoking opium, or not?

4.	Yes, it is wrong	221
5.	No, it is not wrong	5
6.	Unascertainable	1

c. IF SOMETHING WRONG: What are the various reasons why you think it is wrong?

7.	Bad for health	43
8.	Habit forming	62
9.	Waste of money	220
X.		
Y.	Other reasons, specify_____	40
0.	Unascertainable	

57.a. In the last month, how many times did you go to Khuri or didn't you go at all? [484]

0.	Did not go at all	67
1.	Once	95
2.	2 to 4 times	120
3.	5 to 9 times	39
4.	10 to 19 times	30
5.	20 times or more	20
6.	Unascertainable	8

58

• 125 [484]

57.b. IF R DID NOT GO DURING LAST MONTH: How many months ago was the last time you went to Minburi?

7.	Within last 3 months	34
8.	More than 3 months ago	25
9.	Never been to Minburi	1
X.	Unascertainable	3
—	No Answer	6

58. This past year, how many times did you go to Bangkok, or didn't you go at all?

0.	None	71
1.	Once	56
2.	2 to 4 times	90
3.	5 to 9 times	88
4.	10 times or more	87
5.	Unascertainable	1

59. In your life, how many times have you been to Don Muang Airport, or haven't you been there at all?

6.	None	116
7.	Once	58
8.	2 to 4 times	72
9.	5 times or more	52
X.	Unascertainable	3

60. In your life, how many times have you been to the annual agricultural fair or the Agricultural Experimental Station at Bang Khen, or haven't you been there at all?

0.	None	227
1.	Once	47
2.	2 to 4 times	45
3.	5 times or more	14
4.	Unascertainable	

61. In your life, have you ever been beyond the boundaries of Thailand, or not?

X.	Yes	13
Y.	No	318
0.	Unascertainable	2

62.a. Have you ever lived in Bangkok, or not?

1.	Yes	117
2.	No	216
—	Unascertainable	

[464]

b. IF YES: What various duties or jobs did you have when you lived in Bangkok?

4.	Soldier	37
5.	Police	10
6.	Student	22
7.	Artisan	1
8.	Laborer	23
9.	Other, specify _____	33
0.	Unascertainable	2

62.a. IF YES: What is the total number of months that you lived in Bangkok? 125 [166]

5.	One year or less	31
6.	13 to 24 months	30
7.	25 to 60 months (5 yr)	21
8.	More than 5 years	35
9.	Unascertainable	

63.a. Is there anyone now eating and living in your house who once lived in Bangkok, or not? [592] [166]

9.	Yes	34
X.	No	296
Y.	Unascertainable	1

b. IF YES: What is your relationship to this person(s)?

1.	Son	9
2.	Daughter	6
3.	Father	2
4.	Mother	-
5.	Brother	2
6.	Sister	3
7.	Other relative	14
8.	Unascertainable	-

c. IF YES: At what age did he leave BC?

1.	Below 15 years	5
2.	15 to 19	8
3.	20 to 29	15
4.	30 years or more	4
5.	Unascertainable	4

d. IF YES: How long did he (she, they) live in Bangkok?

6.	Less than one year	5
7.	1 to 4 years	19
8.	5 to 9	6
9.	10 years or more	5
X.	Unascertainable	1

64.a. Is there anyone who has previously eaten and lived in your house and who is now working in Bangkok, or not?

1.	Yes	92
2.	No	241
3.	Unascertainable	

b. IF YES: What is your relationship to this person(s)?

4.	Son	35
5.	Daughter	21
6.	Brother	16
7.	Sister	8
8.	Other relative	18
9.	Unascertainable	—
—	No Answer	2

60

125 64.c. IF YES: At what age did he leave BC?
[166]
[592]

1.	Below 15 years	8
2.	15 to 19 years	28
3.	20 to 29 years	50
4.	30 years or more	5
5.	Unascertainable	8

d. IF YES: For how long has he (she, they) been gone from BC?

6.	Less than one year	12
7.	1 to 4	42
8.	5 to 9	19
9.	10 years or more	19
X.	Unascertainable	

[464]
[463]
e. IF YES: What various duties or jobs does he (she, they) do in Bangkok?

1.	Housewife	17
2.	Unskilled laborer	19
3.	Skilled laborer	33
	Armed forces	17
	Service	9
	Employee	5
4.	Other (retired, selling things)	2
5.	Unascertainable	4

[166]
[593]
[602]
f. IF YES: During the last year, have you seen this person(s) several times, once, or not at all?

9.	Several times	65
X.	Once	16
Y.	Not at all	8
O.	Unascertainable	3

g. IF YES: Does he (she, they) make regular remittances to this house?

X.	Yes	31
Y.	No	56
O.	Unascertainable	5

[207] 65. Do you listen to the radio regularly, daily, occasionally, seldom, or never?

6?	Regularly-daily	45
7.	Occasionally	66
8.	Seldom	148
9.	Never	60
—	Unascertainable	14

[525] 66.a. Do you play the lottery regularly, occasionally, seldom, or never?

1.	Regularly	20
2.	Occasionally	54
3.	Seldom	220
4.	Never	38
5.	Unascertainable	—
—	No Answer	1

b. IF REGULARLY, OCCASIONALLY, OR SELDOM: Suppose you were to win the second prize of 40,000 baht. What various things would you do with this money?
(See code)

	Qu 11	Qu 13	Qu 15a	
1. Positive, no evidence: very good, good, nice	103	114	77	125 • 241
2. Positive, with evidence: good results, specific statements	47	120	95	244
3. Neutral or mixed	11	20	6	228
4. Negative, no evidence: no good, bad, of no use	9	5	15	
5. Negative, with evidence: difficult to apply in deep water, must keep using it, too expensive, some results as without fertiliser	33	13	80	
6. Positive, qualified: Fertiliser too expensive	13	—	1	
7. Positive, qualified otherwise: only for high land; very hard to purchase; requires to keep on using it	32	18	18	
8. Respondent states he has no opinion	59	31	86	
X. Negative, qualified: It's not quite good, it depends on the soil	4	4	3	
0. No answer	4	3	1	
9. Respondent's attitude not ascertainable	23	5	11	

	Qu 12a	
		125
		241
0. D.A.	85	
1. Too expensive	78	
2. Difficult to purchase	15	
3. Not fit for low land	39	
4. Soil not suitable	3	
5. No ascertainable reason given	28	
6. Too little land	7	
7. Other reasons	56	
8. Have never used it before. Do not now either	12	
X. N.A.	105	
9.	21	

	Qu 16a	
		125
		243
X. N.A. Unascertainable	60	435
0. D.A.	151	458
1. Nothing, cannot do anything	70	
2. Grow mushrooms	12	
3. Raise poultry	15	
4. Raise fish (including Tilapia	7	
5. Use fertiliser	—	
6. Find job as laborers	6	
7. Other: try to find new seed, sell vegetables, borrow money from neighbors, keep rice until price goes up, economise, send sons to work	86	

62

		Qn 477	Qn 478
125 621	1. Too old to move, old man	33	12
	2. Easy to make living here, more comfortable, happy here	36	8
	3. Loves place, born here, would like to die here	37	26
	4. Doesn't like to leave area	10	4
	5. Relatives are here, likes neighbors, family here	32	28
	6. Own land	19	15
	7. Can't move her house, worried about housing in new place	7	1
	8. Change career, use other occupation	2	18
	9. Other: Big family, had to move too far, wouldn't know how to find a new place, people here one can trust, will help you	39	23
	0. D.A.	130	205
	X. No answer, unascertainable	7	23

		Qn 479 (labor contrib)	Qn 480 (money contrib)
125 653	4. D.A.	238	202
	5. School	23	51
	6. Bridge	36	36
	7. Canal	16	6
	8. Road	13	23
	9. Other: district office, festival shelter, marriage of neighbors	8	8
	0. N.A.	1	9
	X. Rest house	5	5

		Qn 668
125 525	1. Make merit, give alms, buy a golden belt, build a mosque	172
	2. Purchase land	91
	3. Trade, build a market, open rice mill	34
	4. Spend for the family, unspecified, improve group condition	68
	5. Build a house	40
	6. Purchase of farming equipment or stock	22
	7. Pay debt	7
	8.	
	9. Other: Offer sons to Thai army, to be carpenter, keep money in bank and collect interest, educate children, benefit country	44
	0. D.A.	39
	X. No Answer	2

Question 29.h. Reasons respondents give for why some old men have not served in priesthood (multiple choice replies). 125 • 793 792 828 829

Immediate deprivation	
Dependents (worry about family, have wives, they have many children)	78
Financial reasons (they are very poor, they have no money, their parents are very poor, in debt)	55
Property (worry about property and profession)	15
Life situation	
Married too young (too early, have wives early, "fell in love, got married, acquired dependents, so could not get ordained")	50
Wrong orientation to life (they believe in a wrong way of life, they are lazy and not religious, they pay too much attention to wordly things, they cannot pray, "they don't think of their parents enough, they think only of themselves, and only of the present")	19
Religious belief system	
Apathy to priesthood (they do not like it, feel indifferent about ordaination, have no intention of being ordained)	43
Indifference to Buddhism (they are not true believers, they did not participate in religion, "they aren't sons of Lord Buddha," "they don't love their race or Buddha")	19
Qualification	
Illiteracy, ignorance (they cannot read, they are ignorant, "afraid cannot abide by teachings and discipline," "they cannot read so they are ashamed if they become priest")	21
Personality (they are ruffians, they are disorderly drinking men, they are poorly brought up, they are not good enough, mental disturbance)	11
Background	
Lack of parental supervision (their parents can't control them, "nobody would give the advice and so they did not enter the priesthood)	5
Parental objection ("Some men have quarrels and their parents don't want them ordained," "they cannot receive permission from their parents")	2
Other reasons ("Because such men did not get ordained in previous incarnation, either," "because he has sinned in the past life and has had luck in this life," "they have to be soldiers," "they don't know the merit of sin," "they are too old, their merit did not reach the certain point so they did not have the chance," "they have children and sometimes feel ashamed before some who have been ordained," "they forget")	8
No Answer	63
Don't know, unascertainable	37

64

125
369
829

Question 42.b. Reasons for Agreement (multiple choice replies)

Amount of effort in earning a living
- Earn living more easily, lighter work, a farmer has to work too hard, life is hard here--easy there 58
- Can work indoors, needn't work in sun and rain 13
- Other (living is easy if you have money, don't have as many worries as farmers, can trade more easily) 3

Availability of jobs and money
- They have salaries so don't have to worry 11
- Earn more money, earn more money for pleasure, earn money more quickly, can make money in commerce 11
- They have money, they have properties 10
- Can find job more easily 10
- Good occupations 1

Convenience
- More comforts 10
- They can get everything they want, can get everything easily 7
- Can find food more easily, it's more plentiful, food is better 6
- They have communication, transportation, water and light 5
- Everything is convenient 4
- Other (more privacy, children have a better chance for education, many pleasures, better living, no troubles) 5

Other Reasons
- More civilized, they have "knowledge," they can write, they govern the country, Bangkok is progressive, wherever you live you are happy if you behave well 8

No Answer 8

Question 42.c. Reasons for Disagreement (Multiple choice replies)

Cost of Living (Cost of living too high, must spend too much money, everything more expensive, food is expensive there) 34

Availability of jobs and money (Easier to make living here, no way of earning money there, hard to find a job there) 23

Dangers of Bangkok life (Fires, traffic, wars, too much fighting there, cheating, robberies, bandits) 17

No security (Poor people starve there, occupation is not permanent, economically less secure) 14

Urban Atmosphere (It's too crowded, the weather is bad, the air is bad, It's too noisy, too many mosquitoes, no kindness) 14

Integration in Bang Chan, lack of it in Bangkok (Work is harder here--but you have peace of mind, people have no strength or unity there, plenty of friends and relatives here, can live in own house here) 12

Bang Chan is O.K. (There is plenty of food (vegetables) here, life is easier and more convenient here) 9

Specific qualifications needed (Don't have enough knowledge, education, or experience to be happy there, must be a skilled worker) 7

65

Question 42.c. (Cont'd)

Need for Money in Bangkok (Only happy there when have plenty of money)	6	125 •
Amount of effort in earning a living (Have to work every day there	4	369
Other reasons (Too many poor people there, many illnesses there, the life of the people there depends on the farmer, people from Bangkok always go to the country when anything bad happens, people can be happy both places, different people have different hearts)	12	829
No Answer	4	
Don't know	5	

Question 46.b. For what various activities did you contribute labor? 125

Earth work		653
Earth work at Wat	18	
Earth work at Mosque	7	
Earth work, unspecified (digging dirt, filling low places, digging Klong, loading and unloading earth and bricks)	53	
Cement Work		
Cement work at Wat (moved cement bags, laid concrete floor)	12	
Cement work, unspecified (building cement sidewalks, helped make concrete, poured concrete)	14	
Building and Repairs		
Building sala (pavilion, repairing pavilion)	51	
Building mosque (repairing Suree porch)	8	
Built priest house, construction work in wat, latrine in Wat, repair crematorium	18	
Building bridge	21	
Building roof	13	
Construction work, unspecified (carried posts, repair a building, carpentry)	7	
Services		
At Wat fair (helped cook and serve, helped manage, sweeping)	27	
At Suree fair (helped cook and serve)	3	
Services, unspecified (boiled water, cooked, carried water)	15	
Guilding the gold leaf, miscellaneous labor at footprint guilding festival)	7	
Priest's funeral (cooked, helped at cremation)	7	
Other (served at Kathin ceremony, solicited money for Wat)	3	

Question 46.d. For what various activities did you contribute money or goods? 125

		431
To the Wat, unspecified	19	
Contribution, unspecified	19	651
Construction activities		
To build pavilion (sala), to repair pavilion	57	
To make path, build street on Wat grounds	27	

66

125 Question 16.d. (Cont'd)

431 Construction activities (Cont'd)
651 To the Wat (to repair Wat, construction in Wat, fixing walls) 27
Contribution for building materials (buy cement, concrete floor, wood and tin, for new cement sidewalks, water tank) 21
To Surao (general fund, repair) 9
To build a bridge 8
To buy a generator 6
To build priest's house bathroom 5
To build preaching hall 3

[796] Ceremonials
[764] For ceremonies, unspecified 12
To guild the golden leaf 27
To cremation (to build crematorium; to cremate father, people without relatives; to build corpse go-down; priest's funeral) 12
To Wat fair 10
Other (to Katina, to revise the Buddhist sacred book, to ordain priest, for building Buddha figure, to New Year festival, for dancing girls) 11
To Surao fair 4

Food and related donations
Gave rice, unspecified 5
Gave rice (food) for Wat, priests 18
Gave rice for Wat fair 1
To buy utensils (including cooking utensils) for Wat 6
To buy utensils for Surao 6
Gave food to Surao 1

APPENDIX C

Cornell Methodology Project,
Bangkok
2 May 1955

Interviewer Guide

Bang Chan Survey 1955

I. INTRODUCTION

This survey is a multipurpose study. One of its objectives is to help determine HOW one can best use a technique such as a survey for community research in South East Asian villages. A survey is one of several techniques used in community research by Western social scientists. The study of a community permits to acquire knowledge about what is essential and important in the life of a village and town. Once a store of knowledge is available and described, the door is being opened for the introduction of innovations and improvements based on scientific knowledge and not based on hunches and speculative thinking. However, the instruments of social science research still bear great limitations. Life processes are the laboratory of research. Thus, dynamic processes are fluid which make research complex.

Another objective of this survey is to study the meaning in a given cultural setting of variations in question wordings, different types of answer categories, and various types of questions in terms of question structure.

Finally, an attempt is made as well to collect some data from a typical rice village in the hinterland of Bangkok for supplementing cultural anthropological hypotheses and findings.

This interviewer guide is to assist the interviewer in his task. Here anticipated difficulties and weaknesses in this survey are brought to light in order to make it easier for the interviewer to avoid traps inherent in field situations. First of all, it should be noted that replies to ALL QUESTIONS ARE REQUIRED. It means that a given number for each question or subquestion must be ENCIRCLED ON THE ANSWER SHEET OR THE RESPONDENT'S REPLY MUST BE RECEIPTED IN THE PLACE PROVIDED FOR. Unless strict adherence to this rule is obtained from each interviewer, questionnaires will contain omissions and become valueless. Such questionnaires would signify a loss of effort, a loss of time, and unnecessary exposure of respondents to interviews. Secondly, an interviewer who has any doubts about procedural points, should discuss them without any hesitation either with the field director, or with his deputy, Mr. Textor, or with Mr. Civ, who, all three, consider it their responsibility to clarify all possibly confusing matters and to give such training to each interviewer as to enable him to perform his task with ease.

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125 Each interviewer is actually given three instruments to work with: (1) The questionnaire according to which he asks the given questions VERBATIM AND IN THE ORDER INDICATED, (2) The answer sheet on which he registers IMMEDIATELY AFTER EACH QUESTION RESPONSE the obtained replies, and (3) the interviewer checkform which is filled out after the completion of the entire interview, as soon as practicable.

IV. DISCUSSION OF QUESTIONS

The questionnaire consists of 66 questions according to the devised numbering system. Actually, many of the questions are frequently made up to include one or more subquestions. EACH QUESTION REQUIRES AN ENTRY ON THE ANSWER SHEET. However, 26 questions contain subquestions which are conditional. These are to be asked only in the case that a given condition is fulfilled in the response to the main questions. The conditional subquestions carry the following numbers: 3c, 6b, 9 b and c, 10 b, 12 b, c, and d, 14 b, 16 b, 18 b, 19 b, 20 b and d, 26 b, 27 b, 29 b, d, f, and g. 33 b, 36 b and c, 37 b, 40 b, 41 b, 42 b and d, 47 b and d, 49 b, 56 b and c, 57 b, 62 b and c, 63 b,c, d, 64 b, c, d, e, f, and g, and 66 b.

Six questions should be addressed to FARM OPERATORS ONLY. These questions are: 9, 12, 16, 17, 18 and 41. ALL OTHER QUESTIONS SHOULD BE ASKED OF ALL Rs.

The questions are formulated in such a way as to provide certain answer categories. These are: yes-no, agree-disagree, right-wrong, calibrated) multiple choice and open-ended categories. The way to handle these answer categories has been discussed inglength.

At this point, attention is directed to the open-ended reply category, because it is more difficult to deal with. One procedure would be to write down verbatim a response obtained from the R. However, a R. might, at times make a speech and the interviewer would then not be in the position to register all that is said. He would not, furthermore, consider it necessary to register what had been said not connected with the question asked. Therefore, the interviewer would likely to be summing up the response. Such pertinent summaries are most important and frequently made. In this questionnaire, it had been attempted to anticipate the response categories to open-ended questions on the answer sheet to a great extent, as they are likely to fall in given patterns. In such cases, the likely answer categories are found on the answer sheet. On the other hand, open-ended questions remain to be filled in by the interviewer, when lines instead of categories are found on the answer sheet. Here, a verbatim notation of the R.'s pertinent points is essential. In case of doubt, each interviewer is encouraged to discuss such

• 125 124 items the same day with Mr. Textor or with Mr. Civ. As the space provided on the answer sight not be sufficient for this purpose, the back page of the interviewer checkform should be used and an asterik should be placed in the space provided for the reply on the answer sheet. It is expected that for these questions one to three line replies would be of normal length. Such replies, posted on the backpage of the interviewer checkform, can be written in Thai and sufficient space should be left between the various notations for an English translation to be fitted in.

Before an item by item discussion of the questions, just two more remarks about probing. Probing is chiefly used in two kinds of situations: (a) when a R. is slow in replying to a question, or seems not to have understood a given question, or when he might try to avoid a reply by stating that he does not know (D.K.) or "does not recall"; in such cases the question or relevant parts of it are repeated verbatim; and (b) when a R. gives an irrelevant answer and the interviewer is prompted to probe with the intention to stimulate a response to the point of the question; here, usually more probing will be necessary than under (a).

6 DO NOT PAY ANY ATTENTION TO THE "CLM." CODING NUMBER DESIGNATIONS which follow question numbers on the answer sheet.

Q. 2: Write in the precise age obtained on the line behind the corresponding age group. Below, you find a table of the zodiac years ranging from 24 to 73, which will provide you with a check and an adjustment of the frequently approximative age indicated by the R. For instance, assume that a R. says he is 50 years old, when you ask him: How old are you: You then ask him in what zodiac year he has been born. Assuming his reply is "khaan," you then read from below table "53 years" and this is the age which you register in the line behind " 50 to 59" age group.

[805] Table of zodiac years

rawee	24, 36, 48, 60, 72	chalum	30, 42, 54, 66, 78
woog	23, 35, 47, 59, 71	khaan	29, 41, 53, 65, 77
rukha	22, 34, 46, 58, 70	tho	28, 40, 52, 64, 76
coo	21, 33, 45, 57, 69	marocong	27, 39, 51, 63, 75
kun	20, 32, 44, 56, 68	maseng	26, 38, 50, 62, 74
chuad	31, 43, 44, 67, 79	samia	25, 37, 49, 61, 73

Q. 6: You ask the R.: Do you smoke and offer him simultaneously a cigarette.

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Qu. 7: Some reply to this question is desirable and probing might be at times required. In the case that one reply to the point is obtained, no further probing is necessary. If there is no answer or an answer not to the point, probe once by repeating the question and, if necessary, by adding: You probably can tell me something about the new things.

Qu. 8, 9c, 11, 12 b, 13, 15 c, and 16 b ARE AS WELL QUESTIONS where probing might occasionally be required. When we talk of fertilizer, we have exclusively artificial fertilizer in mind and not manure or compost.

Qu. 17 a, 17 b, 17 c, and 17 d are provided with lines behind the given answer categories on which the figures in roj or tang respectively should be registered in the corresponding place just as you handle this in Qu. 2.

Qu. 18 b: This is perhaps a difficult question for some Rs., as simple as it might look. Probing-eventually the use of a silence period for stimulating embarrassment and response-is recommended, when no fast reply is forthcoming.

Qu. 46 and 47: Pretests have indicated that the concepts of public welfare work and the distinction of what are contributions in connection with the Wat or religious activities and other contributions are not very clear in the minds of many Rs. Proceed according to the principle of sound logic for obtaining replies to Qu. 46 as distinguished from Qu. 47. In these questions some explaining might be exceptionally well justified.

Qu. 58: City limits of Bangkok are defined as follows: Present city limits at Km 11, Lard Prow.

Qu. 62 b and 64 c: Probe for each duty and job. You can consider this like a multiple choice question, as the same R. might refer to more than one duty or more than one job held.

Qu. 66 b: This last question is again an open-ended question of the projective type. It is expected that respondents will have no difficulties in expressing their wishful thoughts. You can probe freely, if need arises.

• 125

[Information on sampling techniques, methods of scoring, and the usage of control groups have been filed also in the category 128.]

*128 rapport with the villagers even at the expense of certain much needed information, only very informal interviews were made in the first few months during which time no attempt was made at any businesslike questioning. As a result, it was not until May, 1949 that the first of our Bangchan censuses was completed.

• 125 With scanty background materials, we had, nevertheless, decided to concentrate our effort on the farm operating group at the very beginning. The reason for this approach is simple: it was readily seen that this group was the core of the community.

Since we had only one year for the preliminary study, the pressure of time led us to conduct the farm survey even before the first census materials were available. Simple random sampling, therefore, could not be made, because the population was not yet known. By that time, however, we had already defined our geographical area of the village (page 53), and were thus in a position at least to adopt the block sampling method.

We decided to cover all farms on which operators lived on both sides of Bangchan Canal in the immediate neighborhood of Wat Bangchan. This included all farms operated by residents of hamlets BC4 and KY5, and a few farms operated by residents of KY6. It may be seen in the sketch map on page 162 that BC4, KY5, and KY6 form the nucleus of our natural Bangchan Village, the outer zone consisting of BC5, BC6, KY7 and KY8.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

125 These two selected blocks on each side of Bangchan Canal included some 80 homes of Bangchan operators, 25 in BC4, 37 in KY5, and 18 in KY6; and we actually covered 76 farm operators living in these two blocks, or 95 per cent of the total.

A technical problem then arose: should we or should we not limit our sample of these 76 farms?

There appeared to be two advantages of limiting our sample to 76 farms: (1) by so doing we had almost a 100-per-cent sample of farms operated by Gangchan residents who lived in the immediate neighborhood of Wat Bangchan; and (2) since these 76 farm operators were most accessible to us (our field office was on the BC4 bank of Bangchan Canal opposite the temple), much time could be saved in contacting the operators.

The disadvantage of limiting the sample to these 76 farms was that we would not have any representation from operators living in the outer zone of our natural village. This was a serious disadvantage when the primary purpose of our study was one of problem locating rather than one of mere description. To partially solve this problem, we decided to include in our sample also farms operated by residents of the other hamlets, namely, BC5, BC6, KY7, and KY8. Since time and other considerations did not permit an equally large proportion, quotas were allotted for these four hamlets.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 29

REPRESENTATION OF 104 SELECTED FARMS IN THE TOTAL FARM POPULATION, BY HAMLET
Bangchan, Thailand, 1948

• 125
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Hamlet	Number of Selected Farms	Village Total	Per Cent
BC4	25	25	100
BC5	7	25	28
BC6	7	38	18
KY5	35	37	95
KY6	16	25	64
KY7	9	37	24
KY8	5	42	12
Total	104	229	45

125 It is seen in Table 29 that seven farms were selected from BC5, seven from BC6, nine from KY7, and five from KY8. At the beginning a quota of seven farms was arbitrarily chosen. The reason for the choice of seven farms was that one might make seven short visits to farm operators in the outer zone in just one trip. This is an important consideration in our type of survey work where constant visits for additional information and checking were necessary. In actual practice, the number of selected farms in KY8 was reduced to five because this hamlet was farthest from our field office, and the number for KY7 was increased to nine to include all farms operated by KY7 residents who lived on the eastern side of the Minburi Road which were naturally easiest for us to reach.

Thus, the sampling technique adopted in choosing 104 farms was a combination of block sampling and quota sampling methods, both being under a more inclusive category of judgment sampling as distinct from random sampling.

Effect of Time Element on the Size of the Sample

After the 104 farm operators living in the seven hamlets were chosen for our sample, records of their business and living aspects were made to cover continuously the period from 1948 through 1953. With the progress of time, it is natural that the size of the sample has tended to decline, since some of these farm operators have died, moved out of the village, or changed their occupation from farm operating to others.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

• 125

Table 30 shows that the size of the sample has continuously decreased from 104 in 1948 to 103 in 1949, 98 in 1950, 96 in 1951, 96 in 1952, and finally 87 in 1953.[1] It should be noted, however, that we re-visited the village in 1952 and that most of our materials on business and living aspects of the farms were gathered from the sample-farms existing in that year; hence we occasionally referred to the sample of 96 continuing farms.

One way of minimizing the problem of declining size of the sample is to include in the sample new farm operating families which have branched out from the original sample-families. It was found that there were ten such families when we re-visited the village to continue the study in 1952. If this method were adopted, it would mean that the size of our sample would then be 106 farms, a figure which does not differ very much from the original size of 104 farms in 1948.

Another way of solving the problem is to abolish the continuing operator approach entirely in favor of the re-sampling approach -- that is, a fixed sample size is chosen and new sampling is done every time a new survey is to be conducted. This approach, however, has the drawback that

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[243] [178] [433] [463] [182]

1. According to Table 14, crop indices were as low as 86.8 for 1949, and 87.5 for 1952; while those for 1948, 1950 and 1951 were 111.4, 111.1 and 102.7 respectively. It is worth noting that a relatively large number of farm operators changed their occupation (or moved out of the village) in 1950 and 1953. When Table 14 is studied together with Table 30, it is seen that there is a close correlation between change in occupation (or change of farming place) and crop failure in the preceding year.

[TEXT CONTINUED ON PAGE 180]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 30

CHANGES IN OCCUPATION OF 104 SELECTED OPERATORS*
Bangchan, Thailand, 1948-53

• 125
178
463
621
166

Occupation	1948	1949	1950	1951	1952	1953
Farm operator	104	103	98	96	96	87
Farm laborer	-	-	-	-	1	3
Trader	-	-	-	-	-	2
Investor	-	1	1	1	1	3
Professional	-	-	-	-	-	-
Public servant	-	-	-	-	-	-
Home enterpriser	-	-	-	-	-	-
Priest or novice	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	1
Disappeared	-	-	5	7	6	8
Total	104	104	104	104	104	104

* Explanation for those changing occupation:

1949 A became an investor.

1950 B moved out to unknown locality.
C moved out to Lam Kralog.
D moved out to Sai Kong Din.
E moved out to Bang Plee.
F moved out to Bang Plee.

1951 G died, and family moved out to unknown locality.
H moved to Bangkok.

1952 H moved back from Bangkok into the village, became farm laborer.

1953 I moved to Lard Krabang.
J stopped farming, became an investor.
K stopped farming, became an investor.
L stopped farming, became a trader.
M stopped farming, became a farm laborer.
N stopped farming, became a farm laborer.
O's occupation became obscure (under miscellaneous).
P stopped farming, became a trader.
Q's family lost its identity, was annexed by a farm operating family not in the sample.

125 it would deny any benefit that would arise out of continuous observation of each farm and farm operator through a series of years. With a view to retaining this benefit of continuity, we decided to adopt the first method -- that,is, we included in the sample the ten new families branching out from the original sample-families. Thus, in our subsequent study in 1952 the size of our sample became 106 farm operating families.

There were, however, some types of data which involved records in the past four or five years, such as harvested crop during 1948-52, accumulation of wealth, major receipts and expenses during the same period. In these cases we naturally used the continuing sample of 96 families.

*243 Composition of Farm Operating Families

162 Table 31 shows that the size of the farm operating
592 family decreased from 6.3 in 1948 to 5.7 in 1952. It also shows that, while the number of adults remained more or less constant, the decrease in the size of the family was due almost entirely to the decrease in the number of the young from 2.5 in 1948 to 2.0 in 1952.

*243 A possible explanation for this lies in the economic
162 consequence of the war. Strict government control of the
592 price of rice and of the internal movement of paddy during
182 the war and also in the immediate postwar period has so
178 adversely affected the economic condition of rice farmers
[582] that marriage has often been postponed. In cases where

[TEXT CONTINUED ON PAGE 182]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

APPENDIX B

SCHEDULES USED IN THIS STUDY

• 125 I. Schedule 2.

RICE PRODUCTION COSTS AND INCOME, B.E. 1948, BY HOUSEHOLDS

10. GENERAL

101. Ku Ban House No. 102. Name

103. Date 104. Informants

OUTGO

RAI WORKED

11. By separate parcels:

111. Size 112. Rai

113. Location 114. Distance from home

115. Direction

12. By rice variety:

121. Variety 122. Rai

123. Parcel No. 124. Expected harvest date

13. Rai owned:

131. Owned free 132. Mortgaged and terms

14. Rai owned, not worked, not rented out:

141. Rai 142. Description

143. Location 144. Disposition

125 15. Rai used not producing rice:

151. Rai for house — 152. Rai for garden

153. Other — 154. Note tenure if not owned

16. Rai rented in:

161. Rai — 162. Parcel No. (111)

163. From — 164. Rate

MATERIALS CONSUMED

20. Seed:

201. Variety No. (121) — 202. Amount

203. Source — 204. Price or value

21. Fertilizer:

211. Kind — 212. Amount

213. Source — 214. Price of value

22. Other (oil, salt; etc.):

221. Kind — 222. Amount

223. Source — 224. Price of value

LABOR UTILIZED

30. Family workers:

301. Name (sex, age) — 302. Relationship

31. Workers hired by year:

311. Name, sex, age — 312. Origin

313. Agreement

32. Piece work:

Process	workers, origins	Quantity	Rate	Total cost
321. Preparation	3211	3212	3213	3214
322. Uprooting	3221	3222	3223	3224
323. Transplanting	3231	3232	3233	3234

• 125

324. Harvesting	3241	3242	3243	3244
325. Other	3251	3252	3253	3254

CAPITAL GOODS USED:

40. Buffalo owned:

401. Workable — 402. Young

4011. Names — 4012. Value

4013. Life — 4014. Residual value (meat, hide, other)

41. Buffalo rented in:

411. No. — 412. Value

413. Owner — 414. Dates

415. Rate

42. Buffalo costs:

421. Food — 422. Labor

423. Medicine (for what) — 424. Other

43. Buffalo outfit-yoke:

431. No. — 432. Life

433. Cost, each

44. Buffalo outfit-yoke rope:

441. Material — 442. Meters per year

443. Cost

45. Buffalo outfit-other rope:

451. Lead rope material — 452. Meters per year

453. Cost — 455. Nose rope material

456. Meters per year — 457. Cost

46. Harrows:

461. No. — 462. Material

463. Life — 464. Cost, each

• 125 47. Plows:

471. No. 472. Types

473. Cost, each

Parts	Material	Life	Cost
474. Share	4781	4782	4783
475. mold board			
476. Handle			
477. Hitch			

48. Sickles:

481. No. 482. Life

483. Cost 484. Times whetted

485. Cost

49. Weeding knife:

491. No. 492. Life

493. Cost

50. Hoes:

501. No. 502. Life

503. Cost

51. Shovel:

511. No. 512. Life

513. Cost

52. Winnowing Machine:

521. No. 522. Life

523. Cost 524. Upkeep

53. Other tools: (water wheel: threshing pole: rake: etc.)

531. Kind 532. No.

533. Life 534. Cost

• 125 54. Boats:

541. Type — 542. No.

543. Life — 544. Cost

545. Upkeep — 546. Residual value

55. Windmills:

551. No. — 552. Cost

553. Upkeep

Parts — Size

554. Arm — 5541 — 555. Post

556. Pulley, shaft — 557. Rope (Chain)

558. Life — 559. Cost

56. Noria:

561. Kind — 562. No.

563. Life — 564. Cost

565. Upkeep

57. Engine:

571. Type — 572. Life

573. Cost — 574. Upkeep

575. Fuel Type — 576. Amount

577. Cost

58. Watch house:

581. Material — 582. Life

583. Cost

60. Other water, irrigation costs:

70. Building Material:

701. Use — 702. Kind, amount

703. Source — 704. Cost

705. Life — 706. Repair

125 71. Taxes:

711. Kind
712. When due
713. Cost

72. Other costs:

INCOME

80. Rai rented out:

801. Rai
802. Description
803. Location
804. To
805. Rate
806. Cost

81. Buffalo rented out:

811. No.
812. Value
813. Life
814. To
815. Period
816. Rate

82. Equipment rented out:

821. Kind
822. No., amount
823. To
824. Period
825. Rate

83. Rice sold:

831. Variety
832. Amount
833. Harvest date
834. Sale date
835. To
836. Price
837. Straw sold

84. Rice kept:

841. Variety
842. Amount
843. Harvest date
844. Value

85. Family rice work wages:

851. Name
852. Employer
853. Work, dates
854. Rate

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

125 856. Net wage

86. Other income:

II. Schedule 2a (Simplified form of Schedule 2)

1. Name
2. Date
3. Rais worked
4. Rais rented in
5. Rais rented out
6. Rais owned
7. Home lot
8. Seed and planting method
9. Family labor used
10. Hired labor used
11. Piece work
12. Buffaloes used
13. Buffaloes owned
14. Buffaloes rented in
15. Buffaloes rented out
16. Ropes; yoke (number, life)
17. Ropes neck
18. Ropes nose
19. Ropes lead
20. Plows
21. Harrow
22. Sickles
23. Knife
24. Hoe
25. Shovel
26. Box bin
27. Mat bin
28. Basket
29. Chinese broom
30. Coconut broom
31. Pitchfork
32. Kata
33. Rake
34. Wood shovel
35. Boat
36. Sampan
37. Chala
38. Nard
39. Windmill
40. Rahad (Noria)
41. Winnowing machine
42. Building
43. Engine

125 III. Schedule 11

ACREAGE AND CROP BY YEAR

Name of operator..... Date.....

Year	Area devoted to rice	Harvested crop
1949	..... rai	.....tang
1950	..... rai	.....tang
1951	..... rai	.....tang
1952	..... rai	.....tang

IV. Schedule 12

SPECIAL RECEIPTS AND EXPENSES DURING 1948-52

1948

Kind and amount of special receipts.....
.....
.....
Kind and amount of special expenses.....
.....
.....

1949

Kind and amount of special receipts.....
.....
.....
Kind and amount of special expenses.....
.....
.....

1950

Kind and amount of special receipts.....
.....
.....
Kind and amount of special expenses.....
.....
.....

1951

Kind and amount of special receipts.....
.....
.....
Kind and amount of special expenses.....
.....
.....

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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1952

125 Kind and amount of special receipts.....
.....
.....

V. Schedule 13

ORDINARY HOUSEHOLD EXPENSES, MARCH 1952 - FEBRUARY 1953

Name of operator.....Date.....

Kind and amount of goods consumed:

Paddy.....tang
Coconut.....fruit
Palm sugar.....can (of twenty litres)
White sugar.....kilograms
Shrimp paste..... "
Onion..... "
Garlic..... "
Dried chili..... "
Salt..... "
Curry essence..... "
Limes.....baht
Tamarind.....kilograms
Fish..... " ; bought.....kilograms
Vegetables..... " (per day)
Fish sauce.....bottles
Fermented fish.....barrels; home made.....barrels
Meat.....baht
Dried areca..... "
Betel leaves..... "
Lime.....kilograms
Native tobacco.....bundles
Tobacco binder.....bundles
Matches.....boxes
Soaps.....soaps
Eggs.....eggs; sold.....eggs
Medicine.....baht
Temple contribution.....baht
Contribution to neighbors...baht
Personal expenses.....baht
Clothing.....baht
Children's allowances.....baht
Kerosine: for light.....can; for fishing.....can; for irrigation.....can.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

• 125 VI. Schedule 14

FARM AND HOUSEHOLD INVENTORY

Name of operator.....Date.....

Item	Quantity	Present or replacement value
Land		
Building		
Buffaloes		
Farm implement		
Plow		
Harrow		
Roller		
Sickle		
Weeding knife		
Hoe		
Shovel		
Windmill		
Noria		
Gas engine		
Pitchfork		
Kata		
Rake		
Chinese broom		
Coconut broom		
Basket		
Mat bin		
Box bin		
Winnowing machine		
Wooden spatula		
Others		
Boats		
Sampan		
Nard		
Chala		
Others		
Fishing equipment		
Net		
Trap		
Spear		
Hook		
Pressure lamp		
Others		

• 125 Item	Quantity	Present or replacement value
Poultry and other livestock		
Chicken		
Duck		
Others		
Kitchen utensils (enumerate)		
Bedding (enumerate)		
Storage (enumerate)		
Furniture (enumerate)		
Miscellaneous (enumerate)		

125 VII. Schedule 15

BRIEF HISTORY OF FARM OPERATOR

Name of operator.....Date.....

Name of spouse.....

Other members in the family

Name.....Relation.....
Name.....Relation.....
Name.....Relation.....
Name.....Relation.....
Name.....Relation.....
Name.....Relation.....
Name.....Relation.....
Name.....Relation.....

Date of first marriage.....
Date of starting an independent family.....
If not branching off from old family, date of assumption of familyheadship.....

List kind, quantity, and value of parental gifts when branching off:

Item	Quantity	Value
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

List kind, quantity, and value of wealth accumulated during nascent period:

Item	Quantity	Value
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Describe past incidents of significance which had occurred to you:

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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125 VIII. Schedule 16

BRIEF HISTORY OF FARM LABORER

Name of laborer..... Date.....
Age.....Education..... Date ordained.....
Date conscripted..... Date married.....
Name of father.....of mother.....of spouse.....
Names of children..... ....
....

Work record during past five years:

Year	Employer	Wage
1953	.....	.....
1952	.....	.....
1951	.....	.....
1950	.....	.....
1949	.....	.....

Information on condition of parents:

.....
.....
.....
.....

Information on the condition of the laborer:

.....
.....
.....
.....

125 IX. Schedule 17

CHECK LIST OF ECONOMIC CONDITION OF OPERATOR

Name of operator..... Date.....

Rai worked.....Rai owned.....Rai rented in.....
Rai rented out..... (all in 1952 rice year only)

Rental rates in 1952: Rate paid.....Rate received.....

Paddy stock on hand at the end of March, 1953.....tang

Outstanding debts in December, 1952 (before settlement by money received from the 1952 crop):
Long term loans: Amount.....baht Rate of interest.....
Amount.....baht Rate of interest.....
Amount.....baht Rate of interest.....

Credit purchase account: Total.....baht Principal,,....

Has credit purchase account of 1951 been fully paid at the harvesting season of that year? (Check) Yes.... No....

Amount of credit purchase account that was carried over from last year.....baht. Of this how much was the principal, or the amount agreed upon at the harvesting season of last year?.....baht.

The operator's comment on general debt situation:

.....
.....
.....
.....
.....

The operator's comment on debt situation of the people he knows:

.....
.....
.....
.....
.....

• 125 X. Schedule 18.

DAILY WORK RECORD OF CHOM FARM STAFFS

Date_____

Hour	Kind of Farm Work				
	Worker A	Worker B	Worker C	Worker D	Worker..
0:00- 0:30					
0:30- 1:00					
1:00- 1:30					
1:30- 2:00					
2:00- 2:30					
2:30- 3:00					
3:00- 3:30					
3:30- 4:00					
4:00- 4:30					
4:30- 5:00					
5:00- 5:30					
5:30- 6:00					
6:00- 6:30					
6:30- 7:00					
7:00- 7:30					
7:30- 8:00					
8:00- 8:30					
8:30- 9:00					
9:00- 9:30					
9:30-10:00					
10:00-10:30					
10:30-11:00					
11:00-11:30					
11:30-12:00					

• 125

Hour	Kind of Farm Work				
	Worker A	Worker B	Worker C	Worker D	Worker..
12:00-12:30					
12:30-13:00					
13:00-13:30					
13:30-14:00					
14:00-14:30					
14:30-15:00					
15:00-15:30					
15:30-16:00					
16:00-16:30					
16:30-17:00					
17:00-17:30					
17:30-18:00					
18:00-18:30					
18:30-19:00					
19:00-19:30					
19:30-20:00					
20:00-20:30					
20:30-21:00					
21:00-21:30					
21:30-22:00					
22:00-22:30					
22:30-23:00					
23:00-23:30					
23:30-24:00					

interest of improved maternal and child health, a few suggestions are made.

Purpose and Method

The purpose of this study is to set down the ethnographic data concerning childbirth in Bang Chan, following out the economic, social, religious, and cosmological aspects as needed to clarify the behavior and the psychological attitudes noted. The hope is that not only anthropologists but persons working in programs of maternal and child health will find the data useful.

The data were gathered from Buddhists and Muslims in Bang Chan by interviews and direct observation. Because Dr. Hazel Hauck, in the course of nutritional studies also made inquiries "from the standpoint of anthropological study rather than because of an assumed relation to nutrition or health" (1959:3) she first opened up the broad outlines of the subject. The author, with Dr. Saovanee as an interpreter of unusual competence, and Dr. Saovanee herself then pursued the subject further, including interviews at the Mīnburī Health Center and at Cha Choeng Sao.

A few comparative references such as to McFarland's dictionary and Phya Anuman's researches are given, but the focus is always [illegible] on Bang Chan. Though many of the findings will have a certain pertinence in Bangkok, the fact that Kaufman found striking differences in Bang Khūat only 8 kilometers away shows how cautious generalizations must be.

The transliterations of Thai words are only approximations, based on the system promulgated by the Royal Institute of Thailand; the tones have been omitted. With the translation always adjacent and a glossary provided at the end of the volume, the author feels there should be little confusion. Proper names which are generally known in a different transcription are left in their familiar form. In referring to works by Thai authors western custom is followed but in referring directly to the authors themselves Thai custom is followed, as it should be in direct address.

105 262 Sweets and fruit were the items most commonly eaten. Fruits were seldom eaten except as snacks.

271 105 The customary beverage with meals was untreated water. Rain water was preferred for drinking, but for 3 or 4 months of the year, water from the canal or fish pond was used.

105 262 Attitudes toward food, and foods considered appropriate for the very young, the old, for the pregnant or nursing woman and for use during illness, are briefly discussed.

105 126 146 Quantitative food intake for 11 families was recorded on a total of 44 survey days distributed throughout the year. Two groups of families, in which individuals were matched so far as possible as to age and sex, were selected on the basis of apparent difference in nutriture. The sample was not stratified with respect to economic conditions, but those in Group B, chosen for apparently better nutriture proved to be, in general, more prosperous than those in Group A, chosen because of signs of poor nutrition.

105 146 Food values were calculated on the basis of published analyses. Conservative nutrient allowances were estimated for residents of Bang Chan. On the average, calories, protein, iron, niacin and ascorbic acid in the diets of persons in Group B approximated or exceeded these allowances. For Group A, this was true for niacin and ascorbic acid only. Average intakes of riboflavin were estimated to be about 1/3 or less of the allowances, and estimates of calcium intake were about 20% of the allowance for Group A and 30% of that for Group B. Vitamin A values of diets for both groups appeared to be low, and thiamine intakes marginal or low. The signs observed among persons in these families were generally those associated with low intakes of thiamine, riboflavin and vitamin A.

Rice contributed about 4/5 of the calories and over half the protein in diets of both groups. Animal foods, chiefly fish, furnished about 2/5 of the protein. Intake of fats and sugar was small. Snacks of fruit contributed about 1/6 of the total ascorbic acid for Group A, and about 1/9 for Group B.

Seasonal variations in food preparation, meal patterns, food costs and caloric and nutrient values of foods eaten are discussed. Higher caloric intake during heavy work seasons was largely accounted for by larger amounts of rice eaten. The highest intake of protein for both groups occurred in the post-harvest season, when fish ponds were drained.

Questions for further study are proposed, and possible approaches to improving food habits and nutritional status in Bang Chan are suggested.

INTRODUCTION

121 This study of food habits and nutrient intakes in a Siamese rice village was undertaken in connection with the Cornell Thailand Project. The project is one of several under the auspices of the Department of Sociology and Anthropology, which are focused on the process of cultural change
114 in non-industrialized societies. Dietary studies designed to contribute to a base-line description of the community were carried out from September, 1952 through May, 1954. Local headquarters, where members of the research group kept equipment, and could stay overnight, were maintained in the village.

128 The observations to be reported fall into two general categories: 1) descriptive information concerning many aspects of the food situation in Bang Chan and 2) quantitative information on food intake, and its estimated nutrient
126 value, for 11 selected families. Qualitative information on food in Bang Chan was obtained from several sources: 1) field notes made by various members of the Cornell research group, 2) structured interviews with mothers about their own food, and that of small children in the family, 3) records of food eaten during 24-hour periods, submitted by children in the third and fourth grades of the elementary school as homework for the health class, and 4) weighed dietary studies carried
114 out in 11 selected households. Quantitative information on food intakes was obtained from the latter source only. Most of the data to be presented were obtained between September 1952 and June 1954, but supplementary information was obtained from a diary for 1955, kept by a school teacher at the request of the research group, a study of innovations made by Ralis in May 1955 (Goldsen and Ralis, 1957) and information provided at our request by members of the Cornell research group who were in Thailand in the summer of 1957.

A general account of the economic, political and social organization of Bang Chan in 1948-49, together with some material on health and diet was given in the first interim report issued on the Thailand Project (Sharp et al., 1953). The second interim report concerned aspects of health, sanitation and nutritional status in Bang Chan in 1952-54 (Hauck, 1956), and the third was a report on factors related to acceptance of innovations (Goldsen and Ralis, 1957).

THE COMMUNITY

Location, Climate, Transportation

131 Bang Chan is situated in the rice-producing area of central Thailand, about twenty miles by road northeast of Bangkok.

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

---

1. In some large houses, two related family groups lived together but maintained separate kitchens.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

273 in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

433 434 443 Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary [462] study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

121 In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

221 227 125 [125] From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953, and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 29 ... Analyst]

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Chart 2. Annual Calendar of Fresh Foods Commonly Used in Bang Chan[1]

	No. Records[1]	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Fish													
Climbing perch	114	x[3]	x	x		x	x	x	x	x	x		
Eels	27	x	x	x		x	x	x		x	x		
Field crab (salted before use)	16	x					x	x		x			
Oysters	22		x	x			x			x			
Notopterus notopterus	10	x						x	x		x		
Serpent head	99	x	x	x		x	x	x	x	x	x		
Silurus	66	x	x	x		x	x	x	x	x	x		
(1)plaa (1)thuu	163	x	x	x		x	x	x	x	x			
Other Animal Foods													
Beef	30	x				x	x	x	x	x	x		
Chicken	72	x	x	x		x	x	x		x			
Eggs	142	x	x	x	x	x	x	x	x	x	x	x	x
Frogs	18	x	x	x				x		x			
Pork	51	x	x	x		x	x	x	x	x	x		

1. Based on 539 records obtained from school children, and observations in 11 households on 44 survey days. Figures in the column headed No. Records indicate the number of 1-day records on which the item appeared.

2. No records were obtained from school children during March, April or August, hence absence of the item from these columns means simply that the 4 households visited in each of these months did not use the item.

3. x indicates that the item appeared frequently on records obtained in this month. Note that frequency of use may be influenced by farm work and circumstances other than relative availability.

listed on 10 or more of the 24-hour dietary records obtained. For items which were major ingredients, the number of records on which the item appeared, is given.[1] Thus (1)plaa (1)thuu, which is bought by residents of Bang Chan during the busy work seasons, was used more often than any other single variety of fish named. Of the varieties caught locally, climbing perch, serpenthead, and silurus were most commonly used. Fermented fish, not included in the calendar, appeared on 53 records, and fish with kind not specified, on 180. Eggs were used more often than any animal food other than fish. Among green vegetables, swamp cabbage and (2)phag (2)ka-(2)cheed were commonly used. Bamboo shoots and lotus stalks were prominent among the non-leafy vegetables. Bananas which are grown in every garden and are available all year round were much the most common fruit, although other seasonal fruits were eaten more often in 6 of the 9 months in which school children submitted records.

Some idea may be obtained of peak seasons for use of various common foods by noting the months designed by x. Thus in January and May, serpentheads were listed on about 1/3 of the records, and were frequently served at more than one meal. Sweet potato, usually fried and eaten as a snack, was listed on 35 of 52 records obtained from school children in September. Flowers of the West India pea tree were listed on 10 of 55 records in October, and 12 of 88 in November, with occasional mention on records obtained in 4 other months.

Fruits were eaten much less often than one might expect in a tropical area where many varieties are available and fruit can be grown the year round. They were most often eaten by children as snacks, although pineapple and papaya were usually, and banana occasionally cooked in "with-rice" dishes such as curry. In September, fruit was included in the diets of less than 1/3 of the children. An average of more than one serving of fruit per child per day was recorded in 5 months only, May, June, October, November and February. In May, when (4)ma-(1)faj or rambai was in season 46 of 76 children reported having eaten it. Pineapple, listed by 35 of 61 children in June, was most often served in curry at one or more of the family meals. In October, oranges were eaten by 30 of 55 children who submitted records. Bananas (mostly of the (4)nam-(4)waa variety) topped the list in November and February.

Items mentioned on fewer than 10 records, and hence arbitrarily omitted from the chart, are worth noting as they

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1. No figures are given for sweet basil, garlic, onions, chili or limes, which were so often used in small amounts as seasoning that the count obtained would give no clear idea of the extent of their use. Some common spice plants were not mentioned on the records.

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

The observer often had
126 opportunity to make notes on foods eaten by various family
262 members. Two examples of these are included in Appendix A,
p. 97.

Snacks

262 We have noted that various family members ate the morn-
264 ing meal, in particular, at different times, and that children
555 especially might eat leftover food between meals. Most Bang
Chan school children[1] ate snacks, which were usually different
from foods eaten at a regular meal. Doubtless most of them
were purchased from one of the venders who were to be seen on
the school grounds daily. Fruits and "desserts" were most
commonly eaten, although a variety of other foods, not a part
of the usual Thai meal, were also listed. Sweets were listed
about 450 times on the 539 records obtained. Many of them had
a base of rice, rice flour or glutinous rice with sugar, and
included coconut, banana or other fruit. Some were made with
legumes, and a few contained egg. Fried bananas, fried sweet
potato slices, bananas or beans cooked in syrup, and bananas
cooked in sweetened coconut milk were also listed. A few
items such as ices, flavored syrup poured over shaved ice, and
candies, had little nutrient value other than caloric content.

272 A glass of milk, and milk with coffee, were each listed
once. These might have been obtained at the store adjoining
the school grounds. These instances are worth noting primar-
ily because, although dried and tinned milks were obtainable,
milk was seldom given to village children after weaning.

262 Many children were given a bit of cash each day, and
437 Janlekha (1955) commented that some children who did not have
855 any might barter an egg for snacks. One could tell fairly
well from the children's records what the venders offered for
sale on a given day. Some influence of season was apparent;
thus ices and syrup over shaved ice were eaten more often dur-
ing the hot dry season, and cooked foods such as fried Chinese
noodles appeared primarily in the cool season.

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1. With the cooperation of teachers of the third and
fourth grades in the Bang Chan elementary school, records of
food eaten during 24-hour periods were obtained from children
in these grades at intervals of about one month during the
school year. This was a regular activity in the health class.
A total of 539 records (from 1 to 8 for each child) were ob-
tained from 75 boys and 72 girls. To facilitate recording,
each child was given a sheet of paper, with spaces for his
name, the date, and kinds of food other than rice, eaten at
the morning, noon and evening meals, and as snacks. These
records were collected primarily for information on meal pat-
terns of village families for comparison with the limited
sample in the dietary survey, and on seasonal use of various
foods.

262 Some snacks, i.e. seasonal fruits, may have been picked from the home garden, and items such as lotus seeds were probably gathered wherever the children found them.

Comments on Foods Eaten by School Children

• 126 264 855 In addition to the high percentage of school children who ate snacks, a conspicuous observation was that many ate no regular lunch (Table 3). We did not ask the children to record when they ate snacks, but only what they ate. The number of snacks recorded by individual children did not, however, appear to be related to whether or not they had eaten lunch. For example, among the 76 children who provided 24-hour food records during May, 1953, the average number of snacks recorded by the 39 children who ate a regular lunch and the 37 who did not, was about the same, i.e. a little over three per child.

Table 3. Number and Percentage of Children Who Ate Snacks, and Who Missed Lunch, Arranged by Months in Which Records Were Obtained

Month[1]	No. of Records	Children who ate snacks		Children who missed lunch	
		No.	Percentage	No.	Percentage
May 1953	76	73	96	37	49
June 1954	61	56	92	32	53
July 1953	79	77	98	53	67
Sept. 1953	52	49	94	36	69
Oct. 1953	55	50	91	22	40
Nov. 1953	88	81	92	57	65
Dec. 1952	18	14	78	10	56
Jan. 1954	69	64	93	41	59
Feb. 1953	41	39	95	33	81
Total	539	503	93%	321	60%

1. Note that although the figures are arranged by month, the records were obtained over a period extending from December 1952 through June 1954.

264 855 [262] Most of the children who ate lunch regularly brought rice and some of the "with-rice" dishes prepared for a family meal in a lunch pail. Menus for breakfast and noon meals were often identical. Children who lived at a distance may have found it harder to carry lunch, especially when they had to walk to school, but the month by month record of the percentage of children who missed lunch (Table 3) does not indicate any clear seasonal trend. Even children who lived nearby might neither bring lunch nor return home during the noon recess. We were at the home of a school teacher, a short distance on foot from the school, when his two children returned in the afternoon. The mother said that they usually waited until after school to eat, but were having no snack on that day because for the first time, they had carried lunch to school.

• 126 262 Thorangkul (1957) scanned all of the dietary records to note the frequency with which the following food groups occurred: protein-rich food, carbohydrate-rich food other than plain boiled rice, vegetables and fruits. She considered the records of each child as a unit; thus if a boy for whom 5 daily records were available, had recorded protein-rich food such as fish, eggs, or beans 16 times, he was regarded as having more than 3 "servings"[1] of such food per day. The frequency with which various food items occurred in the daily diets of these children is shown in Table 4.

Considering the day's record as a whole, some protein-rich food, usually fish, was included in the records of 97% of the children. Such protein-rich food appeared two or more times per day in the records of over 80% of the boys and about 90% of the girls. In contrast, no fruit was mentioned in the records of about 10% of the children, although fruit was one of the commonest snacks. Vegetables were not mentioned in the records of 10% of the boys and 3% of the girls. Only about one-fourth of the vegetables recorded were green or yellow.

For 75 children for whom we had 4 or more records, Thorangkul (1957), to obtain a rough estimate of the adequacy of the children's diets, grouped the records into three categories, based on the number of times protein-rich foods, vegetables and fruits appeared. On the average, children whose diets were placed in Class I had at least 3 "servings" of protein-rich food, 3 "servings" of vegetables and 2 of fruits. Diets in Class II included some from each of the food groups each day, but the items were recorded less frequently than in diets in Class I. Diets in Class III did not include foods from each of the food groups emphasized, each day. On this

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[104] 1. The term serving is used here to designate each time an item appeared in the daily food record. Thai do not have "servings" as the term is used in Western countries.

Table 4. Frequency of Occurrence of Various Food Groups in the Daily Diet of 147 School Children in Bang Chan

(Adapted from Thorangkul, 1957)

Number of servings[1]	Protein-rich food	Carbohydrate-rich food[2]	Vegetables	Fruit
	Percentage, based on records of 75 boys[3]			
3 or more	47	8	28	8
2 to 2.9	36	15	23	18
1 to 1.9	13	40	30	37
0.1 to 0.9	3	37	9	26
None	1	-	10	11
	Percentage, based on records of 72 girls[3]			
3 or more	68	13	21	10
2 to 2.9	21	17	38	27
1 to 1.9	4	22	34	38
0.1 to 0.9	3	48	4	15
None	4	-	3	10

1. The term serving is used here to designate each time an item appeared in the daily food record.

2. Other than plain boiled rice, which is an essential part of every Thai meal.

3. Average frequency of occurrence was computed, considering the records of each child as a unit.

basis, nearly a third of the children who provided diet records had diets which were classed as III (Table 5). Almost all of the girls and about 4/5 of the boys in this group missed lunch. Indeed the common habit of eating just two main meals, with snacks, was probably one important determinant of the number of servings of protein-rich foods and

Table 5. Diet Classifications for 75 School Children in Bang Chan, and Percentage of Children with Each Diet Classification who Missed Lunch

(Adapted from Thorangkul, 1957)

Diet classification[1]	Percentage of children	Percentage of children who missed lunch	
Class I	8	Boys	46
		Girls	45
Class II	61	Boys	73
		Girls	68
Class III	31	Boys	81
		Girls	98

1. See text for basis of classification.

vegetables eaten, since items from these two food groups were not commonly eaten as snacks. Note, in the illustrative records presented in translation (Appendix A, p. 98), that the child whose diet was considered to be in Class III did not eat a regular lunch on any of the six days for which records were available, whereas the child whose diet was classified as I ate a regular lunch six times out of seven.

Family Food Shared With Others

Throughout the year families prepared especially good meals for persons who came to work cooperatively with them. Every rice-grower entertained his cooperative harvest crew, some the transplanters. Hired laborers were not usually served such feasts, but the conviviality of the harvest season called for a round of liquor even for them. One harvest dinner for 8 cost 50 baht, plus eels (60 baht) and rice. Cooperative home pounding of rice was still practiced in some households and thought to be fun. In one day enough rice to produce 40 tang (640 kg.) was pounded by groups of 15 to 20 workers; in an evening 20 tang were done. If 40 tang were milled, workers were served a full meal; if 20 tang, a dessert only. Other occasions were fish-pond draining, house raising and repair. Each participant in the fish-pond draining at Household 21 was fed (3)khaaw (3)tom (soupy rice) for lunch and "an enormous supper," in addition to receiving the traditional pot of fish. If good food were not served at these functions people

understood that her merit helped her not to be hungry. Once she asked an eminent layman about eating at night. He said, "If you are not hungry, do not eat. If you feel hungry, it is better to eat. If someone invites you to eat, it is sinful to refuse."

Even young adults had a strong revulsion against gluttony. One of the symptoms of a man who went mad and had to be committed to an institution was that "he ate too much." A woman was despised because "she ate in secret. She stole eggs from her husband, sold them in the market, and then spent the cash on food which she ate there, instead of bringing it home." Definitions of a glutton were, "A 'with-rice' eater," or simply as "one who eats alone." These comments highlight the counsels of eating in moderation and in company. On the other hand, a full stomach was valued for "home is where one eats one's fill."

At maturity, when farm and other tasks were shared as equals, men and women ate almost the same food. The old proscription against animal food for women was somewhat relaxed, but not entirely. To sustain farmers during the seasons of hard work, however, extra quantities of rice and rice alone, were considered essential. "With-rice" was pleasant but not so necessary. Any shift away from a diet of rice as ordinarily cooked in Bang Chan was construed as a shift either in occupation or in health. For example an eminent citizen who gave up farming took to eating (3)khaaw (3)tom often. This soupy rice, a staple dish for infant feeding, had interesting socio-economic connotations. It was served as a light lunch to cooperative farm-workers to be followed at the day's end by a real meal. It was also "delicate" food, suitable for the sick, for city-people, for those who did not toil with their hands and backs. Consequently, when this man ate this "delicate food" more often, he was consciously or unconsciously serving notice on the community that he was not going to do farm work any more, for (3)khaaw (3)tom could not possibly have sustained a farmer's strength. Caustic villagers hinted that he was putting on airs.

Among conditions in which some change from the usual diet was found were pregnancy, post parturition and lactation. Relatively few foods were generally considered to be tabooed under any of these conditions, but many women preferred to limit intake to "safe" foods if there were any possibility that certain foods might cause harm.

Information was obtained from 42 mothers about the food they ate during the post-partum rest period. Two said they ate as usual, but for the remainder, the diet was considerably

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1. Literally "beautiful rice." For method of cooking, see p. 33.

262 curtailed. About half ate soupy rice rather than rice as
843 usually prepared. All ate fish, but over half ate salted
846 fish only, and about one-fourth ate fresh fish only. Rice and fish were apparently the only foods considered safe by all of these mothers. The only other food eaten by half or more of them was banana of the (4)nam-(4)waa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeaeng (1)liang, a broth made with dried fish, and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some. When asked what foods they considered good for a woman who had recently borne a child, no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the post-partum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

262 Fear of illness from eating incompatible foods after
842 child birth was rather strongly expressed by many informants,
753 even by some who knew of Chinese customs which were different
829 from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home in the village, were not forbidden at the government health and maternity center at Minburi.

126 The 45 mothers who were interviewed during lactation,
262 but after work had been resumed, ate more nearly the usual
846 diet than was the case during the post-partum rest period. As in pregnancy, the mothers apparently had no notion of special dietary needs during lactation, but foods considered undesirable during lactation were mentioned 27 times. The list included 12 kinds of food, and four attributes of food, i.e. sour and hot tastes, fermented foods and raw foods. No food was considered harmful by a majority of mothers, the one which occurred most frequently, jackfruit, being mentioned by 8 only of the 45 informants.

262 Reasons were seldom advanced for considering various
753 foods unsuitable for mothers or children. During pregnancy,
853 the hot-tasting foods, i.e. those made with chili, were said by one informant to injure the baby's complexion. When asked at what age a child could have adult food, mothers might say at one or two years, but often specified without giving a reason, that the child could have anything but the hot-tasting foods. A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby, 1 or 2 months old, ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana"[1] caused

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1. The type of banana most familiar to people in the United States.

435 Some information as to the cost in baht of the larger
796 ceremonies held in 1954, and their scale, was obtained from
[126] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[714] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000. Guests gave 2300.
[583] B: Rite of forgiveness after elopement: a meal, with 5 bottles of liquor.
[184] C: Moslem: 2 buffalo slaughtered. 400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
[583] sugar cane, fruits, sweetmeats and other things. At more modest weddings and the rite of forgiveness for a couple who had eloped, food might differ from the usual fare only by including the three essentials of a wedding: pork, chicken and alcohol.

273 Increased consumption of alcoholic beverages during the
796 ceremonial season was indicated by the sales of one local
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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[574] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children, ... The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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1. In reproducing these notes, slight changes have been made such as substitution of descriptive terms for personal names which appeared in the original.

117 takes it down the steps to the fish pond, where she swishes
252 the basket around to wash the fish, and rinses her hands at the same time.

[23] There are some hazards to the food--chickens trying to get at the edible part of fish while the niece cleans it (she leaves the scales, etc. for them to eat); cat and kittens in the kitchen, having to be driven away from the grated coconut and coconut milk, and getting an occasional unweighed nip. Whether we start to weigh food for the evening meal or a.m. meal, some cooked foods are apt to be used, either left over
[242] from a previous meal, or cooked in advance. This a.m., for
[126] example, buffalo meat, already cooked (but not weighed before cooking) was used, and (3)khii-(2)leg leaves, which SS weighed last night. These latter were cooked last night, to reduce bitterness, then put into curry today.

Description of Food Preparation Area in a Relatively Poor Household

Wednesday, May 27, 1953

117 Arrived about 5:45 a.m. While other food was being pre-
[262] pared, the 11-year old son came in with a package of salted white radish and a small milk tin with some coconut oil which had just been bought. This is the house which we found flooded when they sent for us to see the baby last fall. The roof seems to be well thatched. The floor is not wet after last
[352] night's downpour. The bed platform, in one corner, is about
[85] 8 x 10 feet. The baby's cradle hangs above it. In the oppo-
[362] site corner is a shelf where utensils are kept. Some food,
[261] in paper bags, is in a basket hung from the roof. Fresh fish
[359] is kept in a jar of water until needed. The stove is on a small mound of earth, and further elevated on a small box (just big enough for the stove) filled with earth.

[352] We sit on a mat, spread on the mud floor, with the
[355] scales, plastic bowls and waxed paper ready for weighing food. The children lie on a mat nearby. In the house is a fresh mound of earth, a small straw bin with rice, and various pieces of equipment.

Notes on Meal Service

In a Relatively Prosperous Household

Friday, May 22, 1953

117 262 Before breakfast is served, the six-year old girl comes with a piece of jack fruit. SS weighs it and tells her to bring back what she does not eat. Later she comes with hands full of stones (14 of them). She has eaten this much as a "snack" before the regular meal. The grandmother finishes the piece (7 stones) and gives the rind to SS to weigh.

At breakfast the family sits in a circle on the kitchen floor. Each person except the baby has his own bowl of rice before him. In the center of the circle, within reach of all, are four small dishes of "with-rice" which has been prepared for breakfast: sour curry of buffalo meat, curry of (3)khii-(2)leg leaves, bean sprouts and one small fried fish. The mother takes a very small bit of fish on a spoon with rice, and feeds baby. During breakfast baby has 6 bites of rice with fish, nine small spoonfuls of rice with sour curry. The mother herself eats one bite of fish. She takes four spoonfuls of sour curry on plate with rice. This is shared with baby. Mother and baby eat mainly rice, fish and sour curry of buffalo meat, whereas grandmother and the six-year old girl have curry of (3)khii-(2)leg leaves and bean sprouts with their rice.

In a Relatively Poor Household

117 853 [593]

Wednesday, May 27, 1953

While the mother finishes the meal preparation, the seven-year old girl feeds the baby, first rice with some chopped egg, then rice with the "water" from the egg. The mother remarks that she cannot cook unless someone looks after the baby.

117 264 Technique of eating -- A tray with the "with-rice" is set out, also a bowl with water, for rinsing the hand, and a basin or bowl with drinking water. There are spoons in the "with-rice," but these seem to be used for taking some of the juice, which may be eaten directly or put on the individual's bowl of rice. Solid pieces are taken from the serving dish by hand, and mixed with some of the rice, which is then picked up in the right hand. Occasionally the person eating will rinse his hand with water. When finished, each person rinses his bowl (using either water from the bowl nearby, or from the general supply -- in this case the canal). Dishes are turned upside down on the platform near the stove, to dry.

NOTES ON THE PREPARATION AND NUTRITIVE VALUE OF COCONUT MILK AND COCONUT CREAM

252 The term coconut cream ((5)hua (2)ka-(4)thi), as it
262 was used in Thailand, referred to the product which was made by squeezing grated coconut with little or no addition of water. Coconut milk ((4)naam (2)ka-(4)thi) was made by squeezing grated coconut repeatedly with water. Coconut cream might be made first, and the residue extracted one or more additional times to obtain coconut milk. The terms coconut milk and coconut cream apparently are not used consistently. Losee (1952) commented on this when he described
[114] [171] the preparation of coconut cream in Samoa, and said that it was sometimes called coconut milk. Miller et al. (1936), in describing the preparation of coconut milk said "If a thick coconut milk to serve over puddings, taro leaves, etc. is desired, 1/2 to 3/4 cup of coconut water or boiling water should be poured over 3 cups of grated coconut. . . . If the milk is to be used in curry sauce for chicken, eggs, shrimps, or in cornstarch pudding, a larger quantity of water (1 to 2 cups of water to 3 cups of grated coconut) may be used."

• 126 In carrying out the dietary study, the observer weighed the grated coconut meat, the residue and the final products, coconut milk or cream, or both. She did not weigh the water as it was added in successive portions, but the amount of added water could be calculated.

184 The ratio of coconut milk to meat varied considerably,
262 but on the average, households in Group A obtained coconut milk which weighed more than eight times as much as the coconut meat from which it was made. Households in Group B obtained less than 2½ times as much milk by weight as coconut meat. The number of extractions made varied from 2 to 6,
146 with a mode of 3. Obviously, the products made by Groups A
171 and B, although both called coconut milk, had markably differ-
262 ent percentage composition, and neither was similar to "coconut milk" for which values could be found. These values were as follows:

Authors	Location	Coconut milk grams per 100 gm. E. P. Pro.	Fat	Carbo.
Bocobo et al.	Philippine Islands	3.6	33.2	38.4
Food and Drug Division	Thailand	3.52	34.75	1.52
Miller et al.	Hawaii	4.0	27.0	18.91

1. Personal communication

Methods.

All measurements of infants and children were made by one or more members of the research group. Equipment and procedures are described in the Appendix (p. 58). 126

In all, observations were made on 80 babies. For some of these, however, only one or two measurements were obtained. Such records were inadequate for most purposes of this study. Fairly complete sets of measurements were obtained for 71 babies through a total of 449 visits (Table 14). Since our aim was to obtain as much information as possible about babies from birth onward, the larger numbers of children were in the lower age ranges. 125

Nine babies were measured once or twice but were not followed longer because of removal from the village, inability of a mentally subnormal mother to cooperate, death (2 cases), and in one instance, reluctance to cooperate on the part of the mother of an illegitimate baby.

The investigation covered a period of 18 months, and visits were made at intervals of about 3 months, thus, most of the children were measured 6 or 7 times (Table 15).

Table 15. Number of Times Children Were Weighed and Measured, Bang Chan, Thailand, 1952-54.

Number of Measurements	Number of Children
3[1]	3
4	2
5[1]	6
6[2]	21
7	36
8	3

1. An additional measurement of weight but not of height was made on one child.

2. An additional measurement of weight but not height was made on two children.

Sometimes mother and baby were not at home when the scheduled visit was made. If the household was remote from headquarters it might not be possible to return soon without neglecting other equally urgent work. In other cases the child was visited and the food intake recorded, but the child was unwilling to allow himself to be measured; occasionally the child was

A [see p. 33 - Analysis]

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

521 The sociological context of a story-telling is probably what is most
522 important here. Bang Chan is a community where other than cultivating
538 the single rice crop and attending to daily household chores and religious activities, the villagers realistically have little else to do but talk to each other. This is clearly not an inevitable attribute of the peasant condition, but it is true of Bang Chan where little attention is given to such creative leisure activities as craftsmanship, music, and art, and where there is little occupational specialization. In fact, probably more time is given to gossiping than to any other single waking activity except daydreaming. Bang Chaners talk of many things, serious as well as lighthearted: the price of rice, religion, gambling, the doings of "big people," family disputes, and the like. However, by far one of the largest segments of their total conversational repertoire is given over to "funny" stories. Of course, no story is ever *exclusively* humorous in nature; all communication is inherently multidimensional, and even the funniest story has a substantive, non-humorous message. However, if stories may be judged by their behavioral effects (laughter) irrespective of their intellectual content, then the function of a major part of Bang Chan gossip is amusement.[10]

538 The motivations for the selection of banana peel type stories are more
154 complex. In part, the choice seems prompted by a "there but for the grace of God go I . . . " mentality. As suggested earlier, Bang Chaners have a keenly developed sense of the possible: to them, this is a world where anything, not only the probable or the predictable, can happen. The banana peel story, with its emphasis on the painfully ludicrous and extreme, is a perfect representation of such an uncertain world. Its beauty is

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[10] During the early stage of field work, I attempted to do systematic naturalistic observations of these gossip groups. The purpose was simply to identify the kinds of topics uppermost in the villagers' minds and the modes of interaction that most frequently developed during the sessions; it was hoped that the latter information might be related to the psychological test materials of the discussants. As a precisely designed and executed project, the effort, however, was dropped after a short time. For one thing, it was too difficult for two observers to record the *simultaneous* verbal and kinesthetic interaction of *several* people without the aid of a self-powered tape recorder and with the added burden of having to strain the material through the translation process. The task was further complicated by the fact that the membership of these groups continually changed as people would leave and enter the conversations. Also the groups would often break down into smaller sub-groups. Most important was the sheer multidimensionality of the conversation: any one utterance could simultaneously be funny, aggressive, boastful, carry practical information, etc. However, enough information was culled from these early attempts and later less ambitious ones to prompt the statements presented here. It is this writer's observation that one of the reasons behind the success of so much of the "small group" research conducted in the United States is that the groups studied have been *problem solving* or *task-oriented*, rather than simple gossip groups. The highly functional nature of the former has provided built-in constraints on the freedom of action permitted the discussants, and has made observational problems comparatively easier to deal with.

[123] [114] [126]

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ACKNOWLEDGMENTS

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[126] Stool examinations were made at the Department of Pathology, Chulalongkorn Hospital, Bangkok.

[128] Some preliminary tabulations and analyses of data were made at the Division of Statistical Services, National Economic Council, Bangkok, through the courtesy of its director, Dr. Tooi Xoomsai.

000 For the interest and friendliness of the people of Bang Chan, without whose cooperation the study would not have been possible, the author is particularly grateful.

[p. vi is blank]

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Deaths of infants a few days old, with a description of lockjaw, inability to suck, stiff back and clenched hands, were recognized as due to tetanus. The common practice of native midwives is to place the cord over a hard rhizome or clod of earth and to cut it with a tapered piece of bamboo. Thus, infection with the tetanus organism may occur from contact with the soil. Note that 12 of 26 deaths reported for infants under 1 month, were diagnosed as tetanus or probably tetanus. Zimmerman (1931) summarized important causes of death in Siam, based on the physician's diagnosis made after symptoms were described by the head of the household. Of 1800 deaths which occurred in the 18 months preceding the survey, 2% were diagnosed as tetanus. For the Central area, 3.8% of 495 deaths were from tetanus. Most, if not all of the cases of infantile tetanus could be prevented if native midwives learned to avoid contact of the cord with earth or a soil-coated rhizome. By using sterile scissors for cutting the cord instead of tapered bamboo which must be pressed against another surface to accomplish the cutting, contact with soil could be avoided. Of 335 household heads interviewed, 220 owned scissors of some kind (Ralis, 1955).

Infants several months old, who had some of the symptoms of infantile beriberi, as convulsions and almost voiceless crying, were considered as cases of infantile beriberi only if the mother had symptoms of beriberi, such as numbness or tingling in the extremities, or difficulty in walking, at the time. One mother had lost 3 infants at 3 or 4 months of age, with similar symptoms, but described the symptoms of beriberi in herself at the time of the death of the last baby only. The other two cases were therefore listed as convulsions, cause unknown. The occurrence of infantile beriberi reflects the unsatisfactory nutriture of the mother, whose milk is therefore low in thiamine content. To prevent deaths from infantile beriberi, the general level of nutrition in the village, and particularly the food habits of pregnant and nursing women, should be improved.

Note also the number of deaths from "debility." As the Joint FAO/WHO Expert Committee on Nutrition (1951) has pointed out, the number of early deaths from "congenital debility" becomes insignificant where the health and nutritional status of pregnant women approaches the optimal.

Intestinal Parasitism and Bowel Habits

Intestinal Parasitism. - All school children were provided with tin containers labelled with their names, and asked to bring a stool sample to school. Fourth grade children whose first stool samples were negative, were asked to bring a second specimen. Parasites were found in some of these second

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125 specimens. In all, specimens were obtained from 189 or 81% of the children and of these 32% were negative. In 128 stools
126 containing parasites, 196 infecting organisms were found, or an average of 1.5 per infected child. Protozoa and helminths which
164 are pathogenic or which may cause severe diarrhea were identified 126 times, and harmless forms 70 times. Of the harmful forms, Ascaris lumbricoides was found in 96 or 51% of the stool samples, Giardia lamblia in 19, or 10%, and hookworm, Endamoeba histolytica, Trichuris trichiura and Diphyllobothrium in 2% or less. Of the harmless forms noted, Endamoeba coli was found in 45 specimens or 24%, Iodamoeba williamsi in 21 or 11%, Endolimax nana and Chilomastix mesnili each in less than 2%. Doubtless the extent of intestinal parasitism in these school children was greater than the figures indicate, since some cases would be missed in examination of single stool specimens collected in this way. One might expect intestinal parasitism to be relatively common, also, among other family members.

125 Bowel Habits. - In connection with the clinical survey,
147 persons examined were asked whether they had "constipation" or "diarrhea" frequently, occasionally, or never, i.e. not within
514 the past 6 months. As the physician phrased the questions concerning "constipation," the replies indicated whether the respondent had daily bowel movements ("never constipated"), or usually had a bowel movement each day ("occasionally constipated") or usually had longer intervals between bowel movements ("frequently constipated"). Replies are summarized in Table 17.A

126 Considering the inadequate sanitation in Bang Chan, and
147 the prevalence of intestional parasitism, the fact that 3/4 of the persons questioned said they "never" had diarrhea, is worthy of note. Most persons who reported having diarrhea,
[146] were troubled occasionally rather than frequently. The fact that nearly 2/5 of those questioned had bowel movements less often than once a day, is not surprising in view of the fact that diets which are relatively low in fibrous foods and in the B complex vitamins frequently result in sluggish behavior of the large intestine. That approximately 3/5 of the respondents in Bang Chan usually had a daily bowel movement is perhaps more noteworthy. Even in areas where diets tend to be much more liberal, some persons usually have bowel movements at intervals of 2 or 3 days or even longer. If such persons have stools of normal character and experience no discomfort, this bowel habit may be considered normal for them.

A [see p. 43 – Analyst]

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Foods for Which Values Were Obtained from Miscellaneous Sources, or Imputed by the Authors

Name of Food	Source or Basis for Imputed Values
Cereals	
Rice, glutinous, black	Values for glutinous rice
Animal Foods	
Fermented fish	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche, Ca value from Knudson (1955).
Shrimp paste	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche.
Fishsoy	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche.
Field rats	Values from Chatfield et al. for mammals, dressed.
Fruits	
(2)Ma-(1)dan, fruit	Leung et al. Unspecified fruits, tropical areas.
Manila tamarind	Leung et al. Unspecified fruits, tropical areas.
Rambai	Willimott
Thai nutmeg	Values for persimmon
Vegetables	
(1) Bauaun	Values for eggplant
Bergamot rind	Aykroyd et al., values for lime peel.
Celery leaves, Chinese	Values for celery leaves and stalks, Chinese.
Coral	Leung et al., values for dark green leaves
Cucumber	Watt et al., for figures for Fe and Vitamin A in cucumber with skin.

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Galangal	Leung et al., values for ginger root.
(1)Jauan	Leung et al., values for dark green leaves.
(3)Khii-(2)leg	Leung et al., values for dark green leaves.
(4)Khlyb	Leung et al., values for dark green leaves.
Lotus stalk	Leung et al., values for lotus root.
(2)Ma-(1)dan leaves	Leung et al., values for dark green leaves.
(4)Ma-(5)khya (2)khaj (2)taw	Values for eggplant.
Morinda	Leung et al., values for dark green leaves.
(2)Phag (2)ka-(2)cheed	Leung et al., values for dark green leaves.
Sweet potato	Chatfield, values for vitamin A in pale variety.

Foods for Which Nutritive Values Were Not Calculated and the Total Amounts Eaten by Two Groups of Households Throughout the Survey

Name of food	Amounts Eaten	
	Group A	Group B
	g	g
Bergamot leaves	5	15
(2)Ka-(1)chaaj	15	71
(2)Kha-(1)cauaun flowers	25	0
Lemongrass	135	154
(2)Sa-(5)noo flowers	216	1078

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

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779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

84 A soul desiring rebirth flew into the womb of a woman at
[775] conception. By care and imitative magical practices, both
[774] parents helped the fetus grow but the mother gave the baby its
[789] body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of
846 several days was taken beside a hot fire, the purpose of which
392 was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman.
793 The comparable ceremony of maturation for men, when they too
789 were changed from "raw" to mature, compassionate, and strong
562 males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to
[688] nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

844 This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

128 The understanding of, and the attitudes toward, modern
844 medicine are given along with findings accounting for
846 acceptance or rejection of modern hospital care for parturients.
369 Accepting the changes that were observed in the practices
178 surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

are more reliable than the new," implying familiarity with both. One Buddhist headman earnestly sought of the field-worker information on medicines, or "mechanical devices" about which he had heard, but bemoaned the costliness.

To the concepts underlying childbirth, both as physiological processes and their meanings in Bang Chan's world view, we devote the next chapter.

7. Hauck (1956) finds that the number of pregnancies compared to the years of marriage is so low as to suggest (1) relatively low fertility in many cases, or (2) the existence of some (unknown) method of birth-control (pp. 31-32). She finds an unusual feature of menstrual history as compared to western standards in a somewhat older age at menarche (median and modal age was 15, with a range from 13-19 years). The onset of menopause occurred anywhere from 38-45 or even later, which is somewhat later than in western societies (pp. 30-31).

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magical formulae and incantations (khāthā cf. Textor 1960:80-88; 67-79). It was one of the branches of occultism (saiyasāt [McF. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khaō (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khaō. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

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The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

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The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō raksā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyāe). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.19

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19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

[787]

INTRODUCTION

121 This study of food habits and nutrient intakes in a Siamese rice village was undertaken in connection with the Cornell Thailand Project. The project is one of several under the auspices of the Department of Sociology and Anthropology, which are focused on the process of cultural change
114 in non-industrialized societies. Dietary studies designed to contribute to a base-line description of the community were carried out from September, 1952 through May, 1954. Local headquarters, where members of the research group kept equipment, and could stay overnight, were maintained in the village.

128 The observations to be reported fall into two general categories: 1) descriptive information concerning many aspects of the food situation in Bang Chan and 2) quantitative information on food intake, and its estimated nutrient
126 value, for 11 selected families. Qualitative information on food in Bang Chan was obtained from several sources: 1) field notes made by various members of the Cornell research group, 2) structured interviews with mothers about their own food, and that of small children in the family, 3) records of food eaten during 24-hour periods, submitted by children in the third and fourth grades of the elementary school as homework for the health class, and 4) weighed dietary studies carried
114 out in 11 selected households. Quantitative information on food intakes was obtained from the latter source only. Most of the data to be presented were obtained between September 1952 and June 1954, but supplementary information was obtained from a diary for 1955, kept by a school teacher at the request of the research group, a study of innovations made by Ralis in May 1955 (Goldsen and Ralis, 1957) and information provided at our request by members of the Cornell research group who were in Thailand in the summer of 1957.

A general account of the economic, political and social organization of Bang Chan in 1948-49, together with some material on health and diet was given in the first interim report issued on the Thailand Project (Sharp et al., 1953). The second interim report concerned aspects of health, sanitation and nutritional status in Bang Chan in 1952-54 (Hauck, 1956), and the third was a report on factors related to acceptance of innovations (Goldsen and Ralis, 1957).

THE COMMUNITY

Location, Climate, Transportation

131 Bang Chan is situated in the rice-producing area of central Thailand, about twenty miles by road northeast of Bangkok.

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132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [943] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [220] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop [435] greatly exceeded the needs for local consumption as human food, feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part of the Thai-Buddhist community. Information to be presented • 028 on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

133 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the 484 nearest market town, ran through one edge of the village. Bus 487 service was available along this road, to either Bangkok or [496] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [501] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

251 which did not attract them could be left anywhere out of reach of dogs. Raw rice was stored in a large jar or oil can while salt, fermented fish, shrimp paste[1] and fishsoy[1] were kept in smaller jars or bottles. Such containers were customarily covered. Dried food materials such as onions, garlic, chili peppers and other seasonings were often kept in a basket hung from the roof. Paddy, i.e. unhusked rice, was kept in a large bin of matting or wood, the excess sometimes simply piled on an uncovered mat on the floor.

128 Descriptions of two kitchens, one in a relatively prosperous household and one in a poorer home in Bang Chan, are included in excerpts from field notes, Appendix A, p. 93.

312 In a few homes, a clay water jar was kept in the kitchen or nearby, but more frequently foods were washed, and cooking water obtained at the canal or fish pond.

The water level varied between heavy flood and threatened drought. There were no deep wells in the whole area. Rainwater was collected from the roofs and stored in jars, but during the dry season, the canal or fishpond, although low, must supply the needs of the household. In some, drinking water drawn from the fishpond was preferred, and an effort might be made to keep buffalo from wallowing in it, and to avoid contaminating it with fecal or food wastes or by bathing. Others considered the moving water of the canal preferable to pond water.

General Social Factors Affecting Nutritional Level

462 In Bang Chan, most farm and household tasks were shared by men and women. Both sexes plowed, planted, harvested and dealt with rice buyers; managed buffaloes, boats, and children; cooked, fished and cut wood for fuel; hired out as labor hands, "living in" if desired.

554 184 Though there were clear differences in socio-economic status, the daily life of the people was much alike: whether owners of land or renters, whether farming large or small acreages, the rich and the poor worked in the fields at the same tasks, produced or gathered much of their sustenance, and ran out of cash periodically. Socio-economic status was roughly defined in terms of food: a poor man "had one meal only to forego another;" a rich man "had or could get what he wanted to eat." (Sharp et al. 1953, p. 264.)

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1. Description of these products will be found on pp. 17-18.

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

22 132 241 512 871 462 883 The year starts with May, the beginning of the rice-year. At this time the rains began to soften the parched ground, and the heat slackened. School re-opened. Farmers turned to plowing, harrowing, raising the seedlings. Both sexes worked about equally in field labor, boys from 14 and girls from about 15 years of age performing tasks according to skill and strength. Everyone was in the field at dawn. The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

221 132 501 442 24 With the rains, the canals had filled, so that by June buyers with big rice boats could return. The few farmers who could afford to hold onto a portion of their last year's crop sold it for a better price at this time. Vegetables and fruits which had died in the long drought were replaced, and trees were planted.

24 221 132 In July the heavy transplanting season began. Because of cooperative work habits or hiring out, people worked solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly controllable. [312] Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. [871] School vacation was scheduled at this time so both teachers and [857] children could help. Older children might work in the fields, [887] while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food [433] for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

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361 rice land. Water-ways, however, were public areas, and any
[505] convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

262 Mushroom culture as a side line activity of rice far-
344 mers developed during the period when this study was in
433 progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

[434] As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

262 Relatively few foods were purchased, but some of these,
438 such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

262 Estimates of mean annual consumption and cost of pur-
435 chased foods, for 106 households in Bang Chan are shown in
128 Table 1.

262 The list of purchased foods presented by Janlekha (1955)
432 was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)ma-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23---Analyst]

273 in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

433 434 443 Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

[462]

121 In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

221 267 127 128 From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953, and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 29 -- Analyst]

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[26]
[28]
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Chart 2. Annual Calendar of Fresh Foods Commonly Used in Bang Chan[1]

	No. Records[1]	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Fish													
Climbing perch	114	x[3]	x	x		x	x	x	x	x	x		
Eels	27	x	x	x		x	x	x		x	x		
Field crab (salted before use)	16	x					x	x		x			
Oysters	22		x	x			x			x			
Notopterus notopterus	10	x						x	x		x		
Serpent head	99	x	x	x		x	x	x	x	x	x		
Silurus	66	x	x	x		x	x	x	x	x	x		
(1)plaa (1)thuu	163	x	x	x		x	x	x	x	x			
Other Animal Foods													
Beef	30	x				x	x	x	x	x	x		
Chicken	72	x	x	x		x	x	x		x			
Eggs	142	x	x	x	x	x	x	x	x	x	x	x	x
Frogs	18	x	x	x				x		x			
Pork	51	x	x	x		x	x	x	x	x	x		

1. Based on 539 records obtained from school children, and observations in 11 households on 44 survey days. Figures in the column headed No. Records indicate the number of 1-day records on which the item appeared.

2. No records were obtained from school children during March, April or August, hence absence of the item from these columns means simply that the 4 households visited in each of these months did not use the item.

3. x indicates that the item appeared frequently on records obtained in this month. Note that frequency of use may be influenced by farm work and circumstances other than relative availability.

listed on 10 or more of the 24-hour dietary records obtained. For items which were major ingredients, the number of records on which the item appeared, is given.[1] Thus (1)plaa (1)thuu, which is bought by residents of Bang Chan during the busy work seasons, was used more often than any other single variety of fish named. Of the varieties caught locally, climbing perch, serpenthead, and silurus were most commonly used. Fermented fish, not included in the calendar, appeared on 53 records, and fish with kind not specified, on 180. Eggs were used more often than any animal food other than fish. Among green vegetables, swamp cabbage and (2)phag (2)ka-(2)cheed were commonly used. Bamboo shoots and lotus stalks were prominent among the non-leafy vegetables. Bananas which are grown in every garden and are available all year round were much the most common fruit, although other seasonal fruits were eaten more often in 6 of the 9 months in which school children submitted records.

Some idea may be obtained of peak seasons for use of various common foods by noting the months designed by x. Thus in January and May, serpentheads were listed on about 1/3 of the records, and were frequently served at more than one meal. Sweet potato, usually fried and eaten as a snack, was listed on 35 of 52 records obtained from school children in September. Flowers of the West India pea tree were listed on 10 of 55 records in October, and 12 of 88 in November, with occasional mention on records obtained in 4 other months.

Fruits were eaten much less often than one might expect in a tropical area where many varieties are available and fruit can be grown the year round. They were most often eaten by children as snacks, although pineapple and papaya were usually, and banana occasionally cooked in "with-rice" dishes such as curry. In September, fruit was included in the diets of less than 1/3 of the children. An average of more than one serving of fruit per child per day was recorded in 5 months only, May, June, October, November and February. In May, when (4)ma-(1)faj or rambai was in season 46 of 76 children reported having eaten it. Pineapple, listed by 35 of 61 children in June, was most often served in curry at one or more of the family meals. In October, oranges were eaten by 30 of 55 children who submitted records. Bananas (mostly of the (4)nam-(4)waa variety) topped the list in November and February.

Items mentioned on fewer than 10 records, and hence arbitrarily omitted from the chart, are worth noting as they

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1. No figures are given for sweet basil, garlic, onions, chili or limes, which were so often used in small amounts as seasoning that the count obtained would give no clear idea of the extent of their use. Some common spice plants were not mentioned on the records.

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

271 contaminated drinking water, but the traditional use of boiled water for newborn infants and their mothers, and its occasional use for sick persons, might provide the starting point for a desirable change.

Meal Preparation and Service

Processes and Equipment

252 The principal processes involved in food preparation for which equipment was required are: cutting solid food into bite-size pieces, pounding spices and flavoring materials, grating coconut, straining, boiling, sauteing in a small amount of fat, steaming, and roasting on a stick or metal support over the fire. Although foods were steamed or roasted only occasionally, the processes were familiar to all.

[35] The Thai kitchen had no oven. When the term "baked" was used, it might mean cooking with dry heat on a rack over the fire (as banana baked in the skin) or without fat in the frying pan (as small dried fish toasted in this way).

128 415 Equipment used during meal preparation by the 11 families observed on 44 survey days is listed in Appendix A, p. 96, that used in serving and eating food, on p. 96.

252 415 554 184 The type of food preparation and service was much the same in the relatively well-to-do and the poorer households in Bang Chan. The chief difference in equipment for food preparation and service in families of different economic status was in the number of items of one kind which were owned. Thus a poor family might own one knife and one clay water jar, whereas an affluent family would probably own several knives and a number of water jars. Equipment used on special occasions, as in preparation of food for large numbers of people, was owned by well-to-do families only. Some had enough equipment for large cooperative work parties.

Persons Responsible for Food Preparation

252 462 Food was usually prepared by the homemaker and/or older daughter, if one were at home, but all members of the family who were old enough to help, had some knowledge of food preparation and did prepare food as the occasion demanded. While preparing, cooking and serving food were more frequently carried out by women than by men, adults and school-age children of both sexes had some competence in this area. "While certain activities are normally assigned to men and others to women, the Thai maintain no rigid compartmentalization and are unembarrassed when a woman does a man's job or a man does

756 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the [476] time and effort went into preparing and serving food. Even a [782] small celebration involved cooperative effort among relatives and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A 764 big cremation might require planning in detail for years ahead: 796 invitations to priests and relatives in distant parts of the 574 country; hiring an orchestra and obtaining ceremonial gear. [533] For the largest events, when the guest lists ranged upward to [426] 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person, [252] usually one of the "professional" cooks of the village. The [476] day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

[262] The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an 262 annual homage-to-the-teacher rite. It is the nearest approxi- 796 mation to a quantitative record of food for a ceremony that 815 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either 796 at 7 a.m. or 11 a.m., or both, always at least in part by the 792 host, who sat and chatted with them. No one else ate until

124 On the basis of experience during the pretest, the ob-
125 server began the 24-hour period of observation with an unannounced visit in the afternoon, in time to see the preparation for the evening meal. This proved to have several advantages. A householder whose home had been visited at the evening meal, and who anticipated the observer's return before breakfast, could restrain the dog, if necessary; or the homemaker might postpone washing the rice until the observer arrived to weigh it. Without such cooperation on the part of the homemaker, our records would have been much less complete
[405] than they were. Since few village families had clocks, the time when the homemaker said she would start breakfast was always approximate.

125 Foods were weighed in both the raw and cooked states,
262 and foods given to priests, fed to animals, left over, etc. were weighed so that the actual amount eaten by the family could be calculated. Previously cooked foods included in the survey meals were weighed and raw weights estimated from information obtained in other observations. If possible, snacks were weighed. School children and others who ate snacks away from home were asked to report them to the obser-
128 ver, and weights were estimated. The guides prepared for
262 the observer are included in Appendix C, pp. 110-111. Data were recorded on the schedule, shown in Appendix C, pp. 116-120. and essential information such as the weights of food, after allowing for weight of containers, was later transferred to the shorter form shown in Appendix C, p. 121. As examples some of the data obtained on 3 of the 44 survey days are shown. Examples of notes on procedures in food preparation are included with these records. For examples of notes on the food intake of individuals see Appendix A, p. 97.

Calculation of Nutritive Value of the Diets

Figures from the original records were transferred to the Form for Calculating Raw Weights of Foods Eaten (Appendix C, p. 121), and the edible portion of each raw ingredient consumed was calculated by adjusting the gross amounts according to the use made of the cooked food and the number of family members present. Procedures followed are outlined in Appendix C, pp. 113-115.[1]

Few analyses of Thai foods had been made in Thai laboratories, and most of these were for proximate composition only. Therefore, data from other available sources were used. Since Handbook No. 34 of the United States Department of Agriculture "Composition of Foods Used in Far Eastern Countries" (Leung

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[114] 1. Many of the calculations were checked by Mrs. Mary Barkley Campbell, who made independent use of the data.

128 et al. 1952) included more of the foods used than any other
262 table, it was used as the primary source of information. Other food value tables (p. 92) were used to supplement it. When two or more values were found for a given food, the more suitable one was selected on the basis of the nature of the food and the method of preparation for sampling, i.e. whether this method was similar to procedures used in Bang Chan. While this study was in progress Tables Showing Food Values for Calculation of Diet Records compiled by the Food and Drug Division, Department of Health (1953) and intended for use in Thailand, were published. These tables, however, included few analyses made in Thailand, and references were not given to the sources from which the values were compiled. For these reasons, the Thai table was used as a supplement only when values could not be found elsewhere.

For convenience in calculation, a table was compiled which contained the most appropriate values available for all items of food eaten on the survey days (Sudsaneh, Campbell and Hauck, 1954). A list of foods for which no nutritive values were calculated, for lack of available information, is given in Appendix C, p. 124. Foods for which values were found elsewhere than in tables, or for which values were imputed by the authors, are listed in Appendix C, pp. 124-125.

Although values for coconut milk were found, they did not seem to be appropriate for the product as prepared in Bang Chan. Coconut milk, (4)naam (2)ka-(4)thi, is a product made at home from fresh coconuts, and used frequently in preparing curries and other dishes. Families in Group A used considerably more water in proportion to coconut meat in making coconut milk than families in Group B, hence a single set of figures was not appropriate for both groups. Since "expressed coconut milk" which had been analyzed in Hawaii (Hawaii Agr. Expt. Sta. Bull. 77, 1936) appeared to be similar to coconut cream, (5)hua (2)ka-(4)thi, as prepared in the village, the composition of coconut milk was estimated by assuming it to contain carbohydrate, protein and fat in the same proportions as "expressed coconut milk" but to be more dilute (Appendix C, pp. 128-129)

Division of food into various food groups, and foods included in each, is shown in Appendix C, p. 126. For each survey day, the adjusted consumption of like foods was added together and the calculated total intake of each food item for each household during one 24-hour period was transferred to the Form for Calculating Nutrients in Foods Eaten. The nutrient content was then calculated. Two such calculations are shown (Appendix C, p. 122). Nutrients available[1] per capita

1. Figures used were for the edible portion of raw food, or the food as used in food preparation, i.e. dry salted radish, shrimp paste, etc., with no allowance for cooking losses.

128 per day were calculated for Groups A and B by Round and for
262 all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

124 General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

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184 Although our semple was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more
[934] prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the
[935] main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive
[891] fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

125 From the viewpoint of parents, the "peak of life" was
511 the time when children were no longer dependent, but produc-
592 tive, unmarried workers whose earnings stayed within the
434 family. Household 16 was such a family, forward looking,
463 progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analyst]

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 8. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

235 Eggs and poultry. - Every household which took part in the survey raised chickens, and 3 of the 11 households had ducks also. In both groups of families, most of the eggs produced were sold. Home consumption of eggs on survey days was small.

228 Fish. - Each family studied had a fish pool. One family only, Household 25 in Group B raised tilapia. They began tilapia culture during the third round of the study, too late to ascertain how this might affect fish consumption in the family.

251 Preservation of Foods at Home. - Home food preservation was practiced to a very limited extent only, fish products being the principal ones produced.

Dried fish. - Families in both groups salted and dried fish throughout the year whenever they were available in excess of immediate needs.

Fermented fish. - In 10 of the 11 households, fermented fish was prepared. The 6 families in Group A had prepared a total of 30 kg., and 4 of the 5 families in Group B, a total of 29 kg. The largest amount prepared in one household, for one year was 10 kg.

Shrimp paste. - Because shrimp were caught in insufficient quantity, shrimp paste was prepared by only 6 of the 11 families. Four families in Group A prepared a total of 26 kg., and 2 families in Group B prepared a total of 7 kg. These amounts were insufficient for their needs.

Fishsoy. - One family only, in Group A, prepared fishsoy. All others in both groups purchased this product.

Buffalo meat. - During the survey year, the buffalo belonging to one family died. Some of the meat was used fresh for curry, and the remainder was salted, dried and sold.

Comparison of Caloric and Nutrient Intakes of the Two Groups With Each Other and With the Estimated Allowances.

128 146 In Table 11, the estimated calories and nutrients available to the two groups of families, are shown together with the estimated allowances.

146 On the average, the number of calories, and amounts of protein, iron, niacin and ascorbic acid in the diets of persons in Group B, the apparently better nourished group, approximated or exceeded the conservative allowances. For Group A, this was true for niacin and ascorbic acid only, the calories being 11%, protein 15% and iron 21% below the allowances.

146 absent, and in 6 of these, ankle jerk was absent also. In
164 Group B, the apparently better nourished group, one adult and two school boys had knee jerk only absent. In Group A, Household 12, the father, mother and 21 year old son all had both knee jerk and ankle jerk absent. The son was diagnosed by the examining physician as having frank beriberi at the time of the medical inspection. In Household 2, the father and 23 year old son had both knee jerk and ankle jerk absent, but the mother had no signs of thiamine deficiency. In Household 67, mother and father had both knee jerk and ankle jerk absent. The mother had lost 3 of her 6 children when they were 3 or 4 months old, with symptoms such as convulsions and voiceless crying, suggestive of infantile beriberi. When the third child died, the mother had symptoms of beriberi, and the physician who conducted the medical inspection considered the death of this child to be due to infantile beriberi. Clearly the thiamine content of diets of some of the families studied was inadequate to meet their needs under varying conditions of activity and stress. Beriberi was the one frank deficiency disease observed while these studies were underway in Bang Chan (Hauck, 1956).

146 Fat provided only about 9 to 10% of the calories. Coconut oil contains only about 0.5% of linoleic acid (Anantakrishnan, et al., 1949), but the essential fatty acid content of the diet as a whole was not estimated.

146 In summary, although the estimated nutrient intakes of
164 Group B were in general more favorable than those of Group A, the contrast between the two groups was not striking. Perhaps we should have anticipated this from the fact that the groups did not present a clear contrast in apparent nutriture. In Group A, 19 of the 30 persons examined had a total of 36 possible signs of nutritional deficiency. In Group B, 8 persons had a total of 9 such signs. Judging by both the apparent nutriture of the household members, and by their estimated nutrient intakes, the diets of both groups were in need of improvement.

146 Contribution of Food Groups and Certain Common Foods to the Nutritive Values of the Diets

[128] Contribution of Food Groups and Individual Foods. - The percentages of the total calorie and nutrient intakes provided by various food groups for households in Group A and B are shown in Table 12.

146 Rice and other cereals. - Rice was the staple food,
262 which provided over 4/5 of the calorie intake and more than half of the protein for both groups. Much of the difference in calorie and protein intake of the two groups was due to the greater rice consumption of Group B. Rice was also the

[Text continues on page 72··· Analyst]

146 more than fats and oils as such.
262

Bananas were grown by all families that participated in the study, but were eaten only occasionally, primarily as snacks. Tamarind and lime were used often in small amounts in making sour curry and chili sauce, and bergamot rind was used for seasoning. Papaya and mango, both of which are good sources of vitamin A and C, were each eaten once only during the survey. The green papaya was used in curry. Fruits are relatively abundant in Thailand, the year round, yet fruit made minor contributions to the diets of families studied in Bang Chan.

Fats and oils. - Fats were used in small amounts to pan fish, meat, eggs and vegetables, and provided about 1/7 of the total fat in the diet of Group A, and 2/7 for Group B. Coconut oil, which was less expensive than pork fat, was more often used in Group A.

Sugar. - Palm sugar was used in small amounts in the preparation of many "with-rice" dishes, and occasionally in snacks, i.e. guava dipped in a mixture of sugar, salt, chili, mung beans cooked in palm syrup and the like. The amounts used were small, and the contribution to nutritive value was slight. By Western standards, the consumption of sugar in Bang Chan was almost negligible.

146 Spices. - Spices were commonly used in food preparation,
263 particularly in hot dishes (i.e. those made with chilies) but little information on their nutritive value is available.

146 Alcoholic beverages. - In the families surveyed, all men
273 except the elderly father in Household 21 drank occasionally, but most of the women did not. The husbands in Households 12 and 67 drank heavily at times. No estimate can be made of the contribution of alcoholic beverages to caloric intake in these households.

146 Summary of Nutrient Contributions of Foods Commonly
262 Eaten in Two Groups of Households. - The contribution in terms
028 of calories and nutrients of certain foods used by 25% or more of the families studied, i.e. by 3 or more of the families on at least one survey day is shown in Table 13. Items selected for inclusion in this table are those which either made significant contributions to the nutrient content of the diets of Groups A and B respectively, or were major items in terms of amounts used or frequency of use. For certain items used frequently for seasoning, information on nutritive value was too scant to warrant inclusion in this table. Figures given are for average consumption per capita per day, based on all persons in the specified groups, and all survey days. For items used by all or most families every day, such as rice, fresh fish, chili, coconut products, and sugar, the figures represent approximately the usual daily per capita consumption.

106 For items used less frequently, the figures are correspond-
262 ingly less than the usual amount eaten. Thus, sweet potato, which is represented as 18 grams per day per person in Group A, actually appeared on 3 records only. One family of 8 persons ate 1200 grams of sweet potato at one meal and a substantial amount later the same day. Most items appear on the lists for both groups, but sweet potato, sweet basil and bananas were included on the list for Group A only, and glutinous rice which is used as a sweet in this area, appears on the list for Group B only. Note that a few common foods account for most of the nutrients in the diets of both groups. These common foods account for only about 80% of the calcium and vitamin A value and slightly less of the ascorbic acid in the diets of Group A. The list for Group B accounts for about 70% of the calcium and 60% of the ascorbic acid in the diets of this group. The variety of green leaves used once or twice only on survey days by Group B, and the number of different seasonal fruits used by both groups in small amounts as snacks, probably account for this.

264 Contribution of Snacks to the Nutrient Content of Diets. -
[855] On the average, 4 out of 5 children had one snack per day,
262 whereas only one adult in 6 did so. The following items appeared most commonly: various kinds of fruit, 40 times (orange 7, banana 6, pineapple, watermelon and mango each 5 times, guava, jujube and Manila tamarind each 2 times, olives, rambutan, rambai, star gooseberry, (2)ta-(1)koo and Thai nutmeg each once,) coconut and bread each 13 times, glutinous rice 8, mung bean 7, truffles 6, products made of rice flour 6 times, and a variety of other items including rice noodles, sweet potato, taro, bean sprouts, lotus stalks, lotus seeds, popcorn, products made of cassava flour, sugar cane, pork and milk from 1 to 4 times each. Salt, and/or palm sugar were
[146] eaten with a number of the snacks. Although they contributed only about 2% of the total calories, and from 1 to 3% of most nutrients, snacks contributed 16% of the total ascorbic acid for Group A and 11% for Group B.

Seasonal Variation in Food Preparation, Meal Patterns, Food Costs and Calorie and Nutrient Value of Foods Eaten

128 In Table 14, a summary including the number of meals
252 prepared, time spent in meal preparation, number of "with-
264 rice" dishes, and cash expenditures for food is given by
[435] rounds, for families in each group.

252 Number of Meals Prepared. - Food was cooked twice on
512 each survey day in 3 of 6 households in Group A and 3 of 5 households in Group B. Heavy farm work or vending which kept the mother away from the house sometimes accounted for once-
[443] a-day food preparation. One housewife who took food to market in Bangkok, cooked food twice a day only during the period shortly before the birth of a child, when she was not vending.

[Text continues on page 79 --- Analyst]

252 Another, who had time during Round IV to prepare food twice a
262 day, preferred to prepare more in the morning when she expected
264 to offer food to her son who had just been ordained. In two
578 instances an evening meal was not prepared because the father
[525] and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

262 Cost of Food Purchased. - The lowest cash expenditure
435 for food by any household on a survey day was 0.12 baht, for
511 a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year progressed was apparent. Most of the rice was sold at the end
242 of Round III. The cash went for capital investments, not
432 food, during Round IV. With time to drain ponds and to fish
[221] intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

146 Calorie and Nutrient Value of Foods Eaten. - The
221 seasonal variation in calorie and nutrient intake of the two groups of families is shown in Table 15. As one would expect,
[128] the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 - Analysis]

Form for Calculating Raw Weights of Foods Eaten

Dietary Survey, Bang Chan — Household No. 12 — Date Jan. 14, 1954

Amounts of foods prepared and eaten — No. persons in household 3

Meal - menu	Raw ingredients				Cooked food	Use of cooked foods					Adjustments-raw wt.		
1	2[1]	3	5	6	9	10	11	12	13	14	For amt. eaten	15	For No. people
4:00 p.m.													
Cooked rice	Polished	610			1640				500	1140		3	
Baked egg plants	3 egg plants	370		370	240				0	240			
Fish "salad"	Lemongrass (HG)[2]	36		36)									
	Holy basil (HG)	44	20	24)	115				0	115			
	1 fish (cooked)	52	12	40)									
	Lime (1/2 fruit)	30	12	18)									
Cooked rice	(Leftover)				250				0	250			
6:55 a.m.													
Cooked rice	Polished	950			2390				800	1590		3	
Roasted fish	2 fish	112			96				0	96			
Cooked rice	(Leftover)				500				0	500			
Chili sauce	Bird pepper (HG)	12		12)									
	Shrimp paste	10		10)									
	Garlic	8		8)	45				20	25			
	Palm sugar	10		10)									
	Lime	12	4	8)									

1. For identification of column numbers, see the original schedule, pp. 118-119 and pp. 113-114 121
2. HG stands for home grown.

128 In calculating values to be used in our estimates of
146 nutrient content of diets in Bang Chan, we made two assump-
262 tions: 1) that the "expressed coconut milk" described by Miller et al. was similar to coconut cream as made in Bang Chan, and 2) that coconut milk as made in Bang Chan differed from coconut cream primarily by dilution. When coconut milk was made by successive extractions after coconut cream had been prepared, the combined weights of cream and milk were taken to represent the yield of coconut milk from the weight of meat used.

The ratio of coconut cream to coconut meat was approximately the same, 0.30 for households in Group A and 0.33 for those in Group B, but Group A used more water in making coconut milk than Group B. By calculation, we obtained the following figures for the percentage of protein, fat and carbohydrate in coconut milk as made in the two groups of households.

Estimated Composition of Coconut Milk as Made in Two Groups of Households, Bang Chan

	Grams per 100 gm. E. P.		
	Protein	Fat	Carbo.
Group A	0.15	1.0	0.7
Group B	0.5	3.6	2.4

The need for a guide for calculating composition of various coconut milks, based on actual analysis of the products as made at home is apparent. Since coconut milk was used almost daily in Bang Chan, use of the figures which we found in the literature would have introduced a major error into our calculations. Using figures from the table designed for use in Thailand (Food and Drug Division, Bangkok, 1953), the average per capita caloric intake per day, from this source for the families studied would have been over 300 calories, as compared to about 45 calories, using the figures calculated on the basis of observed procedures in the village.

/Pp. 130-139 contain no data on Bang Chan and the Central Thai and were not processed for the AO7 Central Thai file./

INTRODUCTION

121 In the study of food habits and health in Bang Chan, Thailand, mothers and small children were the focus of special attention. We were interested in these groups not only for their own sake, but because in an area where frank deficiency disease was not common, inadequacies in the diet might be reflected in the condition of these vulnerable groups to a greater extent than in the general population. Food habits in this rice producing village have been described (Hauck, Sudsaneh, and Hanks, 1958; Hauck and Hanks, 1959) and information has been presented on nutrient intakes of 11 families (Hauck, Sudsaneh, and Hanks, 1958; Hauck and Sudsaneh, 1959).

128 In the present paper, general procedures are described first, followed by sections on 1) health and care of mothers and 2) of infants, 3) diet of mothers during pregnancy, postpartum, and lactation, 4) feeding of infants and small children, and 5) growth in height and weight of infants and small children in Bang Chan.

PROCEDURES

124 Some of the information presented herein was obtained by direct observation, but much of it resulted from interviews, usually with the mother. One of our first tasks, therefore, was to develop appropriate schedules for such interviews.

Schedules for Interviews.

During the early weeks of getting acquainted in the community, we had preliminary unstructured interviews with a number of pregnant women and mothers of young babies. Frequently the child's father, a grandparent, or other family member would be present. Informants were encouraged to discuss infant feeding, common customs associated with childbirth, and other subjects
125 of interest to the research group. From the information so obtained and from conversations with workers at the Mother and Child Health Center in Bangkok, two schedules were drawn up. In general, both schedules included three areas of inquiry: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project. In this category some items were included because of their interest from the standpoint of an anthropological study rather than because of any assumed relation to nutrition or health.

GROWTH IN HEIGHT AND WEIGHT OF INFANTS AND YOUNG CHILDREN

Evidence on growth in height and weight of Thai is scant. So far as we have been able to learn, all available studies have been cross-sectional. We, therefore, undertook, in the limited time available, to make longitudinal studies of growth of infants and small children and elementary school children in Bang Chan. Observations on the latter were summarized by Thorangkul (1957) and those of infants and small children, by Smith (1958).

In general Thai children of elementary school age are shorter and weigh less than Western children of the same age. Heights of children in the Bang Chan elementary school were, on the average, less than mean heights for Thai children given by Dr. Yong Chutima (1939), and they were much below mean heights at various ages from charts (class II) in use at the Department of School Hygiene, Bangkok. Mean heights of adult men and women in Bang Chan were slightly below those recorded by other observers who have measured groups of Thai men and women (Hauck, 1956). Without further study one cannot say whether the short stature of Thai as compared to Western peoples is due to inheritance, environment, or both. Nor do we know why school age children and adults in the rice producing village of Bang Chan were, on the average, somewhat shorter than their counterparts in Bangkok only 20 miles away.

Thorangkul (1957) found that although children 7 to 14 years of age increased in height in successive 3-month intervals, a large proportion of them failed to gain weight or even lost at times and that such failure to gain occurred in more children during the dry season than during the wet season. The reason for this was not apparent from our observations. Two possible explanations are: 1) use of untreated canal water may lead to heavier infestation with intestinal parasites in the dry season and 2) leafy vegetables are almost lacking, and other vegetables are in short supply at this time. One would expect the temporary shortage of vegetables to be reflected in growth failure only when the diet is borderline in respect to some nutrients as it appears to be in Bang Chan (Hauck et al., 1958; Hauck and Sudsaneh, 1959). Either of the possible causes suggested might affect the nutritional state of other family members as well as elementary school children. All those drinking canal water and eating "adult foods" could be affected directly, whereas infants who are still largely breast fed might be affected indirectly through the quantity and quality of mother's milk available to them.

In this section observations on the growth in height and weight of infants and small children in Bang Chan are presented.

In some age groups fairly large numbers of children were observed and in other groups relatively few. None of the groups up to 4 1/2 years of age with whom the children in this series could be compared included fewer than 30 individuals. The numbers of boys and girls measured at each age were about the same.

Dr. Amara Chandrapanond (1957) reported the mean heights and weights of 20 babies who were weighed and measured at monthly intervals over a period of a year. She did not report values for boys and girls separately, but, in general, at each age these fell between those for males and females as reported by Dr. Montri (1939).

In figure 1[1] the median heights of boys and girls in Bang Chan together with the number of individuals who were measured at 3, 6, 9, 12, 15, 18, or 21 months are shown in comparison to the height curves constructed from values reported by Dr. Montri (1939). Corresponding median weights are shown in figure 2.[1] Although the groups are small, the tendency for both height and weight of young children in Bang Chan to be below that of children attending a well baby clinic in Bangkok is clear.

One should note, however, that Dr. Montri characterized the children he observed as "free from disease", whereas some of the children of Bang Chan had colds, skin infections, or other minor disorders which might have affected their weights. Such disorders are very common, and we do not know whether or not they disqualified children attending the Well Baby Clinic from inclusion in the series for which heights and weights were reported.

Graphs of height-age and weight-age were plotted for each child in this study and for small groups of children who were observed regularly over a year or so at the same ages.

Most of the children increased in height in a fairly regular fashion, the slopes of their height curves being about the same as the curve drawn from Dr. Montri's[1] values, although there were individual variations in this. The height curves of many more children of Bang Chan were below than were above the curve drawn to Dr. Montri's values. Of the 35 girls measured, the height curves of 6 were above, 6 were about the same as, and 23 were below the curve drawn to Dr. Montri's values for girls. Of the 36 boys measured, the height curves of 9 were

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1. Mean values reported by Dr. Montri were plotted at 1-month intervals for the first 11 months, then at the midpoint of the intervals he reported. For example, measurements reported for children 1 to 1 1/2 years of age were plotted at 1 year 3 months.

[TEXT CONTINUED ON PAGE 41].

1 [See p. 34 - Analyst; 2 [See p. 40 - Analyst]

• 128

[For information on the author's analysis and interpretation of the results of the Sentence Completion Test, see category 116, pp. ix, 4-8, 11-12, 39, 53-54, 96, and 142-199.]

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FOREWORD

The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, Minburi. A century-old canal and to the north of it a post-war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

In 1954, when data for the present study were still being gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the households were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupation of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple food of the people. During the wet season and into the cooler dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

The Thai countryside is divided into hamlets, each with a headman in charge of the thirty to sixty households of the hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

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The author wishes to express her gratitude for the assistance of her Thai co-workers: Dr. Anusith Rajatasilpin and Miss Sapha Indrasud, whose services were provided by the Food and Drug Administration, Bangkok, Thailand, through the courtesy of its director, Dr. Yong H. Chutima; Dr. Chumlong Kittiveja, whose services were made available through the courtesy of Dr. Luang Vach Vidyaddhana, Dean of the Dental School, University of Medical Sciences, Bangkok; and Miss Saovanee Sudsaneh, who served as field worker with the Cornell Thailand Project during 1953-54.

[126] Stool examinations were made at the Department of Pathology, Chulalongkorn Hospital, Bangkok.

[128] Some preliminary tabulations and analyses of data were made at the Division of Statistical Services, National Economic Council, Bangkok, through the courtesy of its director, Dr. Tooi Xoomsai.

ooo For the interest and friendliness of the people of Bang Chan, without whose cooperation the study would not have been possible, the author is particularly grateful.

▼ [p. vi is blank]

in Tables 1 and 2.[1]

Heights of children in the Bang Chan elementary school were, on the average, less than mean heights for Thai children given by Yong Chutima (Chutima, 1939). They are much below the mean heights at various ages, from charts (Class II) in use at the Dept. of School Hygiene, Bangkok.[2] Curves for mean weights of children in Bang Chan cross Dr. Yong's average curves, but are well below the average curves for girls and boys in Class II, School Hygiene charts (Figures 1 and 2). When compared with mean weights for children of the same height and age, from tables in use at the Dept. of School Hygiene, however, the two curves are seen to be similar (Figure 3). Mean heights and weights for rural children as reported by Zimmerman (1931) are not very different from those in Bang Chan.

In general, Thai children are shorter and weigh less than western children of the same age. For example, at all ages, mean heights and median weights[3] for both boys and girls in Bang Chan fell below the 10th percentile of the Iowa school children whose measurements are reported by Stuart and Meredith (1946) (Table 3). Weight of clothing was probably about the same for the two groups. In general, the median weight for a given age, in Bang Chan, corresponds to the weight of the 50th percentile for Iowa children 2½ to 4½ years younger. Thus the median weights for 8 year old boys and girls in Bang Chan, were similar to the weights of the 50th percentile of Iowa boys and girls 5 to 5½ years old, and the median weights of 13 year old boys and girls in Bang Chan were similar to weights of the 50th percentile of Iowa boys and girls at 10 and 9½ years of age, respectively. The tallest and heaviest boys and girls of these ages in Bang Chan were shorter and lighter than the corresponding median values for Iowa school children. On the average, however,

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1. Median weights are generally considered to be more representative of a group, but mean values are included as well, for comparison with results of certain other studies.

2. Unpublished data, based on measurements of over 15,000 children, both urban and rural, made over a period of years, and compiled by Dr. Laeng. Furnished through the courtesy of Dr. Ladda of the Dept. of School Hygiene, Bangkok. Subjects were grouped as Classes I and II, of which roughly 1/3 were considered Class I.

3. Most of these observations were made in November or early December, 1952. On the basis of subsequent observations, many children were found to weigh less in May than during the previous February, but weight gains were again observed the following August and November.

TEXT CONTINUED ON PAGE 15

[see pp.9-13-An] [see p. 14-An.]

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mats on the floor as most of them would have done at home. Relatives were welcome; indeed they were supposed to come and help.

Nature and Incidence of Illness and Injury, and Treatments Sought by Residents of Bang Chan. - Evidence concerning the nature of illness and injury in Bang Chan was obtained in connection with the clinical examination of school children and persons in the random sample of village households; from questions in two types of structured interviews with household heads: 1) in the entire village, and 2) in one hamlet, KY-7; and from the field notes of workers associated with the Cornell Thailand Project.

In connection with the clinical examination, information was obtained from heads of 30 of the 31 households whose members were examined (See schedule in Appendix A).[2] In this group none reported any accident or injury, and 26 said that no member had been ill within the year. Illness was reported as occurring in 4 households only. In one of these, a 49-year old man reported loss of sensation over the extremities and other symptoms which led the physician in the research group to conclude that he had beriberi. As treatment, this man had used an herb recommended by a priest, a native medicine given him by a neighbor and had gone to a private clinic at Minburi where he received an injection.[1] In another family, a 39-year old man who had asthma, took an advertised remedy which he purchased from a drugstore. Two children in the third family had fever for 8 days, for which a traditional practitioner prescribed herbs. In the fourth family, a 1-year old child with eczema was taken first to a traditional practitioner, then to a private clinic in Minburi where he was given an injection.

On the basis of other observations, however, we believe that illness and injury are more common in Bang Chan than is suggested by the replies to this particular inquiry. For example, no mention was made in one of the households surveyed of a baby who had been too ill to be weighed and measured, when team members called, and who recovered in a day or two without outside help. Coming as they did at the end of the clinical examination which was new to most of these people, perhaps the questions asked seemed relatively unimportant. No attempt was made to probe beyond the person's reply to the questions as stated.

Replies to questions in connection with an intensive

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1. From casual observation, one is led to believe that the villagers have considerable confidence in "injections," although the nature of the injection received or desired, is not usually specified.

2 [see p.51 - Analyst]

Procedures Used in Obtaining Information Recorded on Schedule for Clinical Examination, and Descriptions of Possible Signs of Nutritive Failure

114 For the clinical portion of the nutrition survey, the team consisted of a Thai physician, who carried out the clinical examination, the nutritionist, who made the physical measurements, a second-class chemist, who did the hemoglobin determinations and served as interpretor, and a local boy who not only propelled the boat but helped in other ways such as giving directions to the children concerning preparations for being weighed and measured. The nutritionist was the only non-Thai on the team. The physician's internship had been served in a hospital in which he had opportunity to see many patients with nutritional disorders.

• 128 The material which follows is primarily descriptive of the procedures agreed upon in advance of the clinical examination. When different descriptions of a given sign were obtained from the various sources, the criteria which the physician agreed to use, after discussion with the nutritionist, are stated here. Some of the signs described were not observed in any of the persons examined in Bang Chan.

Before beginning the survey, the examining physician and the nutritionist agreed that only signs which could be considered undoubtedly positive should be so recorded.

128 In preparing the schedule, care was taken to avoid
125 diagnosis, i.e. the physician was to record what he saw. If the examining physician believed diagnosis or probable diagnosis would be helpful, he recorded this under Comments. Thus Comments included such items as the following:

1. Diagnosis of deficiency disease, together with nature of onset, association with other conditions such as pregnancy, malaria or dysentery.

2. Obvious present disease as trachoma, ring worm etc. or evidence of past disease, as smallpox scars.

3. Complaints such as bloody stools, or other conditions which might affect adversely the general health and nutrition.

The schedule was designed to be used with all ages and both sexes. Items relating to menstrual and child bearing history were placed at the end, to be used for adolescent girls and women.

Comments on the items on the schedule follow:

1. Hamlet and house number. Information given by the school child or householder was checked later with the census data.

54

125 2. Name. The name was recorded according to the Mary Haas system of transliteration, modified for use on a typo- 128 writer. Later a code number was given each individual examined.

3. Sex. The appropriate symbol, M or F, was circled.

4. Birth date, when known, was recorded in Thai, according to the Thai calendar. This information was later translated into age in years and months. Information given by school children was checked against that in the school records, which were obtained by the school teachers from the Naai Amphoee, or district officer. At present, parents are required by law to register the birth of a child within 15 days. In practice, however, the interval between birth and registration is frequently longer, and the recorded date may be somewhat later than the actual birthdate. In preparing height-weight-age tables, age to nearest birthday was used. In a few cases, the birth date as given by a school child and that in the school records differed enough so that age to nearest birthday was in doubt. Data for such children were omitted in preparing the tables.

5. Marital status was recorded either as single, or the number of years married. To avoid embarrassment if there had been no legal marriage, the question was phrased so as to mean "How long have you had a house?"

6. Weight. A bathroom scale with 1/2 kg. divisions, with a magnifying glass over the scale reading so that one might interpolate to 1/4 kg., was used. All persons were asked to stand with the feet squarely on the platform, with the toes not extending beyond it. In order to get weights under as nearly standard conditions as possible, school children and adults were instructed to remove all but a minimum of clothing. All boys, [29] and the younger school girls removed their blouses, belts, and any items in pockets, leaving only short trousers, for the boys, and for the girls, a Thai-style skirt (phaasin) or standard western style school costume consisting of cotton skirt with attached bib and shoulder straps. Older girls were asked to re- [29] move the outer blouse and belt but were allowed to keep on the under blouse or camisole, as well as skirt. The children did not wear shoes to school.

[29] In the homes, preschool children were usually weighed nude, older girls and women in inner blouse, and phaasin or phaanung, and the men in trousers only.

Several examples of each type of clothing were weighed. Clothing worn by children whose body weight was 22.5 kg. or less, usually weighed considerably less than 1/4 kg., and would therefore make no detectable difference in the observed weight. Clothing worn by the larger school children and adults weighed, on the average, about 1/4 kg.

School children were asked to empty the bladder before being weighed. To minimize the effect of food, school children were weighed between 10 A.M. and noon. We were unable to carry out these precautions in connection with the survey of persons in a random sample of village households.

7. Height. A locally made wooden measuring device, hinged so as to fold (4 sections, each 50 cm. long) and provided with a sliding set square, was used for measuring height. The individual was told to stand with heels and shoulders against the measuring device, with chin parallel to the floor. Persons old enough to cooperate were asked to take a deep breath and "stand tall." The set-square was brought into contact with the person's head and the height, to the nearest 1 cm., noted. Smaller school children sometimes had to be helped to assume the desired position. An infant was measured by putting the device on the floor, and placing the baby on it. The knees were then pressed down, so that the backs of knees were in contact with the scale. One team member then placed a flat-surfaced object such as a book, perpendicular to the scale, against the soles of the feet, while another brought the set-square into contact with the infant's head.

8. Bicristal diameter was measured with a pelvimeter. The subject stood, with heels together, before the examiner, who felt for the highest points of the iliac crests, and placed the pelvimeter, with firm pressure. The pelvimeter was calibrated in centimeters, but readings were estimated to the nearest 0.5 cm.

9. Cristal height. The height of the iliac crest was taken as the vertical distance of the left iliac spine from the floor. The subject was asked to stand with left side toward the measuring device used for height, and the distance of the set square from it. The examiner felt for the iliac crests, placing her right hand so that the thumb was at the level of the tip of the iliac crest. She tried to see that the subject's pelvis was held level and not tipped. An assistant then lowered the set square to the examiner's thumb, and the height was measured by reading the level of the set square.

10. General appearance and vitality. This item represented the examining physician's impression of the behavior of the subjects. Facial expression, attitude, degree of alertness, and behavior while waiting for the examinations were taken into account. Thus a child with good vitality would appear alert and interested, whereas a child who was rated poor might be apathetic, abnormally subdued or lacking in initiative.

11. Hemoglobin was determined by means of a Spencer Hb-Meter (American Optical Co., Scientific Instrument Division, Buffalo 15, N.Y.). Values were recorded in grams per 100 ml. of blood. Very little resistance was encountered to the finger

puncture, although a few adults and two school age children refused. No attempt was made to determine hemoglobin for most children under school age.

12. Stool examination. Each school child was furnished with an appropriate container labelled with his name. Pupils were asked to bring the container, with stool sample, to the teacher. Specimens were examined at the Pathology Department of Chulalongkorn Hospital.

13. Hair.

a. Dry and staring. Hair which has lost its normal sleekness and luster, and is dry and brittle.

b. Diminution or loss of pigment. In dark haired people, an auburn tinge is evident in mild cases. (Note: None of the cases seen in Bang Chan had progressed beyond this to "ginger" or tow-colored hair).

14. Eyes.

a. Photophobia, when present, was always recorded. If obviously due to some non-nutritional eye disease, this fact was recorded under comments.

b. Lachrymation, which is often associated with photophobia, was recorded when elicited by brief eye examination.

c. Blepharitis. Inflammation of the muco-cutaneous junction of the eyelid, with or without scaling and crusting or loss of eyelashes. If blepharitis was obviously associated with some non-nutritional eye disease, such as trachoma, this fact was recorded under comments.

d. Xerophthalmia. The conjunctiva is abnormally dry and appears thickened, yellowish and opaque.

e. Excess conjunctival tissue. Thickening of the bulbar conjunctiva, which appears opaque and yellowish. The tissue is moist. When the subject moves the eye from side to side, a thickened conjunctiva is thrown into a moving ripple of folds.

f. Bitot's spots. An extreme form of thickening of the epithelium of the bulbar conjunctiva. The spots resemble patches of chalk paste which have been striated with a pin.

g. Corneal vascularization (gross). Loops of newly-formed capillaries appear near the corneal margin, and extend onto the cornea. Since a slit lamp, which is necessary for observation of early stages, was not used, gross changes only could be noted.

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15. Face.

a. Folliculosis. Pouting of the sebaceous and pilosebaceous follicles of the face.

b. Nasolabial seborrhoea. A scaly or greasy desquamation; flaky accumulations of seborrhoeic material in the nasolabial folds.

c. Dyssebacia. A condition probably representing a severer degree of folliculosis. The pouting sebaceous follicles contain plugs of greasy material. The condition is usually most marked in the nasolabial folds, but in severe cases extends to the nose, cheeks, chin and the whole butterfly area.

d. Suborbital pigmentation. A brownish or greyish-brown area of pigmentation under the eyes, often seen in severe starvation.

16. Lips.

a. Cheilosis. The earliest change in cheilosis is a loss of the normal uniformly shiny appearance of the vermilion of the lips. A somewhat "velvet-like" appearance is associated with a milky "bloom". In more severe cases the lips are reddened, capillaries are engorged and the mucosa at first appears thin and shiny; later, scaling, ulceration and cracking may occur, with crusts of blood and serous exudate.

b. Scars of past cheilosis: Multiple antero-posterior linear scars of the lips; the vermilion of the lips takes on a slightly tissue-paper like appearance.

c. Angular stomatitis. A lesion which varies in severity, ranging from slight scaliness with small cracks in the epithelium at the corners of the mouth to a pale, moist and ulcerated appearance with fissures extending onto the neighbouring skin of the face.

d. Scars of angular stomatitis. Scars in the corners of the mouth.

17. Tongue.

a. Papillae atrophied. The tongue is dry, smooth and glazed, with atrophy of the papillae.

b. Papillae hypertrophied.

c. Edema. Swelling which is evidenced by indentations of the teeth along the margin of the tongue.

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• 128 d. Color change - scarlet. A bright red color of the tongue, like that of raw beef.

e. Color change - magenta. The normal pink color of the tongue is changed in the direction of blue or purple.

f. Appearance - fissured. The presence of deep central or lateral fissures which may run antero-posteriorly or transversally.

g. Appearance - geographical. Superficial erosion of the tongue, appearing in irregular patches. These are redder than the unaffected area.

h. Not ascertained - Betel. This category was added to designate cases in which the tongue was so coated from betel chewing that color changes and changes in papillae could not be noted.

18. Gums.

a. Swelling. Swelling of the interdental papillae with an increased tendency to bleeding when the papillae are pressed. Later, the whole gum may be swollen and purplish.

b. Redness (gingivitis). The gums are red and hyperemic, particularly at the margins.

c. Recession of the gums.

d. Retraction. The margins of the gums become detached from the tooth.

e. Loss of interdental papillae. The papillae no longer fill the interdental spaces neatly.

19. Parotid glands enlarged. Mild degrees of enlargement may be detected more readily by observation from above or behind than from in front. Both Smith (1952) and Nicholls (1951)[1] mentioned the association of parotid enlargement with malnutrition in the tropics.

20. Thyroid enlarged. Obvious enlargement was recorded. An item was included for scars of thyroidectomy, if any should be seen.

21. Betel. If the subject chewed betel frequently or habitually, so that the teeth were stained, this item was checked "yes". In the "no" category, may be some persons who have tried

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1. Nicholls, 1951, p. 354.

125 betel chewing, but have not persisted in it.
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22. Teeth. Changes in the teeth were noted by means of a series of symbols on two dental diagrams, one for deciduous and one for permanent teeth. Teeth just erupting, missing, carious or filled were noted. A dentist examined the teeth of the school children, in good natural light, using mouth mirror and probe. Inspection of persons in the random sample of families was carried out by the physician without mirror or probe, therefore the record is of gross changes only. If a tooth was crowned, the physician inquired whether the tooth had been sound or carious before being crowned.

23. Skin.

a. Symmetrical dermatosis. Any skin disorder which had a symmetrical distribution was noted, and the physician's diagnosis recorded under Comments. Pellagroid dermatosis begins as an erythema resembling sunburn and develops into a symmetrical, rough hyper-pigmented dermatosis with sharply defined margins, usually on areas exposed to sunlight. Areas may desquamate with serous exudate in the centre.

b. Phrynoderma. A type of follicular hyperkeratosis which occurs on the back of the arms, on the thighs, abdomen, shoulders and buttocks. Viewed through a lens, the enlarged glands are seen to be plugged. The eruption can be felt by passing the tips of the fingers over it.

c. Perifollicular congestion. Congestion occurs around the hair follicles, frequently limited to the legs and forearms.

d. Petechiae. Pinpoint hemorrhages, which are most apt to occur around hair follicles.

e. Xerosis. Dryness of the skin, diminution or absence of sebaceous secretions, sometimes also of sweat. (Note: Crackled skin was originally included as a separate sign. No clearly defined cases were noted, however, and since the physician was uncertain of the distinction between early stages of crackled skin, and xerosis, the latter term was used to cover all such lesions.)

f. Loss of elasticity. Diminution of suppleness of skin seen as a fine wrinkling, particularly over the calves. When the superficial skin is pinched up and released it returns very slowly to its smooth condition.

g. Atrophic skin. Thinning of the skin, generally most marked on legs below the knee. The skin usually appears smooth, tightly stretched and shiny.

Note: The skin changes known as xerosis, loss of elasticity and atrophic skin, which are associated with defective nutrition, mimic closely the changes in senility.

125 h. Ulcers. Single or multiple ulcers, other than
• 128 those associated with varicose veins, confined to the skin of the legs below the knees.

24. Edema, if present, was noted.

25. Knee jerk. Absence of the knee jerk was recorded.

26. Ankle jerk. Absence of the ankle jerk was recorded.

27. Calf tenderness. The patient's reaction was noted when the calf muscles were squeezed firmly.

28. Inability to rise from squatting. The patient is made to squat with his thighs fully flexed on his legs, and is asked to rise. When this is done with difficulty, the hands grasping the knees and aiding the legs to bring the body into an erect position, the test is positive.

(Note: This test was not applied to persons who were obviously active and had good muscular coordination. Thai customarily sit or squat on the floor, and would be peculiarly aware of such difficulty.)

29. Liver enlarged.

30. Spleen enlarged.

For this part of the examination (items 29 and 30), the subject was asked to lie on his back with his knees flexed, to relax the abdomen and take a deep breath. The physician palpated the costal margins in the usual manner. If liver or spleen were found to be enlarged, the appropriate space was checked, and the description of size and texture of the organ entered under Comments.

31. Posture:

Winged scapulae. The fingers can be placed easily under the inner border or tip of the scapula.

32. Skeleton.

a. Frontal bossae. Protruding forehead, giving the person a "box-headed" appearance.

b. Beaded ribs. A line of enlargement at the costochondral junction of the ribs.

c. Enlargement of epiphyses at wrists.

d. Bowed legs. The subject was asked to stand with feet parallel and together, the body erect. If the space between his knees was more than 1 finger breadth (1.5 cm.) or the legs below the knees curved outward obviously, the person was considered to be bow legged.

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• 128 e. Knock Knees. The subject was considered to be knock kneed if the knee joints overlapped markedly.

33. Diarrhea. As phrased, the question meant literally "Do your bowels run or not?" If the answer was affirmative, the physician asked further questions to determine about how often this occurred. "Frequent" diarrhea meant that watery stools were passed every week, i.e. that stools seldom were formed. "Occasional" diarrhea meant the passing of watery stools once in a long time, and "Never" meant that diarrhea had not occurred within the past 6 months.

34. Constipation. The question as asked by the physician meant literally "Do you have a stool every day?" The physician checked "frequent" if the subject did not usually have a bowel movement each day; "occasional," if the subject usually had a daily bowel movement, but once in a while a day was skipped. "Never" meant that the subject had a bowel movement daily during the previous 6 months.

Note that this question does not relate to constipation, in the true sense, since it tells nothing of the character of the stool or feelings of the subject, but is confined to the interval between stools.

35. Menstruation.

a. Regularity. This was indicated by a check mark after yes or no.

b. Duration. The question "How many days does it last?" The number of days, as stated by the informant, was recorded.

c. Interval. The replies were grouped into 3 categories: 1) usual interval, i.e. about 1 lunar month; 2) markedly less than 1 month; or 3) markedly longer than 1 month.

d. Menarche. The age in years, at first menstruation, was recorded. Young girls, who appeared adolescent, were asked by the physician if they had menstruated yet. To be sure the question was understood and properly answered, a woman school teacher questioned these girls separately.

e. Menopause. Age, in years, of last menstruation, was recorded for woman who had passed the menopause.

36. Children. Appropriate numbers were recorded in each category.

a. Total children born . . . . . .

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b. Number of children alive now . . . . . .

c. Stillbirths . . . . . .

d. Deaths in utero . . . . . .

e. Miscarriages . . . . . .

f. Other deaths . . . . . ., i.e. deaths of children born alive. Notes were made on the age and circumstances of death. When the description was clear, the physician noted the cause of death.

g. Age of the oldest child . . . . . in years.

h. Age of the youngest child . . . . . in years.

The investigator noted whether or not related items such as years of marriage, age of oldest child, age of youngest child, age at menarche, and age at menopause, were reasonably consistent. A few replies were discarded as unreliable.

II. DEFINITIONS

Definitions are here provided only for a few basic terms within the context of this survey. An attempt will be made to discuss the many concepts contained in the questionnaire before the beginning of the actual field work, as the desirability to keep this guide short makes it unadvisable to go into lengthy details at the present time.

A household is a single person or a group of persons making one economic unit and distinguished as one kitchen unit. It is likely that members of the same household sleep under one roof (or roofs) belonging to one person, but the main criterion of the definition is the kitchen unit. With each kitchen goes one household. There is occasionally more than one household under one roof; this is found when more than one kitchen is encountered in one dwelling unit.

The head of the household, shortly referred to as HH, is the person whom other members of the household consider to be the head and who lives in this household - we exclude absentee heads of households.

Relationship to the HH is to be designated as whatever applies among the following categories: husband, wife, son, daughter, father, mother, mother-in-law, or "other relative."

Respondent, shortly referred to as R., is the person being interviewed. The R. should preferably be the HH, or, in the absence or nonavailability of the HH, an articulate adult member of the household.

Articulate member of the household is a person in a given household who could be considered eligible to substitute as R. for the HH. An articulate member of the household is another member of the same household as the HH. Such an articulate member should be an adult in the position to express himself without unusual difficulties and he is expected to have a scope of views not much less limited than those of the HH.

III. PROCEDURE

Our survey will be conducted in Bang Chan, shortly referred to as BC. This is a rice village about 20 miles from Bangkok. The Cornell Research Center has been working in this village for many years and friendly relations have been established all over. Senior members of the Cornell Research Center have taken great pain in maintaining good rapport with the villagers and are, naturally, anxious that nothing should occur to damage the established fine relations. Each interviewer is expected to keep this in mind all the time while in BC.

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[For the author's discussion of his methods of processing data, ratings, scoring and sampling techniques, passim, see category 116, pp. 52, 53, 94, 127-156, 170-199, 215-221, 240-243, 271-311, and 364-391.]

243 426 432 Differentiation in paddy prices is limited to cases where farmers have received in advance the payment for paddy to be delivered at harvesting time. This is a common practice which is called in Thai "tog khao" (lit., fall rice). Usually, the advance price received by the farmer is about half or not more than three-fifths of what he would normally receive. Considering that cash is usually received about a month or two before the delivery of the paddy, it would seem that tog khao is a kind of loan with as high a rate of interest as from 25 to 50 per cent per month.

243 426 465 A similar practice is adopted with respect to advanced payment for piecework, where pieceworkers are committed to uproot, transplant, or harvest at about half of the prevailing rates. This is called tog raeng (lit., fall labor).

243 128 427 Tables 24 and 25, in the section on land tenure of Chapter III, show a wide range of rental rates of rice lands which have not demonstrated any marked difference in crop producing ability.

Rates of interest in Bangchan vary greatly from 0 to 10 per cent per month. This topic will be discussed more fully in later sections of this chapter.

243 434 556 The important point that should be observed in connection with these differentials in paddy prices, rates of interest, rentals, and wage is that it is the less affluent farmers who usually bear the burden of higher costs due to these practices. Thus, these differentiations serve only to widen the gap between poor and well-to-do farmers.

Chapter I

THE COMMUNITY OF BANG CHAN

The Geographical Setting

In the populous flat central plain of Thailand where Bang Chan was located, fenceless geometric rice-fields, dotted by clumps of trees, stretch as far as the eye can see. Houses, clustering occasionally into hamlets, line the canals that serve for domestic use, drainage, irrigation and communication. A few rounded-up roads lead out from Bangkok, the national capital on the Menam Chao Phraya, the great central river.

The monsoon divides the year into three seasons: a hot and wet (late May through November); a cool and dry (December to mid-February); and a hot and dry (late February to mid-May). The temperatures range annually from 59° to 89° F. (15° to 32° C.) with monthly means of 77° to 86° F. (25° to 30° C.) (de Young:5). A drop at night averages around 18° F. (10° C.) in April, and 22° F. (12° C.) in January, while the relative humidity varies between 65 per cent and 81 per cent (Hauck, et al.:12). Rainfall averages about 50 inches a year, 40 of which fall in the wet season (Janlekha:21). Because of the run-off from the mountains in the north, once a year the Menam Chao Phraya slowly rises, fills the canals and then overflows its banks, covering the plain for hundreds of miles to a depth of three feet or more. In Bang Chan, the water stood on the land from June until January, with its peak in October. From February to May the canals ran low, and the land dried and cracked from the intense heat.

The Community

In 1954, 1700 persons (336 families) lived in Bang Chan. Muslims, comprising 10 per cent of the population, lived as fully Thai citizens in all parts of the community in economic and social symbiosis with Buddhists. A few ethnic Chinese had married into Thai families and were accepted.

The community spread over an area of about 7000 rai (1000 hectares or 4 square miles). Bang Chan Canal bisected

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132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [463] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [221] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [433] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part of the Thai-Buddhist community. Information to be presented [028] on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

139 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the 484 nearest market town, ran through one edge of the village. Bus 487 service was available along this road, to either Bangkok or [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

[P. 14]

I

The Village of Bang Chan

Geographical and Cultural Setting

The heartland of Siam is the Mɛɛnaam or Caw Phrajaa Valley, a vast alluvial plain stretching out for some 250 miles north of the Gulf of Thailand and the capital city of Bangkok, where approximately 40 percent of the nation's 26.3 million persons (1960) live.[1] This Central region is distinguished geographically, and to a lesser extent culturally, from the three other major areas of Thailand: the North, a forested mountain area dominated by Chiengmai, Thailand's second largest city, and in whose outer reaches live many of the tribal peoples of Siam; the Northeast, a broad plateau region which is the largest and economically poorest area of the country; and the South, or Peninsular Thailand, a jungle and mountain area where the heaviest concentration of Thai Malay-Moslems live.

The community of Bang Chan is located some 31 kilometers northeast of Bangkok on what is essentially a flat, seemingly endless rice field, broken occasionally by tall Asiatic pines, strings of houses along canals, or clumps of trees shielding some isolated homesteads. A person seeing Bang Chan for the first time is struck particularly by the intense green of the landscape and, once off the macadam road that connects the village to Bangkok and to the market town of Minburi four kilometers to the east, the stillness of the setting, even along the thickly populated main canal where voices are muffled by the heavy foliage surrounding each house. Often in the early hours of the afternoon the only sound that one can hear in Bang Chan is the dip of the paddles of boats moving up the canal or the barking of dogs.

[1] There is no general agreement on the precise boundaries of the Mɛɛnaam Valley. Zimmerman (1931), Andrews (1935), Blanchard *et al.* (1958), and most Thai government documents use the term synonymously with "Central region," which would include the provinces east and southeast of Bangkok to the Cambodia frontier, west to the Burma border, and north of the Gulf of Thailand. Credner (1935) and deYoung (1955) on the other hand limit the term to only that portion of the Central region which falls north of Bangkok, equivalent to what Pendleton (1962) calls the "Bangkok Plain." Our population figure refers to the former usage.

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INTRODUCTION

121 This study of food habits and nutrient intakes in a Siamese rice village was undertaken in connection with the Cornell Thailand Project. The project is one of several under the auspices of the Department of Sociology and Anthropology, which are focused on the process of cultural change
114 in non-industrialized societies. Dietary studies designed to contribute to a base-line description of the community were carried out from September, 1952 through May, 1954. Local headquarters, where members of the research group kept equipment, and could stay overnight, were maintained in the village.

128 The observations to be reported fall into two general categories: 1) descriptive information concerning many aspects of the food situation in Bang Chan and 2) quantitative information on food intake, and its estimated nutrient
126 value, for 11 selected families. Qualitative information on food in Bang Chan was obtained from several sources: 1) field notes made by various members of the Cornell research group, 2) structured interviews with mothers about their own food, and that of small children in the family, 3) records of food eaten during 24-hour periods, submitted by children in the third and fourth grades of the elementary school as homework for the health class, and 4) weighed dietary studies carried
114 out in 11 selected households. Quantitative information on food intakes was obtained from the latter source only. Most of the data to be presented were obtained between September 1952 and June 1954, but supplementary information was obtained from a diary for 1955, kept by a school teacher at the request of the research group, a study of innovations made by Ralis in May 1955 (Goldsen and Ralis, 1957) and information provided at our request by members of the Cornell research group who were in Thailand in the summer of 1957.

A general account of the economic, political and social organization of Bang Chan in 1948-49, together with some material on health and diet was given in the first interim report issued on the Thailand Project (Sharp et al., 1953). The second interim report concerned aspects of health, sanitation and nutritional status in Bang Chan in 1952-54 (Hauck, 1956), and the third was a report on factors related to acceptance of innovations (Goldsen and Ralis, 1957).

THE COMMUNITY

Location, Climate, Transportation

131 Bang Chan is situated in the rice-producing area of central Thailand, about twenty miles by road northeast of Bangkok.

FOREWORD

In this Data Paper, Professor Hauck and her associates continue their analysis and reporting of the field research into conditions of health, sanitation, nutritional status, and diet carried out in Thailand during 1952, 1953, and 1954. Research operations were concentrated among the 300 households of the village of Bang Chan, whose population of about 1,700 was made up primarily of rice farming families. This community lies in the central plain of Thailand some twenty roadmiles northeast of the capital, Bangkok, whose proximity provides major and continuing stimuli to cultural change. Investigation of the processes involved in changing cultural behavior in rural Thailand is the primary objective of this and other field research conducted under the auspices of the Cornell Thailand Project.

Reference to earlier reports by Professor Hauck and her associates and to other materials providing general background information for this study will be found in the bibliography included in this interim report. Dr. Hauck, who is Professor of Food and Nutrition in the New York State College of Home Economics, Cornell University, designed and supervised the research on basic problems of health in Bang Chan reported on in this and in the other studies cited. Of the other contributors to this present report, Dr. Anusith, who has been working in the Medical School of Tulane University, is associated with the School of Public Health in Bangkok, and Dr. Saovanee, having completed her doctoral work in nutrition at Harvard University, has returned to Thailand to join the faculty in home economics at Kasetsart University. The Cornell Thailand Project is much indebted to these scholars and to other Thai and American collaborators who have contributed so much to the studies of Bang Chan.

Lauriston Sharp, Director
Cornell Thailand Project

Ithaca, New York
November, 1959

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

121 established that none of the correlated factors finally turned out to produce the disease--the necessary condition was a bacillus. Indeed, some of the factors mentioned might be viewed as results of the illness rather than as causal factors. Correlational analysis in a study of this type can establish only that the factors associated with tuberculosis constitute the context within which the necessary condition (in this case the bacillus) was known to operate. In the second example, traffic accidents, it is perfectly apparent that age , or time of day, cannot produce a car accident, but the linkage between accidents and other factors provides portions of the context where accidents occur.

Why is it important to understand this context' Such knowledge can lead to inferences about more direct causation, which serve to narrow down the clinician or experimenter's search for the necessary condition. Indeed, a necessary condition may operate only when it is imbedded in this complex matrix of other related variables--or may even be rendered inoperative when the context is changed. Thus efforts toward change or improvement can be made more effective by being directed to the relevant conditions.

It is essentially this kind of reasoning which underlies the procedure of the present study. Just as in the examples cited, linkages can lead to inferences about causation which may later be checked in the laboratory, so, in the same way, linkages discerned in the present study can lead to inferences about causal factors. They are useful chiefly in providing the context within which the decision to try out these sorts of innovations comes about. In this sense of understanding the context, efforts to produce social change may be made with more understanding of the dynamics.

We may now turn to the data collected in Bang Chan for a study of factors related to acceptance or rejection of innovations within the larger context of a rural community in contemporary Thailand.

THE COMMUNITY AND THE INNOVATIONS

The Scene of Bang Chan

361 Twenty-five miles by highway northeast of Bangkok is situ-
[131] ated the community of Bang Chan. In this section of the central plains the inhabitants live as near as possible to the rice paddies which they till, so that instead of a compact village Bang Chan is a community spreading broadly along the banks of a
[621] canal network which from its two-mile stretch through Bang Chan, covers most of Central Thailand. Under these circumstances precise definition of the community becomes difficult and might be

II. DEFINITIONS

Definitions are here provided only for a few basic terms within the context of this survey. An attempt will be made to discuss the many concepts contained in the questionnaire before the beginning of the actual field work, as the desirability to keep this guide short makes it unadvisable to go into lengthy details at the present time.

A household is a single person or a group of persons making one economic unit and distinguished as one kitchen unit. It is likely that members of the same household sleep under one roof (or roofs) belonging to one person, but the main criterion of the definition is the kitchen unit. With each kitchen goes one household. There is occasionally more than one household under one roof; this is found when more than one kitchen is encountered in one dwelling unit.

The head of the household, shortly referred to as HH, is the person whom other members of the household consider to be the head and who lives in this household - we exclude absentee heads of households.

Relationship to the HH is to be designated as whatever applies among the following categories: husband, wife, son, daughter, father, mother, mother-in-law, or "other relative."

Respondent, shortly referred to as R., is the person being interviewed. The R. should preferably be the HH, or, in the absence or nonavailability of the HH, an articulate adult member of the household.

Articulate member of the household is a person in a given household who could be considered eligible to substitute as R. for the HH. An articulate member of the household is another member of the same household as the HH. Such an articulate member should be an adult in the position to express himself without unusual difficulties and he is expected to have a scope of views not much less limited than those of the HH.

III. PROCEDURE

Our survey will be conducted in Bang Chan, shortly referred to as BC. This is a rice village about 20 miles from Bangkok. The Cornell Research Center has been working in this village for many years and friendly relations have been established all over. Senior members of the Cornell Research Center have taken great pain in maintaining good rapport with the villagers and are, naturally, anxious that nothing should occur to damage the established fine relations. Each interviewer is expected to keep this in mind all the time while in BC.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

CHAPTER II

THE COMMUNITY

Geography

131 The community of Bangchan is situated some twenty road-miles northeast of Bangkok in the heart of the economically all-important commercial rice growing area of central Thailand. Surrounded by their rice fields, the population 361 [161] of about 1,600 persons lives on some three hundred small [503] family homesteads scattered along a half dozen connecting *[243] canals. The community occupies an area of 6,500 rai,[1] or 2,600 acres, all of which, with the exception of about 300 rai of homesites and narrow strips bordering canals, is given over to the production of wet rice.

134 The soil of Bangchan area is heavy dark clay with *243 an impervious layer at a depth of about six to eight inches and is suited only to rice growing.

133 The area is essentially flat, rising slightly toward 312 the north. It receives, in addition to rain water, irrigation water channeled into it through the Saen-saeb Canal one mile to the south, Samwa Canal one mile to the east, and Khlong-song Canal one mile to the north.[2]

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[804] 1. One rai is equal to two-fifths of an acre.

2. See map on page 162.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

MAP I

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103
102
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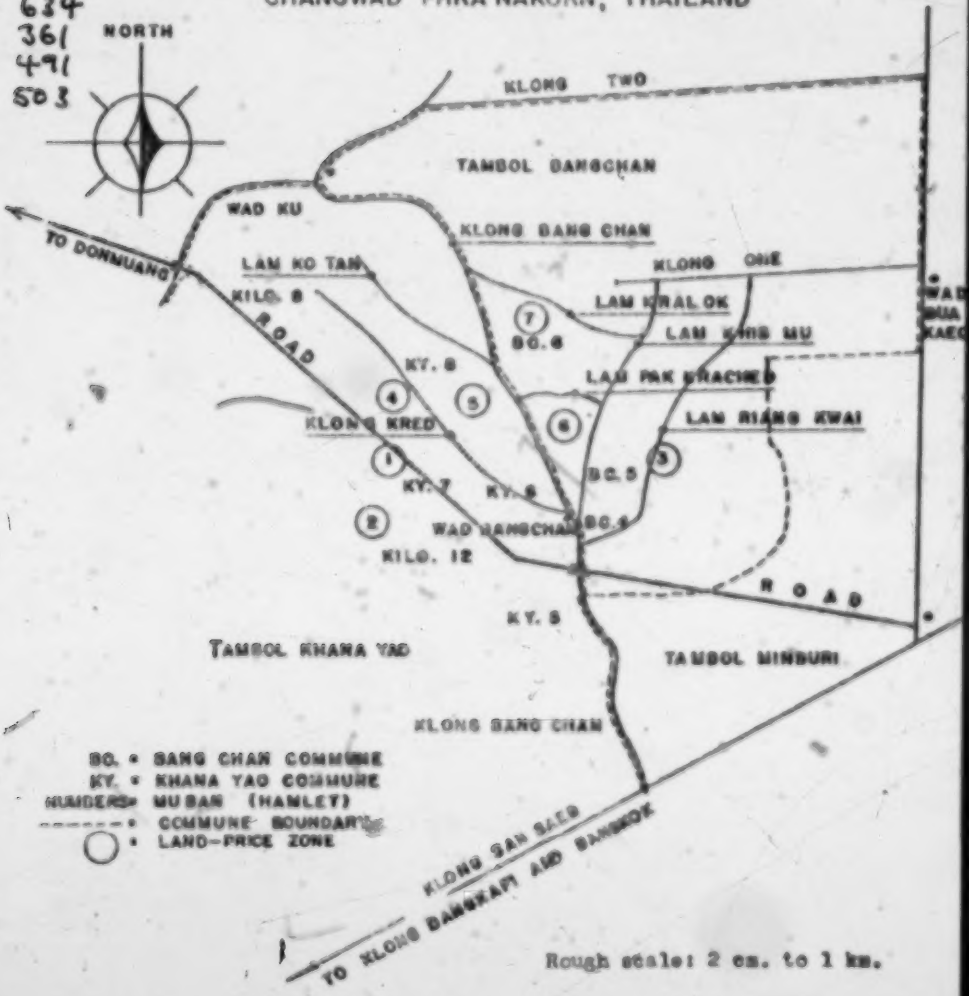
SKETCH MAP OF TAMBOL KHANA YAO, AMPHOE BANGKAPI
AND TAMBOL BANGCHAN, AMPHOE MINBURI
CHANGWAD PHRA NAKORN, THAILAND



Rough scale: 2 cm. to 1 km.

[p. i]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kan (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

121 132 243 433 565 462 142 582 584 842 851 84 826 774 75 799 782 779

Chapter I

THE COMMUNITY OF BANG CHAN

The Geographical Setting

In the populous flat central plain of Thailand where Bang Chan was located, fenceless geometric rice-fields, dotted by clumps of trees, stretch as far as the eye can see. Houses, clustering occasionally into hamlets, line the canals that serve for domestic use, drainage, irrigation, and communication. A few mounded-up roads lead out from Bangkok, the national capital on the Menam Chao Phraya, the great central river.

The monsoon divides the year into three seasons: a hot and wet (late May through November); a cool and dry (December to mid-February); and a hot and dry (late February to mid-May). The temperatures range annually from 59° to 89° F. (15° to 32° C.) with monthly means of 77° to 86° F. (25° to 30° C.) (de Young:5). A drop at night averages around 18° F. (10° C.) in April, and 22° F. (12° C.) in January, while the relative humidity varies between 86 per cent and 81 per cent (Hauck, et al.:12). Rainfall averages about 50 inches a year, 40 of which fall in the wet season (Janlekha:21). Because of the run-off from the mountains in the north, once a year the Menam Chao Phraya slowly rises, fills the canals and then overflows its banks, covering the plain for hundreds of miles to a depth of three feet or more. In Bang Chan, the water stood on the land from June until January, with its peak in October. From February to May the canals ran low, and the land dried and cracked from the intense heat.

The Community

In 1954, 1700 persons (336 families) lived in Bang Chan. Muslims, comprising 10 per cent of the population, lived as fully Thai citizens in all parts of the community in economic and social symbiosis with Buddhists. A few ethnic Chinese had married into Thai families and were accepted.

The community spread over an area of about 7000 rai (1000 hectares or 4 square miles). Bang Chan Canal bisected

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132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [965] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [18] river, provided natural conditions for raising a single crop [220] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [435] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part [028] of the Thai-Buddhist community. Information to be presented on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

193 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the 484 nearest market town, ran through one edge of the village. Bus 587 service was available along this road, to either Bangkok or [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

22 132 241 512 570 [illegible] [illegible] 24 The year starts with May, the beginning of the rice-year. At this time the rains began to soften the parched ground, and the heat slackened. School re-opened. Farmers turned to plowing, harrowing, raising the seedlings. Both sexes worked about equally in field labor, boys from 14 and girls from about 15 years of age performing tasks according to skill and strength. Everyone was in the field at dawn. The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)toc, or tiered lunch kit.

22 132 501 441 524 With the rains, the canals had filled, so that by June buyers with big rice boats could return. The few farmers who could afford to hold onto a portion of their last year's crop sold it for a better price at this time. Vegetables and fruits which had died in the long drought were replaced, and trees were planted.

24 22 132 In July the heavy transplanting season began. Because of cooperative work habits or hiring out, people worked solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly controllable. Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School [illegible] 570 vacation was scheduled at this time so both teachers and [illegible] children could help. Older children might work in the fields, [illegible] while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food for the family and grass for the buffalo. People knew the [illegible] crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ‹----WET----›							‹--COOL--›		‹--HOT--›		
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	---→ heavy		moderate	‹--heavy--›		‹-----light-----›			‹-----negligible-----			
Canals	rising			high		(floods)			lowering fast		low,dry	
Cultivation of Rice	plowing----→ seedbed grown				growing	early var. mature						
	TRANSPLANTING					‹--------HARVEST--------›						
School	vacation							vacation			vacation	
Cash available Source	cash in hand---------- rice						‹-----cash shortage----→ cash jobs---------→			main rice sale	cash in hand--	
Fruit;vegetables	--→ ‹-new planting-→								‹------annuals die-----			
Fish: Supplies	ponds drained-→								‹-----ponds drained-------			
Maturation			‹------many varieties----------›							‹---best varieties---›		
Preserving	‹----much----›			‹----------moderate----------›						‹---------most------›		
Ceremonies	ceremonies-------→			‹-----Buddhist Lent-----›							‹--ceremonies---	
Dietary survey	--→ ‹-----Round I------›					‹--------Round II--------›			‹----Round III----›		‹--Round IV-	

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 18°F (10°C) in April and 22°F (12°C) in January.

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at other seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

BANG CHAN

FOREWORD

114 The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

[013] The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on [129] health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

361 Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, [487] Minburi. A century-old canal and to the north of it a post- [491] war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

621 In 1954, when data for the present study were still being 162 gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the house- [592] holds were made up of independent nuclear families consisting of parents and unmarried children. The average size for all 243 families was 5.7 persons. Rice farming was the main occupa- 24 tion of 80 per cent of all families. The population in 1954 [463] worked and lived on about 2800 acres (7000 rai) of land. With [311] the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple [132] food of the people. During the wet season and into the cooler 28 dry season, from May or June to February, the growing of the [517] single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

621 The Thai countryside is divided into hamlets, each with [622] a headman in charge of the thirty to sixty households of the [128] hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

132 The monsoon climate of the region in which the village lies gives the area an annual rainfall, averaged over a recent ten year period, of about fifty inches; the effective rainfall, for the critical months when the rice is in the ground, is about forty inches.[3] The minimum precipitation requirement for wet rice is about seventy inches a year. This rainfall deficiency in the central plain of Thailand is made up by direct flooding from the rivers which flow in from the mountains and plateaux on the northeast, north, and west, the run-off rate fortunately being low because forests still cover much of these uplands. The whole plain is channeled for simple distribution of the spate of these rivers which occurs during October, November, and December, just before the harvest of rice. Because most fields are fed by gravity without an artificial head of water, or with only small heads impounded behind water gates, the depth and duration of flooding cannot be wholly controlled. As a result, variable water supply produces a wide variability in harvests and crop risks may be considerable. For 117 years between 1831 and 1948 the ministry of Agriculture records four major damaging floods (1831, 1879, 1917, and 1942), four years of extreme drought, thirty-five years of severe drought, and twenty-one years of moderate drought, leaving only fifty-three years of optimal supply of water.[4]

243 312

[195 731]

3. Central Service of Statistics, Statistical Yearbook of Thailand, No. 21, 1939-40-1944. Bangkok, 1950.

4. Ministry of Agriculture, Thailand and Her Agricultural Problems (Bangkok, 1950).

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243 The normal distribution of rain in the region, however, is almost ideal for single crop rice production. Heavy rainfall in May and June softens the soil for easy plowing and harrowing. During July and August, when the young plant does not require much water, the rainfall moderates. Again there is heavy rainfall in September and October when the maturing plant needs rising water as it shoots upward. Finally, during the harvesting season of December and January there is a minimum of rainfall. It is in terms of rainfall that the people divide the year into three seasons: (1) the rainy season of late May to November; (2) the cold season, December into early February; and (3) the dry hot season from late February to early May.

Vegetation

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351
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312 Of the 6,404 rai privately owned in Bangchan 6,106 rai is devoted to rice and 298 rai to homelots. During the rice season the village is seen as a vast rice field interspersed with bamboos and fruit trees on the homelots which string along the half dozen canals of the village. In the dry season only stumps of rice stalks are left in the field.

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231 Some of these may be removed by burning. With the coming of rains, which usually fall once or twice in March and four or five times in April, a variety of grasses begin to appear and the rice field is gradually transformed into a grass field, providing a pasture for the buffaloes until the next planting season when the size of the grass field available

#243
132
137 to the buffaloes will be gradually reduced by the process
231 of land preparation.

The homelot is usually surrounded on all sides,
244
245 except the one facing the canal, with bamboos which serve
351 to protect the farm home from strong wind. Within this compound there always is a kitchen garden where a variety of plants and vegetables for everyday use are grown. If the homelot is large, there may be enough room at the backyard for an orchard where fruit trees may be grown. In some cases, aquatic plants are cultivated in the canal in front of the house.

137 In addition to cultivated plants, there are to be seen also wild shrubs and vines which are more or less restricted to small strips of land along the banks of the canals. Wild aquatic vegetables, especially the morning glory, are always seen in these canals, making them appear narrower than they actually are.

Livestock

231 Buffaloes: As in most of the rice producing areas of the country, so in Bangchan buffaloes are used in all kinds of farm work where the help of draft animals is needed. Since the village is without land which can be grazed the year-round, buffaloes are not locally bred but are brought in from the northeast and other parts of the kingdom. To be sure, there are some local-born buffaloes, and these are considered to be stronger and to live longer than the imported

243 312 water started on June 10, irrigation work before that was limited to repairing the dikes) and ended on July 8.

[192] The rising of the water level in the canal from July onward, slowly at the beginning and progressively more rapidly afterward, until it reaches its ebb in November, is due to local rains as well as rains falling elsewhere which affect the general water level of the entire Central Plain. While farmers are anxious for the arrival of rains at the beginning of the rice season in order that they may get their field work started, by August their worry has shifted to too much water instead of too little. If there is too much water at this later stage when the canal water level is rapidly rising and will soon go well above the height of the dikes, there is a danger that the seedlings in the seedbed and newly transplanted rice plants may be destroyed by the flood. Every Bangchan farmer knows that as from the Buddhist Lent of each year (the full moon of the eighth lunar month -- July 27 for 1953), the fieldwork has entered a new phase when he has to spend longer hours on the field or else it might not be ready for transplanting before the canal water level rises too high to permit transplanting. Even after transplanting has been finished, unless it is done well before the flood so that the transplanted rice plants are well established on the field, the danger still exists.

243 5. Rolling. This is a necessary step following plowing and harrowing. Only if the seedbed is to be used for a second time in the year as an additional parcel after all the

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132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [443] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [220] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [433] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part of the Thai-Buddhist community. Information to be presented [028] on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

133 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the nearest market town, ran through one edge of the village. Bus 484 service was available along this road, to either Bangkok or [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

221 Despite the availability of fish and of vegetables in
435 the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

221 The two months of September and October during which
[512] the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit
[788] and take trips. A few might go on a pilgrimage. Therefore,
264 in this season, all family members were less often together
224 at the evening meal. Fishing was a continuous occupation,
[43] with some preserving and home craft. Jobs such as selling
356 food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

[342] High water caused time-consuming inconvenience only in
[33] earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

243 By November, the earliest varieties of rice matured.
221 Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could
[460] not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into
[226] the night. At this time also many varieties of fish matured
434 and men fished night after night. Just when the convenience
426 of purchased food was greatest, cash was exhausted. With
443 rice money in sight, venders might be generous with credit, but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

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[504] 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

Rice. --Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 73 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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1. In some large houses, two related family groups lived together but maintained separate kitchens.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

CHAPTER II

THE COMMUNITY

Geography

131 The community of Bangchan is situated some twenty road-miles northeast of Bangkok in the heart of the economically all-important commercial rice growing area of central 361 Thailand. Surrounded by their rice fields, the population [161] of about 1,600 persons lives on some three hundred small [503] family homesteads scattered along a half dozen connecting *[243] canals. The community occupies an area of 6,500 rai,[1] or 2,600 acres, all of which, with the exception of about 300 rai of homesites and narrow strips bordering canals, is given over to the production of wet rice.

134 The soil of Bangchan area is heavy dark clay with *243 an impervious layer at a depth of about six to eight inches and is suited only to rice growing.

• 133 The area is essentially flat, rising slightly toward 312 the north. It receives, in addition to rain water, irrigation water channeled into it through the Saen-saeb Canal one mile to the south, Samwa Canal one mile to the east, and Khlong-song Canal one mile to the north.[2]

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[804] 1. One rai is equal to two-fifths of an acre.

2. See map on page 162.

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fish was apparently regarded more lightly by many Buddhists than killing of larger animals, but fishing on (1)wan (4)phra, the weekly holy day, was forbidden. Fish were caught from the canal with nets, traps, spears and hooks. Some were trapped in trenches in the rice fields. Techniques varied with the varieties of fish mature and plentiful at different seasons.[1] Moreover, every house had a fish pond. It was usually the hole from which earth had been removed for mounding the home site, and was connected by a ditch to the canal. Fish were lured from the canal into the pond by clearing it of injurious undergrowth, planting appropriate fish-feeding plants, of

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Smaller fish were preserved as fermented fish. The fish with bones left in, were salted overnight. This product was called (1)plaa (1)raa. For fermented fish to be used as seasoning, in various dishes, the liquid was drained off, then the fish were washed and mixed with salt and specially prepared rice. This had been soaked overnight, fried and pounded. The mixture was allowed to ferment in a small jar for from 2 weeks to 2 or 3 months, depending on the product desired. Large bones were removed by putting the product through a colander before use. Fermented fish had the advantage that it could be eaten without further preparation, and the flavor was generally liked.

Small shrimp, which were caught in quantity during only about 3 weeks in February, were made into shrimp paste as follows: the shrimp were washed, mixed with salt and allowed to stand overnight. The liquid was drained off, and the shrimp were spread out on trays and exposed to the sun for a day or so. Larger ones might then be beaten to loosen the shells, which could be winnowed away. For very small shrimp, this step was omitted. The shrimp were then pounded thoroughly in a mortar, and stored in a jar for about a month before use. Very small fish were sometimes made into fish paste in the same way. The yield was about 2 kg. of the tannish or grayish colored shrimp paste from 4 baskets (4/5 tang) of shrimp. Shrimp paste or (2)ka-(2)pi was an essential ingredient of Thai hot dishes.

The liquid which was drained off from the mixture of fish or shrimp and salt in the first stage of preparing fermented fish or shrimp paste was used by some villagers to prepare (4)nam (1)plaa or fishsoy. The liquid was boiled with certain green leaves such as mango leaves, onion, garlic and salt for from 30 minutes to an hour, then it was strained. The resulting red-brown liquid was bottled and was ready for use as a condiment.

1. Sharp et al. (1953, pp. 185-196) described some common fishing techniques and listed 32 varieties of fish known to be found in Bang Chan in 1948-49.

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)canaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

000 Growing other kinds of green and yellow vegetables should be fostered. Although vitamin A value and riboflavin content appear to be critical, in choosing vegetables to be stressed, specialists in agriculture should consider greens [202] with high calcium and low oxalic acid content also. A variety of edible leaves of trees were used by a few families; some used sweet basil as a vegetable rather than just a seasoning; pumpkin and sweet potato were familiar, but less often used than would be desirable. More green or yellow vegetables which mature when canals are low and aquatic plants no longer available, would be especially good. If increased production by most households[1] is not practicable, a few of the more successful gardeners might be persuaded to produce vegetables and fruits which would help to bridge the gap between rainy seasons. Mushrooms, which can be grown readily, would provide a good source of ribo- [244] flavin when leafy vegetables are in short supply. The boom-and-bust experience in mushroom culture (See Appendix A, pp. 101-102) might, however, make its revival as a source of healthful food for home use more difficult than if the villagers did not think of mushrooms as a cash crop for which the market failed.

Eating more fruit would help to tide over the dry 262 season. Fruits were commonly used as snacks, not at meal- [264] time, hence snacks of fruit should be encouraged for adults as well as children. Bananas grew in all gardens and were available the year round. The (4)nam (4)waa variety, which was used in ceremonies, and considered safe for all, should 000 be stressed. More families could grow pineapple, which is [777] relished both raw and in curries. Mango and papaya, fruits of outstanding value for both vitamin A and ascorbic acid, would be excellent, but the idea that growing papayas is "unlucky" must be taken into account. If a few of the more thoughtful and forward-looking farmers could be persuaded to start papaya trees, even though they were not willing to plant them near the house, the practice might spread in time.

496 On the average, the Bang Chan diet did not seem to be [644] very deficient in protein, but distribution is not proportional to need, and protein deficiency may be in part responsible for periods of weight loss, or failure to gain, so 000 common among infants and children. The presence of other [134] essential nutrients in animal foods is important also. If, the local supply of fish is indeed diminishing, efforts to [228] increase it through pond culture should be continued. Abandonment of tilapia culture in Bang Chan, after about one-third of the families had tried it, (Appendix A, p. 101) suggests that not enough of the right kind of help was given

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1. Tenant farmers may not be permitted to enlarge gardens by mounding at the expense of rice fields.

243 per cent in 1949 to thirteen per cent in 1953 suggests that
464
621 the problem of population pressure on land has become more
161 acute, although it may also indicate changes in the cost
178 structure of rice production which will be discussed in Chapter VI.

434 Concluding the discussion of this section, we may
463 say that rice growing is the core of the occupational struc-
222 ture of Bangchan around which other occupations rotate. It
226 is not uncommon that one family has several occupations,
[243] and in addition to income from these most families get "free" food in the forms of fish and uncultivated aquatic plants. This is the principal reason why families with apparently no cash income still thrive.

433 It is conceivable that in years of poor rice crop
434 the family put more effort in the secondary occupations;
21 when such an attempt does not work out well -- for example,
[136] no work for manual labor and no capital for trivial trade -- an effort is made to obtain subsistence directly from nature.

In any event, every family in the village is engaged
[136] in fishing in varying degree. It is because of this fact coupled with the fact that the village fish supply is decreasing that the problem of fish conservation is very important.

243 Finally, the dynamic nature of rice farming, with varying efforts on getting extra jobs and securing free food outside the farm depending upon the increase and decrease of the rice crop, suggests that the economy of any rice

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

132 243 The normal distribution of rain in the region, however, is almost ideal for single crop rice production. Heavy rainfall in May and June softens the soil for easy plowing and harrowing. During July and August, when the young plant does not require much water, the rainfall moderates. Again there is heavy rainfall in September and October when the maturing plant needs rising water as it shoots upward. Finally, during the harvesting season of December and January there is a minimum of rainfall. It is in terms of rainfall that the people divide the year into three seasons: (1) the rainy season of late May to November; (2) the cold season, December into early February; and (3) the dry hot season from late February to early May.

Vegetation

243 137 [311] [351] [361] [312] Of the 6,404 rai privately owned in Bangchan 6,106 rai is devoted to rice and 298 rai to homelots. During the rice season the village is seen as a vast rice field interspersed with bamboos and fruit trees on the homelots which string along the half dozen canals of the village. In the dry season only stumps of rice stalks are left in the field. 192 231 Some of these may be removed by burning. With the coming of rains, which usually fall once or twice in March and four or five times in April, a variety of grasses begin to appear and the rice field is gradually transformed into a grass field, providing a pasture for the buffaloes until the next planting season when the size of the grass field available

243
192
137 to the buffaloes will be gradually reduced by the process
231 of land preparation.

244 The homelot is usually surrounded on all sides,
245 except the one facing the canal, with bamboos which serve
351 to protect the farm home from strong wind. Within this compound there always is a kitchen garden where a variety of plants and vegetables for everyday use are grown. If the homelot is large, there may be enough room at the backyard for an orchard where fruit trees may be grown. In some cases, aquatic plants are cultivated in the canal in front of the house.

137 In addition to cultivated plants, there are to be seen also wild shrubs and vines which are more or less restricted to small strips of land along the banks of the canals. Wild aquatic vegetables, especially the morning glory, are always seen in these canals, making them appear narrower than they actually are.

Livestock

231 Buffaloes: As in most of the rice producing areas of the country, so in Bangchan buffaloes are used in all kinds of farm work where the help of draft animals is needed. Since the village is without land which can be grazed the year-round, buffaloes are not locally bred but are brought in from the northeast and other parts of the kingdom. To be sure, there are some local-born buffaloes, and these are considered to be stronger and to live longer than the imported

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As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 65 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

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Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

1. In some large houses, two related family groups lived together but maintained separate kitchens.

196 Average intakes of riboflavin were estimated to be about a third, or less, of the allowances. Estimates of calcium intake were, on the average, only 20% of the allowance for Group A, and 30% of that for Group B. Although the calcium allowances were thought to be conservative, estimated requirements based on calcium balance experiments are believed by some investigators to reflect usual intake rather than need, and the extent to which man may adapt to a low calcium diet is still undetermined. Among residents of Bang Chan, no evidence was noted other than short stature and small bones, which might suggest a calcium deficiency.

The vitamin A value of diets of both Groups A and B appeared to be low. Clinical signs possibly associated with vitamin A deficiency, i.e. xerosis and phrynoderma, occurred among residents of Bang Chan (Hauck, 1956), and as would be expected from the method of selection of the two groups, such skin signs were more prominent among members of Group A than Group B. On this basis one would expect the vitamin A intake of Group A to be less than that of Group B, whereas the reverse appeared to be the case on the survey days; but the higher estimated vitamin A value for the diets of Group A than Group B may not represent a real and consistent difference. The yellow (2)sa-(5)noo flowers, for which no nutrient values were found, were used rather liberally by some families in Group B at one season and may have contributed vitamin A value. Moreover, owing to unavoidable changes in the plan for alternating visits to the two groups of families, those in Group B were visited more often when the level of water in the canals was low and the leafy water plants were not available. The unusual intake of a large amount of yellow sweet potato by one family in Group A on one survey day may also have tended to distort the picture. Families in Group A, however, used substantial amounts of sweet basil leaves, whereas in Group B, this herb was used for seasoning only.

The estimated amount of thiamine available per capita, before cooking, was 73% of the estimated allowance for Group A and 79% for Group B. Since over four-fifths of the thiamine content of the foods used by each group came from rice, and the thiamine loss when rice is cooked as it was in Bang Chan has been estimated as 75% or more (Tmangraksatve and Srisukh, 1955) the actual per capita intake of thiamine must have been below the value of 0.23 mg. per 1000 calories which the Food and Nutrition Board, National Research Council (1953) considered to be the minimal requirement for adults. According to Nicholls (1951, p. [illegible]) a ratio of Thiamine: Non-fat Calories of 0.3 - 0.35 is borderline and too low, and ratios below 0.3 are associated with beriberi-producing diets. That the diets of some of these people, as eaten, were in fact dangerously low in thiamine, is attested by the occurrence of beriberi and history of beriberi among them. Of the 15 persons, 20 years of age or older in Group A, 7 had knee jerk

125 asleep, and the mother was reluctant to wake him. Thus, for some children only three or four measurements were obtained.

The measurements of height and weight of each child were tabulated by age in months at observation.[1] A child was considered to be the age at his last month's birthday unless he was within 7 days of the next month's birthday. For example, a child who was measured at 2 months 25 days was considered to be 3 months of age, whereas a child who was measured at 2 months 20 days was considered to be 2 months old at the time of measuring.

Results.

145 Growth in Height and Weight Compared to Children Attending
145 Well Baby Clinics. - The mean, median, and range of height and
125 weight of children measured at 1 month, 3 months, 6 months, 9
141 months of age, and so on, were determined (Tables 16 and 17). These figures include data obtained for all children who were measured at any of the selected ages but not weights and measures made at intervening ages. No marked difference was noted between mean and median values for height and weight. At almost all ages the mean and median values for height and weight of boys were greater than those for girls.

For comparison with these observations, only two reports on height and weight of Thai infants have come to our notice. Both of these dealt with infants and young children attending well baby clinics in Bangkok.

145 Over a period of 5 years, Dr. Montri Mongcolsamai (1939)
141 collected data on height and weight of infants and children who came to the Well Baby Clinic at the Siriraj Hospital. These were described as normal children free from disease and ranging in age from 1 day to 6 years. Most of the children were Thai, most were from Bangkok, and most had been born in the Siriraj Hospital. In all, 2664 children were observed; 3006 measurements of height and 3570 measurements of weight were obtained.

Dr. Montri (1939) grouped the data according to age and sex, reporting mean values for height and weight of children under 1 year of age at monthly intervals and of children over 1 year of age at intervals of 6 months. For example, weights of all male infants who were 1 month old but younger than 2 months were averaged, also, weights of all male children who were 1 year old but younger than 1 1/2 years were averaged. Average weights and lengths of newborn infants and of infants under 1 month of age were included.

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1. The height and weight of each child at each observation were reported by Smith (1958).

[see p. 36-37 - Analysis]

Table 16. Mean, Median, and Range of Heights and Weights of Male Infants and Young Children Who Were Measured at Selected Ages, Bang Chan, Thailand, 1952-54.

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Age	No.	Height			Weight		
		Mean	Med.	Range	Mean	Med.	Range
		cm.	cm.	cm.	kg.	kg.	kg.
1 mo.	5	54.9	54.5	54.0-57.5	3.3	4.5	3.8- 5.25
3 mo.	9	59.4	59.5	49.5-64.5	6.1	5.5	5.0- 8.35
6 mo.	10[1]	64.8	65.8	60.0-69.0	7.2	7.0	6.0- 8.5
9 mo.	10	68.2	68.3	65.0-73.0	7.6	7.5	6.9- 8.5
1 yr.	11	70.9	70.5	65.0-77.0	8.2	8.0	7.0-11.0
1 yr. 3 mo.	12	73.3	74.0	70.0-76.0	8.6	8.5	8.0- 9.75
1 yr. 6 mo.	9	76.7	76.5	74.0-80.0	9.3	9.0	8.0-10.5
1 yr. 9 mo.	6	79.0	80.3	73.5-81.0	9.7	9.8	7.5-11.0
2 yr.	6	79.1	80.3	74.5-82.5	10.1	10.5	8.0-11.5
2 yr. 3 mo.	5	81.3	82.0	76.0-85.0	11.2	12.0	8.5-13.5
2 yr. 6 mo.	3	84.0	83.5	80.5-88.0	10.7	11.0	10.0-11.0
2 yr. 9 mo.	3	86.2	85.5	84.0-89.0	11.2	11.5	10.0-12.0
3 yr.	7	87.9	87.5	85.0-92.0	12.0	12.0	10.5-13.5
3 yr. 3 mo.	6	88.0	87.8	85.0-92.5	12.0	11.8	11.0-13.75
3 yr. 6 mo.	7	89.8	89.5	87.0-95.0	12.5	12.5	11.0-14.5
3 yr. 9 mo.	4	92.3	92.5	90.0-94.0	12.9	13.0	12.0-13.5
4 yr.	3	94.0	94.5	91.5-96.0	14.2	14.5	13.0-15.0
4 yr. 3 mo.	4	95.9	95.5	93.5-99.0	14.8	15.0	13.0-16.0

1. An additional child was weighed but height was not measured.

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Table 17. Mean, Median, and Range of Heights and Weights of Female Infants and Young Children Who Were Measured at Selected Ages, Bang Chan, Thailand, 1952-54.

Age	No.	Height			Weight		
		Mean	Med.	Range	Mean	Med.	Range
		cm.	cm.	cm.	kg.	kg.	kg.
1 mo.	9	53.1	52.0	49.0-59.0	3.9	3.75	3.35- 4.45
3 mo.	10	59.1	59.3	54.0-64.5	5.7	5.4	4.45- 7.0
6 mo.	9	62.8	62.5	57.5-69.0	6.6	6.5	4.8 - 8.0
9 mo.	11	65.3	64.5	58.0-73.0	7.0	7.0	5.35- 8.5
1 yr.	12	69.5	68.7	63.0-76.0	8.0	7.8	6.0 -11.0
1 yr. 3 mo.	11	72.1	71.0	68.0-80.5	8.2	7.5	7.0 -10.5
1 yr. 6 mo.	11	72.6	72.5	67.5-83.0	8.2	8.5	4.5 -11.0
1 yr. 9 mo.	7	77.6	75.0	74.0-86.5	9.7	9.0	8.0 -12.0
2 yr.	9	79.2	79.5	73.0-85.0	9.9	9.5	7.5 -13.0
2 yr. 3 mo.	8	78.4	78.3	74.0-82.5	9.3	9.5	7.5 -10.5
2 yr. 6 mo.	6	80.7	81.3	76.0-84.0	10.0	10.0	9.0 -11.0
2 yr. 9 mo.	6	83.4	83.0	78.5-88.0	11.3	11.8	9.7 -12.0
3 yr.	6	88.1	88.0	84.5-92.0	11.8	11.8	10.0 -14.0
3 yr. 3 mo.	3	87.3	86.5	85.0-90.5	11.5	11.5	11.0 -12.0
3 yr. 6 mo.	2	87.5	87.5	86.5-88.5	12.0	12.0	11.0 -13.0
3 yr. 9 mo.	1	87.5			14.0		

In some age groups fairly large numbers of children were observed and in other groups relatively few. None of the groups up to 4 1/2 years of age with whom the children in this series could be compared included fewer than 30 individuals. The numbers of boys and girls measured at each age were about the same. 145 125 141

Dr. Amara Chandrapanond (1957) reported the mean heights and weights of 20 babies who were weighed and measured at monthly intervals over a period of a year. She did not report values for boys and girls separately, but, in general, at each age these fell between those for males and females as reported by Dr. Mostri (1939). 145 141

In figure 1[1] the median heights of boys and girls in Bang Chan together with the number of individuals who were measured at 3, 6, 9, 12, 15, 18, or 21 months are shown in comparison to the height curves constructed from values reported by Dr. Mostri (1939). Corresponding median weights are shown in figure 2.[1] Although the groups are small, the tendency for both height and weight of young children in Bang Chan to be below that of children attending a well baby clinic in Bangkok is clear.

One should note, however, that Dr. Mostri characterized the children he observed as "free from disease", whereas some of the children of Bang Chan had colds, skin infections, or other minor disorders which might have affected their weights. Such disorders are very common, and we do not know whether or not they disqualified children attending the Well Baby Clinic from inclusion in the series for which heights and weights were reported. [164]

Graphs of height-age and weight-age were plotted for each child in this study and for small groups of children who were observed regularly over a year or so at the same ages. [228]

Most of the children increased in height in a fairly regular fashion, the slopes of their height curves being about the same as the curve drawn from Dr. Mostri's values, although there were individual variations in this. The height curves of many more children of Bang Chan were below than were above the curve drawn to Dr. Mostri's values. Of the 35 girls measured, the height curves of 6 were above, 6 were about the same as, and 23 were below the curve drawn to Dr. Mostri's values for girls. Of the 36 boys measured, the height curves of 9 were

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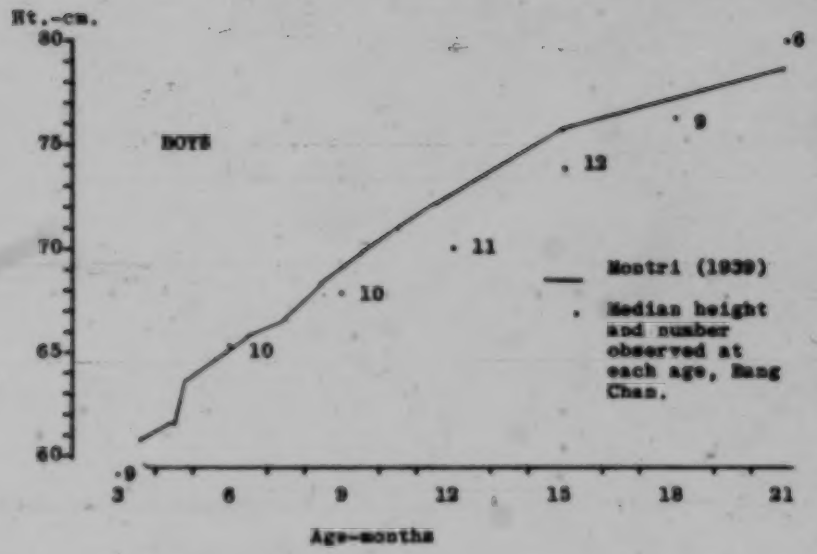
1. Mean values reported by Dr. Mostri were plotted at 1-month intervals for the first 11 months, then at the midpoint of the intervals he reported. For example, measurements reported for children 1 to 1 1/2 years of age were plotted at 1 year 3 months.

[TEXT CONTINUED ON PAGE 41].

1 [see p. 34 - Analyst; 2 [see p. 40 - Analyst]



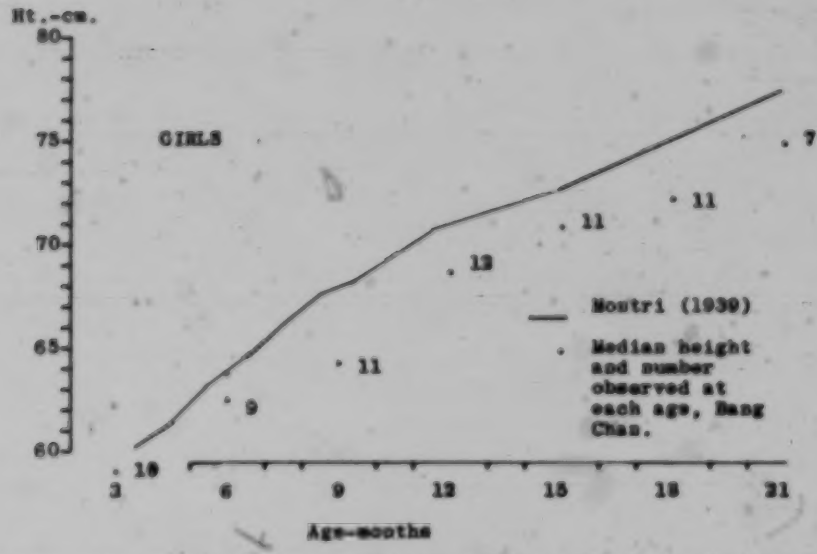


Figure 1. Median Heights of Children Under 2 Years of Age, Bang Chan, Compared to Mean for Children Attending Well Baby Clinic, Bangkok.

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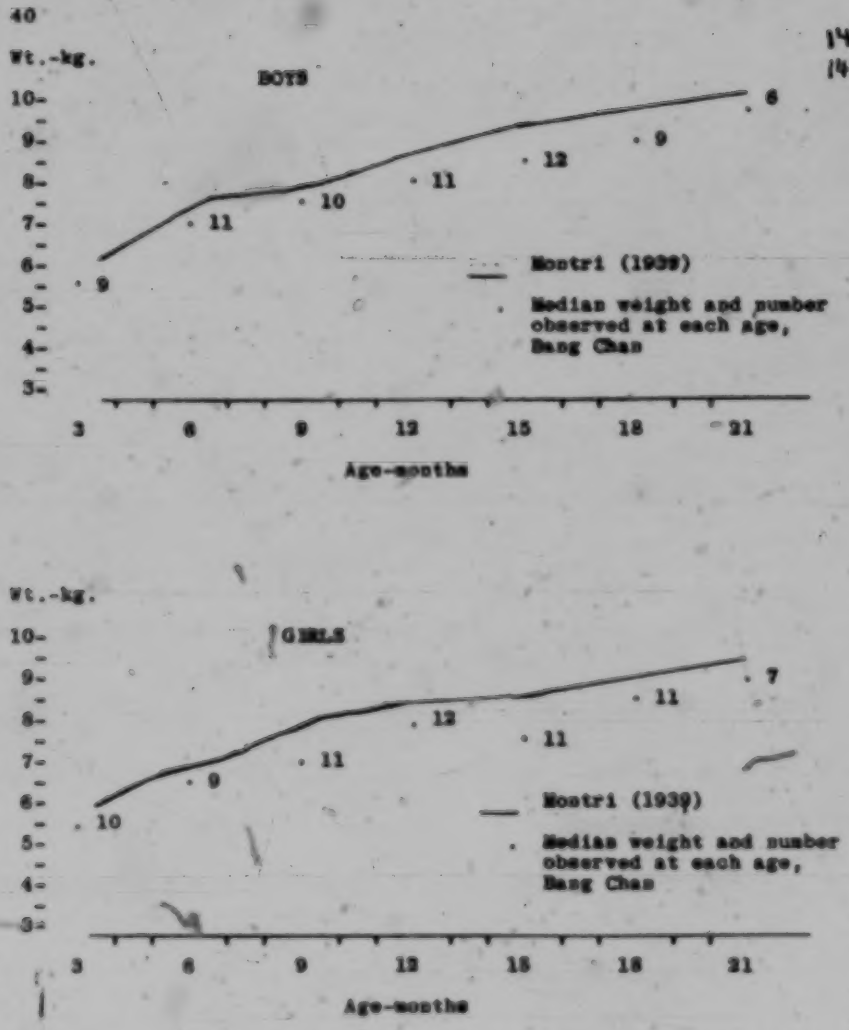

Figure 2. Median Weights of Children Under 2 Years of Age, Bang Chan, Compared With Mean for Children Attending Well Baby Clinic, Bangkok.

145 above, 12 were about the same as, and 13 were below the curve
141 drawn to Dr. Montri's values for boys.

[125] Mean heights and weights of groups of children who were observed regularly at 3-month intervals, at the same ages, were determined. The numbers in these groups were small because of difficulties encountered in collecting data precisely according to plan, but curves could be constructed for some such groups covering periods up to 12 months. These were compared to those based on Dr. Montri's values. The curves of mean height for such small groups were fairly smooth with slopes similar to but below the curve drawn to Dr. Montri's data.

For the younger groups of children in Bang Chan, curves for mean weights were generally below those drawn to Dr. Montri's values. Although the groups under 1 year of age were, on the average, about 1 week younger than the children observed by Dr. Montri, adjustment[1] did not eradicate the difference. Differences between mean weights for groups of children 18 months of age and older, in this series and in Dr. Montri's, were less consistent than for the younger children.

145 Many studies on weight of infants in the tropics indicate that weight gain during the first 6 months or so of life is comparable to that of infants in Europe and America. After 6 months of age, however, the weight curves become flattened (Jelliffe, 1955; Falkner et al., 1958). Both Dr. Montri (1939) and Dr. Amara (1957) noted this tendency in the weights of the Thai infants they studied. Dr. Montri (1939) compared the weights of the Thai children he observed with values reported for Japanese children. He found that up to 6 months of age Thai children weighed as much as Japanese children but that after this age they weighed less. Dr. Amara (1957) compared the weights of the infants she observed with those of American babies and found that after 4 months of age the Thai infants gained weight more slowly. Both of these observers expressed the opinion that Thai babies gained weight more slowly as they grew older because their diets were inadequate.

145 In general, Thai children are short and light as compared
141 to children in the U.S.A. In the Bang Chan group, for example, at 3 and 6 months the median weights for male infants approximated the 25th percentile of male infants as reported by Stuart and Stevenson (1950). At 9 months, however, the median weight was

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1. Dr. Montri calculated that boys 3 to 6 months old gained, on the average, 23 grams per day and that girls gained 22 grams per day; from 6 to 9 months the figures are 7.3 and 7.8; and from 9 to 12 months they are 7.4 and 7.6 grams, for boys and girls respectively. These values were calculated for a week and added to the mean weights of the children of Bang Chan to find out if the difference could be accounted for in this way.

about the same as the 3rd percentile of male infants in the U.S.A., and from one year on the values fall below the 3rd percentile. Norms for American children are inappropriate for use with Thai, but an increasing lag in growth such as we observed may be a matter for concern.

Weight Loss and Failure to Gain. - Many of the children in Bang Chan failed to gain or actually lost weight over periods of time. This occurred frequently between two weighings which were 1 to 4 months apart and occasionally when a child was reweighed after an interval of 6 months. In some children loss of weight or failure to gain extended over two weighing intervals. Such loss or failure to gain may be an important sign of malnutrition (Jelliffe, 1955).

Relation to age. - The ages at which the children experienced weight loss or failure to gain were determined by inspection of the weight-age graphs. As shown in Table 17A, a period of loss of weight or stationary weight was noted for only one child below the age of 6 months. Between the ages of 6 and 12 months, a time when healthy infants usually continue to grow rapidly, such periods of weight loss or failure to gain for intervals of 1 to 5 months between weighings were observed in almost 40 per cent of the infants. Dr. Mostri (1939) and Dr. Amara (1957) did not discuss the growth of individual infants, hence we do not know to what extent failure of some infants to gain weight may account for the depressed growth, on the average, which both of these observers reported for infants of this age.

During the second year of life children may be expected to gain weight less steadily, but more than 40 per cent of the children of this age in Bang Chan lost weight or failed to gain over intervals of 1 to 7 months.

After 2 years of age approximately one-half to two-thirds of the children weighed in a given 6-month period lost or failed to gain weight. Of 68 children who were weighed and measured over a period of a year or more, only 16 did not experience such loss or failure to gain between any two weighings. Most of these were in the youngest age group, only 3 were over 2 years old at the end of the study.

Possible reasons for failure to gain. - From the information available specific reasons cannot be given for the loss or failure to gain weight of so many of the young children of Bang Chan. Infection may have played a role, although we saw little evidence of severe infection and it was seldom mentioned. Increased activity as children grow older might affect rate of gain at the toddler age. For safety very young children in Bang Chan were closely tended which meant that their activities were rather restricted. As they became older and learned to

A [See p. 37 - Analyst]

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Summary

12 The general condition of health and sanitation in the village of Bang Chan, Thailand, and the nutritional status of 166 persons in a random sample including 31 village households and of 233 primary school children are described.

• 141 The mean height for adult men in the random sample was 158.6 cm. (62.4 inches) and for women, was 151.3 cm. (59.6 inches).

Mean weights for adult men and women were 53 kg. (116.6 lb.) and 45.3 kg. (99.7 lb.) respectively. Mean and median weights for various age groups did not differ markedly nor consistently.

145 In general, the Thai children were shorter and weighed less than western children of the same ages. Mean heights and median weights fell below the 10th percentile of Iowa school children whose measurements have been reported by Stuart and Meredith (1946).

The reported age at menarche, for 94 females in Bang Chan, ranged from 13 to 19 years, with a median age of 15.

As judged by the median ages of eruption of specific permanent teeth and the number of permanent teeth per child at each age level, dental maturity of children in Bang Chan was approximately the same as that of children in other regions, both western and eastern, for which data are available. Although the average number of teeth at some ages was lower for children in Bang Chan than for American or English children, the differences were neither marked nor consistent.

164 Children in the Bang Chan primary school were found to be relatively free from caries. Of 226 school children 7 to 14 years of age, whose teeth were examined by a dentist, 42% were completely free of caries of both deciduous and permanent teeth. Of the total group of children, 68% (76% of 116 boys and 60% of 110 girls) were free of caries of permanent teeth. The average number of carious permanent teeth per child was 0.5 for boys and 0.9 for girls. For children with caries experience, the figures were 1.9 and 2.3 for boys and girls respectively. None of the children examined had any filled teeth.

The reason for the relatively low incidence of caries

5: Mauck et al. D-5 (1952-1954) 1956 AO7 Central Thai AO7

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12 total of 336 households in Bang Chan (Ralis, 1955).[1] Appropriate portions of schedules used are included in Appendix A.

Women in the random sample of village households, and women whose young children were included in the child feeding study, were asked about survival of all children born to them (See Appendix A, schedule 3, item 36). With the exception of a few old women, those who reported that one or more children had died, were asked to describe the child's symptoms and the circumstances surrounding the death. When the description was clear enough to permit diagnosis, the physician recorded cause of death, as well as the informant's description.

Sanitation

Information concerning toilet practices was obtained from adult members in 30 of the 31 families included in the random sample of households. Additional information on toilet care of infants and toilet behavior of preschool children was recorded in field notes.

In connection with a weighed dietary survey, the observers noted practices relating to care of food, disposal of garbage, and source and treatment of drinking water, in 11 households on 4 days each throughout a year.

Schedules or portions of schedules used in recording the information on sanitation are included in Appendix A.

Results

Physical Measurements

141 145 Heights and Weights. - Mean values and ranges for heights, cristal heights and bicristal diameters, and both mean and median values and ranges for weights of boys and girls in the Bang Chan primary school are classified by age,

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[592] 1. In Ralis' survey, each "kitchen-unit" was considered as a household. As generally used in this data paper, "household" includes all persons living under one roof. A number of such households in Bang Chan include more than one kitchen-unit.

[see pp. 51-52--Analyst]

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in Tables 1 and 2.[1]

Heights of children in the Bang Chan elementary school were, on the average, less than mean heights for Thai children given by Yong Chutima (Chutima, 1939). They are much below the mean heights at various ages, from charts (Class II) in use at the Dept. of School Hygiene, Bangkok.[2] Curves for mean weights of children in Bang Chan cross Dr. Yong's average curves, but are well below the average curves for girls and boys in Class II, School Hygiene charts (Figures 1 and 2). When compared with mean weights for children of the same height and age, from tables in use at the Dept. of School Hygiene, however, the two curves are seen to be similar (Figure 3). Mean heights and weights for rural children as reported by Zimmerman (1931) are not very different from those in Bang Chan.

In general, Thai children are shorter and weigh less than western children of the same age. For example, at all ages, mean heights and median weights for both boys and girls in Bang Chan fell below the 10th percentile of the Iowa school children whose measurements are reported by Stuart and Meredith (1946) (Table 3).[3] Weight of clothing was probably about the same for the two groups. In general, the median weight for a given age, in Bang Chan, corresponds to the weight of the 50th percentile for Iowa children 2½ to 4 years younger. Thus the median weights for 8 year old boys and girls in Bang Chan, were similar to the weights of the 50th percentile of Iowa boys and girls 5 to 5½ years old, and the median weights of 13 year old boys and girls in Bang Chan were similar to weights of the 50th percentile of Iowa boys and girls at 10 and 10½ years of age, respectively. The tallest and heaviest boys and girls of these ages in Bang Chan were shorter and lighter than the corresponding median values for Iowa school children. On the average, however,

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1. Median weights are generally considered to be more representative of a group, but mean values are included as well, for comparison with results of certain other studies.

2. Unpublished data, based on measurements of over 15,000 children, both urban and rural, made over a period of years, and compiled by Dr. Laong. Furnished through the courtesy of Dr. Ladda of the Dept. of School Hygiene, Bangkok. Subjects were grouped as Classes I and II, of which roughly 1/3 were considered Class I.

3. Most of these observations were made in November or early December, 1952. On the basis of subsequent observations, many children were found to weigh less in May than during the previous February, but weight gains were again observed the following August and November.

TEXT CONTINUED ON PAGE 15

[see pp.9-13-An.] [see p. 14-An.]

Table 1

Heights, Weights, Cristal Heights and Bicristal Diameters
of 116 Male Children in Bang Chan Primary School, 1952-53, Classified by Age.

Age[1], Years	No. of Persons	Height		Weight[2]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
7	5	111.5	106.5-114.0	18.1	18.75	15.5-19.25	64.0	60.5-67.5	19.3	18-20.5
8	19	113.6	106.0-123.5	19.5	19.75	16.0-23.0	64.4	59.5-70.0	19.5	18-20.5
9	9	115.8	109.0-124.5	20.0	19.50	16.5-25.25	66.3	61.5-73.5	19.4	18-22.0
10	22	121.9	113.5-130.75	22.7	22.25	18.0-29.0	70.1	62.0-76.5	20.2	19-22.0
11	24	125.0	116.0-132.5	23.8	23.75	19.0-30.0	72.9	63.5-80.0	20.7	18-23.0
12	18	125.2	119.5-141.0	26.2	25.25	22.0-34.0	76.3	68.5-87.0	21.2	18-24.0
13	18	138.9	126.5-151.5	31.8	32.75	23.0-41.75	82.3	74.5-94.0	23.2	21-25.5
14	1	131.5		29.0	29.00		76.0		22.0	

1. Age to nearest birthday. For 3 boys in the school, age was uncertain, therefore their measurements were excluded from these averages.

2. For children weighing 22.75 kg. or more, weight of clothing was about ¼ kg.; clothing of smaller children weighed less than this.

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Table 2

Heights, Weights, Cristal Heights and Bicristal Diameters of 109 Female Children in Bang Chan Primary School, 1952-53, Classified by Age.

Age[1], Years	No. of Persons	Height		Weight[2]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
7	8	109.0	106.5-114.0	16.9	17.4	15.0 -18.75	61.0	58.0-65.0	18.8	18.0-20.0
8	15	113.5	103.0-125.0	19.2	19.8	14.5 -24.25	64.7	56.0-74.5	19.5	18.0-21.0
9	9	118.3	114.5-125.0	22.1	22.0	20.25-26.50	67.8	66.0-70.0	20.1	18.0-22.0
10	12	121.6	113.5-134.5	22.5	22.0	19.0 -29.75	71.0	67.0-82.0	20.3	19.0-22.0
11	24	126.9	117.5-141.0	24.7	24.4	18.5 -30.5	74.5	62.5-85.0	21.3	19.0-23.0
12	21	133.3	124.5-150.5	28.2	28.0	22.0 -38.0	79.1	72.5-87.5	22.4	20.0-25.0
13	18	137.1	126.5-146.0	30.8	30.4	21.0 -37.25	81.6	70.0-90.0	22.8	19.5-26.0
14	2	137.7	133.0-142.5	32.9	32.6	31.75-33.75	80.5	76.5-84.5	21.5	19.5-23.5

1. Age to nearest birthday. For 5 girls in the school age was uncertain, therefore their measurements were excluded from these averages.

2. For children weighing 22.75 kg. or more, weight of clothing was about ¼ kg.; clothing of smaller children weighed less than this.

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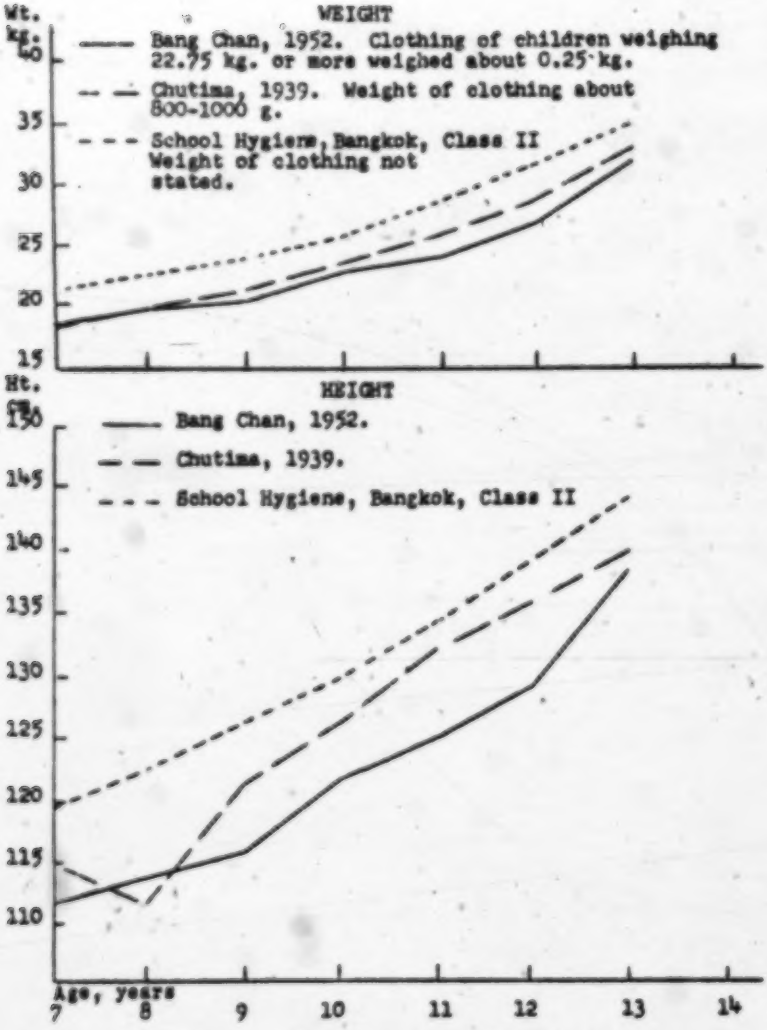

Figure 1. Mean heights and weights of boys in Bang Chan elementary school, compared with mean heights and weights of Thai children as reported by others.

BANG CHAN

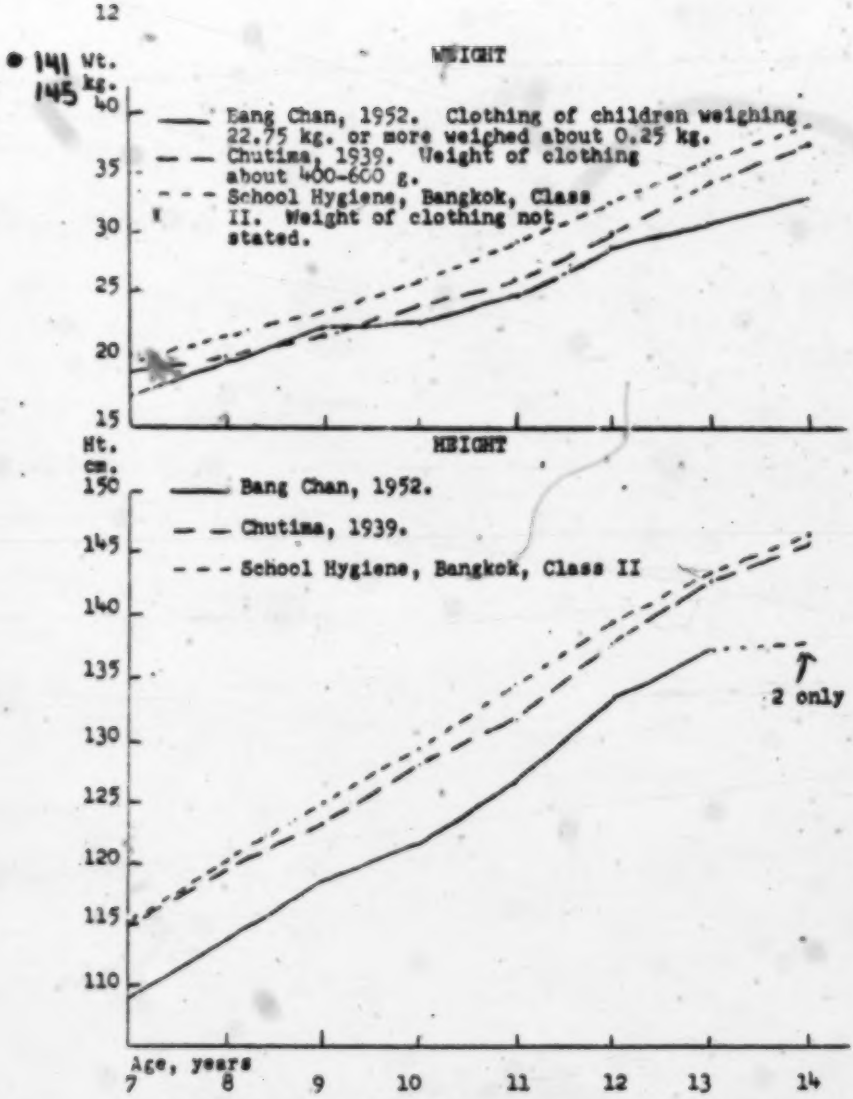

Figure 2. Mean heights and weights of girls in Bang Chan elementary school, compared with mean heights and weights of Thai children as reported by others.

BANG CHAN

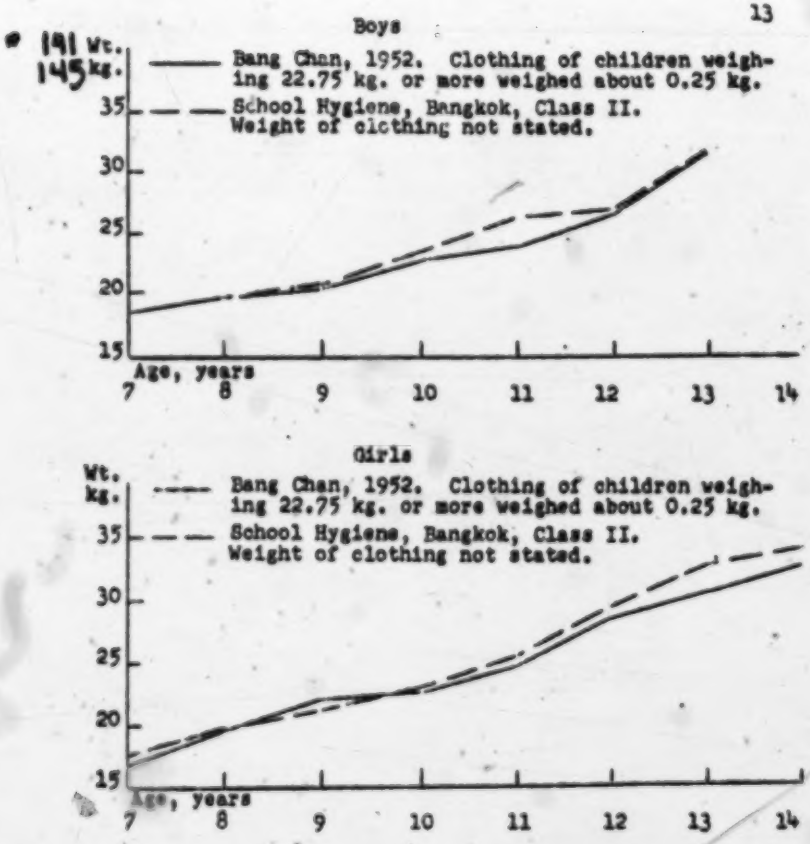

Figure 3. Mean weights of boys and girls in Bang Chan elementary school compared with mean weights (Class II) for children of the same height and age, in table used at Department of School Hygiene, Bangkok.

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Table 3

Heights, Weights and Bicristal Diameters of Children in Bang Chan Elementary School, Compared to Measurements of American School Children (Stuart and Meredith).

	Age[3]	Bang Chan				Stuart and Meredith[1]		
		Height		Wt.[2]	Bicr. diam.	Percentile 10		
		Mean	Range	Med.	Mean	Ht.	Wt.[4]	Hip Width
		cm.	cm.	kg.	cm.	cm.	kg.	cm.
Boys	8	113.6	106.0-123.5	19.75	19.5	123.1	23.2	19.2
	11	125.0	116.0-132.5	23.75	20.7	137.3	30.1	21.1
	12	129.2	119.5-141.0	25.25	21.2	142.4	32.7	21.9
	13	138.9	126.5-151.5	32.75	23.2	146.6	34.9	22.7
Girls	8	113.5	103.0-125.0	19.75	19.5	122.1	22.0	19.1
	11	126.9	117.5-141.0	24.4	21.3	137.0	28.4	21.4
	12	133.3	124.5-150.5	28.0	22.4	142.6	31.5	22.4
	13	137.1	126.5-146.0	30.4	22.8	149.1	36.2	23.6

1. H. C. Stuart and H. V. Meredith (1946).
2. Includes small amount of clothing, weighing on the average about ½ kg. for the 11-13 year old children.
3. Ages 8, 11-13 chosen for comparison because for each age from 15-24 children of each sex had been measured.
4. Weight in pounds changed to kg. Children were weighed in light socks, shorts, and for older girls, brassieres.

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141 145 Bang Chan children could not be considered as markedly underweight. Few were so thin that one could "count their ribs" and still fewer would be considered plump by American standards.

141 age[1] Heights and weights of males and females over 7 years of in the family survey are summarized in Tables 4 and 5. The height of the tallest man in the random sample was 172.5 cm. (67.9 inches) and that of the shortest, 150.5 cm. (59.3 inches). The height of the tallest woman measured was 159 cm. (62.6 inches), but one 16-year old girl, the daughter of the tallest man in the random sample, was taller, 161 cm. (63.4 inches). The height of the shortest adult woman measured was 142.5 cm. (56.1 inches). Mean heights for men and women 20 years of age or older, in the random sample were 158.6 cm. (62.4 inches) and 151. cm. (59.6 inches) respectively.

The weight of the heaviest man in the random sample was 69 kg. (151.8 pounds) and that of the heaviest woman was 70 kg. (154 pounds).

Mean weights for men and women in the random sample were 53 kg. (116.6 pounds) and 45.3 kg. (99.7 pounds) respectively. Note that, in general, differences are slight between mean and median weights for age and sex groups including a number of individuals. The group of 6 men over 60 years of age is an exception, as values for two individuals weighing 66 and 69 kg. respectivoly raise the mean markedly. An even wider range of weights occurred in the group of women 60-81 years of age, but the influence of one high weight (70 kg.) was offset by a correspondingly low weight (27 kg.). Thus the tendency noted among western populations, for mean weight to exceed the median weight for a given age and sex group, was not apparent in the population of Bang Chan.

141 145 Girls in Bang Chan may have reached adult height and weight by age 20, since the small differences in the averages for ages 15-19 (mean age 17 years) and the successively older age groups are probably associated with individual variation and the small numbers in each group (Table 5). Note that, in general, Bang Chan women did not appear to increase in weight with age, after adult stature is reached. Zimmerman (1937) states that Thai females reach maturity of height at age 17. Mean values from School Hygiene tables are similar, for heights of school girls 17 or 18 years of age and older, and mean weight increases from 17 years on are in the neighborhood of 1 or 2 kg. Mean heights for adult women in the random sample of households in Bang Chan are slightly below those recorded by other observers (Table 6).

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1. Measurements of preschool children are included in Appendix B, Table 19.

[see p.17-An.] [see p. 18-An.] [See p. 67-an.]

Table 5

Summary of Heights, Weights[1], Cristal Heights and Bicristal Diameters of 70 Females Over 7 Years Old, in the Random Sample of Village Households, Bang Chan, 1952-53

Age in Years	No. of Persons	Height		Weight[1]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
8	4	112.4	100.0-117.0	18.2	19.6	13.0 -20.5	63.1	56.0-66.0	19.4	18.0-20.5
10	4	124.0	120.0-126.5	24.1	23.6	19.75-29.5	71.9	67.5-75.0	19.8	18.0-21.0
11	2	122.3	120.0-124.5	23.1	23.1	22.0 -24.25	71.5	69.0-74.0	21.0	20.5-21.5
12	3	135.3	127.0-140.5	29.7	30.5	27.75-30.75	79.0	75.5-81.0	22.0	21.0-23.0
13	3	142.0	138.5-145.5	34.9	36.0	32.25-36.5	85.8	84.5-87.5	21.7	21.0-23.0
14	1	142.5		33.8	33.8		84.5		19.5	
15-19	8	151.3	143.5-161.0	45.4	45.5	40.0 -50.5	90.0	85.0-96.0	25.8	23.0-27.0
20-39	21	150.1	142.5-158.0	45.9	47.0	32.5 -58.0	87.2	81.5-96.5	26.3[2]	22.0-31.0
40-59	16	150.3[2]	143.5-157.0	44.0	43.0	37.0 -55.5	87.8	78.0-93.5	26.9	23.0-29.5
60-81	8	151.4	146.0-159.0	46.0[2]	46.3	27.0 -70.0	88.1[2]	84.0-93.0	28.0[2]	24.0-30.0
Partial Total 20-81	45	151.3	142.5-159.0	45.3	45.7	27.0 -70.0	87.6	78.0-96.5	26.7	22.0-31.0

1. For children weighing 22.75 kg. or more weight of clothing was about 0.25 kg; clothing of smaller school children weighed less than this. Clothing of adults weighed about 0.25 kg.
2. Measurement not obtained for one person in this group.

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Table 6

141 Mean Heights and Weights of Women in Random Sample of Village Households, Bang Chan, Compared to Heights and Weights of Thai Women as Reported by Other Observers.

	No.	Ages	Mean Height	Mean Weight[1]
			Cm.	Kg.
Women, Bang Chan	8	15-19 (Av. 17)	151.3	45.4
	45	20-81	151.3	45.3
Nurses, Siriraj Hospital[2]	198	17-26	152.6	47.5
Medical Students[2]	14	17-25	154.7	44.5
School girls[3]	76	19	152.0[4]	46.9[4]
School girls[3]	48	20	151.9[4]	47.4[4]
Laborers, Huahin Ry. Freight Service	32	20-40	156.2	49.9
Rural Women[5]	113	20-39	151.7	47.0

1. Clothing of women in Bang Chan weighed about 0.25 kg., and that of nurses about 0.5 kg. No estimates were given of weight of clothing of women in the other groups.

2. Chutima, 1939.

3. From tables in use at Dept. of School Hygiene, Bangkok.

4. Means for 2 groups classified on basis of physical status, but evidently not height or weight.

5. Calculated from figures given by Zimmerman, 1937.

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141 Among the men and boys in the random sample of house-
145 holds, however, mean height and weight was distinctly less for the age group 15-19 (mean age 17) than for the older age groups (Table 4), and mean height and weight increased with age among the subgroups. Thus mean height of 4 boys 18 and 19 years old was 157.6 cm., and mean weight 50.2 kg. as compared to 150.1 cm. and 38.5 kg. for 4 boys aged 15-16. Among the 20 men in age group 20-39, 3 were age 20, and 4 either 23 or 24. Mean heights for both of these subgroups were 157 cms. The number of young men examined in Bang Chan is too small to permit judgment as to when adult stature is attained. On the basis of measurements of Siamese males, from the medical service of the Royal Siamese Navy, Dr. Yong concludes that "growth, as regards both height and weight stops at age 22" (Chutima, 1939). According to Zimmerman (1937) rural Siamese boys increase in height steadily until about 19 years of age, at which time they seem to have reached maturity. Adult men in Bang Chan were on the average a little shorter than other groups of Thai men whose measurements were available to us (Table 7).

Bicristal Diameter. - Some additional information concerning body build is obtained from this measurement. In general, for Bang Chan children of elementary school age (Tables 1 and 2), mean bicristal diameters correspond to hip widths for Iowa school children one to three years younger (Stuart and Meredith, 1946). Mean bicristal diameters of adult men and women in Bang Chan (Tables 4 and 5) correspond approximately to the values for the 10th percentile of the 18 year old boys and girls in the Iowa study. Andrews (1943) found the hip breadth of Central Thai men to be 26.98 ± 1.48 cm., which is similar to the mean of 26.9 cm. for 31 adult males, aged 20-59, in Bang Chan.

141 Cristal Height. - At the time this study was undertaken,
145 the Committee on Anthropometry of the Food and Nutrition
125 Board, National Research Council had tentatively recommended cristal height as an additional measurement pertaining to the long dimension of the body. Mean values and ranges, for various age groups, are presented in Tables 1, 2, 4 and 5.

Dental Status

164 A dentist examined the teeth and mouths of 226 school
125 children, 7 to 14 years of age, in good natural light, using mouth mirror and probe. Teeth of persons in the random sample of village households were inspected by the physician in the course of the clinical examination. Data on dentition and dental health were analyzed by Kamalanathan (1956).

000 As noted by the Joint FAO/WHO Expert Committee on

[TEXT CONTINUED ON PAGE 21]

A,B,C,D,E [see p.: 16; 20; 9-13; 16, 17; 9-13, 16, 17]

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Table 7

141 Mean Heights and Weights of Older Boys and Men in Random Sample of Village Households, in Bang Chan, Compared to Heights and Weights of Older Boys and Men as Reported by Other Observers.

	No.	Ages	Mean Height	Mean Weight[1]
			cm.	kg.
Older boys, Bang Chan	9	15-19	153.8	45.1
Men, Bang Chan	37	20-66	158.6	53.0
Royal Agricultural College, North Siam[2]	302	17-24	164.5	55.6
Soldiers[2]	46	21	165.5	55.9
Medical students, Chulalongkorn University[2]	83	18-26	165.4	55.3
Convicts, Southern Penal Colony[2]	124	21-40	164.0	55.1
Students[3]	285	19	162.8	50.75[4]
Students[3]	50	21	164.2[4]	52.0[4]
Central Thai[5]	about 950	20+ mean 32.6	163.5 ± 5.44	53.48
Men, rural areas[6]	478	20-84	162.3 ± 5.43	54.05 ± 6.39

1. Clothing of men in Bang Chan weighed about 0.25 kg. and of the Central Thai studied by Andrews weighed approximately 0.5 kg. No estimates were given of weight of clothing of men in the other groups.

2. Chutima, 1939.

3. From tables in use at Dept. of School Hygiene, Bangkok.

4. Average for figures for 2 groups, classified on the basis of physical status, but evidently not height or weight.

5. Andrews, 1943.

6. Zimmerman, 1937.

Appendix B

Table 19

191 Summary of Heights and Weights[1] of 34 Pre-school Children in 145 the Random Sample of Village Households, Bang Chan, 1952-53

Age	No. of Persons	Height		Weight		
		Mean	Range	Mean	Median	Range
		CMs.	CMs.	KGs.	KGs.	KGs.
Males						
Mos.						
Under 1	2	50.8	50.0-51.5	3.4	3.4	2.95-3.8
5-6	1	61.0		5.5	5.5	
11-12	1	69.0		8.3	8.3	
Years						
1-1½	4	68.5	65.0-70.0	8.3	8.1	7.0 -10.0
2	1	89.0		13.0	13.0	
3-3½	3	86.7	83.5-90.0	11.2	10.5	10.0 -13.0
4-4½	4	96.5	90.5-104.5	14.2	14.0	12.75-16.25
4½-5	1	98.5		12.5	12.5	
6	2	105.0	101.5-108.5	17.0	17.0	16.5 -17.5
Females						
Mos.						
1	1	63.0		5.2	5.2	
3	1	54.0		5.5	5.5	
7	1	63.0		5.5	5.5	
9	1	60.5		6.3	6.3	
11-12	1	70.0		7.5	7.5	
Years						
1½-2	2	73.3	71.0-75.5	9.3	9.3	9.3 - 9.3
2½-3	2	81.5	81.0-82.0	10.5	10.5	10.0 -11.0
3½-4	3	85.5	85.0-86.0	11.7	12.0	10.5 -12.5
4½-5	1	94.5		12.5	12.5	
6	1	108.0		18.5	18.5	
7	1	107.5		17.5	17.5	

1. Preschool children were weighed nude.

1: Hanks E-3 (1953-1954) 1964 AO7 Central Thai AO7

[P. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

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Table 4

Summary of Heights, Weights[1], Cristal Heights and Bicristal Diameters of 62 Males Over 7 Years Old, in the Random Sample of Village Households, Bang Chan, 1952-53

Age	No. of Persons	Height		Weight[1]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
8	1	112.0		17.5	17.5		64.0		18.5	
9	1	113.5		19.5	19.5		63.0		20.0	
10	3	121.7	120.5-122.5	23.4	23.5	22.25-24.5	69.7	68.5-70.5	20.0	19-21
11	2	129.5	129.0-130.0	26.3	26.3	25.0 -27.5	77.0	75.0-79.0	21.5	21-22
12	5	130.8	119.5-137.5	27.3	28.3	22.0 -31.0	77.3	69.5-84.5	20.8	18-23
13	2	145.8	140.5-151.0	35.8	35.8	33.25-38.25	86.3	82.0-90.5	25.0	25-25
14	2	149.0	145.0-153.0	38.0	38.0	34.0 -42.0	85.5	85.0-86.0	22.5	22-23
15-19	9	153.8	141.5-167.0	45.1	45.8	35.75-53.25	91.4	82.5-101.0	25.4	24-27
20-39	20	157.5	152.0-171.0	51.8	52.0	42.5 -58.5	91.4	86.5-99.0	26.5[2]	24-28
40-59	11	160.6	151.5-172.5	54.9	55.0	45.5- 61.0	93.1	86.0-101.5	27.7	24-29
60-66	6	158.0	150.5-170.5	53.4	49.8	43.0 -69.0	91.6	86.0-101.0	27.9[2]	25-30
Partial Total 20-66	37	158.6	150.5-172.5	53.0	52.0	42.5 -69.0	91.9	86.0-101.5	27.1	24-30

1. For children weighing 22.75 kg. or more weight of clothing was about 0.25 kg., clothing of smaller school children weighed less than this. Clothing of adults weighed about 0.25 kg.
2. Measurement was not obtained for 1 person in this group.

5: Hauck et al. D-5 (1952-1954) 1956 AO7 Central Thai AO7

361 Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended 351 to live in proximity. Around the houses were kitchen gardens and threshing floors, and behind them, the fields. Bananas grew 245 abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, 241 while fish were plentiful. Water sources were the rain, kept 226 in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large 312 tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

General Nutritional Level

146 The population was physically well-formed with few physical [142] deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. [292] Food at the not-infrequent festivals was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The [178] change-over, some decades ago, from home pounding of rice to [256] steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community.

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2. Dr. H.M. Hauck, personal communication, 1959.

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146 164 women of childbearing age as compared to older women, was in the incidence of skin changes. Certain of these, i.e. xerosis, loss of elasticity and atrophic skin, were observed, in the adult group, only among older women. In some cases at least these signs may have been associated with aging rather than nutritional deficiency, unless, indeed some of the common signs of aging prove to be due to long continued intakes which are suboptimal. Among the school children, however, these skin changes were clearly abnormal.

At the clinical examination, redness of the gums was noted in a few cases only among school children, most of whom were examined in November. The dentist, who examined the children in February, noted redness of gums in about one-fourth of them. This difference may reflect a difference in standards used by the physician and dentist, or the incidence of this sign may have increased between examinations.

Certain groups of signs tended to occur together. Thus the various skin signs: phrynoderma, xerosis and loss of elasticity were often associated. Of 23 cases with absence of knee jerk, 16 had absence of ankle jerk also, and the various changes in tongue and lips not only tended to occur together, but these were often associated with absence of knee jerk and/or ankle jerk. The signs of possible nutritive deficiency most commonly noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine in the diet (Sudsaneh, 1956).

146 142 Bowleggedness was observed in a larger proportion of adults than children, but according to our criteria, did not occur in either group to the extent that we had been led to expect from previous reports. Among the 198 school children in Bang Chan who were examined by a physician in 1948-49, 69, i.e., about 35%, were reported to have bowed legs, with 4 cases called "severe" (Sharp et al. 1953, p. 249). Among the 233 children in Bang Chan school whom we examined, 9 only, i.e., less than 4%, were considered bowlegged according to our criteria, and none of these cases was severe. Chutima (1939) stated that "Another condition prevalent in Siam and fundamentally due to improper diets since infancy is bow-leggedness. Only about 25% have normal lower limbs, the rest being bowlegged and many are knock-kneed . . . The percentage of extreme bow legs is about 20% while mild bow legs form about 55% of our school children." Since these other observers determined bowleggedness by casual inspection[1], some of the difference between the earlier observations and ours may be due to difference in criteria used. The children

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1. Personal communication from Dr. Yong Chutima.

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pictured as bowlegged in Chutima's report (1939) are, however, clearly so, and represent more extreme cases than we encountered among the children in Bang Chan in 1952-53. If the incidence of bowleggedness among children in Thailand is indeed decreasing, an investigation into possible causes of the change would be of interest.

To the nutrition specialist on the team, who was not Thai, the knee joints appeared to be large. Moreover, although the term "knock knees" was not included on the schedule, it was entered frequently by the physician under comments (Appendix B, Table 22).[A] Whether this condition is related to heredity, nutritional status, or to some other environmental influence such as the life-time habit of squatting on the heels, is not known.

The physician's estimate of general appearance and vitality were recorded early in the examination, before he sought for specific signs. About 80% of all persons examined were rated as "good," and less than 1% as "poor." About half of all persons rated as "good" in general appearance and vitality were without clinical signs, as compared to about 30% of those rated "fair." Of persons with 3 or more possible signs of malnutrition, however, about 2/3 were rated "good" (Appendix B, Tables 23 and 24).[B] As has been observed frequently, such a general appraisal is not correlated with the presence or absence of clinical signs possibly associated with malnutrition. Clearly, in Bang Chan, there is little or no malnutrition of the sort that causes marked apathy.

In summary, a variety of possible signs of malnutrition were noted both in the school children and the persons in the random sample of village households. More than half of the total number examined had one or more signs possibly due to malnutrition, but the only clearly defined deficiency disease encountered was one case of beri beri[1] in a 49-year old man.

Reproductive Function in Females

Menstrual History. - Information concerning menstrual history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied.

Most of the women from whom information on age at menarche was obtained were under 40 years of age. A few could

1. History of beriberi among nursing mothers and their infants was obtained in several instances, and cases of beriberi, in both sexes, were seen among persons not included in the population samples which were examined.

[A] [see p. 71-Am.] [B] [see pp. 72, 73-Analyst]

125 puncture, although a few adults and two school age children re-
128 fused. No attempt was made to determine hemoglobin for most children under school age.

12. Stool examination. Each school child was furnished with an appropriate container labelled with his name. Pupils were asked to bring the container, with stool sample, to the teacher. Specimens were examined at the Pathology Department of Chulalongkorn Hospital.

13. Hair.

a. Dry and staring. Hair which has lost its normal sleekness and luster, and is dry and brittle.

b. Diminution or loss of pigment. In dark haired [142] people, an auburn tinge is evident in mild cases. (Note: None of the cases seen in Bang Chan had progressed beyond this to "ginger" or tow-colored hair).

14. Eyes.

a. Photophobia, when present, was always recorded. If obviously due to some non-nutritional eye disease, this fact was recorded under comments.

b. Lachrymation, which is often associated with photophobia, was recorded when elicited by brief eye examination.

c. Blepharitis. Inflammation of the muco-cutaneous junction of the eyelid, with or without scaling and crusting or loss of eyelashes. If blepharitis was obviously associated with some non-nutritional eye disease, such as trachoma, this fact was recorded under comments.

d. Xerophthalmia. The conjunctiva is abnormally dry and appears thickened, yellowish and opaque.

e. Excess conjunctival tissue. Thickening of the bulbar conjunctiva, which appears opaque and yellowish. The tissue is moist. When the subject moves the eye from side to side, a thickened conjunctiva is thrown into a moving ripple of folds.

f. Bitot's spots. An extreme form of thickening of the epithelium of the bulbar conjunctiva. The spots resemble patches of chalk paste which have been striated with a pin.

g. Corneal vascularization (gross). Loops of newly-formed capillaries appear near the corneal margin, and extend onto the cornea. Since a slit lamp, which is necessary for observation of early stages, was not used, gross changes only could be noted.

are more reliable than the new," implying familiarity with both. One Buddhist headman earnestly sought of the field-worker information on medicines, or "mechanical devices" about which he had heard, but bemoaned the costliness.

To the concepts underlying childbirth, both as physiological processes and their meanings in Bang Chan's world view, we devote the next chapter.

7. Hauck (1956) finds that the number of pregnancies compared to the years of marriage is so low as to suggest (1) relatively low fertility in many cases, or (2) the existence of some (unknown) method of birth-control (pp.31-32). She finds an unusual feature of menstrual history as compared to western standards in a somewhat older age at menarche (median and modal age was 15, with a range from 13-19 years). The onset of menopause occurred anywhere from 35-55 or even later,which is somewhat later than in western societies (pp.30-31).

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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1. In some large houses, two related family groups lived together but maintained separate kitchens.

A small, rather flavorless banana was given to young babies, 853
sometimes before they were put to the breast. This type of banana and soupy rice were the only supplementary foods given before 6 months of age. Protein-rich foods, chiefly fish and egg, were generally introduced in small amounts during the second half of the first year. Few infants were given vegetables before one year of age, and even then none had them daily. At two years of age, some children had not yet been given green vegetables. Late introduction of vegetables into the child's diet may be due to the fact that vegetables were often prepared as hot curries which were considered unsuitable for young children.

A child was usually allowed foods commonly eaten by adults by the time he was weaned, although a few informants specified that the child could have anything but "hot tasting" foods, i.e. foods containing chili. A minority of informants mentioned other foods as not good for younger babies.

Except for dietary restrictions while the mother was lying 846
by the fire, postpartum, no well established dietary taboos 853
connected with the feeding of mothers or babies were encountered. 262
The concept that a good choice of food is important to the health of both mother and child seemed to be entirely lacking.

Many of the young children in Bang Chan failed to gain, or 145
even lost, weight in the intervals between observations. Almost all infants appeared to gain steadily up to 6 months of age, but stationary weight or weight loss for periods of from 1 to 7 months was observed in most children at some time. These periods were noted more frequently among children from 2 to 3 years old than among younger ones. Such experiences were not more common after weaning than at other times, but the cause or causes of growth failure could not be determined from the information available.

Some approaches to improvement in the diet of Thai mothers 252
and children are suggested. Improvement in the diets of mothers and small children would probably parallel any improvement in the general family dietary, since food is prepared at one time for all members of the family.

124 Information on growth in height and weight is based on obser-
125 vations of 71 children, most of whom were weighed and measured 6 or 7 times. For 30 of these children, observations were made both before and after weaning.

HEALTH AND GENERAL CARE OF MOTHERS

145 Information obtained on menstrual history of girls and women in Bang Chan has been reported previously (Hauck, 1956). The median and modal reported age at menarche was 15 years with a range from 13 to 19 years.

163 Most married women in Bang Chan had children, and of 438 pregnancies reported by 84 mothers, over 90 per cent resulted in live births (Hauck, 1956).

843 Clinical History and Complaints During Pregnancy.

164 Most of the women interviewed reported no history of disease which might affect, or be affected by, nutritional status.

Four women had a history of beriberi; 3, a history of malaria; and one had active tuberculosis of which she later died. In relation to the current pregnancy, 6 women had minor complaints such as nausea in early pregnancy, faintness, and leg cramps. The physician considered these as probably physiological. Of the 4 women with more serious complaints, one who said she had pain in the abdomen and legs and difficulty in walking had manifest beriberi when seen a few days after delivery.

844 Delivery and Care of Mothers After Childbirth.

846 Information was obtained from 49 mothers concerning
125 delivery and care after childbirth. For 43 of these women, ages reported were as follows:

Reported Age (years)	Number of Mothers
20 or under	7
21-25	11
26-30	12
31-35	6
36-40	6
over 41	1

The mothers interviewed had borne from 1 to 12 children. For 8 of them, this was the first child; but 25, a majority,

GROWTH IN HEIGHT AND WEIGHT OF INFANTS AND YOUNG CHILDREN

Evidence on growth in height and weight of Thai is scant. So far as we have been able to learn, all available studies have been cross-sectional. We, therefore, undertook, in the limited time available, to make longitudinal studies of growth of infants and small children and elementary school children in Bang Chan. Observations on the latter were summarized by Thorangkul (1957) and those of infants and small children, by Smith (1958).

In general Thai children of elementary school age are shorter and weigh less than Western children of the same age. Heights of children in the Bang Chan elementary school were, on the average, less than mean heights for Thai children given by Dr. Yong Chutima (1939), and they were much below mean heights at various ages from charts (class II) in use at the Department of School Hygiene, Bangkok. Mean heights of adult men and women in Bang Chan were slightly below those recorded by other observers who have measured groups of Thai men and women (Hauck, 1956). Without further study one cannot say whether the short stature of Thai as compared to Western peoples is due to inheritance, environment, or both. Nor do we know why school age children and adults in the rice producing village of Bang Chan were, on the average, somewhat shorter than their counterparts in Bangkok only 20 miles away.

Thorangkul (1957) found that although children 7 to 14 years of age increased in height in successive 3-month intervals, a large proportion of them failed to gain weight or even lost at times and that such failure to gain occurred in more children during the dry season than during the wet season. The reason for this was not apparent from our observations. Two possible explanations are: 1) use of untreated canal water may lead to heavier infestation with intestinal parasites in the dry season and 2) leafy vegetables are almost lacking, and other vegetables are in short supply at this time. One would expect the temporary shortage of vegetables to be reflected in growth failure only when the diet is borderline in respect to some nutrients as it appears to be in Bang Chan (Hauck et al., 1958; Hauck and Sudsaneh, 1959). Either of the possible causes suggested might affect the nutritional state of other family members as well as elementary school children. All those drinking canal water and eating "adult foods" could be affected directly, whereas infants who are still largely breast fed might be affected indirectly through the quantity and quality of mother's milk available to them.

In this section observations on the growth in height and weight of infants and small children in Bang Chan are presented.

Table 14. Ages of Infants and Young Children at First and Last Measurements[1], Bang Chan, Thailand, 1953-54.

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Age at First Measurement	Age at Last Measurement	Number of Children		
		Total	Boys	Girls
months	months			
under 1[2]	13-18	16	5	11
1-3	16-21	12	8	4
4-5	20-22	5	4	1
7-9	23-27	4	2	2
11-12	22-28	6	4	2
13-18	29-35[3]	6	0	6
19-24	36-40	10	3	7
25-29	40-45	5	3	2
31-35	42-51	4	4	0
36-43	53-60	3	3	0
		71	36	35

1. In addition to these listed nine children were measured once or twice but were not followed longer.

2. Weights and recumbent lengths for infants under 1 month are not included in this report because of varying ages from one day onward, at which the initial observations were made.

3. Except for one child who was measured over a relatively short period.

asleep, and the mother was reluctant to wake him. Thus, for some children only three or four measurements were obtained.

The measurements of height and weight of each child were tabulated by age in months at observation.[1] A child was considered to be the age at his last month's birthday unless he was within 7 days of the next month's birthday. For example, a child who was measured at 2 months 25 days was considered to be 3 months of age, whereas a child who was measured at 2 months 20 days was considered to be 2 months old at the time of measuring.

Results.

Growth in Height and Weight Compared to Children Attending Well Baby Clinics. - The mean, median, and range of height and weight of children measured at 1 month, 3 months, 6 months, 9 months of age, and so on, were determined (Tables 16 and 17). These figures include data obtained for all children who were measured at any of the selected ages but not weights and measures made at intervening ages. No marked difference was noted between mean and median values for height and weight. At almost all ages the mean and median values for height and weight of boys were greater than those for girls.

For comparison with these observations, only two reports on height and weight of Thai infants have come to our notice. Both of these dealt with infants and young children attending well baby clinics in Bangkok.

Over a period of 5 years, Dr. Montri Mongcolsamai (1939) collected data on height and weight of infants and children who came to the Well Baby Clinic at the Siriraj Hospital. These were described as normal children free from disease and ranging in age from 1 day to 6 years. Most of the children were Thai, most were from Bangkok, and most had been born in the Siriraj Hospital. In all, 2664 children were observed; 3006 measurements of height and 3570 measurements of weight were obtained.

Dr. Montri (1939) grouped the data according to age and sex, reporting mean values for height and weight of children under 1 year of age at monthly intervals and of children over 1 year of age at intervals of 6 months. For example, weights of all male infants who were 1 month old but younger than 2 months were averaged, also, weights of all male children who were 1 year old but younger than 1 1/2 years were averaged. Average weights and lengths of newborn infants and of infants under 1 month of age were included.

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1. The height and weight of each child at each observation were reported by Smith (1958).

[see p. 36-37 - Analysis]

Table 16. Mean, Median, and Range of Heights and Weights of Male Infants and Young Children Who Were Measured at Selected Ages, Bang Chan, Thailand, 1952-54.

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Age	No.	Height			Weight		
		Mean	Med.	Range	Mean	Med.	Range
		cm.	cm.	cm.	kg.	kg.	kg.
1 mo.	5	54.9	54.5	54.0-57.5	3.3	4.5	3.8- 5.25
3 mo.	9	59.4	59.5	49.5-64.5	6.1	5.5	5.0- 8.35
6 mo.	10[1]	64.8	65.8	60.0-69.0	7.2	7.0	6.0- 8.5
9 mo.	10	68.2	68.3	65.0-73.0	7.6	7.5	6.9- 8.5
1 yr.	11	70.9	70.5	65.0-77.0	8.2	8.0	7.0-11.0
1 yr. 3 mo.	12	73.3	74.0	70.0-76.0	8.6	8.5	8.0- 9.75
1 yr. 6 mo.	9	76.7	76.5	74.0-80.0	9.3	9.0	8.0-10.5
1 yr. 9 mo.	6	79.0	80.3	73.5-81.0	9.7	9.8	7.5-11.0
2 yr.	6	79.1	80.3	74.5-82.5	10.1	10.5	8.0-11.5
2 yr. 3 mo.	5	81.3	82.0	76.0-85.0	11.2	12.0	8.5-13.5
2 yr. 6 mo.	3	84.0	83.5	80.5-88.0	10.7	11.0	10.0-11.0
2 yr. 9 mo.	3	86.2	85.5	84.0-89.0	11.2	11.5	10.0-12.0
3 yr.	7	87.9	87.5	85.0-92.0	12.0	12.0	10.5-13.5
3 yr. 3 mo.	6	88.0	87.8	85.0-92.5	12.0	11.8	11.0-13.75
3 yr. 6 mo.	7	89.8	89.5	87.0-95.0	12.5	12.5	11.0-14.5
3 yr. 9 mo.	4	92.3	92.5	90.0-94.0	12.9	13.0	12.0-13.5
4 yr.	3	94.0	94.5	91.5-96.0	14.2	14.5	13.0-15.0
4 yr. 3 mo.	4	95.9	95.5	93.5-99.0	14.8	15.0	13.0-16.0

1. An additional child was weighed but height was not measured.

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Table 17. Mean, Median, and Range of Heights and Weights of Female Infants and Young Children Who Were Measured at Selected Ages, Bang Chan, Thailand, 1952-54.

Age	No.	Height			Weight		
		Mean	Med.	Range	Mean	Med.	Range
		cm.	cm.	cm.	kg.	kg.	kg.
1 mo.	9	53.1	52.0	49.0-59.0	3.9	3.75	3.35- 4.45
3 mo.	10	59.1	59.3	54.0-64.5	5.7	5.4	4.45- 7.0
6 mo.	9	62.8	62.5	57.5-69.0	6.6	6.5	4.8 - 8.0
9 mo.	11	65.3	64.5	58.0-73.0	7.0	7.0	5.35- 8.5
1 yr.	12	69.5	68.7	63.0-76.0	8.0	7.8	6.0 -11.0
1 yr. 3 mo.	11	72.1	71.0	68.0-80.5	8.2	7.5	7.0 -10.5
1 yr. 6 mo.	11	72.6	72.5	67.5-83.0	8.2	8.5	4.5 -11.0
1 yr. 9 mo.	7	77.6	75.0	74.0-86.5	9.7	9.0	8.0 -12.0
2 yr.	9	79.2	79.5	73.0-85.0	9.9	9.5	7.5 -13.0
2 yr. 3 mo.	8	78.4	78.3	74.0-82.5	9.3	9.5	7.5 -10.5
2 yr. 6 mo.	6	80.7	81.3	76.0-84.0	10.0	10.0	9.0 -11.0
2 yr. 9 mo.	6	83.4	83.0	78.5-88.0	11.3	11.8	9.7 -12.0
3 yr.	6	88.1	88.0	84.5-92.0	11.8	11.8	10.0 -14.0
3 yr. 3 mo.	3	87.3	86.5	85.0-90.5	11.5	11.5	11.0 -12.0
3 yr. 6 mo.	2	87.5	87.5	86.5-88.5	12.0	12.0	11.0 -13.0
3 yr. 9 mo.	1	87.5			14.0		

In some age groups fairly large numbers of children were observed and in other groups relatively few. None of the groups up to 4 1/2 years of age with whom the children in this series could be compared included fewer than 30 individuals. The numbers of boys and girls measured at each age were about the same.

Dr. Amara Chandrapanond (1957) reported the mean heights and weights of 20 babies who were weighed and measured at monthly intervals over a period of a year. She did not report values for boys and girls separately, but, in general, at each age these fell between those for males and females as reported by Dr. Montri (1939).

In figure 1[1] the median heights of boys and girls in Bang Chan together with the number of individuals who were measured at 3, 6, 9, 12, 15, 18, or 21 months are shown in comparison to the height curves constructed from values reported by Dr. Montri (1939). Corresponding median weights are shown in figure 2.[2] Although the groups are small, the tendency for both height and weight of young children in Bang Chan to be below that of children attending a well baby clinic in Bangkok is clear.

One should note, however, that Dr. Montri characterized the children he observed as "free from disease", whereas some of the children of Bang Chan had colds, skin infections, or other minor disorders which might have affected their weights. Such disorders are very common, and we do not know whether or not they disqualified children attending the Well Baby Clinic from inclusion in the series for which heights and weights were reported.

Graphs of height-age and weight-age were plotted for each child in this study and for small groups of children who were observed regularly over a year or so at the same ages.

Most of the children increased in height in a fairly regular fashion, the slopes of their height curves being about the same as the curve drawn from Dr. Montri's[1] values, although there were individual variations in this. The height curves of many more children of Bang Chan were below than were above the curve drawn to Dr. Montri's values. Of the 35 girls measured, the height curves of 6 were above, 6 were about the same as, and 23 were below the curve drawn to Dr. Montri's values for girls. Of the 36 boys measured, the height curves of 9 were

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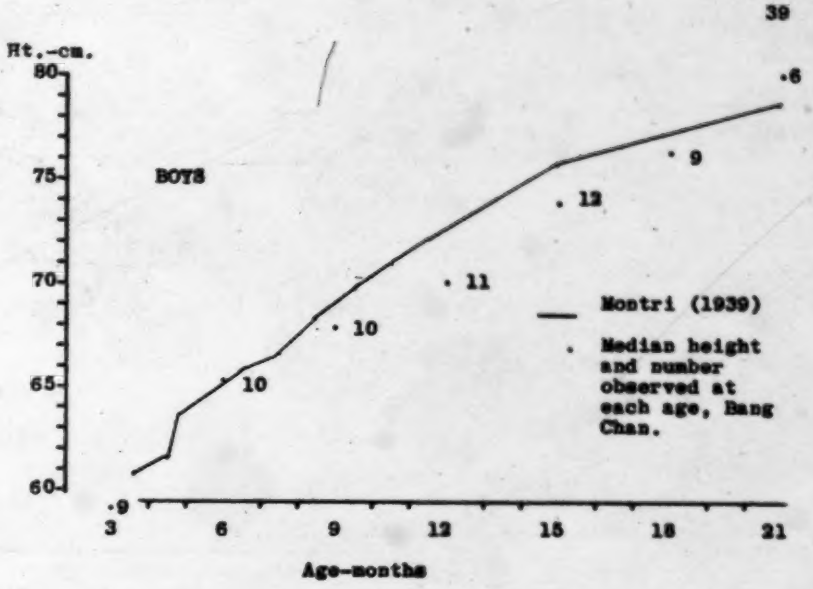
1. Mean values reported by Dr. Montri were plotted at 1-month intervals for the first 11 months, then at the midpoint of the intervals he reported. For example, measurements reported for children 1 to 1 1/2 years of age were plotted at 1 year 3 months.

[TEXT CONTINUED ON PAGE 41].

1 [See p. 34 - Analyst; 2 [See p. 40 - Analyst]

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
Bang Chan



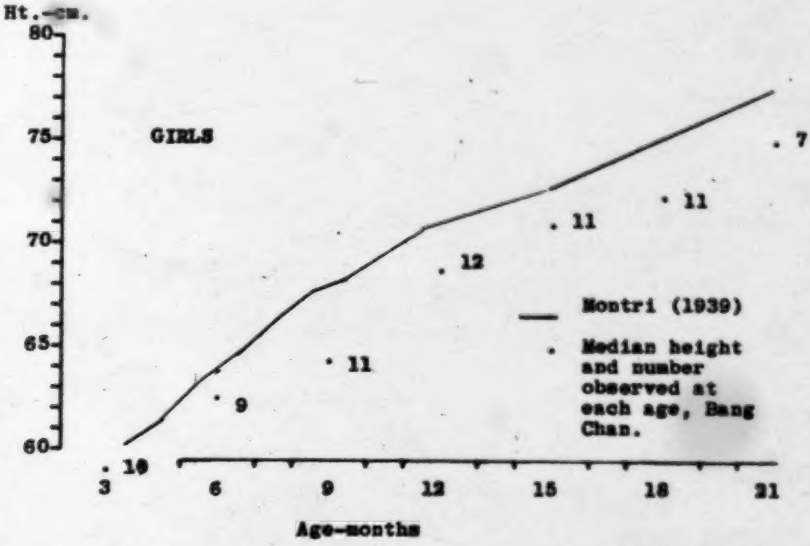


Figure 1. Median Heights of Children Under 2 Years of Age, Bang Chan, Compared to Mean for Children Attending Well Baby Clinic, Bangkok.

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
Bang Chan

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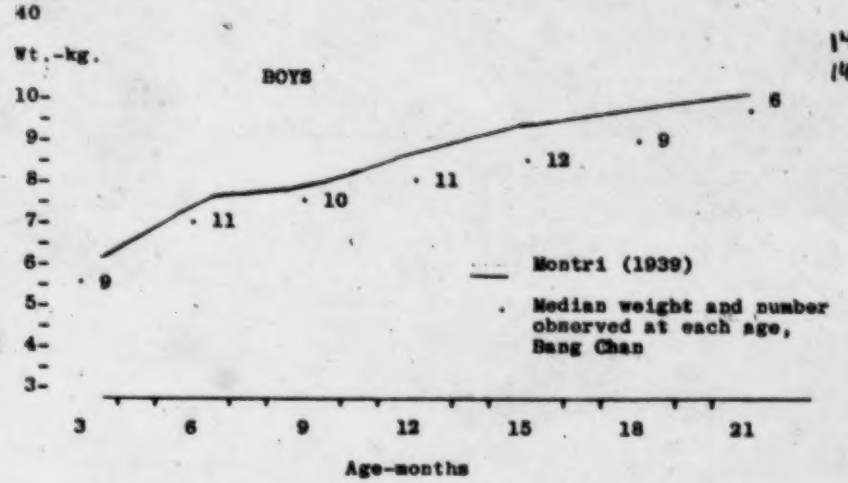

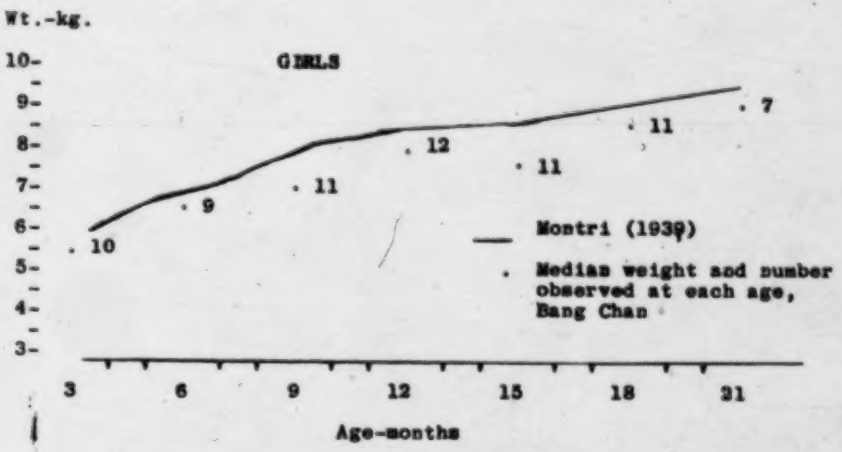

Figure 2. Median Weights of Children Under 2 Years of Age, Bang Chan, Compared With Mean for Children Attending Well Baby Clinic, Bangkok.

145 above, 12 were about the same as, and 15 were below the curve
141 drawn to Dr. Montri's values for boys.

[125] Mean heights and weights of groups of children who were observed regularly at 3-month intervals, at the same ages, were determined. The numbers in these groups were small because of difficulties encountered in collecting data precisely according to plan, but curves could be constructed for some such groups covering periods up to 12 months. These were compared to those based on Dr. Montri's values. The curves of mean height for such small groups were fairly smooth with slopes similar to but below the curve drawn to Dr. Montri's data.

For the younger groups of children in Bang Chan, curves for mean weights were generally below those drawn to Dr. Montri's values. Although the groups under 1 year of age were, on the average, about 1 week younger than the children observed by Dr. Montri, adjustment[1] did not eradicate the difference. Differences between mean weights for groups of children 15 months of age and older, in this series and in Dr. Montri's, were less consistent than for the younger children.

145 Many studies on weight of infants in the tropics indicate that weight gain during the first 6 months or so of life is comparable to that of infants in Europe and America. After 6 months of age, however, the weight curves become flattened (Jelliffe, 1955; Falkner et al., 1958). Both Dr. Montri (1939) and Dr. Amara (1957) noted this tendency in the weights of the Thai infants they studied. Dr. Montri (1939) compared the weights of the Thai children he observed with values reported for Japanese children. He found that up to 6 months of age Thai children weighed as much as Japanese children but that after this age they weighed less. Dr. Amara (1957) compared the weights of the infants she observed with those of American babies and found that after 4 months of age the Thai infants gained weight more slowly. Both of these observers expressed the opinion that Thai babies gained weight more slowly as they grew older because their diets were inadequate.

145 In general, Thai children are short and light as compared
141 to children in the U.S.A. In the Bang Chan group, for example, at 3 and 6 months the median weights for male infants approximated the 25th percentile of male infants as reported by Stuart and Stevenson (1950). At 9 months, however, the median weight was

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1. Dr. Montri calculated that boys 3 to 6 months old gained, on the average, 23 grams per day and that girls gained 22 grams per day; from 6 to 9 months the figures are 7.3 and 7.8; and from 9 to 12 months they are 7.4 and 7.6 grams, for boys and girls respectively. These values were calculated for a week and added to the mean weights of the children of Bang Chan to find out if the difference could be accounted for in this way.

about the same as the 3rd percentile of male infants in the U.S.A., and from one year on the values fell below the 3rd percentile. Norms for American children are inappropriate for use with Thai, but an increasing lag in growth such as we observed may be a matter for concern.

Weight Loss and Failure to Gain. - Many of the children in Bang Chan failed to gain or actually lost weight over periods of time. This occurred frequently between two weighings which were 1 to 4 months apart and occasionally when a child was reweighed after an interval of 6 months. In some children loss of weight or failure to gain extended over two weighing intervals. Such loss or failure to gain may be an important sign of malnutrition (Jelliffe, 1955).

Relation to age. - The ages at which the children experienced weight loss or failure to gain were determined by inspection of the weight-age graphs. As shown in Table 17, a period of loss of weight or stationary weight was noted for only one child below the age of 6 months. Between the ages of 6 and 12 months, a time when healthy infants usually continue to grow rapidly, such periods of weight loss or failure to gain for intervals of 1 to 5 months between weighings were observed in almost 40 per cent of the infants. Dr. Montri (1939) and Dr. Amara (1957) did not discuss the growth of individual infants, hence we do not know to what extent failure of some infants to gain weight may account for the depressed growth, on the average, which both of these observers reported for infants of this age.

During the second year of life children may be expected to gain weight less steadily, but more than 40 per cent of the children of this age in Bang Chan lost weight or failed to gain over intervals of 1 to 7 months.

After 2 years of age approximately one-half to two-thirds of the children weighed in a given 6-month period lost or failed to gain weight. Of 68 children who were weighed and measured over a period of a year or more, only 16 did not experience such loss or failure to gain between any two weighings. Most of these were in the youngest age group, only 3 were over 2 years old at the end of the study.

Possible reasons for failure to gain. - From the information available specific reasons cannot be given for the loss or failure to gain weight of so many of the young children of Bang Chan. Infection may have played a role, although we saw little evidence of severe infection and it was seldom mentioned. Increased activity as children grow older might affect rate of gain at the toddler age. For safety very young children in Bang Chan were closely tended which meant that their activities were rather restricted. As they became older and learned to

[See p. 37 - Analyst]

keep out of danger, they had more freedom. At this time their caloric needs may have increased more rapidly than did their caloric intake. To the student of nutrition, inadequate intake of essential nutrients seems likely to be of importance when children fail to gain.

In some areas growth failure is common at weaning, but this did not seem to be a major factor in Bang Chan. Weaning before one year of age was uncommon (Table 11, p. 24), yet growth failure occurred in many infants between 6 and 12 months.

Observations on the weight gain of 30 children whom we weighed both before and after weaning are summarized in Table 18. Four children lost or did not gain weight between the weighing before weaning and the one afterward (code numbers 13, 23, 35, and 56), while 3 others, who had been weaned shortly before a weighing, did not gain between the next two weighings (code numbers 22, 33, and 37). Thus only 7 of 30 children lost or failed to gain weight at or near the time of weaning (Table 18, I).

Weight curves of 4 children could not be interpreted in relation to weaning. Two of these (code numbers 15 and 44) were weaned just before their last weighing; for two others (code numbers 18 and 51) the intervals between weighings were long (Table 18, II). Only 5 individuals gained at each successive observation (Table 18, III), whereas 18, a majority, failed to gain at some period other than at weaning (Table 18, III and individuals designated *).

Of 19 other children who had not been weaned by the time the study ended, 10 lost weight or failed to gain at some period during the study.[1]

Since Thorangkul (1957) noted a clear association with season of weight loss or failure to gain in Bang Chan school children, the weight records of infants and young children were inspected to see if such an association occurred at younger ages also. The number of children weighed during each month and the number who had lost weight or had failed to gain since the previous weighing were counted after omitting observations on children under 6 months of age, as well as those whose most recent weighing had been obtained more than 4 months previously. Little or no indication of relation of season to weight loss or failure to gain was apparent. At the weighings in April, July, August, and September, 1953, a smaller proportion of the children had lost weight or failed to gain; but this is not

1. Of the 22 other children in the study, 20 had been breast fed but were weaned before the study began, and 2 were receiving cow's milk because of death or illness of their mothers.

[TEXT CONTINUED ON PAGE 44]

Table 18. Observations on Weight Gain for Thirty Children Weighed Before and After Weaning. 145 • 862

Sex and Code No.	Age at Obser-vations	Age at Weaning	No. of Weighings: Before Weaning	No. of Weighings: After Weaning	Comments on Weight
	months	months			
	I. INDIVIDUALS WHO LOST OR FAILED TO GAIN WEIGHT AT OR NEAR THE TIME OF WEANING.				
F 13	0-15	12/	6	1	L 12-15[1]
M 23	2-19	14	3	2	NG 12-16
M 35	4-31	17	5	2	L 15-16
*M 56	20-37	25/	3	4	L25-28; L 31-37
*M 22	2-16	15	6	1	L 9-12; NG 15-16
M 33	4-22	12	3	4	L 12-16
*M 37	9-25	19	4	3	L 9-10½; NG 20-22; L 22-25
	II. INDIVIDUALS WHOSE WEIGHT CURVES COULD NOT BE INTERPRETED IN RELATION TO WEANING.				
F 15	0-17	16	6	1	NG 14-17
M 18	0-18	12/	3	1	Not weighed between 5-18 months.
*F 44	16-39	28	5	1	L 16-17; NG 21-24; marked gain 27-39
F 51	18-35	18/	1	3	Not weighed 18-29
	III. INDIVIDUALS WHO GAINED AT EACH SUCCESSIVE OBSERVATION.				
F 10	0-16	9	4	2	
M 19	1-17	13	5	2	
M 30	3-19	14	5	2	
M 42	11-27	19	3	3	
M 45	11-28	20	3	2	

• Individuals other than those in group IV, who lost or failed to gain weight at some period other than at weaning.

Table 18, con't.

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Sex and Code No.	Age at Obser-vations	Age at Weaning	No. of Weighings Before Weaning	No. of Weighings After Weaning	Comments on Weight
	months	months			
	IV. INDIVIDUALS WHO FAILED TO GAIN AT SOME PERIOD OTHER THAN AT WEANING.				
M 4	0-15	10	5	2	NG 6-9
M 12	0-15	12/	6	1	NG 9-12; weaned right after 6th measurement; gain thereafter.
M 28	3-18	13	5	2	NG 5-6½ and 9-12
M 29	5-20	14/	3	3	L 10-14
F 31	3-21	18/	6	1	NG 6-9; L 12-15
M 32	4-21	18/	6	1	L 9-11
F 39	9-27	22	5	2	L 9½-12; NG 24-27
M 41	11-27	20/	5	2	NG 13-17
M 43	11-28	22	4	2	NG 18-21
F 46	12-32	18	2	2	NG 12-16; L 19-22
F 48	15-30	19	2	4	L 21-25
M 53	19-36	20	1	6	L 28-31
F 61	24-40	36	4	2	NG 24-27; NG 37-40
M 64	25-42	25	1	4	Weaned immediately after first weighing; large gain between 25-30 months; NG 39-42

1. L = Loss NG = No Gain Figures represent age in months.

clear evidence of a seasonal effect. If weight gain in Thai infants is related to season, this could be better defined by weighing groups of children at monthly intervals and determining when or if changes in rate of gain occur.

Although our records were not made for the purpose of correlating food intake with weight gain, and no quantitative information was obtained on the diets of mothers and babies, we attempted to see if any obvious relation existed between the variety of food eaten by the mother or the child and the child's growth. For this purpose, case studies were made of 7 infants whose records from birth onward were fairly complete. The age at last observation was from about 14 to 18 months. Four of these children had gained at each weighing and weighed more at one year of age than the average infant observed by Dr. Mostri (1939). Three were chosen because they had lost weight or failed to gain at some time during the period of observation and weighed less at one year of age than the average infant observed by Dr. Mostri. Infants of both sexes were included in each group. No illnesses or abnormalities were recorded in the clinical histories of any of these babies or their mothers. No evidence was obtained from the qualitative food records as to why some infants gained consistently and at a fairly "normal" rate, whereas others gained relatively slowly and failed to gain or lost weight at times (Smith, 1958).

Quantitative food records might have provided evidence on this point but our observations were inadequate for this purpose. Such quantitative records should include estimations of the amount of mother's milk obtained by the infants, based on the baby's weight before and after nursing, as well as records of supplementary food given. Analysis of the mother's milk, particularly for the content of the water soluble vitamins which are influenced by the mother's diet, should also help to shed light on the cause or causes of the common failure to gain weight among older infants and small children in Bang Chan. No cases of beriberi occurred among the infants we observed, but in two instances siblings had died of infantile beriberi.

Evidence of protein malnutrition has not been commonly recognized in rice eating areas, but one must consider the possibility that these children may be in a state analagous to pre-kwashiorkor. Development of the clinically recognizable protein deficiency disease may be forestalled when the child learned to feed himself and eats more liberally of rice with some fish and egg. Of the 54 children with kwashiorkor observed by Metrasiri and Metrasiri (1955) in Bangkok, many were weaned earlier than was usual in Bang Chan. Most of them, however, had been breast fed, and 4 were still being breast fed when the disease was diagnosed.

145 In summary, although infants and children in Bang Chan
121 increased steadily in height, the rate of increase tended to be less than that of infants observed in a well baby clinic in Bangkok and much less than is usual for Western infants.
[146] Repeated periods of failure to gain in weight, or even weight loss, which we observed in infants and small children as well as in school children 7 to 14 years of age, may be evidence of unsatisfactory nutrition and might account in large part for the relatively small size of adults in this area. Extended longitudinal studies on growth of Thai children are needed, as are studies of food intake, intestinal parasitism, and other conditions which may lead to growth failure. Controlled therapeutic trials would help in recognizing the more serious of many problems of child health in this region.

[p 48 is blank]

BANG CHAN

Summary

12 The general condition of health and sanitation in the village of Bang Chan, Thailand, and the nutritional status of 166 persons in a random sample including 31 village households and of 233 primary school children are described.

141 The mean height for adult men in the random sample was 158.6 cm. (62.4 inches) and for women, was 151.3 cm. (59.6 inches).

Mean weights for adult men and women were 53 kg. (116.6 lb.) and 45.3 kg. (99.7 lb.) respectively. Mean and median weights for various age groups did not differ markedly nor consistently.

• 145 In general, the Thai children were shorter and weighed less than western children of the same ages. Mean heights and median weights fell below the 10th percentile of Iowa school children whose measurements have been reported by Stuart and Meredith (1946).

The reported age at menarche, for 94 females in Bang Chan, ranged from 13 to 19 years, with a median age of 15.

As judged by the median ages of eruption of specific permanent teeth and the number of permanent teeth per child at each age level, dental maturity of children in Bang Chan was approximately the same as that of children in other regions, both western and eastern, for which data are available. Although the average number of teeth at some ages was lower for children in Bang Chan than for American or English children, the differences were neither marked nor consistent.

164 Children in the Bang Chan primary school were found to be relatively free from caries. Of 226 school children 7 to 14 years of age, whose teeth were examined by a dentist, 42% were completely free of caries of both deciduous and permanent teeth. Of the total group of children, 68% (76% of 116 boys and 60% of 110 girls) were free of caries of permanent teeth. The average number of carious permanent teeth per child was 0.5 for boys and 0.9 for girls. For children with caries experience, the figures were 1.9 and 2.3 for boys and girls respectively. None of the children examined had any filled teeth.

The reason for the relatively low incidence of caries

125 included adults of both sexes and some preschool children who
123 were unwilling to allow the physician to examine them. The small non-response group included persons of both sexes and a wide range of ages, and would therefore not be expected to bias the sample seriously. In general, rapport and cooperation were excellent.

Reproductive Function in Females

[145] Information concerning menstrual history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 35).

Information on child-bearing history was obtained from women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 36).

Illness and Injury

12 [164] Evidence concerning the nature and extent of illness and injury in Bang Chan was obtained from various sources:

1) direct observation by the physician at the time of the physical examination, or when the physician was asked to visit a sick person in the village;

2) field notes in which information concerning illnesses, accidents and deaths were recorded as research workers learned of them; and

3) information obtained by structured interview in connection with surveys conducted by various persons working on the Cornell Thailand Project.

Adults in households which were included in the random sample were asked after the clinical examination whether any family member had been ill or injured during the past year. If so, the interviewer asked the nature of the illness or injury and what was done. The portion of schedule 6 which relates to this is included in Appendix A.

Some questions on illness were included in a survey of household heads in Hamlet KY-7 (Hanks, 1954) and in a structured interview to which there were 335 respondents from the

[see pp. 51-52--Analyst]

12 total of 336 households in Bang Chan (Ralis, 1955).[1] Appropriate portions of schedules used are included in Appendix A.

Women in the random sample of village households, and women whose young children were included in the child feeding study, were asked about survival of all children born to them (See Appendix A, schedule 3, item 36). With the exception of a few old women, those who reported that one or more children had died, were asked to describe the child's symptoms and the circumstances surrounding the death. When the description was clear enough to permit diagnosis, the physician recorded cause of death, as well as the informant's description.

Sanitation

Information concerning toilet practices was obtained from adult members in 30 of the 31 families included in the random sample of households. Additional information on toilet care of infants and toilet behavior of preschool children was recorded in field notes.

In connection with a weighed dietary survey, the observers noted practices relating to care of food, disposal of garbage, and source and treatment of drinking water, in 11 households on 4 days each throughout a year.

Schedules or portions of schedules used in recording the information on sanitation are included in Appendix A.

Results

Physical Measurements

141 • 145 Heights and Weights. - Mean values and ranges for heights, cristal heights and bicristal diameters, and both mean and median values and ranges for weights of boys and girls in the Bang Chan primary school are classified by age,

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[592] 1. In Ralis' survey, each "kitchen-unit" was considered as a household. As generally used in this data paper, "household" includes all persons living under one roof. A number of such households in Bang Chan include more than one kitchen-unit.

[see pp. 51-52--Analyst]

in Tables 1 and 2.[1] A

Heights of children in the Bang Chan elementary school were, on the average, less than mean heights for Thai children given by Yong Chutima (Chutima, 1939). They are much below the mean heights at various ages, from charts (Class II) in use at the Dept. of School Hygiene, Bangkok.[2] Curves for mean weights of children in Bang Chan cross Dr. Yong's average curves, but are well below the average curves for girls and boys in Class II, School Hygiene charts (Figures 1 and 2). When compared with mean weights for children of the same height and age, from tables in use at the Dept. of School Hygiene, however, the two curves are seen to be similar (Figure 3). Mean heights and weights for rural children as reported by Zimmerman (1931) are not very different from those in Bang Chan.

In general, Thai children are shorter and weigh less than western children of the same age. For example, at all ages, mean heights and median weights[3] for both boys and girls in Bang Chan fell below the 10th percentile of the Iowa school children whose measurements are reported by Stuart and Meredith (1946) (Table 3). Weight of clothing was probably about the same for the two groups. In general, the median weight for a given age, in Bang Chan, corresponds to the weight of the 50th percentile for Iowa children 2½ to 4½ years younger. Thus the median weights for 8 year old boys and girls in Bang Chan, were similar to the weights of the 50th percentile of Iowa boys and girls 5 to 5½ years old, and the median weights of 13 year old boys and girls in Bang Chan were similar to weights of the 50th percentile of Iowa boys and girls at 10 and 9½ years of age, respectively. The tallest and heaviest boys and girls of these ages in Bang Chan were shorter and lighter than the corresponding median values for Iowa school children. On the average, however,

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1. Median weights are generally considered to be more representative of a group, but mean values are included as well, for comparison with results of certain other studies.

2. Unpublished data, based on measurements of over 15,000 children, both urban and rural, made over a period of years, and compiled by Dr. Laeng. Furnished through the courtesy of Dr. Ladda of the Dept. of School Hygiene, Bangkok. Subjects were grouped as Classes I and II, of which roughly 1/3 were considered Class I.

3. Most of these observations were made in November or early December, 1952. On the basis of subsequent observations, many children were found to weigh less in May than during the previous February, but weight gains were again observed the following August and November.

TEXT CONTINUED ON PAGE 15

A [see pp.9-13-An.] B [see p. 14-An.]

Table 1

Heights, Weights, Cristal Heights and Bicristal Diameters of 116 Male Children in Bang Chan Primary School, 1952-53, Classified by Age.

Age[1], Years	No. of Persons	Height		Weight[2]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
7	5	111.5	106.5-114.0	18.1	18.75	15.5-19.25	64.0	60.5-67.5	19.3	18-20.5
8	19	113.6	106.0-123.5	19.5	19.75	16.0-23.0	64.4	59.5-70.0	19.5	18-20.5
9	9	115.8	109.0-124.5	20.0	19.50	16.5-25.25	66.3	61.5-73.5	19.4	18-22.0
10	22	121.9	113.5-130.75	22.7	22.25	18.0-29.0	70.1	62.0-76.5	20.2	19-22.0
11	24	125.0	116.0-132.5	23.8	23.75	19.0-30.0	72.9	63.5-80.0	20.7	18-23.0
12	18	129.2	119.5-141.0	26.2	25.25	22.0-34.0	76.3	68.5-87.0	21.2	18-24.0
13	18	138.9	126.5-151.5	31.8	32.75	23.0-41.75	82.3	74.5-94.0	23.2	21-25.5
14	1	131.5		29.0	29.00		76.0		22.0	

1. Age to nearest birthday. For 3 boys in the school, age was uncertain, therefore their measurements were excluded from these averages.

2. For children weighing 22.75 kg. or more, weight of clothing was about ¼ kg.; clothing of smaller children weighed less than this.

5: Hauck et al. D-5 (1952-1954) 1956 AO7 Central Thai AO7

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5: Hauck et al. D-5 (1952-1954) 1956 AO7 Central Thai AO7

Table 2

Heights, Weights, Cristal Heights and Bicristal Diameters of 109 Female Children in Bang Chan Primary School, 1952-53, Classified by Age.

Age[1], Years	No. of Persons	Height		Weight[2]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
7	8	109.0	106.5-114.0	16.9	17.4	15.0 -18.75	61.0	58.0-65.0	18.8	18.0-20.0
8	15	113.5	103.0-125.0	19.2	19.8	14.5 -24.25	64.7	56.0-74.5	19.5	18.0-21.0
9	9	118.3	114.5-125.0	22.1	22.0	20.25-26.50	67.8	66.0-70.0	20.1	18.0-22.0
10	12	121.6	113.5-134.5	22.5	22.0	19.0 -29.75	71.0	67.0-82.0	20.3	19.0-22.0
11	24	126.9	117.5-141.0	24.7	24.4	18.5 -30.5	74.5	62.5-85.0	21.3	19.0-23.0
12	21	133.3	124.5-150.5	28.2	28.0	22.0 -38.0	79.1	72.5-87.5	22.4	20.0-25.0
13	18	137.1	126.5-146.0	30.8	30.4	21.0 -37.25	81.6	70.0-90.0	22.8	19.5-26.0
14	2	137.7	133.0-142.5	32.9	32.6	31.75-33.75	80.5	76.5-84.5	21.5	19.5-23.5

1. Age to nearest birthday. For 5 girls in the school age was uncertain, therefore their measurements were excluded from these averages.

2. For children weighing 22.75 kg. or more, weight of clothing was about ¼ kg.; clothing of smaller children weighed less than this.

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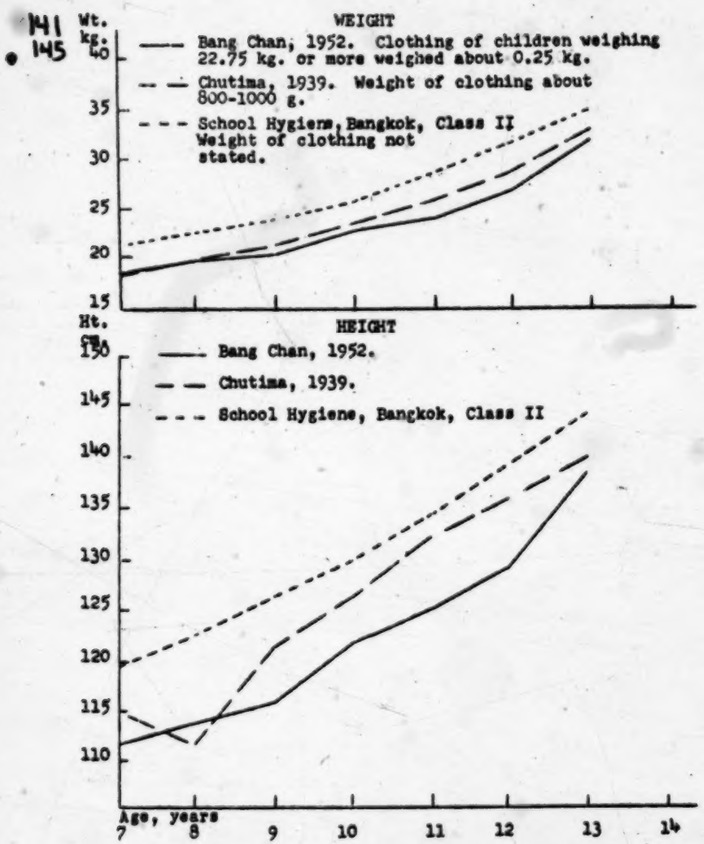

Figure 1. Mean heights and weights of boys in Bang Chan elementary school, compared with mean heights and weights of Thai children as reported by others.

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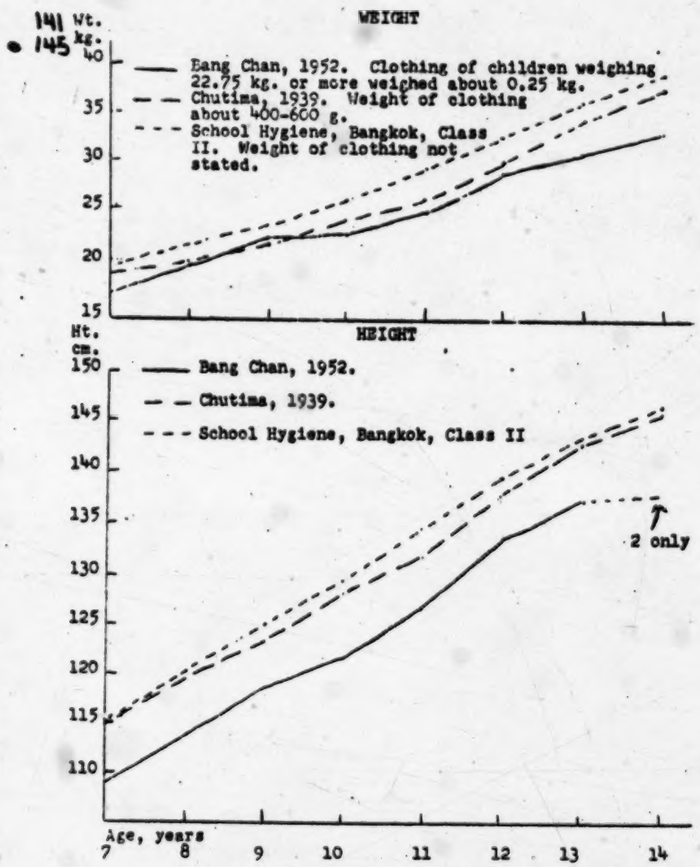

Figure 2. Mean heights and weights of girls in Bang Chan elementary school, compared with mean heights and weights of Thai children as reported by others.

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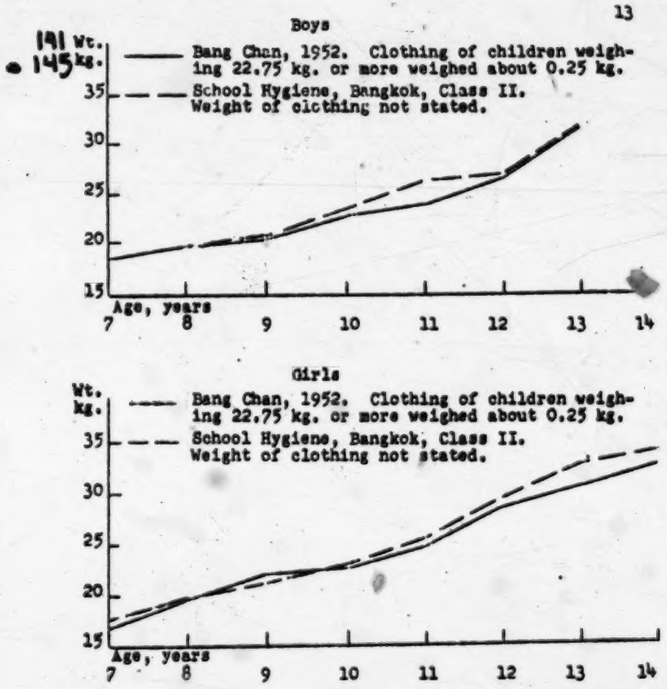

Figure 3. Mean weights of boys and girls in Bang Chan elementary school compared with mean weights (Class II) for children of the same height and age, in table used at Department of School Hygiene, Bangkok.

5: Hauck et al. D-5 (1952-1954) 1956 AO7 Central Thai AO7
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Table 3

Heights, Weights and Bicristal Diameters of Children in Bang Chan Elementary School, Compared to Measurements of American School Children (Stuart and Meredith).

		Bang Chan				Stuart and Meredith[1]		
		Height		Wt.[2]	Bicr. diam.	Percentile 10		
	Age[3]	Mean	Range	Med.	Mean	Ht.	Wt.[4]	Hip Width
		cm.	cm.	kg.	cm.	cm.	kg.	cm.
Boys	8	113.6	106.0-123.5	19.75	19.5	123.1	23.2	19.2
	11	125.0	116.0-132.5	23.75	20.7	137.3	30.1	21.1
	12	129.2	119.5-141.0	25.25	21.2	142.4	32.7	21.9
	13	138.9	126.5-151.5	32.75	23.2	146.6	34.9	22.7
Girls	8	113.5	103.0-125.0	19.75	19.5	122.1	22.0	19.1
	11	126.9	117.5-141.0	24.4	21.3	137.0	28.4	21.4
	12	133.3	124.5-150.5	28.0	22.4	142.6	31.5	22.4
	13	137.1	126.5-146.0	30.4	22.8	149.1	36.2	23.6

1. H. C. Stuart and H. V. Meredith (1946).
2. Includes small amount of clothing, weighing on the average about ½ kg. for the 11-13 year old children.
3. Ages 8, 11-13 chosen for comparison because for each age from 15-24 children of each sex had been measured.
4. Weight in pounds changed to kg. Children were weighed in light socks, shorts, and for older girls, brassieres.

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141 Bang Chan children could not be considered as markedly under-
145 weight. Few were so thin that one could "count their ribs" and still fewer would be considered plump by American standards.

141 Heights and weights of males and females over 7 years of age[1] in the family survey are summarized in Tables 4 and 5. The height of the tallest man in the random sample was 172.5 cm. (67.9 inches) and that of the shortest, 150.5 cm. (59.3 inches). The height of the tallest woman measured was 159 cm. (62.6 inches), but one 16-year old girl, the daughter of the tallest man in the random sample, was taller, 161 cm. (63.4 inches). The height of the shortest adult woman measured was 142.5 cm. (56.1 inches). Mean heights for men and women 20 years of age or older, in the random sample were 158.6 cm. (62.4 inches) and 151.3 cm. (59.6 inches) respectively.

The weight of the heaviest man in the random sample was 69 kg. (151.8 pounds) and that of the heaviest woman was 70 kg. (154 pounds).

Mean weights for men and women in the random sample were 53 kg. (116.6 pounds) and 45.3 kg. (99.7 pounds) respectively. Note that, in general, differences are slight between mean and median weights for age and sex groups including a number of individuals. The group of 6 men over 60 years of age is an exception, as values for two individuals weighing 66 and 69 kg. respectively raise the mean markedly. An even wider range of weights occurred in the group of women 60-81 years of age, but the influence of one high weight (70 kg.) was offset by a correspondingly low weight (27 kg.). Thus the tendency noted among western populations, for mean weight to exceed the median weight for a given age and sex group, was not apparent in the population of Bang Chan.

141 Girls in Bang Chan may have reached adult height and
145 weight by age 20, since the small differences in the averages for ages 15-19 (mean age 17 years) and the successively older age groups are probably associated with individual variation and the small numbers in each group (Table 5).A Note that, in general, Bang Chan women did not appear to increase in weight with age, after adult stature is reached. Zimmerman (1937) states that Thai females reach maturity of height at age 17. Mean values from School Hygiene tables are similar, for heights of school girls 17 or 18 years of age and older, and mean weight increases from 17 years on are in the neighborhood of 1 or 2 kg. Mean heights for adult women in the random sample of households in Bang Chan are slightly below those recorded by other observers (Table 6).B

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1. Measurements of preschool children are included in Appendix B, Table 19.C

A [see p.17-An.] B [see p. 18-An.] C [see p. 67-an.]

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S: Hauck et al. D-5 (1952-1954) 1956 AO7 Central Thai AO7

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Table 4

Summary of Heights, Weights[1], Cristal Heights and Bicristal Diameters of 62 Males Over 7 Years Old, in the Random Sample of Village Households, Bang Chan, 1952-53

Age	No. of Persons	Height		Weight[1]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
8	1	112.0		17.5	17.5		64.0		18.5	
9	1	113.5		19.5	19.5		63.0		20.0	
10	3	121.7	120.5-122.5	23.4	23.5	22.25-24.5	69.7	68.5-70.5	20.0	19-21
11	2	129.5	129.0-130.0	26.3	26.3	25.0 -27.5	77.0	75.0-79.0	21.5	21-22
12	5	130.8	119.5-137.5	27.3	28.3	22.0 -31.0	77.3	69.5-84.5	20.8	18-23
13	2	145.8	140.5-151.0	35.8	35.8	33.25-38.25	86.3	82.0-90.5	25.0	25-25
14	2	149.0	145.0-153.0	38.0	38.0	34.0 -42.0	85.5	85.0-86.0	22.5	22-23
15-19	9	153.8	141.5-167.0	45.1	45.8	35.75-53.25	91.4	82.5-101.0	25.4	24-27
20-39	20	157.5	152.0-171.0	51.8	52.0	42.5 -58.5	91.4	86.5-99.0	26.5[2]	24-28
40-59	11	160.6	151.5-172.5	54.9	55.0	45.5- 61.0	93.1	86.0-101.5	27.7	24-29
60-66	6	158.0	150.5-170.5	53.4	49.8	43.0 -69.0	91.6	86.0-101.0	27.9[2]	25-30
Partial Total 20-66	37	158.6	150.5-172.5	53.0	52.0	42.5 -69.0	91.9	86.0-101.5	27.1	24-30

1. For children weighing 22.75 kg. or more weight of clothing was about 0.25 kg., clothing of smaller school children weighed less than this. Clothing of adults weighed about 0.25 kg.
2. Measurement was not obtained for 1 person in this group.

Table 5

Summary of Heights, Weights[1], Cristal Heights and Bicristal Diameters of 70 Females Over 7 Years Old, in the Random Sample of Village Households, Bang Chan, 1952-53

Age in Years	No. of Persons	Height		Weight[1]			Cristal Height		Bicristal Diameter	
		Mean	Range	Mean	Median	Range	Mean	Range	Mean	Range
		cm.	cm.	kg.	kg.	kg.	cm.	cm.	cm.	cm.
8	4	112.4	100.0-117.0	18.2	19.6	13.0 -20.5	63.1	56.0-66.0	19.4	18.0-20.5
10	4	124.0	120.0-126.5	24.1	23.6	19.75-29.5	71.9	67.5-75.0	19.8	18.0-21.0
11	2	122.3	120.0-124.5	23.1	23.1	22.0 -24.25	71.5	69.0-74.0	21.0	20.5-21.5
12	3	135.3	127.0-140.5	29.7	30.5	27.75-30.75	79.0	75.5-81.0	22.0	21.0-23.0
13	3	142.0	138.5-145.5	34.9	36.0	32.25-36.5	85.8	84.5-87.5	21.7	21.0-23.0
14	1	142.5		33.8	33.8		84.5		19.5	
15-19	8	151.3	143.5-161.0	45.4	45.5	40.0 -50.5	90.0	85.0-96.0	25.8	23.0-27.0
20-39	21	150.1	142.5-158.0	45.9	47.0	32.5 -58.0	87.2	81.5-96.5	26.3[2]	22.0-31.0
40-59	16	150.3[2]	143.5-157.0	44.0	43.0	37.0 -55.5	87.8	78.0-93.5	26.9	23.0-29.5
60-81	8	151.4	146.0-159.0	46.0[2]	46.3	27.0 -70.0	88.1[2]	84.0-93.0	28.0[2]	24.0-30.0
Partial Total 20-81	45	151.3	142.5-159.0	45.3	45.7	27.0 -70.0	87.6	78.0-96.5	26.7	22.0-31.0

1. For children weighing 22.75 kg. or more weight of clothing was about 0.25 kg; clothing of smaller school children weighed less than this. Clothing of adults weighed about 0.25 kg.
2. Measurement not obtained for one person in this group.

S: Hauck et al. D-5 (1952-1954) 1956 AO7 Central-Thai AO7
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Among the men and boys in the random sample of households, however, mean height and weight was distinctly less for the age group 15-19 (mean age 17) than for the older age groups (Table 4), and mean height and weight increased with age among the subgroups. Thus mean height of 4 boys 18 and 19 years old was 157.6 cm., and mean weight 50.2 kg. as compared to 150.1 cm. and 38.5 kg. for 4 boys aged 15-16. Among the 20 men in age group 20-39, 3 were age 20, and 4 either 23 or 24. Mean heights for both of these subgroups were 157 cms. The number of young men examined in Bang Chan is too small to permit judgment as to when adult stature is attained. On the basis of measurements of Siamese males, from the medical service of the Royal Siamese Navy, Dr. Yong concludes that "growth, as regards both height and weight stops at age 22" (Gautama, 1939). According to Gautama (1939) [illegible] boys increase in height steadily until about 19 years of age, at which time they seem to have reached maturity. Adult men in Bang Chan were on the average a little shorter than other groups of Thai men whose measurements were available to us (Table 7).

Bicristal Diameter. - Some additional information concerning body build is obtained from this measurement. In general, for Bang Chan children of elementary school age (Tables 1 and 2), mean bicristal diameters correspond to hip widths for Iowa school children one to three years younger (Stuart and Meredith, 1946). Mean bicristal diameters of adult men and women in Bang Chan (Tables 4 and 5) correspond approximately to the values for the 10th percentile of the 18 year old boys and girls in the Iowa study. Andrews (1943) found the hip breadth of Central Thai men to be 26.98 ± 1.48 cm., which is similar to the mean of 26.9 cm. for 31 adult males, aged 20-59, in Bang Chan.

Cristal Height. - At the time this study was undertaken, the Committee on Anthropometry of the Food and Nutrition Board, National Research Council had tentatively recommended cristal height as an additional measurement pertaining to the long dimension of the body. Mean values and ranges, for various age groups, are presented in Tables 1, 2, 4 and 5.

Dental Status

A dentist examined the teeth and mouths of 226 school children, 7 to 14 years of age, in good natural light, using mouth mirror and probe. Teeth of persons in the random sample of village households were inspected by the physician in the course of the clinical examination. Data on dentition and dental health were analyzed by Kamalanathan (1956).

As noted by the Joint FAO/WHO Expert Committee on

[TEXT CONTINUED ON PAGE 21]

[see p.: 16; 20; 9-13; 16, 17; 9-13; 16, 17]

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As noted by the Joint FAO/WHO Expert Committee on Nutrition (1951) the part played by diet in the production of teeth which are unduly susceptible to caries is still controversial, although in general, the importance of nutrition, especially in the formative period, is widely accepted. In accordance with the recommendation of this Committee, caries rates are recorded as a separate item, and are not taken as a criterion of malnutrition.

Dentition. - Median ages of eruption of specific permanent teeth in 240 Bang Chan children, ages 7 to 14, are shown in Table 20 (Appendix B). For this purpose, data on 226 children in the Bang Chan primary school, and 14 additional children between these ages, in the random sample, were included. The percentage of boys and girls at each age, having each specific tooth erupted, was calculated. Median ages of eruption were estimated according to the method suggested by Klein et al. (1937). A graph was drawn for each kind of tooth, for each sex. Cumulated percentages for each specified kind of tooth erupted were represented on the x axis and age in years at one year intervals on the y axis. Median age of eruption was estimated by determining the point at which the age percentage eruption curve cut the 50% perpendicular.

In Bang Chan, as elsewhere, the median age of eruption for specific teeth is lower for girls than for boys. In some cases the difference is slight, in others, from several months to more than a year. The difference is most marked for lower canine teeth.

The average number of teeth, deciduous, permanent and total, at each age, is shown for children 7 to 14 years of age, in Table 21 (Appendix B). For ages 8 to 13, the greater dental maturity of girls than boys is reflected in the larger average number of permanent teeth present at each age.

On the basis of median ages of eruption for specific teeth, and the number of permanent teeth per child at each age level, dental maturity of children in Bang Chan appeared to be approximately the same as for children in other regions, in both eastern and western hemispheres, with which they were compared. Although the average number of teeth at some ages was lower for children in Bang Chan than for American or English children, the differences were neither marked nor consistent (Kamalanathan, 1956).

Caries Incidence. - Caries incidence was found to be low among Bang Chan children as compared to many regions in which surveys have been made. Of 226 children examined by the dentist, 42% (45% of the boys and 38% of the girls) were totally free of caries. When all carious teeth, both deciduous and permanent, were included, the average number of carious teeth per child was 1.8 (1.6 for boys and 2.0 for girls).

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164 Considering deciduous tooth only, in a group of 173 children, 93 boys and 80 girls who had deciduous teeth, 56% of the boys and 50% of the girls were free from caries. The average number of carious deciduous teeth per child was 1.4 and 1.5 for boys and girls respectively. For those with caries experience, the number of carious deciduous teeth per child was 3.2 for both boys and girls.

In the entire group of 226 children, 76% of 116 boys and 60% of 110 girls were free from caries of permanent teeth. The average number of carious permanent teeth per child was 0.5 for boys and 0.9 for girls. For children with caries experience, the figures were 1.9 and 2.3 for boys and girls respectively. None of the 30 boys with caries of permanent teeth had more than 4 such teeth, whereas 5 of 43 girls had more than 4 carious permanent teeth.

164 171 Data for children aged 12 to 14 in Galesburg, Illinois and Colorado Springs (Dean et al. 1942) have been chosen for comparison of caries experience in permanent teeth, with that in Bang Chan. In these cities, the fluoride content of the water is conducive to low caries incidence, yet the percentage of children aged 12 to 14 having caries experience was 72.2 and 71.5 for Galesburg and Colorado Springs, respectively as compared to 41% for Bang Chan, and the number of DMF[1] permanent teeth per child was 2.36 and 2.46 as compared to 0.88 carious permanent teeth per child in Bang Chan.

The reason for the relatively low incidence of caries among children in Bang Chan cannot be stated with certainty. Similarly low or even lower caries incidence has been reported for certain age groups of children in various parts of the world, for example in North China (Afonsky, 1951), in the northern islands of Samoa where the people had little access to store foods (Losee, 1952) and in a small isolated village in Greece [146] (Phillipas, 1955). One thing which residents of Bang Chan appeared to have in common with such other populations which are relatively caries free, was low intake of sugar[2], particularly in a form which would be apt to adhere to the teeth.

757 Restoration of Decayed and Missing Teeth. - None of the children examined had any filled teeth. Up to 44 years of age, the adults examined had retained almost all of their teeth, and • [145] no evidence of restoration, other than crowning was noted. Decline in average number of teeth was marked after age 55.

Of 92 adults with teeth, at least 7 men and 6 women had been to a dentist as evidenced by the presence of crowned teeth

1. DMF denotes decayed, missing and filled. Children in Bang Chan had no filled teeth.

2. Sudsaneh (1956) found the average per capita intake of sugar in 11 families to be only 6 grams per day.

pictured as bowlegged in Chutima's report (1939) are, however, clearly so, and represent more extreme cases than we encountered among the children in Bang Chan in 1952-53. If the incidence of bowleggedness among children in Thailand is indeed decreasing, an investigation into possible causes of the change would be of interest.

To the nutrition specialist on the team, who was not Thai, the knee joints appeared to be large. Moreover, although the term "knock knees" was not included on the schedule, it was entered frequently by the physician under comments (Appendix B, Table 22). Whether this condition is related to heredity, nutritional status, or to some other environmental influence such as the life-time habit of squatting on the heels, is not known.

The physician's estimate of general appearance and vitality were recorded early in the examination, before he sought for specific signs. About 80% of all persons examined were rated as "good," and less than 1% as "poor." About half of all persons rated as "good" in general appearance and vitality were without clinical signs, as compared to about 30% of those rated "fair." Of persons with 3 or more possible signs of malnutrition, however, about 2/3 were rated "good" (Appendix B, Tables 23 and 24). As has been observed frequently, such a general appraisal is not correlated with the presence or absence of clinical signs possibly associated with malnutrition. Clearly, in Bang Chan, there is little or no malnutrition of the sort that causes marked apathy.

In summary, a variety of possible signs of malnutrition were noted both in the school children and the persons in the random sample of village households. More than half of the total number examined had one or more signs possibly due to malnutrition, but the only clearly defined deficiency disease encountered was one case of beri beri[1] in a 49-year old man.

Reproductive Function in Females

Menstrual History. - Information concerning menstrual history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied.

Most of the women from whom information on age at menarche was obtained were under 40 years of age. A few could

1. History of beribori among nursing mothers and their infants was obtained in several instances, and cases of beri-beri, in both sexes, were seen among persons not included in the population samples which were examined.

[see p.71-Am.] [see pp.72,73-Analyst]

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145 not recall the age at menarche.

The median and modal reported age at menarche was 15 years, with a range from 13-19 years (Table 11).

Table 11

Reported Age at Menarche of 94 Females in Bang Chan.

	Age in Years						
	13	14	15	16	17	18	19
Number at each age	6	18	34	21	8	4	3
Percentage at each age	6	19	36	22	9	4	3

This estimate, made from ages given by recall, is necessarily approximate; however, none of the girls between 12 and 14 who were examined clinically, had passed the menarche. Moreover, median and modal ages at menarche were 15 years for sub-groups aged 15 to 24, and 25 to 39 at the time of inquiry, hence the inclusion in this series of women for whom the event was not recent did not alter the estimated median age at menarche. Wilson and Sutherland (1953) conclude that in tropical countries the onset of menstruation as compared with that for English children, 145 may be either early or late. Tanner (1955) notes that if 114 climate has an effect on age at menarche, it must be a minor one, 121 and that at present the effect of race cannot be disentangled from nutritional and socio-economic circumstances. Basing his [146] judgment on the effects on man of famine associated with war, and on results of direct experiments on animals, Tanner expresses the conviction that nutrition plays a major role in determining the age at which menarche and the adolescent spurt in growth occur. If this view is correct, the relatively late median age of menarche in Bang Chan may be associated with inferior nutritional status.

145 One of 17 women in the age group 35-44 had passed the menopause, whereas 12 of 16 women over 45 years of age had done so. One of 7 women over 55 years of age, 2 of 7 women age 50-54, and one of 2 women age 45-49 had not yet reached the menopause. The reported ages at menopause were: 30-34 years, 2 women; 40-44 years, 3 women; 45-49 years, 3 women and 50-54, 5 women.

147 Approximately 100 respondents gave information concerning

Appendix B

Table 19

191 145 Summary of Heights and Weights[1] of 34 Pre-school Children in the Random Sample of Village Households, Bang Chan, 1952-53

Age	No. of Persons	Height		Weight		
		Mean	Range	Mean	Median	Range
		cm.	cm.	kg.	kg.	kg.
Males						
Mo.						
Under 1	2	50.8	50.0-51.5	3.4	3.4	2.95-3.8
5-6	1	61.0		5.5	5.5	
11-12	1	69.0		8.3	8.3	
Years						
1-1½	4	68.5	65.0-70.0	8.3	8.1	7.0 -10.0
2	1	89.0		13.0	13.0	
3-3½	3	86.7	83.5-90.0	11.2	10.5	10.0 -13.0
4-4½	4	96.5	90.5-104.5	14.2	14.0	12.75-16.25
4½-5	1	98.5		12.5	12.5	
6	2	105.0	101.5-108.5	17.0	17.0	16.5 -17.5
Females						
Mo.						
1	1	63.0		5.2	5.2	
3	1	54.0		5.5	5.5	
7	1	63.0		5.5	5.5	
9	1	60.5		6.3	6.3	
11-12	1	70.0		7.5	7.5	
Years						
1½-2	2	73.3	71.0-75.5	9.3	9.3	9.3 - 9.3
2½-3	2	81.5	81.0-82.0	10.5	10.5	10.0 -11.0
3½-4	3	85.5	85.0-86.0	11.7	12.0	10.5 -12.5
4½-5	1	94.5		12.5	12.5	
6	1	108.0		18.5	18.5	
7	1	107.5		17.5	17.5	

1. Preschool children were weighed nude.

Table 20

145 Estimated Median Ages of Eruption of Specific Permanent Teeth in Children of Bang Chan[1]

Tooth	Jaw	Side	Boys		Girls	
			Age of Eruption		Age of Eruption	
			Each Side	Average	Each Side	Average
			Years	Years	Years	Years
1. Central Incisor	Upper	Right	8.0	8.1	7.7	7.8
		Left	8.2		7.8	
	Lower	Right	7.0-[2]	7.0-	7.0	7.0-
		Left	7.2		7.0-	
2. Lateral Incisors	Upper	Right	9.2	9.1	8.6	8.8
		Left	8.9		9.0	
	Lower	Right	8.2	8.2	7.6	7.6
		Left	8.1		7.6	
3. Canine	Upper	Right	11.4	11.5	11.0	10.9
		Left	11.6		10.8	
	Lower	Right	11.3	11.3	9.9	9.9
		Left	11.2		9.9	
4. 1st Bicuspid	Upper	Right	10.4	10.5	9.7	9.8
		Left	10.6		9.9	
	Lower	Right	11.0	11.1	10.4	10.4
		Left	11.1		10.4	
5. 2nd Bicuspid	Upper	Right	11.9	11.9	11.6	11.6
		Left	11.8		11.5	
	Lower	Right	11.8	11.8	11.5	11.5
		Left	11.7		11.5	
6. 1st Molar	Upper	Right) Left)	7.0-	7.0-	7.0-	7.0-
	Lower	Right) Left)				
7. 2nd Molar	Upper	Right	12.2	12.2	12.1	12.1
		Left	12.1		12.0	
	Lower	Right	11.5	11.7	11.5	11.6
		Left	11.8		11.6	

1. Adapted from Kamalanathan, 1956.
2. 7.0- More than 50% of 7 year old children had this tooth erupted, hence the age of eruption is given as less than 7.0.

Table 21

Average Number of Teeth: Deciduous, Permanent, and Total, at Each Age, in Children 7 to 14 Years of Age, Bang Chan[1].

Age, years	Boys				Girls			
	Number Examined	Average No. Teeth			Number Examined	Average No. Teeth		
		Dec.	Perm.	Total		Dec.	Perm.	Total
7	5	15.0	6.4	21.4	8	17.3	5.5	22.8
8	18	14.9	7.8	22.7	16	14.5	9.0	23.5
9	9	12.4	10.6	23.0	8	12.0	10.8	22.8
10	23	9.5	14.8	24.3	13	6.3	17.6	23.9
11[2]	27	6.8	17.9	24.7	24	4.6	19.8	24.4
12[2]	23	4.2	21.9	26.1	20	3.0	22.6	25.6
13[2]	17	0.5	26.3	26.8	22	0.7	27.4	28.1
14	3	0.0	28.0	28.0	4	0.0	28.0	28.0

1. Adapted from tables in Kamalanathan, 1956.

2. Six children in the age groups 11 to 13 had one or more 3rd molars erupted.

Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended to live in proximity. Around the houses were kitchen gardens and threshing floors, and behind them, the fields. Bananas grew abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, while fish were plentiful. Water sources were the rain, kept in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

General Nutritional Level

The population was physically well-formed with few physical deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. Food at the not-infrequent festivals was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The change-over, some decades ago, from home pounding of rice to steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community.

2. Dr. H.M. Hauck, personal communication, 1959.

105 262 Sweets and fruit were the items most commonly eaten. Fruits were seldom eaten except as snacks.

271 105 The customary beverage with meals was untreated water. Rain water was preferred for drinking, but for 3 or 4 months of the year, water from the canal or fish pond was used.

105 262 Attitudes toward food, and foods considered appropriate for the very young, the old, for the pregnant or nursing woman and for use during illness, are briefly discussed.

105 126 146 Quantitative food intake for 11 families was recorded on a total of 44 survey days distributed throughout the year. Two groups of families, in which individuals were matched so far as possible as to age and sex, were selected on the basis of apparent difference in nutriture. The sample was not stratified with respect to economic conditions, but those in Group B, chosen for apparently better nutriture proved to be, in general, more prosperous than those in Group A, chosen because of signs of poor nutrition.

105 146 Food values were calculated on the basis of published analyses. Conservative nutrient allowances were estimated for residents of Bang Chan. On the average, calories, protein, iron, niacin and ascorbic acid in the diets of persons in Group B approximated or exceeded these allowances. For Group A, this was true for niacin and ascorbic acid only. Average intakes of riboflavin were estimated to be about 1/3 or less of the allowances, and estimates of calcium intake were about 20% of the allowance for Group A and 30% of that for Group B. Vitamin A values of diets for both groups appeared to be low, and thiamine intakes marginal or low. The signs observed among persons in these families were generally those associated with low intakes of thiamine, riboflavin and vitamin A.

Rice contributed about 4/5 of the calories and over half the protein in diets of both groups. Animal foods, chiefly fish, furnished about 2/5 of the protein. Intake of fats and sugar was small. Snacks of fruit contributed about 1/6 of the total ascorbic acid for Group A, and about 1/9 for Group B.

Seasonal variations in food preparation, meal patterns, food costs and caloric and nutrient values of foods eaten are discussed. Higher caloric intake during heavy work seasons was largely accounted for by larger amounts of rice eaten. The highest intake of protein for both groups occurred in the post-harvest season, when fish ponds were drained.

Questions for further study are proposed, and possible approaches to improving food habits and nutritional status in Bang Chan are suggested.

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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1. In some large houses, two related family groups lived together but maintained separate kitchens.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

One other aspect of (1)ngaan which should be mentioned
252 in connection with food and health is the opportunity for con-
756 tamination of food. The villagers did not associate sanitation
751 with health, hence the hazards of a community meal which many
753 persons helped to prepare were many. Two incidents observed the day before an ordination in early April, will illustrate. In the final stage of making Chinese noodles, rice flour paste was extruded through a perforated disk into an enormous pot of boiling water. When done, the product was removed with a fish net, and plunged into the canal to cool, after which women helpers spread it out on banana-leaf covered trays. Dishes were also washed before use in the canal, which was then too low for boats. Since, however, many people drank untreated canal water at this season (see p. 28), the added hazards for the participants caused by these procedures may have been slight.

262 In summary, food plays a major role in ceremonies and
792 festivities, which are concentrated in the 3 months' dry season. Proposals for dietary improvement in Bang Chan must take into account not only the possible effects of the (1)ngaan season on the total nutrient intake, and on opportunity for exposure to contaminated food, but also the importance of these affairs from the standpoint of merit and prestige, and the relatively great financial burdens which villagers therefore undertake because of them.

QUANTITATIVE DIETARY STUDY: FOODS EATEN AND ESTIMATED NUTRIENT INTAKE OF SELECTED FAMILIES IN BANG CHAN

Procedure

121 Selection of the Sample
125
146

Medical inspection designed primarily to discover possible signs of nutritional deficiency was carried out in advance of the family dietary study. The suggestion of Grant (1948) that matched groups, of contrasting economic or other status be studied, appeared to be appropriate to the situation in Bang Chan. Our hope was to be able to select from the random sample of families given medical inspection (Hauck, 1956) a group of families (A) in each of which several members had clinical signs which might be evidence of malnutrition, and a group of families similar in age and sex distribution (B) in each of which the members were largely or wholly free from such signs.

125 When the medical inspection of the random sample was
146 complete, however, too few of the families were found to meet our criteria for inclusion in Group A, i.e. the group of apparently less well nourished families. Additional families for

125 this group were located by checking the list of school chil-
146 dren, all of whom had been examined, for instances in which 2 or 3 children in one family had signs possibly indicative of malnutrition. The remaining members of their families were then examined. Families appropriate for Group B were chosen from those in the random sample.

Note that the groups for inclusion in the weighed dietary study were selected on the basis of apparently contrasting nutritive status. They did not represent a random sample of village families, although 7 of the 11 families included in the dietary study were in the random sample chosen for the medical inspection. In the absence of recommended dietary allowances for Thai, study of food intakes of two such groups seemed likely to yield more useful information than would be obtained from a dietary survey of a random sample of the population.

The groups chosen for study included 11 households, 6 in Group A and 5 in Group B, with 30 members in each group, paired so far as possible according to age and sex. When the survey was begun, however, 2 additional members were found in the households in Group A and 7 additional members in Group B. These were relatives and hired helpers who remained in the households throughout the survey year. The field worker who carried out the dietary study rearranged the matching plan somewhat, so that 32 reasonably well matched pairs were obtained (Table 6). In planning this rearrangement, the observer had in mind pairing persons of similar size, so far as possible, in addition to pairing by sex and approximate age.

Estimation of Caloric and Nutrient Allowances

Because of the 5 additional unmatched persons in Group B, males aged 23, 15 and 4 years, and females aged 79 and 82, some means was sought of checking the validity of comparing calculated per capita food and nutrient intakes for the two groups. By selecting matched groups differing in apparent nutriture, we had hoped to avoid comparing calculated nutrient intakes with an arbitrary standard, but comparison of estimated per capita nutrient needs of the two groups appeared to provide one means of checking the probable comparability of our groups, even though their members were not all matched as originally planned. No nutrient allowances had been proposed for Thai, however, so Nicholls' (1951, p. 315) allowances for people in the tropics were modified by taking into account information in Recommended Dietary Allowances of the National Research Council, Food and Nutrition Board (1953) and FAO recommendations concerning caloric requirements (FAO Committee on Caloric Requirements, 1950). The resulting basic table of allowances for Thai people in Bang Chan (Table 16, p. 104) is conservative, and probably represents something like a

[Text continues on page 57 --- Analyst]

125 nutritional floor for this population, beneath which maintenance of health cannot be assumed. From this table, allowances were estimated for persons of each age and sex, for Groups A and B (Table 17, p. 105). Estimates were made for each quarterly period or Round, during which each family was visited once, and these were averaged to obtain mean per capita allowances for each group for the year (Table 18, p. 108). In each group, one woman was in late pregnancy during the third Round, and a new infant had been added to each group in the fourth Round. Since young infants in Bang Chan are given little more than mother's milk, allowances for the fourth Round were adjusted to account for an additional nursing mother, but not for the infant itself. Differences in estimated per capita allowances for Groups A and B were trivial (Table 18, p. 108), hence we felt justified in comparing the estimated food and nutrient intakes of the groups as originally planned, even though Group B contained 5 persons not matched with persons in Group A.

Method of Collecting Data

124 The procedures we planned to use were first pretested
125 in several households to give the observer experience and to be sure that the method would actually work under conditions in Bang Chan. Following the pretest, each family chosen was told in a preliminary interview, what the observer wished to do, and in what ways family members would be expected to cooperate (Appendix C, p. 109). All families that were asked to participate in the study consented. They were not notified in advance just when the observer would visit. Observations on each family included food intake for a 24-hour period, 4 times during the year: twice during the rainy season, and once each during the cool and the hot, dry seasons.

Survey days were planned so as to avoid special festivals when food preparation might be unusual. Six of the 44 survey days fell on (1)wan (4)phra, the weekly holy day. The families visited on (1)wan (4)phra did not, however, take food to the temple on those days, hence food preparation and consumption was probably not unusual.

Alternate visits to the families in Groups A and B were planned so that seasonal variations in food supply would not be apt to account for any observed differences in food intake. Again, our plan could not be fully carried out. Occurrence of cooperative transplanting and other interfering circumstances made some modifications in schedule necessary. Since the objective was to learn about the usual family food intake, the study was not carried on when several members of the family were away from home, or when the participating family was preparing to feed neighbors who were helping with farm work. In such a case, the field worker would go to the nearest

per day were calculated for Groups A and B by Round and for all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

Although our sample was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

From the viewpoint of parents, the "peak of life" was the time when children were no longer dependent, but productive, unmarried workers whose earnings stayed within the family. Household 16 was such a family, forward looking, progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analyst]

235 Eggs and poultry. - Every household which took part in the survey raised chickens, and 3 of the 11 households had ducks also. In both groups of families, most of the eggs produced were sold. Home consumption of eggs on survey days was small.

228 Fish. - Each family studied had a fish pool. One family only, Household 25 in Group B raised tilapia. They began tilapia culture during the third round of the study, too late to ascertain how this might affect fish consumption in the family.

251 Preservation of Foods at Home. - Home food preservation was practiced to a very limited extent only, fish products being the principal ones produced.

Dried fish. - Families in both groups salted and dried fish throughout the year whenever they were available in excess of immediate needs.

Fermented fish. - In 10 of the 11 households, fermented fish was prepared. The 6 families in Group A had prepared a total of 30 kg., and 4 of the 5 families in Group B, a total of 29 kg. The largest amount prepared in one household, for one year was 10 kg.

Shrimp paste. - Because shrimp were caught in insufficient quantity, shrimp paste was prepared by only 6 of the 11 families. Four families in Group A prepared a total of 26 kg., and 2 families in Group B prepared a total of 7 kg. These amounts were insufficient for their needs.

Fishsoy. - One family only, in Group A, prepared fishsoy. All others in both groups purchased this product.

Buffalo meat. - During the survey year, the buffalo belonging to one family died. Some of the meat was used fresh for curry, and the remainder was salted, dried and sold.

Comparison of Caloric and Nutrient Intakes of the Two Groups With Each Other and With the Estimated Allowances.

128 146 In Table 11, the estimated calories and nutrients available to the two groups of families, are shown together with the estimated allowances.

146 On the average, the number of calories, and amounts of protein, iron, niacin and ascorbic acid in the diets of persons in Group B, the apparently better nourished group, approximated or exceeded the conservative allowances. For Group A, this was true for niacin and ascorbic acid only, the calories being 11%, protein 15% and iron 21% below the allowances.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

146 Table 11. Comparison of Calories and Nutrients Available to Groups A and B, with Each Other and with the Estimated Allowances

Average per capita per day

	Estimated amounts available[1]		Allowance	
	Group A	Group B	Group A	Group B
Food energy, calories	1731	2009	1935	1955
Protein, gm	50	59	59	59
Fat, gm	14	22	-	-
Carbohydrates, gm	342	384	-	-
Calcium, mg	129	194	650	650
Phosphorus, mg	847	895	-	-
Iron, mg	6.9	8.4	8.7	8.8
Vitamin A, I.U.	2047	1340[2]	2522	2548
Thiamine, mg	0.68	0.76	0.93	0.96
Riboflavin, mg	0.37	0.28	1.07[3]	1.06
Niacin, mg	11.3	11.5	9.3	9.6
Ascorbic acid, mg	27	23	24	24
Thiamine/calorie ratio	0.39	0.38		
Thiamine/non-fat calorie ratio	0.42	0.42		

1. Estimates based on values for edible portion without allowance for cooking losses. Analyses for a number of common foods were incomplete (See Table 13, p. 75).

2. No values found for flowers of Sesbania roxburghii, therefore these are not included.

3. Slightly higher allowance for Group A because of presence of one more nursing mother in this group than in Group B.

Average intakes of riboflavin were estimated to be about a third, or less, of the allowances. Estimates of calcium intake were, on the average, only 20% of the allowance for Group A, and 30% of that for Group B. Although the calcium allowances were thought to be conservative, estimated requirements based on calcium balance experiments are believed by some investigators to reflect usual intake rather than need, and the extent to which man may adapt to a low calcium diet is still undetermined. Among residents of Bang Chan, no evidence was noted other than short stature and small bones, which might suggest a calcium deficiency.

The vitamin A value of diets of both Groups A and B appeared to be low. Clinical signs possibly associated with vitamin A deficiency, i.e. xerosis and pharynoderma, occurred among residents of Bang Chan (Hauck, 1956), and as would be expected from the method of selection of the two groups, such skin signs were more prominent among members of Group A than Group B. On this basis one would expect the vitamin A intake of Group A to be less than that of Group B, whereas the reverse appeared to be the case on the survey days; but the higher estimated vitamin A value for the diets of Group A than Group B may not represent a real and consistent difference. The yellow (2)sa-(5)noo flowers, for which no nutrient values were found, were used rather liberally by some families in Group B at one season and may have contributed vitamin A value. Moreover, owing to unavoidable changes in the plan for alternating visits to the two groups of families, those in Group B were visited more often when the level of water in the canals was low and the leafy water plants were not available. The unusual intake of a large amount of yellow sweet potato by one family in Group A on one survey day may also have tended to distort the picture. Families in Group A, however, used substantial amounts of sweet basil leaves, whereas in Group B, this herb was used for seasoning only.

The estimated amount of thiamine available per capita, before cooking, was 73% of the estimated allowance for Group A and 79% for Group B. Since over four-fifths of the thiamine content of the foods used by each group came from rice, and the thiamine loss when rice is cooked as it was in Bang Chan has been estimated as 75% or more (Tuangraksatva and Srisukh, 1955) the actual per capita intake of thiamine must have been below the value of 0.23 mg. per 1000 calories which the Food and Nutrition Board, National Research Council (1953) considered to be the minimal requirement for adults. According to Nicholls (1951, p. 87), a ratio of Thiamine: Non-fat Calories of 0.3 - 0.35 is borderline and too low, and ratios below 0.3 are associated with beriberi-producing diets. That the diets of some of these people, as eaten, were in fact dangerously low in thiamine, is attested by the occurrence of beriberi and history of beriberi among them. Of the 15 persons, 20 years of age or older in Group A, 7 had knee jerk

196 absent, and in 6 of these, ankle jerk was absent also. In
169 Group B, the apparently better nourished group, one adult and two school boys had knee jerk only absent. In Group A, Household 12, the father, mother and 21 year old son all had both knee jerk and ankle jerk absent. The son was diagnosed by the examining physician as having frank beriberi at the time of the medical inspection. In Household 2, the father and 23 year old son had both knee jerk and ankle jerk absent, but the mother had no signs of thiamine deficiency. In Household 67, mother and father had both knee jerk and ankle jerk absent. The mother had lost 3 of her 6 children when they were 3 or 4 months old, with symptoms such as convulsions and voiceless crying, suggestive of infantile beriberi. When the third child died, the mother had symptoms of beriberi, and the physician who conducted the medical inspection considered the death of this child to be due to infantile beriberi. Clearly the thiamine content of diets of some of the families studied was inadequate to meet their needs under varying conditions of activity and stress. Beriberi was the one frank deficiency disease observed while these studies were underway in Bang Chan (Hauck, 1956).

196 Fat provided only about 9 to 10% of the calories. Coconut oil contains only about 0.5% of linoleic acid (Anantakrishnan, et al., 1949), but the essential fatty acid content of the diet as a whole was not estimated.

196 In summary, although the estimated nutrient intakes of
169 Group B were in general more favorable than those of Group A, the contrast between the two groups was not striking. Perhaps we should have anticipated this from the fact that the groups did not present a clear contrast in apparent nutriture. In Group A, 19 of the 30 persons examined had a total of 36 possible signs of nutritional deficiency. In Group B, 8 persons had a total of 9 such signs. Judging by both the apparent nutriture of the household members, and by their estimated nutrient intakes, the diets of both groups were in need of improvement.

146 Contribution of Food Groups and Certain Common Foods to the Nutritive Values of the Diets

[128] Contribution of Food Groups and Individual Foods. - The percentages of the total calorie and nutrient intakes provided by various food groups for households in Group A and B are shown in Table 12.

196 Rice and other cereals. - Rice was the staple food,
262 which provided over 4/5 of the calorie intake and more than half of the protein for both groups. Much of the difference in calorie and protein intake of the two groups was due to the greater rice consumption of Group B. Rice was also the

[Text continues on page 72 --- Analyst]

most significant source of phosphorus, iron, thiamine, riboflavin and niacin in these diets. Although the calcium content of rice is low[1], about 23 and 16% of the estimated calcium content[2] of diets of Groups A and B respectively came from the cereal groups. Glutinous rice and various products such as noodles made of rice flour were eaten occasionally in small amounts. These and other cereals and cereal products, such as wheat bread and popcorn contributed little to the total nutritive value of the diets.

Animal products other than pork fat. - Fish and other foods of animal origin furnished about 2/5 of the protein in the diets of both groups. From 20 to 30% of the riboflavin and niacin and substantial amounts of phosphorus and iron were provided by this food group, also. For families in Group A, these animal products provided substantially more fat than the group of fats and oils as such, whereas Group B obtained about the same amount of fat from these two food groups. The estimated contribution of vitamin A from this group was small. Specific analyses for most of the varieties of fish used in Bang Chan were not available, however, hence many calculations were made on the basis of average values for "fat fish," "lean fish," and "dried fish."

Although a substantial part of the calculated calcium content of the diets came from animal products, the amounts were only about 8 and 9% of the estimated allowances for Groups A and B respectively. Fermented fish are reported to contain 1126 mg. per cent of calcium (Knudson, 1955) but the amounts eaten were relatively small. Two families only in Group A used a total of 217 grams of fermented fish on survey days, and two families in Group B used a total of 608 grams. These amounts, though they represented servings of only 20 grams per person for the two families in Group A, and of 36 grams per person for those in Group B, nevertheless increased the estimated average calcium intakes substantially, so that 43% of the calcium in diets of Group A, and 34% in diets of Group B, were provided by animal products. The tiny dried fish which are eaten whole, were not used by the families studied on any of the 44 survey days.

On the average, the contribution of animal products other than fish to the nutrient content of these diets was small.

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[256] 1. According to Knudson (1955), addition of calcium carbonate to rice during the milling process was not practiced in Thailand.

[76] 2. No attempt was made to estimate calcium intake from betel chewing, although this might be considered a dietary source of calcium. Six of 15 persons twenty years of age or older, in Group A, were betel chewers, whereas among 14 persons over twenty in Group B, 9 chewed betel regularly and one occasionally.

[146] [262] Eggs were eaten occasionally; pork and beef were bought infrequently and in small amounts by some families. One family only, ate chicken; other meats eaten on survey days included buffalo, frogs, eels and field rats.

Vegetables. - More than three quarters of the estimated vitamin A value of these diets was provided by green and leafy vegetables, although the pale yellow sweet potatoes, eaten in quantity by one family in Group A increased the vitamin A from other vegetables substantially. The greater use of swamp cabbage, a wild aquatic plant by families in Group A, may be explained by the fact that more visits to this group occurred when the water level in the canals was relatively high. Families in Group B, however, used a greater variety [263] of greens, especially leaves from a number of trees. For families in Group A, sweet basil contributed substantially to the vitamin A and riboflavin content of the diets, whereas families in Group B used this herb in trivial amounts for flavoring. No nutrient values were found for lemongrass, which was used regularly in substantial amounts for flavoring. Persons in Group B got a greater percentage of their calcium and iron from green than from other vegetables, whereas those in Group A obtained as much or more of these nutrients from other vegetables.

Nearly 3/5 of the ascorbic acid intake of Group A was provided by other vegetables as compared to 1/4 from green vegetables, whereas Group B obtained about equal amounts of ascorbic acid from green and other vegetables. Egg plants[1], calabash and white radish were most commonly used in quantity. Onion, garlic and dried chilies were used daily, but in smaller amounts. With the exception of one family which ate a large amount of sweet potato on one survey day, consumption of tubers, i.e. sweet potato and taro, was small and usually in the form of snacks eaten by children. Legumes were seldom eaten in Bang Chan. Two families had bean sprouts on survey days, and children occasionally ate mungbeans and peanuts as snacks.

Fruit. - Although technically a fruit, the coconut does not resemble fruits as a group in its contributions to the diet, hence coconut and other fruits are treated here as two sub-groups. Coconut meat, and its products, coconut milk and coconut cream (Appendix C, p.120), were used almost daily in the participating households. These coconut products contributed about 1/5 of the total fat of the diet, for Group A,

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[244] [252] 1. Many varieties of eggplant are grown in Thailand. Three were used on survey days: the pea-size variety which was frequently put in hot curry, a round type which was served raw with chili sauce and a long variety which was either panned with a small amount of fat or used in curry.

146 more than fats and oils as such.
262

Bananas were grown by all families that participated in the study, but were eaten only occasionally, primarily as
[263] snacks. Tamarind and lime were used often in small amounts in making sour curry and chili sauce, and bergamot rind was used for seasoning. Papaya and mango, both of which are good sources of vitamin A and C, were each eaten once only during the survey. The green papaya was used in curry. Fruits are relatively abundant in Thailand, the year round, yet fruit made minor contributions to the diets of families studied in Bang Chan.

Fats and oils. - Fats were used in small amounts to pan fish, meat, eggs and vegetables, and provided about 1/7 of the total fat in the diet of Group A, and 2/7 for Group B. Coconut oil, which was less expensive than pork fat, was more often used in Group A.

Sugar. - Palm sugar was used in small amounts in the preparation of many "with-rice" dishes, and occasionally in snacks, i.e. guava dipped in a mixture of sugar, salt, chili, mung beans cooked in palm syrup and the like. The amounts used were small, and the contribution to nutritive value was slight. By Western standards, the consumption of sugar in Bang Chan was almost negligible.

146 Spices. - Spices were commonly used in food preparation,
263 particularly in hot dishes (i.e. those made with chilies) but little information on their nutritive value is available.

146 Alcoholic beverages. - In the families surveyed, all men
273 except the elderly father in Household 21 drank occasionally, but most of the women did not. The husbands in Households 12 and 67 drank heavily at times. No estimate can be made of the contribution of alcoholic beverages to caloric intake in these households.

146 Summary of Nutrient Contributions of Foods Commonly
262 Eaten in Two Groups of Households. - The contribution in terms
[128] of calories and nutrients of certain foods used by 25% or more of the families studied, i.e. by 3 or more of the families on at least one survey day is shown in Table 13. Items selected for inclusion in this table are those which either made significant contributions to the nutrient content of the diets of Groups A and B respectively, or were major items in terms of amounts used or frequency of use. For certain items used frequently for seasoning, information on nutritive value was too scant to warrant inclusion in this table. Figures given are for average consumption per capita per day, based on all persons in the specified groups, and all survey days. For items used by all or most families every day, such as rice, fresh fish, chili, coconut products, and sugar, the figures represent approximately the usual daily per capita consumption.

Table 13. Contributions in Terms of Calories and Nutrients of Selected Foods Commonly[1] Eaten by Groups A and B

Foods	Frequency[1] of Use	Average values per person per day											
		Wt.	Calories	Protein	Fat	Carbohydrates	Ca	P	Fe	Vit. A	B_1	Ribo.	Niacin	Vit. C
		gm		gm	gm	gm	mg	mg	mg	I.U.	mg	mg	mg	mg
Group A														
Rice		399	1440	28	3	316	28	634	3.5	(0)[2]	0.54	0.14	7.5	(0)
Eggs	9	4	8	1	1	0	3	8	0.1	48	0.01	0.01	0	0[2]
Fish, fresh	31	57	58	10	2	0	19	124	0.6	0	0.03	0.04	2.4	0
Fish, dried	8	6	12	3	0	0	4	2	0.2	0	0	0.02	0.2	0
Fish, fermented	2	2	2	0	0		19			0	0	0.01	0	
Fishsoy		5	2	0	0					0	0	0	0.1	
Shrimp paste	33	3	3	1	0					0	0	0	0.2	
Swamp cabbage	4	20	3	0	0	1	9	6	0.3	750	0.01	0.01	0.1	4
(2)Phag (2)ka-(2)cheed	4	3	1	0	0		6		0.1	204	0	0.01	0	2
Sweet basil		4	4	0	0	1	3	2	0.1	504		0.09		0
Calabash	3	11	2	0	0	0	1	2	0.1	8	0	0.01	0.1	1
Chili, fresh	17	4	1	0	0	0	0		0	126	0	0	0	8
Eggplants	10	13	3	0	0	1	2	5	0.1	4	0.01	0.01	0.1	1
Radish, white	5	7	2	0	0	0	0	6	0	1	0	0	0	1
Sweet potato	1	18	22	0	0	5	5	9	0.1	74	0.02	0.01	0.1	14
Banana	2	3	3	0	0	1	0	1	0	14	0	0	0	0
Coconut milk[3]	22	144	30	0	2	2								
Coconut oil		2	15	0	2	0	0	0	0	0	0	0	0	0
Lard		-	4	0	0	0	0	0	0	0	0	0	0	0
Sugar, palm		6	22	0	0	5	5	2	0.6	0			0	
Total			1637	43	10	332	104	799	5.8	1733	0.62	0.36	10.8	21
Total from all foods			1731	50	14	342	129	847	6.9	2047	0.68	0.37	11.3	27

See footnotes p. 76.

146 For items used less frequently, the figures are correspond-
262 ingly less than the usual amount eaten. Thus, sweet potato, which is represented as 18 grams per day per person in Group A, actually appeared on 3 records only. One family of 8 persons ate 1200 grams of sweet potato at one meal and a substantial amount later the same day. Most items appear on the lists for both groups, but sweet potato, sweet basil and bananas were included on the list for Group A only, and glutinous rice which is used as a sweet in this area, appears on the list for Group B only. Note that a few common foods account for most of the nutrients in the diets of both groups. These common foods account for only about 80% of the calcium and vitamin A value and slightly less of the ascorbic acid in the diets of Group A. The list for Group B accounts for about 70% of the calcium and 60% of the ascorbic acid in the diets of this group. The variety of green leaves used once or twice only on survey days by Group B, and the number of different seasonal fruits used by both groups in small amounts as snacks, probably account for this.

264 Contribution of Snacks to the Nutrient Content of Diets. -
[855] On the average, 4 out of 5 children had one snack per day,
262 whereas only one adult in 6 did so. The following items appeared most commonly: various kinds of fruit, 40 times (orange 7, banana 6, pineapple, watermelon and mango each 5 times, guava, jujube and Manila tamarind each 2 times, olives, rambutan, rambai, star gooseberry, (2)ta-(1)koo and Thai nutmeg each once,) coconut and bread each 13 times, glutinous rice 8, mung bean 7, truffles 6, products made of rice flour 6 times, and a variety of other items including rice noodles, sweet potato, taro, bean sprouts, lotus stalks, lotus seeds, popcorn, products made of cassava flour, sugar cane, pork and milk from 1 to 4 times each. Salt, and/or palm sugar were
[146] eaten with a number of the snacks. Although they contributed only about 2% of the total calories, and from 1 to 3% of most nutrients, snacks contributed 16% of the total ascorbic acid for Group A and 11% for Group B.

Seasonal Variation in Food Preparation, Meal Patterns, Food Costs and Calorie and Nutrient Value of Foods Eaten

128 In Table 14, a summary including the number of meals
252 prepared, time spent in meal preparation, number of "with-
264 rice" dishes, and cash expenditures for food is given by
[435] rounds, for families in each group.

252 Number of Meals Prepared. - Food was cooked twice on
512 each survey day in 3 of 6 households in Group A and 3 of 5 households in Group B. Heavy farm work or vending which kept the mother away from the house sometimes accounted for once-
[443] a-day food preparation. One housewife who took food to market in Bangkok, cooked food twice a day only during the period shortly before the birth of a child, when she was not vending.

[Text continues on page 79 --- Analyst]

252 Another, who had time during Round IV to prepare food twice a
262 day, preferred to prepare more in the morning when she expected
264 to offer food to her son who had just been ordained. In two
512 instances an evening meal was not prepared because the father
[525] and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

262 Cost of Food Purchased. - The lowest cash expenditure
435 for food by any household on a survey day was 0.12 baht, for
511 a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year pro-
262 gressed was apparent. Most of the rice was sold at the end
432 of Round III. The cash went for capital investments, not
[221] food, during Round IV. With time to drain ponds and to fish intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

146 Calorie and Nutrient Value of Foods Eaten. - The
221 seasonal variation in calorie and nutrient intake of the two
[128] groups of families is shown in Table 15. As one would expect, the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 --- Analyst]

146 221 Table 15. Seasonal Variation in the Average per Capita Intake per Day of Calories and Nutrients by Two Groups of Households

	Family Group	Round[1] I	II	III	IV
Calories	A	1906	1560	1752	1708
	B	2262	1757	2156	1862
Protein, gm	A	53	44	48	55
	B	59	49	59	68
Fat, gm	A	15	15	14	13
	B	25	21	19	21
Carbohydrate, gm	A	382	302	349	334
	B	437	334	427	340
Calcium, mg	A	239	84	86	107
	B	243	181	223	128
Phosphorus, mg	A	953	782	734	917
	B	1033	737	960	851
Iron, mg	A	9.0	6.4	5.6	6.6
	B	7.7	7.1	12.5	6.1
Vitamin A, I.U.	A	4414	582	1392	1802
	B	1337	1939	1197	884
Thiamine, mg	A	0.86	0.63	0.59	0.63
	B	0.92	0.57	0.72	0.57
Riboflavin, mg	A	0.61	0.27	0.34	0.24
	B	0.43	0.24	0.27	0.25
Niacin, mg	A	13.2	11.1	9.2	11.8
	B	14.1	9.2	11.7	11.2
Ascorbic acid, mg	A	48	19	21	18
	B	15	45	21	15

1. For dates of Rounds, see Table 7, p. 58.

[146] [221] higher calorie intake in these periods. In general, the level of calories, phosphorus and thiamine and to some extent the protein varied with the rice consumption. The greater consumption of fish when fish ponds were drained during Round IV, accounted for the relatively higher protein content of the diets of both groups at this time, even though calorie intake was not at its peak. During this period, animal foods provided 45 and 53% of the total protein intake of Groups A and B respectively, whereas for the year as a whole, 37 and 40% of the protein intake of these groups was of animal origin.

The relatively high vitamin A and C intakes of families in Group A, during Round I as compared to other periods, was associated with a higher consumption of green leafy vegetables, and the use of sweet potatoes in quantity by one family. During Round II, families in Group A had few green vegetables, and their average intake of vitamin A was very low. The use of papaya, obtained as a gift, by one family in Group B during Round II raised the average ascorbic acid intake for this group substantially. Better average intakes, by one or both groups, of vitamin A, thiamine, riboflavin and calcium during the first Round, were not such as to provide liberal body stores to be called upon when food supplies of these nutrients were low.

000

SOME RECOMMENDATIONS FOR IMPROVEMENT OF DIET AND NUTRITURE AMONG RESIDENTS OF BANG CHAN

[164] Attempts to improve nutritional status in Bang Chan should be directed both toward increasing the supply and intake of certain nutrients and toward improvement of sanitary conditions so that intestinal infestation, diarrhea and other related illnesses will not lead to needless loss or increased requirement of nutrients.

Solution of the related problems of disposal of human excreta and provision of a year-round safe water supply are [164] in the province of the sanitary engineer. Intestinal para- [312] sitism was common, but little can be done through treatment of individuals so long as the water supply is contaminated. [271] Rain water was preferred for drinking, so provision of adequate and sanitary storage for rain water, coupled with sterilization of water from ponds and canals when rain water is not available, would do much to ensure safe drinking [846] water. The custom of giving mother and infant boiled water [353] only, during the post-partum rest period, provides a starting point for extending use of boiled water to other ages and conditions.

000 and conditions. An improved stove[1], by making more efficient [55] use of fuel, would reduce one obstacle to boiling drinking water. The alternative, chemical treatment, might be regarded as "medicine," and people might be more willing to spend money for this than for firewood. Water supply and latrine facilities at the school and wat should be such as to set a good example. Since links between sanitation and health have not been established in the minds of the villagers, no proposed solutions are apt to be effective without a strenuous and continued educational campaign.

Since the nutrient content of many foods used in Bang Chan has not been ascertained, the responsible Thai government personnel should as soon as possible seek to analyze those more commonly used, in particular fish, fermented fish, shrimp paste, fish paste and fishsoy, both commercial and home-made products, edible green leaves and flowers. Discovery, among the many varieties of fish used, of some which are good sources 146 of vitamin A, would be particularly useful. Of the calculated vitamin A values in diets for the two groups of households studied 90% or more of the vitamin A value was from vegetable sources, therefore in the precursor form. Among foods of animal origin which were used, eggs were the only food known to contain appreciable amounts of vitamin A. With more, and more complete, analyses of Thai foods, some of unusual nutritive value would probably be discovered. Also, information on composition of coconut milk should permit reasonably accurate calculation if the weight of coconut meat and the resulting product are known. Use of figures now available in food value tables, for coconut milks as prepared in Bang Chan, would lead to gross overestimate of caloric value and fat content of diets.

000 In using present knowledge to improve nutrient intake, emphasis should be placed on changes which would improve the everyday diet for all members of the family. We would start with familiar foods and methods of preparation, stressing the types of food which should be produced and used in increasing amounts. Advice of specialists in agriculture at nearby Kasetsart University should be sought in making choices appropriate to the location, among vegetables which would enhance the nutrient content of the diet, particularly in vitamin A value [246] and riboflavin. Since garden area is often limited, vine vegetables which can be trellised may be useful. In introducing innovations, we would, if possible, build on procedures known to be acceptable to some respected persons in the community.

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1. The "Hyderabad Smokeless Chula" would be useful in Bang Chan. In Smokeless Kitchens for the Millions, S. P. Raju (1953) includes designs for models with one to three cooking holes and hot water pot (The Christian Literature Society, P. O. Box 501, Park Town, Madras, India).

000 First steps toward a better diet are suggested by the best dietary practices observed. Although the calculated intake of no family on any survey day approximated or exceeded the estimated allowances for all nutrients, sharp contrasts were evident in individual records. Two sample calculations in Appendix C (pp. 121-122) represent one of the better and 262 one of the poorer records obtained. The food for Household 592 12, on Jan. 14, 1954 consisted chiefly of polished rice, fish, and non-leafy vegetable, with seasonings. In contrast, on July 23, 1953, Household 16 used home-milled rice, and about 60 gm. per person of swamp cabbage, with other vegetables and fish. These choices enhanced the potential nutritive value of the diet markedly without increasing its cash cost. Family labor was involved, however, in gathering greens and milling rice.

000 Since rice is the chief solid food for all ages, improving this major item will be considered first. An important step would be to teach the people to cook rice with just enough water so that all would be absorbed. The Thai government [252] has sought to encourage this. So long as the practice [146] of cooking rice in excess water persists, much of its vitamin and mineral content will be discarded, and efforts to improve the nutrient content of rice will be largely nullified. Some rice water could be used as a beverage, and for cooking certain vegetables which are commonly served with a thickened sauce. This would be preferable to discarding the rice water, but encouraging its use must be considered as an alternative to cooking rice without excess water, since the two practices are mutually exclusive.

[146] Use of under-milled and processed rice, and of the [256] rice polishings, has the advantage that a large part of the original B-complex content is conserved, whereas vitamins for enrichment are at present imported, and are apt to be for years to come. Since home milling persisted to some extent in Bang Chan, it might be encouraged, in some families. [256] One highly respected headman continued to mill rice at home, [554] hence the "prestige value" of white rice may not be so important in Bang Chan as it is among city Thai, who sometimes regard undermilled rice as "prisoner's food." The time and effort involved in home milling, however, may deter those who have given it up from returning to it; and since deepening the main canal has made the mill accessible to more families the year round, a program based on the assumption that commercial milling of rice will increase is probably more realistic than an attempt to encourage the return to home milling where it has been abandoned.

256 At present, no processed rice is made in Thailand. A plan to buy and install a Malekizing plant to process rice for the Royal Thai Navy was announced in 1953, but the plan has not materialized. Enriched rice has been sold by the Thai Rice Company for some years, but the best grades only,

256 90 to 100% unbroken grains, are used. To benefit rice farmers, enrichment should either be done at the nearby mills, or premix sold locally, and farmers taught to mix it with
• [146] their own rice. Because the premix used and marketed by the Thai Rice Company contains riboflavin as well as thiamine, niacin and iron, the treated grains can be readily distin-
000 guished from ordinary rice. Enrichment at the mill would be convenient, but would probably entail some government supervision and would not automatically ensure a better nutrient intake unless people learned the value of the conspicuous yellow grains. From this standpoint, separate purchase of premix might have advantage, at least in the initial stages of the program.

As far as we know, use of rice polishings in preparing "with-rice" dishes has not been explored in Thailand. Incorporation of rice polishings into a variety of soups and other "with-rice" dishes which would be acceptable to the Thai palate should not be difficult for the Thai home economist interested in experimental cookery. Nutrients usually lost in milling could thus be returned to the human diet. If adopted this procedure could be effective even in families that cling to the customary method of cooking rice in excess water. One old lady with beriberi, whose doctor had prescribed rice polishings, said she found them tasty. Information on the health value of rice polishings would probably be received more favorably if homemakers were shown acceptable ways of using them. A watery extract of the polishings might be used as a stop-gap preventive of thiamine deficiency while the slow process of changing food habits is going on. Such an extract could be used as a strengthening medicine for women during pregnancy and lactation, for infants and young children, and for those doing heavy field work, i.e. for vulnerable
[159] groups. The "second class doctors" at Minburi, the priests who practice healing, other traditional practitioners and midwives, because of their basic desire to help, would provide natural centers of information for this purpose.

Efforts being made by Thai government agencies to encourage eating more "with-rice" and less rice should be continued. A Thai co-worker suggested that "an educational program enjoining less peppery forms of with-rice would have the effect of encouraging consumption of a larger proportion
[262] of with-rice" (Sharp et al. 1953, p. 278). Various food items including those with a hot taste, were sometimes said to be bad for children, pregnant women, sick persons, etc., but seldom was any food mentioned as being good to eat under these circumstances. The concept that hot tasting foods are not healthful might be coupled with the idea that more generous amounts of mild dishes, especially those including green and
[262] yellow vegetables, should be used instead. The most widely used vegetables in Bang Chan were the wild swamp cabbage, and (2)phag (2)ka-(2)cheed, both leafy aquatic plants. Planting more (2)phag (2)ka-(2)cheed, and liberal use of both of these plants while they are available should be encouraged.

000 Growing other kinds of green and yellow vegetables should be fostered. Although vitamin A value and riboflavin content appear to be critical, in choosing vegetables to be stressed, specialists in agriculture should consider greens [P62] with high calcium and low oxalic acid content also. A variety of edible leaves of trees were used by a few families; some used sweet basil as a vegetable rather than just a seasoning; pumpkin and sweet potato were familiar, but less often used than would be desirable. More green or yellow vegetables which mature when canals are low and aquatic plants no longer available, would be especially good. If increased production by most households[1] is not practicable, a few of the more successful gardeners might be persuaded to produce vegetables and fruits which would help to bridge the gap between rainy seasons. Mushrooms, which can be grown readily, would provide a good source of ribo- [P64] flavin when leafy vegetables are in short supply. The boom-and-bust experience in mushroom culture (See Appendix A, pp. 101-102) might, however, make its revival as a source of healthful food for home use more difficult than if the villagers did not think of mushrooms as a cash crop for which the market failed.

Eating more fruit would help to tide over the dry 262 season. Fruits were commonly used as snacks, not at meal- [P66] time, hence snacks of fruit should be encouraged for adults as well as children. Bananas grew in all gardens and were available the year round. The (4)nam (4)waa variety, which was used in ceremonies, and considered safe for all, should 000 be stressed. More families could grow pineapple, which is [P77] relished both raw and in curries. Mango and papaya, fruits of outstanding value for both vitamin A and ascorbic acid, would be excellent, but the idea that growing papayas is "unlucky" must be taken into account. If a few of the more thoughtful and forward-looking farmers could be persuaded to start papaya trees, even though they were not willing to plant them near the house, the practice might spread in time.

• 146 On the average, the Bang Chan diet did not seem to be [P64] very deficient in protein, but distribution is not proportional to need, and protein deficiency may be in part responsible for periods of weight loss, or failure to gain, so 000 common among infants and children. The presence of other [P34] essential nutrients in animal foods is important also. If, the local supply of fish is indeed diminishing, efforts to [P22] increase it through pond culture should be continued. Abandonment of tilapia culture in Bang Chan, after about one-third of the families had tried it, (Appendix A, p. 101) suggests that not enough of the right kind of help was given

1. Tenant farmers may not be permitted to enlarge gardens by mounding at the expense of rice fields.

Table 16. Estimated Dietary Allowances for Residents of Bang Chan[1]

	Calories[2]	Protein[3]	Calcium	Iron	Vitamin A	Thiamine	Riboflavin	Niacin[4]	Ascorbic acid
		gm	gm	mg	I.U.	mg	mg	mg	mg
Adult man (52 Kg)									
Active	2500	60	0.5	8	2500	1.2	1.0	12	25
Adult woman (47.3 Kg)									
Active	1900	55	0.5	10	2500	1.0	1.0	10	25
Pregnant (latter half)	2300	80	0.8	18	4000	1.2	1.5	15	25
Lactating	2900	85	1.0	15	4000	1.5	2.0	15	30
Adolescents									
Boys 15-19 years	3000	80	1.0	12	4000	1.5	1.5	15	30
13-14 "	2500	70	1.0	12	3000	1.2	1.2	12	25
11-12 "	2000	60	0.75	10	2500	1.0	1.0	10	25
Girls 13-17 "	2500	70	1.0	12	3000	1.2	1.2	12	30
11-12 "	2200	65	0.75	10	2500	1.0	1.2	10	25
Children 9-10 "	1700	60	0.75	8	2500	0.7	1.0	7	25
7-8 "	1600	60	0.75	7	2500	0.6	1.0	6	20
5-6 "	1400	50	0.5	6	2000	0.6	1.0	6	20
3-4 "	1200	40	0.5	6	2000	0.5	1.0	5	18
1-2 "	900	35	0.5	5	1500	0.4	1.0	4	15
under 1 year	80/kg	3/kg	0.5						

1. This table was modified from Dietary Allowances Under Tropical Conditions (Nicholls, 1951, p. 315)

2. Adjustment of calories was made for adult man and adult woman, taking age, body size, climate and activity into account (Food and Nutrition Board, 1953. pp. 3-7 and FAO Committee on Calorie Requirements, 1950, p. 22); 400 calories extra were allowed for late (obvious) pregnancy and 1000 calories extra for lactation. Nicholl's estimates have been accepted for children and adolescents.

3. Protein allowances for sedentary man and woman were chosen for adults.

4. Allowance for niacin is 10 x thiamine allowance except that 15 mg rather than 12 mg was used for pregnancy.

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

Table 17. Estimated Dietary Allowances for Persons in Two Groups of Households, Participating in the Dietary Study, Bang Chan, 1953-54

Age Group[1]	Number	Average Age	Calories	Protein	Calcium	Iron	Vitamin A	B_1	Riboflavin	Niacin	Ascorbic Acid
				gm	gm	mg	I.U.	mg	mg	mg	mg
Group A											
Men											
60+	1	63	2000	60	0.5	8	2500	1.0	1.0	10	25
50-59	2	51	4380	120	1.0	16	5000	2.2	2.0	22	50
40-49	1	41	2315	60	0.5	8	2500	1.2	1.0	12	25
30-39	2	35	4750	120	1.0	16	5000	2.4	2.0	24	50
25-29	-										
20-24	2	22	5070	120	1.0	16	5000	2.4	2.0	24	50
Women											
70+											
60-69	1	60	1570	55	0.5	10	2500	1.0	1.0	10	25
50-59	-										
40-49	2	46	3420	110	1.0	20	5000	2.0	2.0	20	50
30-39	1	34	1805	55	0.5	10	2500	1.0	1.0	10	25
	2		5610	170	2.0	30	8000	3.0	4.0	30	60
20-29	1	20	1945	55	0.5	10	2500	1.0	1.0	10	25
Boys											
15-19	1	15	3000	80	1.0	12	4000	1.5	1.5	15	30
13-14	-										
11-12	2	11.5	4000	120	1.5	20	5000	2.0	2.0	20	50
Girls											
13-17	1	13	2500	70	1.0	12	3000	1.2	1.2	12	30
11-12	1	12	2200	65	0.75	10	2500	1.0	1.2	10	25
Children											
9-10	4	10	6800	240	3.0	32	10000	2.8	4.0	28	100
7-8	3	8	4800	180	2.25	21	7500	1.8	3.0	18	60
5-6	2	5.5	2800	100	1.0	12	4000	1.2	2.0	12	40
3-4	1	3	1200	40	0.5	6	2000	0.5	1.0	5	18
1-2	1	1	900	35	0.5	5	1500	0.4	1.0	4	15

Table 12. Percentage[1] of Total Caloric and Nutrient Intakes Provided by Each Food Group

Food Group	Family group[2]	Calories	Protein	Fat	Carbohydrate	Minerals Ca	Minerals P	Minerals Fe	Vitamins A	Vitamins B1	Vitamins Ribo.	Vitamins Niacin	Vitamins C
Rice and other cereal	A	85	57	23	92	23	75	52	1	82	38	66	-
Home-milled rice		20	14	7	21	8	24	16	-	26	13	25	-
All other		65	43	16	71	15	51	36	-	56	25	41	-
	B	82	54	16	93	16	75	46	-	84	51	64	-
Home-milled rice		9	6	2	10	3	12	7	-	14	9	13	-
All other		73	48	14	83	13	63	39	-	70	42	51	-
Fish and other animal foods	A	7	37	40	-	34	18	15	4	7	21	28	-
	B	7	40	29	-	43	19	15	10	8	29	29	-
Green and leafy vegetables	A	1	2	1	-	14	1	8	79	2	31	1	25
	B	1	2	1	1	23	1	17	76	2	10	2	38
Other vegetables	A	3	3	3	3	15	5	13	15	7	8	3	58
	B	2	3	4	2	8	4	7	5	5	8	4	37
Coconut and products (other than oil)	A	2	1	18	1	-	-	-	-	-	-	-	-
	B	3	1	21	1	-	-	-	-	-	-	-	-
Fruit	A	1	-	1	1	3	1	2	2	2	2	1	17
	B	-	-	-	-	2	1	1	9	1	2	-	23
Fats and oils	A	1	-	14	-	-	-	-	-	-	-	-	-
	B	3	-	29	-	-	-	-	-	-	-	-	-
Sugar	A	1	-	-	2	4	-	9	-	-	-	1	-
	B	2	-	-	3	4	-	14	-	-	-	1	-
Miscellaneous and spices	A	-	-	-	1	7	-	1	-	-	-	-	-
	B	-	-	-	-	4	-	-	-	-	-	-	-

1. Figures rounded to nearest whole number. The dash indicates value less than 0.5%. Analyses for a number of common foods were incomplete (see Table 13, p. 75).
2. Group A included apparently less well nourished families, Group B, apparently better nourished families.

Table 13, cont.

Foods	Frequency[1] of Use	Wt.	Calories	Protein	Fat	Carbohydrates	Ca	P	Fe	Vit. A	B_1	Ribo.	Niacin.	Vit. C
		gm		gm	gm	gm	mg	mg	mg	I.U.	mg	mg	mg	mg
Group B														
Rice		438	1579	30	3	345	29	654	3.7	(0)	0.56	0.15	7.4	(0)
Glutinous rice		8	30	1	0	7	1	12	0.1	(0)	0.01	-	-	(0)
Eggs	7	5	9	1	1	0	3	10	0.1	58	0.01	0.01	0	0
Fish, fresh	32	72	75	13	2	0	25	158	0.7	0	0.04	0.05	3.0	0
Fish, dried	10	12	22	5	0	0	7		0.3	0	0.01	0.03	0.5	0
Fish, fermented	2	4	5	1	0		46			0	0	0.01	0	
Fishsoy		3	2	0	0					0	0	0	0.1	
Shrimp paste	28	2	3	1	0					0	0	0	0.1	
Swamp cabbage	5	9	2	0	-	1	6	4	0.2	542	0.01	0.01	0.1	3
(2)Phag (2)ka-(2)cheed	2	3	1	0	0	0	6		0.1	198	0	0.01	0	2
Calabash	1	10	2	0	0	0	1	2	0.1	7	0	0.01	0.1	1
Chili, fresh	8	3	0	0	0	0	0		0	48	0	0	0	6
Eggplants	3	5	1	0	0	0	1	2	0	2	0	0	0	0
Radish, white	2	12	3	0	0	0	4	3	0.1	3	0	0	0	2
Coconut milk[3]	16	76	52	1	4	3								
Coconut oil		3	27	0	3	0	0	0	0	0	0	0	0	0
Lard		3	30	0	3	0	0	0	0	0	0	0	0	0
Sugar, palm		11	43	0	0	11	9	4	1.3	0			0.1	
Total			1886	53	16	367	138	849	6.7	858	0.64	0.28	11.4	14
Total from all foods			2009	59	22	384	194	895	8.4	1340	0.76	0.28	11.5	23

1. All items were eaten by 25% or more of the participating families. Under "frequency of use," the number of times the item was used as a main ingredient of a "with-rice" dish is indicated for 24 survey days for Group A and 20 survey days for Group B.
2. ( ) means imputed value; 0 means none or insignificant amount; - means no values available, but probably contains measurable amount; blank space means that no information was found.
3. Different values were used for the calculation of nutrient content of coconut milk for Groups A and B (see Appendix C, pp. 128-129).

Table 17. (continued)

Age Group[1]	Number	Average Age	Calories	Protein	Calcium	Iron	Vitamin A	B_1	Riboflavin	Niacin	Ascorbic Acid
				gm	gm	mg	I.U.	mg	mg	mg	mg
Group A											
Under 1 yr.	1[3]	1 mo.	720	27	0.5						
Total	32		61585	1882	20.5	274	80000	29.6	33.9	295	753
Round III[4]			61985	1907	20.8	282	81500	29.8	34.4	300	755
Round IV[4]			62585	1912	21.0	279	81500	30.1	34.9	300	758
Group B											
Men											
60+	1	64	2000	60	0.5	8	2500	1.0	1.0	10	25
50-59	1	53	2125	60	0.5	8	2500	1.1	1.0	11	25
40-49	3	46	6750	180	1.5	24	7500	3.3	3.0	33	75
30-39	1	39	2315	60	0.5	8	2500	1.2	1.0	12	25
25-29	1	25	2500	60	0.5	8	2500	1.2	1.0	12	25
20-24	3	21	7690	180	1.5	24	7500	3.6	3.0	36	75
Women											
70+	2	80+	2760	110	1.0	20	5000	2.0	2.0	20	50
60-69	-										
50-59	1	59	1570	55	0.5	10	2500	1.0	1.0	10	25
40-49	1	44	1710	55	0.5	10	2500	1.0	1.0	10	25
30-39	2	36	3610	110	1.0	20	5000	2.0	2.0	20	50
	1[2]		2805	85	1.0	15	4000	1.5	2.0	15	50
20-29	1	22	1930	55	0.5	10	2500	1.0	1.0	10	25

1. Based on age at beginning of the study.
2. Two nursing women (no. 922 and 905), age 30-39.
3. One additional infant in group, during Round IV.
4. One 20-year old woman (no. 525) was obviously pregnant in Round III and nursing mother in Round IV of the dietary survey.

Tabl 17. (continued)

Age Group[1]	Number	Average Age	Calories	Protein	Calcium	Iron	Vitamin A	B_1	Riboflavin	Niacin	Ascorbic Acid
				gm	gm	mg	I.U.	mg	mg	mg	mg
Group B											
Boys											
15-19	2	15	6000	160	2.0	24	8000	3.0	3.0	30	60
13-14	2	13	5000	140	2.0	24	6000	2.4	2.4	24	60
11-12	1	12	2000	60	0.75	10	2500	1.0	1.0	10	25
Girls											
13-17	2	15.5	5000	140	2.0	24	6000	2.4	2.4	24	60
11-12	-										
Children											
9-10	3	10	5100	180	2.25	24	7500	2.1	3.0	21	75
7-8	3	8	4800	180	2.25	21	7500	1.8	3.0	18	60
5-6	2	6	2800	100	1.0	12	4000	1.2	2.0	12	40
3-4	2	4	2400	80	1.0	12	4000	1.0	2.0	10	36
1-2	1	2	900	35	0.5	5	1500	0.4	1.0	4	15
Under 1 yr.	1[3]	3 mo.	240	5	0.5						
Total	37		71965	2154	23.75	321	93500	35.2	38.8	352	876
Round III[4]			72365	2179	24.05	329	95000	35.4	39.3	357	376
Round IV[4]			72965	2184	24.25	326	95000	35.7	39.8	377	881

1. Based on age at beginning of the study.
2. One nursing woman (no. 752), age 30-39.
3. One additional infant in group, during Round IV.
4. One 38-year old woman in Group B (no. 732) was obviously pregnant in Round III and was a nursing mother in Round IV of the dietary survey.

Table 18. Average per Capita Dietary Allowances for Persons in Two Groups of Households Participating in the Dietary Study, by Round and for the Year, Bang Chan, 1953-54

	Calories[1]	Protein	Calcium	Iron	Vitamin A	Thiamine	Riboflavin	Niacin	Ascorbic Acid
		gm	gm	mg	I.U.	mg	mg	mg	mg
Group A									
Round I	1925	58.8	0.64	8.6	2500	0.93	1.06	9.2	24
Round II	1925	58.8	0.64	8.6	2500	0.93	1.06	9.2	24
Round III[2]	1937	59.6	0.65	8.8	2544	0.93	1.08	9.3	24
Round IV[2]	1956	59.7	0.66	8.7	2544	0.94	1.09	9.3	24
Average per capita	1936	59.2	0.65	8.7	2522	0.93	1.07	9.3	24
Group B									
Round I	1945	53.2	0.64	8.7	2527	0.95	1.05	9.5	24
Round II	1945	58.2	0.64	8.7	2527	0.95	1.05	9.5	24
Round III[2]	1956	58.9	0.65	8.9	2568	0.96	1.06	9.6	24
Round IV[2]	1972	59.0	0.66	8.8	2568	0.96	1.08	9.6	24
Average per capita	1955	58.6	0.65	8.8	2548	0.96	1.06	9.6	24

1. Adults were considered to be "active." The estimates therefore represent values intermediate between those appropriate for heavy farm work, during planting and harvesting, and the relative inactivity of the intervening periods.

2. One 24-year old woman in Group A and one 38-year old woman in Group B were obviously pregnant in Round III, and they were both nursing mothers in Round IV of the dietary studies. Young infants were not counted separately in Round IV, as they were receiving mothers milk only.

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Dietary Study, Bang Chan - Nutritive Value of Total Foods Eaten in 24 Hours — Household No. 16 — Date: July 23, 1953 — Persons Eating: 8

Raw Ingredient	Adj. cons.	Calories	Protein gm.	Fat gm.	Carb. gm.	Ca mg.	P mg.	Fe mg.	Vit. A I.U.	B_1 mg.	Ribo. mg.	Niacin mg.	Vit. C mg.
Rice, home milled	3877	14074	295	43	3036	426	8568	46.5	(0)[1]	7.37	1.94	120.2	0[1]
Dried fish	450	864	189	7	0	293		11.3	0	0.27	1.40	20.7	0
Bottle gourd	1535	261	9	3	58	184	276	9.2	1075	0.61	0.77	15.4	154
Swamp cabbage	480	139	14	1	26	350	245	12.0	30240	0.34	0.58	3.4	154
(2)Phag (2)ka-(2)cheed	40	11	1	0	2	66		1.2	2400	0.04	0.08	0.3	28
Coconut milk[2]	1010	935	8	59	42								
Pork fat	36	325	0	36	0	0	0	0	0	0	0	0	0
Fishsoy	48	23	2	2					0	0.01	0.04	1.1	
Shrimp paste	16	19	4	0					0	0	0.02	1.0	-
Chilies, dried	20	49	3	1	6	32	74	0.5	115	0	0	0	10
Garlic	16	15	1	0	4	7	21	0.2	0	0.04	0.01	0.1	2
Bird pepper	10	3	0	0	1	2	-	0.1	600	0.01	0	0	20
Onion	4	1	0	0	0	1	2	0	2	0	0	0	1
Lime	4	2	0	0	1	(2)	(1)	(0)	0	(0)	(0)	(0)	1
Palm sugar	25	96	0	0	24	20	10	2.9	0	0	0	0.3	0
Salt	20	0	0	0	0	46	0	0.1	0	0	0	0	0
Total		16617	526	152	3200	1429	9197	84.0	34432	8.69	4.84	162.5	370
Average/cap.		2077	66	19	400	179	1150	10.5	4304	1.09	0.60	20.3	46

1. ( ) means imputed value; 0 means none or insignificant amount; - means no values available, but probably contains measurable amount; blank space means no information found.
2. See Appendix C, pp. 128-129.

2: Haugk et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

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Dietary Study, Bang Chan - Nutritive Value[1] of Total Foods Eaten in 24 Hours Household No. 12 Date: Jan. 14, 1954 Persons Eating:

Raw Ingredient	Adj. cons.	Calories	Protein gm.	Fat gm.	Carb. gm.	Ca mg.	P mg.	Fe mg.	Vit. A I.U.	B_1 mg.	Ribo. mg.	Niacin mg.	Vit. C mg.
Rice, polished	1335	4806	91	9	1053	80	1869	10.7	(0)	1.60	0.40	20.0	(0)
Egg plant	370	89	4	1	20	56	137	1.5	111	0.15	0.19	2.2	19
Fat fish	152	275	28	18	0	56	321	1.5	0	0.09	0.06	6.1	0
Lemongrass	36												
Holy basil	24	23	2	0	4	19	2	0.7	3024	-	0.55	-	1
Lime	22	8	0	0	3	9	5	0.1	0	(0.01)	0	0	6
Bird pepper	7	2	0	0	0	1	-	0.1	402	0	0	0	13
Shrimp paste	6	6	1	0	0				0	0	0.01	0.3	
Palm sugar	6	21	0	0	5	4	2	0.6	0			0.1	
Garlic	4	4	0	0	1	2	6	0	0	0.01	0	0	1
Total		5234	126	28	1086	227	2342	15.2	3537	1.86	1.21	28.7	40
Average/cap.		1745	42	9	362	76	781	5.1	1179	0.62	0.40	9.6	13

1. ( ) means imputed value; 0 means none or insignificant amount; - means no values available, but probably contains measurable amount; blank space means no information found.

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Foods for Which Values Were Obtained from Miscellaneous Sources, or Imputed by the Authors

Name of Food	Source or Basis for Imputed Values
Cereals	
Rice, glutinous, black	Values for glutinous rice
Animal Foods	
Fermented fish	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche, Ca value from Knudson (1955).
Shrimp paste	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche.
Fishsoy	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche.
Field rats	Values from Chatfield et al. for mammals, dressed.
Fruits	
(2)Ma-(1)dan, fruit	Leung et al. Unspecified fruits, tropical areas.
Manila tamarind	Leung et al. Unspecified fruits, tropical areas.
Ranbai	Willimott
Thai nutmeg	Values for persimmon
Vegetables	
(1) Bauaun	Values for eggplant
Bergamot rind	Aykroyd et al., values for lime peel.
Celery leaves, Chinese	Values for celery leaves and stalks, Chinese.
Coral	Leung et al., values for dark green leaves
Cucumber	Watt et al., for figures for Fe and Vitamin A in cucumber with skin.

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Galangal	Leung et al., values for ginger root.
(1)Jauau	Leung et al., values for dark green leaves.
(3)Khii-(2)leg	Leung et al., values for dark green leaves.
(4)Khlyb	Leung et al., values for dark green leaves.
Lotus stalk	Leung et al., values for lotus root.
(2)Ma-(1)dan leaves	Leung et al., values for dark green leaves.
(4)Ma-(5)khya (2)khaj (2)taw	Values for eggplant.
Morinda	Leung et al., values for dark green leaves.
(2)Phag (2)ka-(2)cheed	Leung et al., values for dark green leaves.
Sweet potato	Chatfield, values for vitamin A in pale variety.

Foods for Which Nutritive Values Were Not Calculated and the Total Amounts Eaten by Two Groups of Households Throughout the Survey

Name of food	Amounts Eaten	
	Group A	Group B
	g	g
Bergamot leaves	5	15
(2)Ka-(1)chaaj	15	71
(2)Kha-(1)cauaun flowers	25	0
Lemongrass	135	154
(2)Sa-(5)noo flowers	216	1078

NOTES ON THE PREPARATION AND NUTRITIVE VALUE OF COCONUT MILK AND COCONUT CREAM

252 The term coconut cream ((5)hua (2)ka-(4)thi), as it
262 was used in Thailand, referred to the product which was made by squeezing grated coconut with little or no addition of water. Coconut milk ((4)naam (2)ka-(4)thi) was made by squeezing grated coconut repeatedly with water. Coconut cream might be made first, and the residue extracted one or more additional times to obtain coconut milk. The terms coconut milk and coconut cream apparently are not used consistently. Losee (1952) commented on this when he described
[114] [171] the preparation of coconut cream in Samoa, and said that it was sometimes called coconut milk. Miller et al. (1936), in describing the preparation of coconut milk said "If a thick coconut milk to serve over puddings, taro leaves, etc. is desired, 1/2 to 3/4 cup of coconut water or boiling water should be poured over 3 cups of grated coconut. . . . If the milk is to be used in curry sauce for chicken, eggs, shrimps, or in cornstarch pudding, a larger quantity of water (1 to 2 cups of water to 3 cups of grated coconut) may be used."

126 In carrying out the dietary study, the observer weighed the grated coconut meat, the residue and the final products, coconut milk or cream, or both. She did not weigh the water as it was added in successive portions, but the amount of added water could be calculated.

184 The ratio of coconut milk to meat varied considerably,
262 but on the average, households in Group A obtained coconut milk which weighed more than eight times as much as the coconut meat from which it was made. Households in Group B obtained less than 2½ times as much milk by weight as coconut meat. The number of extractions made varied from 2 to 6,
146 with a mode of 3. Obviously, the products made by Groups A
171 and B, although both called coconut milk, had markably differ-
262 ent percentage composition, and neither was similar to "coconut milk" for which values could be found. These values were as follows:

		Coconut milk		
		grams per 100 gm. E. P.		
Authors	Location	Pro.	Fat	Carbo.
Bocobo et al.	Philippine Islands	3.6	33.2	38.4
Food and Drug Division	Thailand	3.52	34.75	1.52
Miller et al.	Hawaii	4.0	27.0	18.9[1]

1. Personal communication

128 In calculating values to be used in our estimates of
146 nutrient content of diets in Bang Chan, we made two assump-
262 tions: 1) that the "expressed coconut milk" described by Miller et al. was similar to coconut cream as made in Bang Chan, and 2) that coconut milk as made in Bang Chan differed from coconut cream primarily by dilution. When coconut milk was made by successive extractions after coconut cream had been prepared, the combined weights of cream and milk were taken to represent the yield of coconut milk from the weight of meat used.

The ratio of coconut cream to coconut meat was approximately the same, 0.30 for households in Group A and 0.33 for those in Group B, but Group A used more water in making coconut milk than Group B. By calculation, we obtained the following figures for the percentage of protein, fat and carbohydrate in coconut milk as made in the two groups of households.

Estimated Composition of Coconut Milk as Made in Two Groups of Households, Bang Chan

	Grams per 100 gm. E. P.		
	Protein	Fat	Carbo.
Group A	0.15	1.0	0.7
Group B	0.5	3.6	2.4

The need for a guide for calculating composition of various coconut milks, based on actual analysis of the products as made at home is apparent. Since coconut milk was used almost daily in Bang Chan, use of the figures which we found in the literature would have introduced a major error into our calculations. Using figures from the table designed for use in Thailand (Food and Drug Division, Bangkok, 1953), the average per capita caloric intake per day, from this source for the families studied would have been over 300 calories, as compared to about 45 calories, using the figures calculated on the basis of observed precedures in the village.

/Pp. 130-139 contain no data on Bang Chan and the Central Thai and were not processed for the AO7 Central Thai file./

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
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SUMMARY

129 Information on health, care, and diet of mothers and small
125 children in Bang Chan, Thailand, was obtained primarily by interview, although some direct observations were made. In general, three areas of inquiry were included in this study: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project.

In all, 66 mothers of young children were interviewed. Information on diet during pregnancy, postpartum, and lactation was obtained from women who were either in the stage under discussion or had only recently passed through it.

The description of child feeding practices is based on records obtained concerning 57 children from birth to two years of age, a majority of whom were visited from 5 to 7 times.

Information on growth in height and weight is based on observations made on 71 children, most of whom were weighed and measured 6 or 7 times. Observations were made for 30 of these children both before and after weaning.

843 During pregnancy most women in Bang Chan continued to eat as usual. A few expressed cravings for certain foods, and a minority thought some kinds of food should not be eaten during pregnancy.

846 During the postpartum rest period most women ate a very restricted diet. Rice and fish, with salt, were the foods considered by all informants to be appropriate for this period.

853 As a rule, diet during lactation, after the mother resumed her usual work, was the customary family diet. A minority of informants mentioned foods which should not be eaten by a nursing mother.

164 Evidence of the need to improve diets in this region was
• 446 provided by the occasional occurrence of beriberi or the history of beriberi among mothers as well as by medical inspection and family dietary studies.

853 Breast feeding was the rule in Bang Chan. For a majority of infants observed, breast feeding was continued into the second year, and some were breast fed for more than two years. Few received animal milk after weaning.

about the same as the 3rd percentile of male infants in the U.S.A., and from one year on the values fell below the 3rd percentile. Norms for American children are inappropriate for use with Thai, but an increasing lag in growth such as we observed may be a matter for concern.

Weight Loss and Failure to Gain. - Many of the children in Bang Chan failed to gain or actually lost weight over periods of time. This occurred frequently between two weighings which were 1 to 4 months apart and occasionally when a child was reweighed after an interval of 6 months. In some children loss of weight or failure to gain extended over two weighing intervals. Such loss or failure to gain may be an important sign of malnutrition (Jelliffe, 1955).

Relation to age. - The ages at which the children experienced weight loss or failure to gain were determined by inspection of the weight-age graphs. As shown in Table 17A, a period of loss of weight or stationary weight was noted for only one child below the age of 6 months. Between the ages of 6 and 12 months, a time when healthy infants usually continue to grow rapidly, such periods of weight loss or failure to gain for intervals of 1 to 5 months between weighings were observed in almost 40 per cent of the infants. Dr. Montri (1939) and Dr. Amara (1957) did not discuss the growth of individual infants, hence we do not know to what extent failure of some infants to gain weight may account for the depressed growth, on the average, which both of these observers reported for infants of this age.

During the second year of life children may be expected to gain weight less steadily, but more than 40 per cent of the children of this age in Bang Chan lost weight or failed to gain over intervals of 1 to 7 months.

After 2 years of age approximately one-half to two-thirds of the children weighed in a given 6-month period lost or failed to gain weight. Of 68 children who were weighed and measured over a period of a year or more, only 16 did not experience such loss or failure to gain between any two weighings. Most of these were in the youngest age group, only 3 were over 2 years old at the end of the study.

Possible reasons for failure to gain. - From the information available specific reasons cannot be given for the loss or failure to gain weight of so many of the young children of Bang Chan. Infection may have played a role, although we saw little evidence of severe infection and it was seldom mentioned. Increased activity as children grow older might affect rate of gain at the toddler age. For safety very young children in Bang Chan were closely tended which meant that their activities were rather restricted. As they became older and learned to

[See p. 37 - Analyst]

145 In summary, although infants and children in Bang Chan
121 increased steadily in weight, the rate of increase tended to be less than that of infants observed in a well baby clinic in Bangkok and much less than is usual for Western infants.
[146] Repeated periods of failure to gain in weight, or even weight loss, which we observed in infants and small children as well as in school children 7 to 14 years of age, may be evidence of unsatisfactory nutrition and might account in large part for the relatively small size of adults in this area. Extended longitudinal studies on growth of Thai children are needed, as are studies of food intake, intestinal parasitism, and other conditions which may lead to growth failure. Controlled therapeutic trials would help in recognizing the more serious of many problems of child health in this region.

[p 48 is blank]

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among children in Bang Chan is not known. One thing which residents of Bang Chan appeared to have in common with other populations which have been reported to be relatively caries free, was low intake of sugar, particularly in a form which would be apt to adhere to the teeth.

Adults up to 44 years of age, in the random sample, retained most of their teeth. A few adults in Bang Chan have had missing teeth crowned. More sound than missing teeth were found to be crowned, however, i.e. in this community a crowned tooth appears to have cosmetic value.

A variety of serious illnesses were found to occur among residents of Bang Chan. As a rule, local traditional practitioners were consulted first, but most persons reported to have been seriously ill eventually received treatment by outside practitioners with some training in modern medicine.

The majority of mothers in childbirth were attended by local traditional midwives, but a few difficult cases were taken to the government Health Center in the nearby town of Minburi, where a trained midwife was in attendance.

Of 436 pregnancies reported by 84 mothers, over 90% resulted in live births. Of the 397 living children born to these women, 81% survived at the time of interview. Within the first month of life, 7% had died, and a total of 11% died within the first year. Tetanus was prominent among causes of death of infants under one month of age. Infantile beriberi caused some deaths among older infants. In a majority of cases, the cause of death of infants could not be clearly identified, but fever, debility and convulsions were the symptoms most commonly described.

Almost half of the persons examined for possible signs of nutritional deficiency, 40% of the school children and 47% of the family sample, were free of such signs. The remainder, slightly more than one half of persons examined, had from 1 to 7 signs each. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Signs most often noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine in the diet. The only clearly defined deficiency disease observed among residents of Bang Chan during the field study was beriberi.

Hemoglobin values of 11.5 g or less per 100 ml. were

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As noted by the Joint FAO/WHO Expert Committee on Nutrition (1951) the part played by diet in the production of teeth which are unduly susceptible to caries is still controversial, although in general, the importance of nutrition, especially in the formative period, is widely accepted. In accordance with the recommendation of this Committee, caries rates are recorded as a separate item, and are not taken as a criterion of malnutrition.

Dentition. - Median ages of eruption of specific permanent teeth in 240 Bang Chan children, ages 7 to 14, are shown in Table 20 (Appendix B). For this purpose, data on 226 children in the Bang Chan primary school, and 14 additional children between those ages, in the random sample, were included. The percentage of boys and girls at each age, having each specific tooth erupted, was calculated. Median ages of eruption were estimated according to the method suggested by Klein et al. (1937). A graph was drawn for each kind of tooth, for each sex. Cumulated percentages for each specified kind of tooth erupted were represented on the x axis and age in years at one year intervals on the y axis. Median age of eruption was estimated by determining the point at which the age percentage eruption curve cut the 50% perpendicular.

In Bang Chan, as elsewhere, the median age of eruption for specific teeth is lower for girls than for boys. In some cases the difference is slight, in others, from several months to more than a year. The difference is most marked for lower canine teeth.

The average number of teeth, deciduous, permanent and total, at each age, is shown for children 7 to 14 years of age, in Table 21 (Appendix B). For ages 8 to 13, the greater dental maturity of girls than boys is reflected in the larger average number of permanent teeth present at each age.

On the basis of median ages of eruption for specific teeth, and the number of permanent teeth per child at each age level, dental maturity of children in Bang Chan appeared to be approximately the same as for children in other regions, in both eastern and western hemispheres, with which they were compared. Although the average number of teeth at some ages was lower for children in Bang Chan than for American or English children, the differences were neither marked nor consistent (Kamalanathan, 1956).

Caries Incidence. - Caries incidence was found to be low among Bang Chan children as compared to many regions in which surveys have been made. Of 226 children examined by the dentist, 42% (45% of the boys and 38% of the girls) were totally free of caries. When all carious teeth, both deciduous and permanent, were included, the average number of carious teeth per child was 1.8 (1.6 for boys and 2.0 for girls).

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164 Considering deciduous teeth only, in a group of 171 children, 93 boys and 80 girls who had deciduous teeth, 36% of the boys and 50% of the girls were free from caries. The average number of carious deciduous teeth per child was 1.4 and 1.5 for boys and girls respectively. For those with caries experience, the number of carious deciduous tooth per child was 3.2 for both boys and girls.

In the entire group of 226 children, 76% of 116 boys and 60% of 110 girls were free from caries of permanent teeth. The average number of carious permanent teeth per child was 0.5 for boys and 0.9 for girls. For children with caries experience, the figures were 1.9 and 2.3 for boys and girls respectively. None of the 30 boys with caries of permanent tooth had more than 4 such teeth, whereas 5 of 43 girls had more than 4 carious permanent teeth.

164 171 Data for children aged 12 to 14 in Galesburg, Illinois and Colorado Springs (Dean et al. 1942) have been chosen for comparison of caries experience in permanent teeth, with that in Bang Chan. In these cities, the fluoride content of the water is conducive to low caries incidence, yet the percentage of children aged 12 to 14 having caries experience was 72.2 and 71.5 for Galesburg and Colorado Springs, respectively as compared to 41% for Bang Chan, and the number of DMF[1] permanent teeth per child was 2.36 and 2.46 as compared to 0.88 carious permanent teeth per child in Bang Chan.

The reason for the relatively low incidence of caries among children in Bang Chan cannot be stated with certainty. Similarly low or even lower caries incidence has been reported for certain age groups of children in various parts of the world, for example in North China (Afonsky, 1951), in the northern islands of Samoa where the people had little access to store foods (Losee, 1952) and in a small isolated village in Greece (Phillipas, 1953). One thing which residents of Bang Chan appeared to have in common with such other populations which are relatively caries free, was low intake of sugar[2], particularly in a form which would be apt to adhere to the teeth. [146]

757 Restoration of Decayed and Missing Teeth. - None of the children examined had any filled teeth. Up to 44 years of age, the adults examined had retained almost all of their teeth, and [145] no evidence of restoration, other than crowning was noted. Decline in average number of teeth was marked after age 55.

Of 92 adults with teeth, at least 7 men and 6 women had been to a dentist as evidenced by the presence of crowned teeth

1. DMF denotes decayed, missing and filled. Children in Bang Chan had no filled teeth.

2. Sudsanah (1956) found the average per capita intake of sugar in 11 families to be only 6 grams per day.

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757 in their mouths. More than half of the teeth crowned were said to have been sound, and no crowned molars were noted. The services of a dentist appear to have been sought more for their cosmetic value than for dental care as such.

276 164 Betel Chewing and Dental Health. - Betel chewing was not habitual with any of the adults under 25 years of age who were examined. Among adults above this age in the random sample, 13 of 29 men, or 45%, and 34 of 40 women, or 85% chewed betel. The group of adults from 25 to 44 years of age was singled out for study of caries incidence in relation to betel chewing, since adults retained most of their teeth up to this age. Among 19 betel chewers, 3 persons had 5 defective teeth whereas among 19 non-betel chewers, 7 persons had 46 defective teeth. Others (Gerry et al. 1952; Shouric, 1948) have reported a lower incidence of caries among betel chewers than non-chewers. Caution must be used in interpreting our observations, however, because the sample is small, and the teeth were not cleaned before counting caries. Stain and calculus may have obscured small caries in betel chewers.

The impression was gained by casual observation that protruding incisors were common among habitual betel chewers, and that the teeth of some betel chewers appeared to be loose. Since such protruding incisors were not noted among the school children, nor among non-chewers, we associated them with habitual betel chewing. Both Gerry et al. (1952) and Balendra (1949) noted a higher incidence of gingivitis among betel chewers than non-chewers. Since most of the older persons in our sample chewed betel, our data offered no clue as to the possible effect of betel chewing on the loosening and loss of teeth among older persons. Another item of possible importance, and on which we have no data, is the extent to which tobacco is used as an ingredient of the mixture which is spread on betel leaves.

276 146 Platt (1945) considered betel chewing as a potential source of calcium in the diet. He stated that the amount and utilization of calcium ingested with 6 betel leaves was similar to that from 10 ounces of cow's milk.[1]

The amount of calcium ingested in this way doubtless varies not only with the frequency of betel chewing, but also with the amount of juice swallowed. In Bang Chan, spitting out the juice appeared to be more customary than swallowing it.

276 Further research is needed to decide whether the potential disadvantages of betel chewing outweigh its potential benefits. Moreover in any attempt to decrease the practice of betel

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1. Platt, 1945. Footnote, p. 21.

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Table 9

147 Hemoglobin Values of 104 Residents, Age 15 and Older, in Random Sample, Bang Chan, 1952-53

	Number of Persons	Hemoglobin, grams per 100 ml.					
		Under 9.75	9.75-11.5	11.75-12.5	12.75-13.5	Over 13.5	Not Ascertained
Male	48	0	3	7	9	28	1
Female	56	1	13	10	14	11	7
Total	104	1	16	17	23	39	8

146 125 Occurrence of Possible Signs of Malnutrition. - Most of the signs and symptoms included on the schedule for clinical examination were those known to be of value in the assessment of nutritional status (Joint FAO/WHO Expert Committee on Nutrition, 1951). Some items included need to be investigated more fully before their value can be determined. Among the 146 164 items on the schedule, (Appendix A) the following were not observed in any of the persons examined:

Eyes: photophobia, lachrymation, blepharitis, xerophthalmia, Bitot's spots, gross corneal vascularisation.

Face: Folliculosis, nasolabial seborrhea, dyssebacia, suborbital pigmentation.

Lips: Scars of cheilosis and of angular stomatitis.

Tongue: Edema, color change to scarlet or magenta. (In 30 adults, however, such color changes if present would have been obscured by the discoloration from betel chewing.)

Gums: Retraction, loss of interdental papillae.

Parotid glands: Enlargement.

Skin: Perifollicular congestion, petechiae.

Edema

Calf tenderness

Inability to rise from squatting A [see p. 51-Analysis]

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In addition, the two cases of symmetrical dermatosis observed were not of the pellagroid type and should probably not have been included with the possible signs of nutritional deficiency.

The only instance of thyroid enlargement noted (an obvious thyroid adenoma) was in a 13 year old boy who had always lived in Bang Chan. He knew of no one else in the family with such enlargement.

Five girls and women in the random sample refused to permit the examining physician to palpate the liver and spleen, but he was able to carry out the rest of the inspection.

Almost half of the groups examined, 46% of the school children and 47% of the family sample, were free of the possible signs of nutritional deficiency. The remainder had from 1 to 7 such signs. Persons in the random sample were grouped according to age, and the percentage of each group found to have each number of signs is shown in Table 10. Note that most of the

Table 10

Number of Possible Signs of Nutritional Deficiency Occurring in 166 Individual Residents in the Family Survey, Grouped According to Age

Age Group, years	Number of Persons Examined	Percentage of Each Group Found to Have Each Number of Signs			
		0	1	2	3 or more
6 and under	33	54	3	3	0
7-14	34	47	38	9	6
15-19	17	76	18	6	0
20-39	41	32	54	7	7
40-59	27	7	33	22	37
60 and over	14	21	7	21	50
Total Group	166	47	30	10	13

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preschool children were free of signs. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Among the children, a larger proportion of school children than preschool children or adolescents had possible signs of malnutrition; i.e., more than half of the children 7-14 years of age, as compared to 6% of the children 6 years old or under, and 24% of the age group 15 to 19 years.

The incidence of specific signs among school children and persons in the random sample of families, is summarized in Table 22 (Appendix B).

Several points concerning the distribution of specific signs possibly associated with nutritional deficiencies deserve comment. The most prominent group of signs among school children were the skin signs: xerosis which occurred in 15% and phrynoderma in 5% of the children. Even loss of elasticity of skin occurred in 3 boys. Among adults, these signs were confined almost wholly to the group of older women.

Liver enlargement was next in frequency among school children, with 5% of them exhibiting this sign. We have no evidence as to the cause of liver enlargement. It is sometimes associated with protein deficiency, but our data on food intake (Sudsanoh, 1956) is on the basis of family consumption, hence we do not know whether school age children have relatively low intakes of total protein or of animal protein. Liver enlargement may also be associated with intestinal parasitism, which was common in Bang Chan.

Dry, "staring" hair was observed in 18 children. One case of diminution of pigment was recorded. A number of other cases in which dark hair had an auburn cast, were noted by the non-Thai nutritionist, but were accepted as normal hair color by the Thai physician.

Ulcers on the legs below the knees were observed in 14 school children. Such ulcers, though not associated with any specific nutritional deficiency, occur commonly in ill-nourished subjects (Smith, 1952).

Some school age children both in the random sample and in Bang Chan primary school, did not have knee and/or ankle jerk. These signs were more prominent among adults, however, particularly among men, than in the school age group.

The occurrence of skin changes among older women, together with the higher incidence of low hemoglobin values among women than among men, accounts for the seemingly higher incidence of possible signs of malnutrition among adult women than men. The only clear difference in occurrence of signs among

[See p. 67-Analyst]

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146 164 women of childbearing age as compared to older women, was in the incidence of skin changes. Certain of these, i.e. xerosis, loss of elasticity and atrophic skin, were observed, in the adult group, only among older women. In some cases at least these signs may have been associated with aging rather than nutritional deficiency, unless, indeed some of the common signs of aging prove to be due to long continued intakes which are suboptimal. Among the school children, however, these skin changes were clearly abnormal.

At the clinical examination, redness of the gums was noted in a few cases only among school children, most of whom were examined in November. The dentist, who examined the children in February, noted redness of gums in about one-fourth of them. This difference may reflect a difference in standards used by the physician and dentist, or the incidence of this sign may have increased between examinations.

Certain groups of signs tended to occur together. Thus the various skin signs: phrynoderma, xerosis and loss of elasticity were often associated. Of 23 cases with absence of knee jerk, 16 had absence of ankle jerk also, and the various changes in tongue and lips not only tended to occur together, but these were often associated with absence of knee jerk and/or ankle jerk. The signs of possible nutritive deficiency most commonly noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine in the diet (Sudsaneh, 1956).

146 142 Bowleggedness was observed in a larger proportion of adults than children, but according to our criteria, did not occur in either group to the extent that we had been led to expect from previous reports. Among the 198 school children in Bang Chan who were examined by a physician in 1948-49, 69, i.e., about 35%, were reported to have bowed legs, with 4 cases called "severe" (Sharp et al. 1953, p. 249). Among the 233 children in Bang Chan school when we examined, 9 only, i.e., less than 4%, were considered bowlegged according to our criteria, and none of these cases was severe. Chutima (1939) stated that "Another condition prevalent in Siam and fundamentally due to improper diets since infancy is Bow-leggedness. Only about 25% have normal lower limbs, the rest being bowlegged and many are knock-kneed . . . The percentage of extreme bow legs is about 20% while mild bow legs form about 55% of our school children." Since these other observers determined bowleggedness by casual inspection[1], some of the difference between the earlier observations and ours may be due to difference in criteria used. The children

1. Personal communication from Dr. Yong Chutima.

pictured as bowlegged in Chutima's report (1939) are, however, clearly so, and represent more extreme cases than we encountered among the children in Bang Chan in 1952-53. If the incidence of bowleggedness among children in Thailand is indeed decreasing, an investigation into possible causes of the change would be of interest.

To the nutrition specialist on the team, who was not Thai, the knee joints appeared to be large. Moreover, although the term "knock knees" was not included on the schedule, it was entered frequently by the physician under comments (Appendix B, Table 22).[1] Whether this condition is related to heredity, nutritional status, or to some other environmental influence such as the life-time habit of squatting on the heels, is not known.

The physician's estimate of general appearance and vitality were recorded early in the examination, before he sought for specific signs. About 80% of all persons examined were rated as "good," and less than 1% as "poor." About half of all persons rated as "good" in general appearance and vitality were without clinical signs, as compared to about 30% of those rated "fair." Of persons with 3 or more possible signs of malnutrition, however, about 2/3 were rated "good" (Appendix B, Tables 23 and 24).[2] As has been observed frequently, such a general appraisal is not correlated with the presence or absence of clinical signs possibly associated with malnutrition. Clearly, in Bang Chan, there is little or no malnutrition of the sort that causes marked apathy.

In summary, a variety of possible signs of malnutrition were noted both in the school children and the persons in the random sample of village households. More than half of the total number examined had one or more signs possibly due to malnutrition, but the only clearly defined deficiency disease encountered was one case of beri beri[1] in a 49-year old man.

Reproductive Function in Females

Menstrual History. - Information concerning menstrual history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied.

Most of the women from whom information on age at menarche was obtained were under 40 years of age. A few could

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1. History of beriberi among nursing mothers and their infants was obtained in several instances, and cases of beriberi, in both sexes, were seen among persons not included in the population samples which were examined.

[2] [see p. 71-Ans.] [3] [see pp. 72, 73-Analysis]

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145 not recall the age at menarche.

The median and modal reported age at menarche was 15 years, with a range from 13-19 years (Table 11).

Table 11

Reported Age at Menarche of 54 Females in Bang Chan.

	Age in Years						
	13	14	15	16	17	18	19
Number at each age	6	18	34	21	8	4	3
Percentage at each age	6	19	36	22	9	4	3

This estimate, made from ages given by recall, is necessarily approximate; however, none of the girls between 12 and 14 who were examined clinically, had passed the menarche. Moreover, median and modal ages at menarche were 15 years for sub-groups aged 15 to 24, and 25 to 39 at the time of inquiry, hence the inclusion in this series of women for whom the event was not recent did not alter the estimated median age at menarche. Wilson and Sutherland (1953) conclude that in tropical countries the onset of menstruation as compared with that for English children, 145 may be either early or late. Tanner (1955) notes that if 114 climate has an effect on age at menarche, it must be a minor one, 121 and that at present the effect of race cannot be disentangled from nutritional and socio-economic circumstances. Basing his judgment on the effects on men of famine associated with war, [146] and on results of direct experiments on animals, Tanner expresses the conviction that nutrition plays a major role in determining the age at which menarche and the adolescent spurt in growth occur. If this view is correct, the relatively late median age of menarche in Bang Chan may be associated with inferior nutritional status.

145 One of 17 women in the age group 35-44 had passed the menopause, whereas 12 of 16 women over 45 years of age had done so. One of 7 women over 55 years of age, 2 of 7 women age 50-54, and one of 2 women age 45-49 had not yet reached the menopause. The reported ages at menopause were: 30-34 years, 2 women; 40-44 years, 3 women; 45-49 years, 3 women and 50-54, 5 women.

147 Approximately 100 respondents gave information concerning

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145 Deaths of infants a few days old, with a description of lockjaw, inability to suck, stiff back and clenched hands, were recognized as due to tetanus. The common practice of native midwives is to place the cord over a hard rhizome or clod of earth and to cut it with a tapered piece of bamboo. Thus, infection with the tetanus organism may occur from contact with the soil. Note that 12 of 26 deaths reported for infants under 1 month, were diagnosed as tetanus or probably tetanus. Zimmerman (1931) summarized important causes of death in Siam, based on the physician's diagnosis made after symptoms were described by the head of the household. Of 1800 deaths which occurred in the 18 months preceding the survey, 2% were diagnosed as tetanus. For the Central area, 3.8% of 495 deaths were from tetanus. Most, if not all of the cases of infantile tetanus could be prevented if native midwives learned to avoid contact of the cord with earth or a soil-coated rhizome. By using sterile scissors for cutting the cord instead of tapered bamboo which must be pressed against another surface to accomplish the cutting, contact with soil could be avoided. Of 335 household heads interviewed, 220 owned scissors of some kind (Nalis, 1955).

Infants several months old, who had some of the symptoms of infantile beriberi, as convulsions and almost voiceless crying, were considered as cases of infantile beriberi only if the mother had symptoms of beriberi, such as numbness or tingling in the extremities, or difficulty in walking, at the time. One mother had lost 3 infants at 3 or 4 months of age, with similar symptoms, but described the symptoms of beriberi in herself at the time of the death of the last baby only. The other two cases were therefore listed as convulsions, cause unknown. The occurrence of infantile beriberi reflects the unsatisfactory nutriture of the mother, whose milk is therefore low in thiamine content. To prevent deaths from infantile beriberi, the general level of nutrition in the village, and particularly the food habits of pregnant and nursing women, should be improved.

Note also the number of deaths from "debility." As the Joint FAO/WHO Expert Committee on Nutrition (1951) has pointed out, the number of early deaths from "congenital debility" becomes insignificant where the health and nutritional status of pregnant women approaches the optimal.

Intestinal Parasitism and Bowel Habits

126 125 164 Intestinal Parasitism. - All school children were provided with tin containers labelled with their names, and asked to bring a stool sample to school. Fourth grade children whose first stool samples were negative, were asked to bring a second specimen. Parasites were found in some of these second

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specimens. In all, specimens were obtained from 189 or 81% of the children and of these 32% were negative. In 128 stools containing parasites, 196 infecting organisms were found, or an average of 1.5 per infected child. Protozoa and helminths which are pathogenic or which may cause severe diarrhea were identified 126 times, and harmless forms 70 times. Of the harmful forms, Ascaris lumbricoides was found in 96 or 51% of the stool samples, Giardia lamblia in 19, or 10%, and hookworm, Endamoeba histolytica, Trichuris trichiura and Diphyllobothrium in 2% or less. Of the harmless forms noted, Endamoeba coli was found in 45 specimens or 24%, Iodamoeba williamsi in 21 or 11%, Endolimax nana and Chilomastix mesnili each in less than 2%. Doubtless the extent of intestinal parasitism in these school children was greater than the figures indicate, since some cases would be missed in examination of single stool specimens collected in this way. One might expect intestinal parasitism to be relatively common, also, among other family members.

Bowel Habits. - In connection with the clinical survey, persons examined were asked whether they had "constipation" or "diarrhea" frequently, occasionally, or never, i.e. not within the past 6 months. As the physician phrased the questions concerning "constipation," the replies indicated whether the respondent had daily bowel movements ("never constipated"), or usually had a bowel movement each day ("occasionally constipated") or usually had longer intervals between bowel movements ("frequently constipated"). Replies are summarized in Table 17.A

Considering the inadequate sanitation in Bang Chan, and the prevalence of intestional parasitism, the fact that 3/4 of the persons questioned said they "never" had diarrhea, is worthy of note. Most persons who reported having diarrhea were troubled occasionally rather than frequently. The fact that nearly 2/5 of those questioned had bowel movements less often than once a day, is not surprising in view of the fact that diets which are relatively low in fibrous foods and in the B complex vitamins frequently result in sluggish behavior of the large intestine. That approximately 3/5 of the respondents in Bang Chan usually had a daily bowel movement is perhaps more noteworthy. Even in areas where diets tend to be much more liberal, some persons usually have bowel movements at intervals of 2 or 3 days or even longer. If such persons have stools of normal character and experience no discomfort, this bowel habit may be considered normal for them.

A [see p. 43 - Analyst]

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Table 17

Bowel Habits of Persons Questioned in Bang Chan, Thailand, 1952-53

Group	Number of Persons Reporting	Frequency of Bowel Movements			Frequency[1] of Diarrhea		
		Daily	Usually 1/day	Usually longer intervals	F	O	N
		%	%	%	%	%	%
Random Sample of village Households	158	57	11	32	2	19	79
Primary school children	233	53	3	44	2	26	72
Total respondents	375[2]	54	7	39	2	23	75

1. F - Frequent; once a week or oftenor.
O - occasional; less often than once a week.
N - never; not within the past 6 months

2. Primary school children in random sample counted once only. Information not obtained in a few instances.

Table 22

•446 Summary of the Occurrence of Clinical Signs Possibly Related to Nutritional Deficiency, Bang Chan

	Random Sample of Families[1]							School Children[1]	
	Adults		Children						
	M	F	15-19 M	15-19 F	7-14 M	7-14 F	under 6 yrs.	Boys	Girls
Total number of persons examined	37	45	9	8	16	18	33	119	114
Clinical Signs									
Hb 11.5 g. or less/100 ml.	2	14	-	-	1	3	-	10	11
Hair - dry and staring	-	-	-	-	1	2	-	9	9
- diminution loss of pigment	-	-	-	-	-	-	-	-	1
Eyes - excess conjunctival tissue	3	6	-	-	-	-	-	-	-
Lips - cheilosis	-	-	-	-	-	-	-	1	1
- angular stomatitis	1	2	-	-	-	-	-	1	2
Tongue - papillae atrophied	-	1	-	-	1	-	-	1	1
- papillae hypertrophied	2	1	-	-	-	-	-	2	3
- appearance, fissured	1	1	-	-	1	-	-	2	-
- appearance, geographical	-	1	-	-	1	-	-	3	-
- NA Betel[2]	(8)[2]	(22)[2]	-	-	-	-	-	-	-

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Table 22 (cont.)

	Random Sample of Families[1]							School Children[1]	
	Adults		Children						
			15-19		7-14		Under		
	M	F	M	F	M	F	6 yrs.	Boys	Girls
Gums - swelling	-	-	-	-	-	1	-	2	2
- redness	-	1	-	-	1	1	-	2	3
- recession	-	-	-	-	-	-	-	-	1
Thyroid enlarged	-	-	-	-	-	-	-	1	-
Skin - Symmetrical dermatosis	-	-	-	-	1	-	-	1	1
- pityriasis	-	-	1	-	-	-	-	5	6
- xerosis	-	2	-	-	-	2	-	24	12
- loss of elasticity	-	7	-	-	-	-	-	3	-
- atrophic	-	6	-	-	-	-	-	-	-
- ulcers	-	-	-	-	1	1	-	8	6
Knee jerk absent	11	2	1	-	2	2	(5)[2]	-	3
Ankle jerk absent	9	2	1	-	-	1	(6)[2]	-	2
Liver enlarged	1	(2)[2]	-	(1)[2]	1	(2)[2]	1	14	7
Spleen enlarged	-	(2)[2]	-	(1)[2]	-	(2)[2]	-	-	1
Skeleton - bowed legs	13	13	1	-	2	-	2	8	1
- knock knees[3]	-	1	-	1	1	-	-	10	6

1. Eighteen children in Bang Chan primary school were also in the random sample of village families.
2. Not ascertained.
3. The term "knock knees" was not included in the schedule, but the figures are included here because it was mentioned so frequently under comments.

Table 23

146 Relation of Number of Possible Signs of Nutritional Defiency to Vitality Ratings of School Children, Bang Chan

Vitality Ratings	Number of Persons	Number of Persons With Each Number of Clinical Signs						
		0	1	2	3	4	5	6 or more
Poor	2		1	1				
Fair	48	13	22	9	2		1	1
Good	182	95	58	24	3	2		
Not ascertained	1			1				
Total	233	108	81	35	5	2	1	1
Percentage of persons with each number of signs		46	35	15	4 (3 or more)			

Table 24

W6 Relation of Number of Possible Signs of Nutritional Deficiency to Vitality Ratings of Persons in the Random Sample of Village Households, Bang Chan

Vitality Ratings	Number of Persons	Number of Persons With Each Number of Clinical Signs						
		0	1	2	3	4	5	6 or more
Poor	1		1					
Fair	30	11	10	5	4			
Good	121	55	37	12	8	5	3	1
Not ascertained	14	12	1					1
Total	166	78	49	17	12	5	3	2
Percentage of persons with each number of signs		47	30	10	13 (3 or more)			

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 15

VILLAGE PADDY CONSUMPTION
Bangchan, Thailand, 1953

Item	Units of Consumption	Rate	Total Consumption
		tang	tang
Food	1,372 man equivalent	38.3	52,548
Feed	5,066 chicken equiv.	4.0	20,264
Seeds	7,682 rai equivalent	1.0	7,682
Total		--	80,494

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

In Table 15, units of consumption of paddy are arrived at by the following procedure:

1. Food. Children age 14 and under are considered to have one-half of the rate of consumption of adults and the old. Thus, 644 children in Table 2 comprise 322 man equivalent units of consumption. When 1,050 people over 14 years of age, each having one man equivalent unit of consumption, are added, a total of 1,372 units is obtained.

The rate of consumption of 38.3 tang per man equivalent was obtained from our consumption study of 106 families in 1953.

2. Feed. Due to the lack of adequate data for 1953, figures obtained by the poultry survey conducted in 1949 were used in the calculation for feed. Items in that survey include roosters, hens, chicks, and ducks. Information on poultry feed consumption was obtained from Luang Suwan, the poultry expert of Kasetsat University, Bangkok, who gave the following figures: roosters, hens and ducks, naturally raised, consume four tang of paddy per head per year; and a chick's paddy consumption, negligible at the beginning but gradually increasing with its age, is about three tang per year. Most of these chicks were disposed of at the age of seven months when each had consumed about one tang. One chicken equivalent is therefore assigned to each head of roosters, hens and ducks, and one-fourth chicken equivalent to each chick. On the basis of a stock of 17 chicken equivalents per family, which was found to be the case in 1949,

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 16

ESTIMATED VILLAGE PADDY SURPLUS
Bangchan, Thailand, 1953

Paddy Production			193,594 tang
Paddy Consumption			
As food		52,548	
As feed		20,264	
As seeds		7,682	
Sub-total			80,494 tang
Paddy Surplus			113,100 tang

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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Other Food Production

235 433 Other food products which are produced in a considerable amount in Bangchan include chicken eggs, duck eggs, and fish. To a lesser extent, fruit and vegetables are also produced locally.

Practically every family in Bangchan raises chickens, and half raise ducks. In April, 1949, the author conducted a poultry survey covering 46 families whose homes were on the banks of Bangchan Canals. Of these, 45 families were found to be raising chickens and 23 families raising ducks.

Of 45 families raising chickens, 38 families from which data were available reported rates of egg production showing that for these families 53,750 eggs were produced annually from 376 laying hens, averaging 143 eggs per hen. [146] [438] Of 31 families who gave information about sales, five consumed all 2,260 chicken eggs produced; the other 26 families sold 31,040 eggs and consumed 5,590. The proportion of consumption to sale was thus 7,850 to 31,040 or approximately one to four.

There were 393 laying hens in the yards of 45 families, averaging 8.6 hens per family. Chicken egg production was estimated at 1,230 per family. Assuming that four-fifths [434] of these were sold at three for one baht, which was the local price in 1949, average cash income for these families from sale of chicken eggs was estimated at 326 baht annually. [435] With a higher price in 1953 of fifty satang a piece, the estimated income from sale of chicken eggs rose to 492 baht per family.

226 made that any program of fish raising in a closed pond, no
654 matter how effective it may be, should not preclude the need for conservation of fish naturally existing in the open canals.

243 It has been pointed out that Bangchan operators
226 produce 52 per cent of the things they need for ordinary
433 consumption. Thus, rice growing may be seen as a farming-
434 to-reduce-cost enterprise where maximization of profit ceases to be the primary motive of production. It has been pointed out also that rice growing is a losing concern to many operators (in terms of labor income and operator's labor earnings), but the loss has been compensated by the privilege to fish [146] which is open to all village residents. Since the amount of fish caught constitutes the main and probably the only source of protein intake and at the same time a considerable share in the diet of villagers, continually decreasing supply of fish therefore underscores the immediate need for an effective program for fish conservation as a means to prevent the standard of living of the villagers from falling below the minimum level of subsistence.

161 Over-population in an area of limited job opportuni-
464 ties naturally creates an over supply of labor, which in
465 turn results in low wages. This is further complicated by a wide variation of individual earning from labor of from two thousand baht annually to almost nothing, the latter being the case of transient members of farm operating families.

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This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

Marriage

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As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Minburi to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

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Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.[a] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:62) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

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a. A person who uses magical means to force an unwilling woman's love "will be born 100 times as a mad dog."

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chewing, the extent to which the betel leaves and areca nuts are associated with festival occasions must be taken into consideration. Betel chewing was forbidden in Thailand by the Thai government but the enforcement of this regulation proved impossible and it has been forgotten since World War II.

Nutritional Status

Incidence of Anemia. - Hemoglobin was determined by means of a Spencer Hb-meter. About 9% of the school children had hemoglobin values below 11.5 g. per 100 ml. but one value only was below 9.75 g. (Table 8). As might be expected since none of the girls in the primary school had passed the menarche, no difference was apparent between values for boys and girls.

Table 8

Hemoglobin Values of 233 Children, Ages 7-14, in the Bang Chan Primary School, 1952-53

	Number of Children	Hemoglobin, grams per 100 ml.					
		Under 9.75	9.75-11.5	11.75-12.5	12.75-13.5	Over 13.5	Not Ascertained
Boys	121	0	10	32	44	33	2
Girls	112	1	10	25	38	37	1
Total	233	1	20	57	82	70	3

In the group of persons 15 years and older, in the random sample of village households, the usual difference in hemoglobin values between males and females is evident (Table 9). About 6% of the males and 25% of the females had hemoglobin values of 11.5 g. or less/100 ml. with one only below 9.75 g. Many of these might be considered as borderline rather than anemic.

[see p.25 - Analyst]

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Table 9

147 Hemoglobin Values of 104 Residents, Age 15 and Older, in Random Sample, Bang Chan, 1952-53

	Number of Persons	Hemoglobin, grams per 100 ml.					
		Under 9.75	9.75-11.5	11.75-12.5	12.75-13.5	Over 13.5	Not Ascertained
Male	48	0	3	7	9	28	1
Female	56	1	13	10	14	11	7
Total	104	1	16	17	23	39	8

146 125 Occurrence of Possible Signs of Malnutrition. - Most of the signs and symptoms included on the schedule for clinical examination were those known to be of value in the assessment of nutritional status (Joint FAO/WHO Expert Committee on Nutrition, 1951). Some items included need to be investigated more fully before their value can be determined. Among the 146 items on the schedule, (Appendix A) the following were not 164 observed in any of the persons examined:

Eyes: photophobia, lachrymation, blepharitis, xerophthalmia, Bitot's spots, gross corneal vascularization.

Face: Folliculosis, nasolabial seborrhea, dyssebacia, suborbital pigmentation.

Lips: Scars of cheilosis and of angular stomatitis.

Tongue: Edema, color change to scarlet or magenta. (In 30 adults, however, such color changes if present would have been obscured by the discoloration from betel chewing.)

Gums: Retraction, loss of interdental papillae.

Parotid glands: Enlargement.

Skin: Perifollicular congestion, petechiae.

Edema

Calf tenderness

Inability to rise from squatting A2 [see p. 51-Analyst]

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not recall the age at menarche.

The median and modal reported age at menarche was 15 years, with a range from 13-19 years (Table 11).

Table 11

Reported Age at Menarche of 54 Females in Bang Chan.

	Age in Years						
	13	14	15	16	17	18	19
Number at each age	6	18	34	21	8	4	3
Percentage at each age	6	19	36	22	9	4	3

This estimate, made from ages given by recall, is necessarily approximate; however, none of the girls between 12 and 14 who were examined clinically, had passed the menarche. Moreover, median and modal ages at menarche were 15 years for sub-groups aged 15 to 24, and 25 to 39 at the time of inquiry, hence the inclusion in this series of women for whom the event was not recent did not alter the estimated median age at menarche. Wilson and Sutherland (1953) conclude that in tropical countries the onset of menstruation as compared with that for English children, may be either early or late. Tanner (1955) notes that if climate has an effect on age at menarche, it must be a minor one, and that at present the effect of race cannot be disentangled from nutritional and socio-economic circumstances. Basing his judgment on the effects on men of famine associated with war, and on results of direct experiments on animals, Tanner expresses the conviction that nutrition plays a major role in determining the age at which menarche and the adolescent spurt in growth occur. If this view is correct, the relatively late median age of menarche in Bang Chan may be associated with inferior nutritional status.

One of 17 women in the age group 35-44 had passed the menopause, whereas 12 of 16 women over 45 years of age had done so. One of 7 women over 55 years of age, 2 of 7 women age 50-54, and one of 2 women age 45-49 had not yet reached the menopause. The reported ages at menopause were: 30-34 years, 2 women; 40-44 years, 3 women; 45-49 years, 3 women and 50-54, 5 women.

Approximately 100 respondents gave information concerning

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• 147 duration and regularity of menstrual periods, and intervals between periods (Table 12).

Table 12

Characteristics of Menstrual Periods of Women in Bang Chan

	Percentage of Respondents in Each Category			
Duration, days	Under 3	3 or 3+ (a)	4 or 4+ (a)	5 or more
91 respondents	6	78	11	5
Interval	**Short**	**Usual (b)**	**Long**	
101 respondents	0	84	16	
Regularity		**Regular**	**Irregular**	
102 respondents		89	11	

(a) A plus sign indicates variability of period, as 3-4 days.

(b) usual - approximately 1 lunar month.

While the usual variations were encountered, a large majority of responses were similar. Thus the typical woman in Bang Chan menstruated at regular intervals of about 1 lunar month, for a period of approximately 3 days. While the sample is small, the only unusual feature of menstrual history as compared to western standards appears to be a somewhat older age at menarche.

892 Pregnancies. - Most married women in Bang Chan have children. The range in number of pregnancies for a given number of years of marriage is great, however (Table 13), and suggests either 1) relatively low fertility in many cases, or 2) the existence of some method of birth control of which the research workers, including the Thai physician, had no information. Zimmerman (1931, p. 230) has commented that in Thailand the birth rate did not seem to be under human control. He said that rural Thai did not know about birth control nor practice any form of it to any extent.

A/A [see p. 32-Analyst]

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125 specimens. In all, specimens were obtained from 189 or 81% of
126 the children and of these 32% were negative. In 128 stools
164 containing parasites, 196 infecting organisms were found, or an average of 1.5 per infected child. Protozoa and helminths which are pathogenic or which may cause severe diarrhea were identified 126 times, and harmless forms 70 times. Of the harmful forms, Ascaris lumbricoides was found in 96 or 51% of the stool samples, Giardia lamblia in 19, or 10%, and hookworm, Endamoeba histolytica, Trichuris trichiura and Diphyllobothrium in 2% or less. Of the harmless forms noted, Endamoeba coli was found in 45 specimens or 24%, Iodamoeba williamsi in 21 or 11%, Endolimax nana and Chilomastix mesnili each in less than 2%. Doubtless the extent of intestinal parasitism in these school children was greater than the figures indicate, since some cases would be missed in examination of single stool specimens collected in this way. One might expect intestinal parasitism to be relatively common, also, among other family members.

125 Bowel Habits. - In connection with the clinical survey,
147 persons examined were asked whether they had "constipation" or "diarrhea" frequently, occasionally, or never, i.e. not within
514 the past 6 months. As the physician phrased the questions concerning "constipation," the replies indicated whether the respondent had daily bowel movements ("never constipated"), or usually had a bowel movement each day ("occasionally constipated") or usually had longer intervals between bowel movements ("frequently constipated"). Replies are summarized in Table 17. A

126 Considering the inadequate sanitation in Bang Chan, and
147 the prevalence of intestional parasitism, the fact that 3/4 of the persons questioned said they "never" had diarrhea, is worthy of note. Most persons who reported having diarrhea were troubled occasionally rather than frequently. The fact
[146] that nearly 2/3 of those questioned had bowel movements less often than once a day, is not surprising in view of the fact that diets which are relatively low in fibrous foods and in the B complex vitamins frequently result in sluggish behavior of the large intestine. That approximately 3/5 of the respondents in Bang Chan usually had a daily bowel movement is perhaps more noteworthy. Even in areas where diets tend to be much more liberal, some persons usually have bowel movements at intervals of 2 or 3 days or even longer. If such persons have stools of normal character and experience no discomfort, this bowel habit may be considered normal for them.

A [see p. 43 - Analyst]

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Table 17

Bowel Habits of Persons Questioned in Bang Chan, Thailand, 1952-53

Group	Number of Persons Reporting	Frequency of Bowel Movements			Frequency[1] of Diarrhea		
		Daily	Usually 1/day	Usually longer intervals	F	O	N
		%	%	%	%	%	%
Random Sample of village Households	158	57	11	32	2	19	79
Primary school children	233	53	3	44	2	26	72
Total respondents	375[2]	54	7	39	2	23	75

1. F - Frequent; once a week or oftener.
O - occasional; less often than once a week.
N - never; not within the past 6 months

2. Primary school children in random sample counted once only. Information not obtained in a few instances.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

1950; and Wheelis 1958.) At best, it would suggest that the Thai informant was faced with a difficult problem external to himself—perhaps finding a job or a spouse, or thinking of his future—and was appraising his ability to deal with that problem. Also, such an appraisal would have a strong constraining element: the necessity to control one's hopes and desires (perhaps for the hypothetical job or spouse) in order to avoid potential pain or disappointment; in essence, "beware of your limitations; do not forget your station." This is in turn supported by certain Buddhist concepts, such as *?ubergkhaa*, or stoical indifference to the vicissitudes of life, among others.

Whether there *is any* way to express handily in Thai the Western notion of "the need for self-acceptance" is doubtful. Most villagers are too thoroughly narcissistic to require such a concept in their cognitive maps. Alternatively, there are other more direct ways of saying what "knowing myself" might mean in Thai, for example, "controlling my desires," "knowing whether I have the ability to do the job," or by referring directly to Buddhist doctrine. As such, these statements would be an expression of piety or the bolstering of one's self-confidence (or steeling oneself against failure) rather than psychic introspection.

A similar interpretive problem exists with the completion "his family." Because Thai kinship relations are so strongly influenced by concepts of benevolent superiority and dependent inferiority, most expressions of the need for affiliation with the family immediately imply the related need of succorance: security, support, protection, and sympathy, either as source or beneficiary.

The point of these comments is that the responses must always be first interpreted in the villagers' terms, not ours. Once made, precisely by explanatory notes such as these, these interpretations become part of the "data" and serve as a basis for our analysis. It should be recognized, however, that anthropological mythology (and these particular examples) to the contrary, not *all* the responses are interpretively dissimilar. When a villager says, *"When he hit me, I . . .* must hit him back," he means precisely the same thing we do. The point, therefore, is to be extremely sensitive to the possibility of differential meanings, underscore and explain it when it occurs, and use the native interpretation as a prerequisite and corrective to our own. For a brief but brilliant theoretical discussion of this problem see Bohannan 1959.

The Psychological Meaning of the Responses

The fourth premise concerns the psychological "meaning" of the responses. There are several aspects of this problem which require specification.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

*125 • 15 First, the informants' reactions to the imagined situations portrayed in the SCT items represent their *predispositions* to act in the manner indicated, rather than literal descriptions of how they would behave in real life.[8] They indicate a psychological readiness or propensity. Any overt behavior is the result of several determinants, only one of which is the individual's predispositions. Other factors include the nature and purpose of the reality situation; the individual's changing moods and skills; and in social situations, the expectations of the other person, his behavioral cues, and ego's perception of them, as well as the relative statuses of the participants (of extreme importance in Bang Chan). All these determinants—and probably others as well—come into play during any particular event, and the slightest change in one may result in different and unexpected forms of overt behavior. It is precisely because so many factors do lie behind the occurrence of an event that predictability in human affairs is so difficult. Yet, because to a large extent a person creates and structures for himself the situations in which he is involved, and because in these situations he is objectively free to respond in any number of different ways, his predisposition to act in a particular way is crucial in determining what actually does occur. Witness Rychlak's students. Basically it is the individual's organized system of predispositions, and their repeated—but not invariable—manifestation in action, which gives his overt behavior a certain consistency and unity, and which allows us to ascribe to him a particular "personality."

In real-life situations, however, the individual's predispositions are often obscured to the observer by more obvious factors such as those mentioned above, e.g., the social climate and the expectations and status of others. A major advantage of an unstructured instrument like the SCT is

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[8] Examination of the SCT literature on this point has been both time-consuming and intriguing. Despite the fact that there probably have been more than two hundred studies involving the use of the SCT—Levy (1952: 192) reports 139 studies between 1946 and 1951 alone—this writer has been able to discover only one. Rychlak's work on Japanese students in the United States (Rychlak 1955, and Rychlak, Mussen, and Bennett 1957), which concerns itself directly with the relationship between SCT responses and overt behavior. SCT responses have been correlated with other tests, attitude scales, psycho-galvanic skin responses, informants', psychiatrists', and teachers' reports, and measurements of "adjustment," but apparently only once with measures of overt behavior in the same areas covered by the items. Rychlak found that students who expressed a high degree of optimism and "sociality" on an SCT administered soon after their arrival in the United States (examples: *"To me the future looks . . . bright"*; *"To others I am . . . very sociable"*) were the same individuals who months later tended to participate in bull sessions and visit American homes; conversely, individuals who exhibited on the SCT an involvement with interpersonal conflicts (examples: *"My bosses are . . . intolerant"*; *"I failed because . . . others didn't understand me"*) later tended to use their leisure time in reading and avoided social clubs and parties. On the basis of these findings, Rychlak views the SCT as "a remarkably efficient predictor of the quality of the individual's social relationships."

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that it gives the informant extraordinary latitude to express his predispositions with relative freedom from these social constraints. The social constraints which do exist are self-defined and self-imposed. Other than being required to make sense, the informant has complete freedom to structure the situation posed by the SCT fragment as he pleases. His predispositions emerge unobscured as he assumes all the roles of the real-life drama, defining the situation as he chooses, placing himself and the imagined others in context, and then reacting to the situation. Although the process is a subjective and imaginative one, it retains at all times its ties to reality by the highly realistic nature of the stimuli. The predispositions thus revealed are realistic and ostensive rather than deep-lying or hidden although, as was suggested earlier, their analytic significance derives not from the manifest meanings of the responses but from more general, underlying denotations.

A second aspect of the responses concerns their psychological primacy. It is a fundamental postulate of this work that the informants' reactions represent their primary or dominant responses to the situations portrayed in the SCT items. This by no means implies that the absence of another kind of response indicates the absence of the capacity to have that sentiment nor that such an alternative sentiment is potentially inexpressible; it does mean, however, that our informants are not predisposed to react in that way.

Earlier in this chapter it was argued that the responses are "relatively unpremeditated" and that an incomplete sentence "taps the relatively unconscious expectations and conditionings which comprise the psychological essence of language and thought." Although these assertions are valid—certainly as contrasted with the results of direct questions—the word "relatively" must not be glossed over. The actual process of constructing an utterance always involves a great deal of psychic editing, and few people ever say what they "really" want to say in the sense of being completely unpremeditative. This was of course one of Freud's earliest (1904) lessons. But somewhere in the process of split-second decision making that goes on within the mind (Freud hypothesized that most of it takes place in the pre-conscious) the individual must make a choice and we have to assume that this choice, as revealed by his articulated statement, is his principal response. The individual might well have said something else. But the point is that he did *not*. The proffered statement was in fact the dominant one.

This raises a question that has been the subject of some discussion in the anthropological literature and which is particularly germane to the present analysis. A cursory review of the SCT data immediately indicates that the villlagers phrase many, although not most, of their responses in terms of cultural ideals, that is, in terms of precepts to which behavior

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should conform. (For example: *"The best way to treat a subordinate is . . .* to speak to him with kind and agreeable words"; *"When he thinks of his father, he thinks of . . .* the goodness and kindness his father has done for him.") This is not a universal pattern since definitions of the ideal are ambiguous, lacking, or inappropriate for many of the items; also, such definitions seem not to be applied to items which imply immediate action. However, they do appear with sufficient frequency to be noticeable.

None of this should be surprising, inasmuch as viewing behavior in terms of "the good" and "the proper" is a central characteristic of the villagers' thought and idiom. They tend, *considerably* more than Americans, to evaluate (in an ethical sense) people and events rather than describe them, and even to describe by evaluating. Ask most villagers: "What kind of a person is so-and-so?" and their replies will consistently be in terms of whether he is "bad" or "good," rather than in terms of non-evaluative description, *e.g.*, he is "funny," "passive," "interesting." The words, *khon mai dii* and *khon dii* ("a bad person" and "a good person") are two of the most frequently occurring items in the Thai lexicon. One might epigrammatically characterize much of the villagers' thought as "super-ego-dominated." That this mode of thought should be applied to many of the SCT situations is hardly unexpectable.[9]

Having recognized this tendency, however, there is the problem of assessing its psychocultural meaning. Do such appeals to the ideal, especially as applied to the self, in any way weaken our definition of the responses as "predispositions to action?" Are many of the responses mere verbalisms that have little to do with real behavior?

A number of theorists, notably Murdock (1940 and 1954) and Kluckhohn (1943*b* and 1951) have taken the position that cultural behavior should be distinguished into two fundamentally different forms: ideal patterns and real patterns. The former are "those norms which are verbalized as the ideals to which behavior should conform" (Murdock 1954: 22); and the latter, patterns of actual, overt behavior. Opler has taken issue with the necessity for this distinction, and has argued (1948: 116):

> My own feeling is that the concern over precepts or ideal patterns which contrast with or stand apart from behavior is a pleasant distraction which will not get us very far. In my opinion the disparity between rule and behavior in society has been greatly exaggerated. Actually, behavior remains remarkably close to rules or precepts which are

[9] This same characteristic has been described in other contexts (Wilson and Phillips 1958, Phillips 1958, L. M. Hanks 1959*a* and 1959*b*) as the essentially moral nature of the villagers' universe: the tendency, largely implicit, for Bang Chaners to perceive events of the most diverse kinds within an ethical frame of reference. It might well be, as Redfield had argued for many years (1941, 1953, and 1956) that such a cognitive orientation is characteristic of all peasant peoples.

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considered of moment by the group. I think that it can be demonstrated that when precept and activity draw too far apart, a modification of one or the other is likely to take place to close up the gap.

In assessing my psychological test materials, I take the following position with regard to this issue. The distinction between the ideal and the real is an analytic requirement because obviously there are some instances where the two patterns are not congruent. However, once such distinction has been made there is no inherent necessity to assume that there *must* be a gap between the two patterns or if there is a gap, to assume that it must be especially wide. One will inevitably encounter in Bang Chan cases where subordinates are not spoken to "with kind and agreeable words." But on the whole, the extent to which real behavior does accord with this precept is impressive. For the most part, it is not a mere verbalism but rather a viable guide to action: a subordinate who is not treated with kind and agreeable words will not (depending of course on other situational factors as well) long maintain his ties to his superior. This same reasoning applies to the majority of the cases in which informants couch their responses in terms of cultural ideals.

A third aspect of the responses concerns the psychological "level" at which they will be interpreted. Because of the highly realistic nature of the completions, the necessity to interpret them in Thai terms (which precludes "blind analyses"—see DuBois 1944) and the necessity to work with the pooled responses of many individuals, our interpretations will not go psychodynamically very "deep." On the other hand, neither will we remain at the level of the manifest meanings of the responses. Although an informant's completion may represent a precise description of the way he would behave in real life, and in many cases does, it is more sensible from an analytic standpoint to view the response as a symptom of an underlying, more generalized, psychological orientation. The reasons for this are twofold: first, many of the responses which are superficially different seem to express simply alternate facets of a single, underlying predisposition; second, and more important, we must remember that on theoretical grounds personality characteristics are not, as Inkeles and Levinson point out (1954: 981) "phenotypic, behavior-descriptive terms, but rather are higher level abstractions that refer to stable, generalized dispositions or modes of functioning and may take a great variety of concrete behavioral forms."

In these terms, a statement such as *"When he saw that others avoided him, he . . .* also avoids them" indicates not only a person's desire not to associate with those who avoid him but, more important, an underlying, more general disposition *to accept and maintain a breakdown in social relations.* Moreover, the latter interpretation also encompasses such varying responses as: ". . . must not speak to them because they are bad. They

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like to look down upon people" and ". . . probably was not generous with them, so they avoided him." The significance of this underlying interpretation becomes even more apparent when the three responses are contrasted with other possible but unoffered completions which belong to totally different interpretive categories, for example, ". . . tried to make up with them" or ". . . asked them why?" signifying *attempts to reintegrate or understand the interpersonal rupture* and ". . . felt terribly hurt," indicating *emotional pain or disturbance.*

A Working Conception of Modal Personality

Our fifth and final premise is concerned with developing a workable conception of modal personality despite the inevitable paradoxes which attend such an endeavor.

The fundamental problem here is that in abstracting out the psychological similarities which the villagers share with one another, we become unavoidably involved in the difficulties of working with "conjugate variables"; that is, the more we concern ourselves with the commonality of a personality trait, the less we simultaneously learn about the role of that trait in the functioning of the individual members of the sample. The significance of this is not so much that we sacrifice an understanding of individuals for an understanding of the group, but that in so doing we must also sacrifice some of the depth and perceptiveness of our analysis. A successful personality study is in large measure achieved by descriptive contrast: we learn more about human beings the less they appear like other people. When subtle individual differences must be submerged for purposes of group characterization, the resulting descriptions must necessarily be less sensitive and precise.

The root of the problem lies in the fact that our basic units of analyses are individuals who, despite all the similarities they share as members of Thai culture, are obviously different from one another in specifics. Moreover, as Wallace points out in a recent article (1961a: 147–148), from the point of view of culture-personality theory, they *must* have certain psychological differences:

> The problem of psychic unity is sometimes obscured by our tendency to regard human societies as populations and not as groups when we make psychological statements. A population of individuals may be described without references to their interrelationships; but a group cannot be considered apart from its organizational structure. Thus physical, demographic, or personality characteristics of the members of a population can be stated, explicitly or implicitly, as a statistical distribution on one or more dimensions, and to the extent that the data

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156 available channels of social participation and the rewards that are attached to them. . . ."

121 114 15 Without claiming in any way to know the thinking that prompted Kaplan's provocative comments on the importance of the motivation of conformity in shaping action, I wonder if it is not based on the supposition that situations in all cultures are similar to those that we typically encounter in our own highly complex, functionally specific culture—a culture which, *if it is to operate in the highly complex and relatively efficient way we know it*, requires that individuals conform to the demands of their tasks. In other terms, to what extent is the argument for conformity based on the supposition that the majority of relationships in most societies are similar to those which obtain, for example, between workers on an assembly line or between a secretary and her employer, where, if conformity were not maintained most of the time, the consequences would be functionally disastrous, disastrous to the very *purpose* of the relationship? While I take issue here with Kaplan, there is one crucial aspect in which I am in complete agreement with what he seems to be aiming at. That is, if his argument is in fact based upon, and directed at understanding, a strictly American model, I can thoroughly understand the import of his question: "What is the motivational basis for the generalized disposition to conformity . . . ?" After living in Thailand for several months and observing, and often identifying with, the ease with which individuals pursued their own purposes, oblivious to the requirements of conformity, I began to wonder not about the Thai capacity to maintain loosely structured relationships but about the considerably more mystifying American capacity to conform to the expectations of others. From a *psychological* point of view, the latter is by far the more difficult and demanding, requiring as it does inhibition of and control over one's own desires and a deeply developed predisposition to orient oneself to others. How this orientation is developed and sustained on such a pervasive scale as is found in American culture—particularly with regard to the rewards involved ("Are *instrumental* rewards such as money really sufficient to link person A to person B?")—is clearly, as Kaplan suggests by his posing of the issue, an analytic problem the motivational details of which we presently have only the dimmest understanding. To a certain extent this orientation is explicable in terms of the simple malleability of human beings; in terms of the consummatory rewards that instrumental satisfactions eventually lead to; or perhaps in terms of what Wallace (1957) calls, "cultural identification," or the love of one's culture patterns for their own sake (in this case, love of the modes of social interaction to be found in one's culture). This last would involve interactional patterns assuming a *motivational* "functional autonomy" (Allport 1937) of their own, that is, ego deriving an *intrinsic*

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satisfaction from fulfilling another's expectations. However, it is clear that the actual motivational process individuals go through in order to learn to be concerned with the expectations of others—and considering the pervasiveness of this concern, it must involve either intensive or sustained learning—has yet to be examined in a ramified way.[1]

To my knowledge, the only scholars to address themselves directly to the question of the motivations and rewards for conformity are Kaplan in an earlier paper (1957) and Parsons (1952, 1961, and Parsons *et al.* 1953). Kaplan argued that there are two motivational tendencies making for conformity: the desire to behave morally and the desire to please others. The former tendency is quite explicable in terms of the development and functioning of the super-ego (a universal human attribute), and by emphasizing this, particularly with his later use of the pointed phrase, "good citizen," Kaplan's contribution is considerable. However, the latter consideration begs the question of why individuals should be so motivated to please others, and raises the additional problem, as I have done here, of whether all people are equally motivated in such directions. Parsons' early discussions of conformity simply propound the "evaluative, cognitive, and cathectic" satisfactions that the fulfillment of prescribed patterns award to the individual. In his later, more carefully elaborated essay, he sees the roots of conformity in the inherent helplessness of the human infant. In what is essentially a masterful sociological translation of Freud, he argues that conformity develops into a "generalized goal" or "mode of organization of the ego" as the individual successively identifies with, cathects, and internalizes the attitudes of the powerful figures (his parents) who respond to his helplessness. In this sense, Parsons seems to be arguing that the individual's major initial reward for conformity is the maintenance of his own life. The individual's conformity is gradually generalized as he goes through successive developmental stages, reaching its crystallization—the "point of no return," as it were—in the painful options of the Oedipal

[1] The theories that have been most concerned with the nature of conformity and "self-other" orientations—role theory and "symbolic interactionist" theory—have for the most part viewed the *motivations* and *rewards* for conformity as self-evident. That is, the immense literature of these "schools" has tended to focus not on why individuals should wish to conform in the first place, but on the skills, consequences, and non-motivational processes of conformative behavior. Writers such as G. H. Mead (1934), Cameron and Magaret (1951), Sarbin (1954), Shibutani (1961), and Rose (1962) all recognize the necessity of individuals to be socialized into conformity, but they go no further than describing the manifest processes of socialization—"intentional instruction" and "incidental learning," "imitation" and "spontaneous play activities." Having once mentioned these processes, they simply go on to assume that the conformative motivation is thoroughly internalized and self-sustaining. The only exception I have found is Shibutani who addresses himself to the matter of reward in a single sentence (1961: 509): "For most children, the voluntary inhibition of impulses begins with attempts to please those whom they admire."

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12 situation. It might be added that since the Oedipal situation is very much of
114 a moral crisis, Parsons' arguments go far in supporting Kaplan's earlier
• 15 contentions. Parsons, however, says little about the *different* ways in which parents respond to the child's helplessness and little about *variations* in the intensity and types of identifications, cathexes, and internalizations that the individual may implement—factors which would obviously lead to different kinds of conformative tendencies. Our earlier materials on Bang Chan socialization are particularly instructive on this point. In fact, if Parsons' formulation were linked to those data, it would go a long way to explain precisely why Bang Chaners have such a weakly developed sense of conformity. In the same way, the contrast helps to underscore the profound sense of interpersonal involvement, dependence, and concern inculcated in members of our own culture during the developmental process. To Parsons, the quintessence of these interpersonal investments is, of course, the Oedipal situation: the prototypic encounter with the power of external authority and all that such power implies for the individual's need to conform and to deny and control his own impulses. If this interpretation is correct, it would further suggest that the Oedipal situation must be based, *in the first instance*, on the developmental experience of close interpersonal involvement—an experience which, as our Thai data demonstrate, is subject to broad cross-cultural variation.

*128 The problem of "conformity" raises an additional question, one that has
*156 been implicit to many of our earlier remarks, but which merits explicit consideration in these final pages. At several points in the text, it was suggested that the villagers, with their profound sense of self-concern and freedom of choice, often choose to ignore or to isolate themselves from the effects and influences of others. This kind of behavior is a major dimension of their loosely structured relationships; it appears as well in their handling of dependency, anxiety, and aggression. From a psychological point of view, the behavior can be interpreted in one of two ways. On the one hand, it can be interpreted to mean that the villagers have difficulty in relating themselves to others, and use isolation as a means of defense. Implicit here is the notion of emotional deprivation, for who but a deprived person should wish to withdraw from contact with others? On the other hand, the behavior can be read to mean that the villagers are emotionally tough, and simply do not need other people very much. Here isolation is seen as self-reliance and mature emotional security. Throughout this study, I have chosen to stress the latter interpretation.

*128 This kind of interpretation is not an easy one to justify in contemporary
114 Western social science. Implicit to almost all of our thinking is the Judaeo-
*156 Christian assumption (more recently codified by Durkheim and Freud)
181 that the greatest psychological pleasures an individual experiences are

in the shwan khan "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year. 759 465

The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children." 759 84

In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mǎ or to the Minburi Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experience, and again, the conviction that the course of childbirth was merit-determined. 759 571 [756] [845] [793] [578] 759 554 152 789

Though living like other elder citizens of the community in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences. 759 554 572

If the case were in difficulty sometimes a mǎ was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (thaan chîip [Mo.F. 990]) when others who had equal or more experience were NOT so considered? 759

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

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the parents often do not really care and children can pretty much get away with doing what they want.[14]

With regard to other expressions of the recognition of individual dignity, one rarely sees in Bang Chan any physical or even verbal coercion. (The rare use of whipping, noted above, is to punish transgression, not to implement action.) Other than in horseplay, children do not push each other around; in my twenty-two months in Thailand, I saw not one case of young children in a serious fight, despite the fact that I looked for it. Very rare indeed is the parent who uses force or the threat of force on his child; there is no Siamese equivalent to the American intimidation, "You had better do that or else. . . ." In general, Bang Chaners proceed on the simple assumption that if people, including children, do not do what you ask them, they have good—and more important, private—reasons for responding that way; there is no need for, or interest in, self-justification. The major means of inducing recalcitrants to conform to your wishes is to cajole, wheedle, and flatter them (see particularly the responses to the Sentence Completion items, *"The best way to treat a subordinate is . . ."*; *"The worst way to treat a subordinate is . . ."* in chapter V). A less conscious but more frequently practiced alternative is simply to withdraw support: the parent who turns his back on the child and walks out (particularly evident in our TAT stories),[15] the older sibling who refuses to take his younger ones with him when there is entertainment to be seen, and the like. It must be noted, however, that social disengagement, although frequently utilized, does not always work; often the individual who is left suspended merely accepts the fact and continues about his business. The major point to be recognized is that villagers do not use forms of direct, blatant coercion on others. If soft words or the withdrawal of love will not move them, then their decision, freely determined, must be respected.

Love and affection within the family appear primarily in two forms. Their most typical expression is shown through the gifts, favors, and services people do for each other. The degree of affection that individuals feel toward one another is in fact explicitly measured in these terms. Thus, a father says that of all his daughters, the one who has given him the greatest pleasure is "the one who sells things . . . When she gets money,

[14] In qualification, however, it must be noted that all Bang Chaners are extremely sensitive to social cues—partially as a consequence of having to balance off their individualistic propensities against the demands of the authority system—and here the children ignore their parents only because the latter have indicated by their very halfheartedness that they do not care. The children can, and do, quickly hop to it on the slightest indication of parental seriousness: a stern look, for example. My point, however, is that such looks are comparatively rare.

[15] In another paper, Hanks and Hanks (1963) make the same observation on the basis of behavioral materials.

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593 she gives it to me." In describing his relationship with his maternal grand-
152 parents, with whom he spent all but two of the first twelve years of his life,
159 this same person says:
593
431
603

> My younger sister and I were born one year after the other. So mother gave me to grandmother to be weaned. I lived with her until I became a novice at the monastery at the age of twelve. I lived with grandmother, so I loved grandmother and grandfather more. I loved grandmother even more than my own mother and father. Wherever grandfather and grandmother went, I went too. Grandmother loved me: she always gave me sweets and toys. I had everything I wanted because I was the only young thing in the house. She loved me. She was going to give her property to me, land and gold, as much as she was going to give to her own children. But it was only a promise. I got the gold, but not the land, because when grandmother died, grandfather got a new wife. She was young. . . . I didn't quite like her. The young woman was too economical. . . . Sometimes she prevented grandfather from buying good things for me. When grandfather was going to buy gold or anything for me, she stopped him. She wanted him to buy for her more than for his grandchild.

593 This excerpt, taken from the biography of one of the life history informants and comprising almost the complete portrayal of the relationship between the informant and the individuals with whom he spent the crucial years of his childhood, is by no means atypical. The point is that of all the myriad
(431) elements in the relationship, or of all the loving characteristics that in his
(603) eyes the grandparents had, he chose to emphasize only the material gifts they had given him as the measure of their love. Other informants are no different: one man said he knew his father did not love him because when he died he left the family home to the Buddhist monastery; and a woman said she admired her father because "when he died there was property left. He was a good man: he did not abandon his children. He was worried about them." (Her other reason for *admiring* him was that "he was the person who brought me into the world.")

596 The other major form of familial love is evidenced in the camaraderie,
593 warmth, and generosity that surrounds the family in planning and ac-
243 complishing the various tasks associated with rice farming. As indicated earlier, the cultivation and harvesting of rice is not only an economic operation in Bang Chan, but almost a way of life. When villagers must deal with the very real and complex problems of planting and bringing in the harvest, all the individualistic propensities, and even to an extent the authority patterns, with which they normally indulge themselves recede before the coöperative requirements of the task at hand. In a very real sense the functional requirements of the economic activity, particularly during

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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[10] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[10] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Ringshill 1960, Sharp *et al.* 1953), a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

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are social peers, the Bang Chaners would easily turn the conversation to a discussion of the technical aspects of rice farming or even gambling. The latter would likely be discussed with a social superior only after some acquaintance. On the other hand, if one were clearly the other's superior, the superior would probably talk not about the methods of rice farming but, more generally and benignly, inquire, "Is all going well with you? Is there any way I might help you?" He might even proffer some unsolicited advice or aid. The tone and theme of the conversation would be expressive largely of the superior's concern with the welfare of his new-found friend, which the latter would typically accept.

All this is usually accompanied by gentle laughter and careful attention to appropriate pronominal forms. The good host will also serve his guest rain water, and if possible, scented rain water. If opportunity and finances permit, he may even offer him a warm Coca-Cola. The youngster who will actually serve the refreshment will make sure that it is on a coaster and that his hands are in the proper ritual position when he offers the drink to the guest. Such are the ingredients from which potential friendships are made.

Although the particulars of the kind of politeness found among family and friends are different from the above, the forms are essentially the same. Villagers do not talk about the funny accents of the people who live next door to them, nor do they rush to serve scented water when a brother comes to call. But they do take pains to express respect for each other by using proper honorific and pronominal forms, by looking to the oldest competent family member for advice, by talking of subjects that are pleasant and amusing, but never threatening or embarrassing.

The avoidance of embarrassing topics—even when the airing of such topics may be crucially important or beneficial to one of the parties concerned—is one of the most pronounced facets of village social life. To a Westerner accustomed to outspokenness, the types of situations that villagers define as embarrassing and the lengths to which they will go to avoid them sometimes appear to border on the sado-masochistic. Detailed interviews with two women whose husbands had taken second wives, for example, indicate that although at the time they were deeply disturbed by their husbands' actions (primarily for economic reasons; secondarily for emotional-sexual ones) they never once even brought the subject up with their husbands. They explained that they were too ʔaaj (embarrassed) to do so. In neither case was this embarrassment expressive of any feeling of inadequacy on their parts (the fear of hearing their husbands say, "I took a second wife because you are not adequate"). It was prompted rather by the desire to avoid an awkward and potentially rancorous confrontation. They did not want to put anybody on the spot. (Whether such a confrontation would *actually* lead to overt rancor is almost impossible to ascertain because

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it in fact so rarely takes place. In fact, the "hypotheses" of these women are perfect manifestations of what, in the technical sense, is *anxiety* rather than *fear* about what might occur.) The marital situations of both these women have since been routinized so that they have come to accept the second wives as part of their normal domestic lives. However, the vehemence with which they report these incidents indicates that at the time they paid for their wish to avoid embarrassment with considerable psychic distress. In terms of the basic attitudes involved, these situations were not too unlike that which obtained for Dang: to avoid a potentially sticky social situation, politeness and complete silence were maintained.

Somewhat different order from the above are the numerous instances where "good friends" will avoid reporting to each other unhappy or distressing information although it is clearly to the other's advantage to have such information in order better to cope with the difficulty. In one case, a villager had been working for weeks on a land sale deal which would have netted him a brokerage fee of two thousand *baht* (approximately one hundred dollars, a considerable sum in a community where the average annual family income is, before expenses, only eighty-five hundred *baht*). A friend had meanwhile learned that another villager, with whom he was not at all close, had sweet-talked the customer into permitting him to handle the sale, much to the detriment of his own friend, the original broker. However, rather than warn the friend of what was happening, he simply said nothing. When asked to explain why he kept his silence, he said that he was just too *ʔaaj* to speak up. Although the consequences of "ʔaaj-ness" were in this case more extreme than usual, the situation itself was not. In another, less dramatic instance a villager mentioned to us that in coming across the rice fields that afternoon he had noticed that his neighbor's windmill had broken down. The belt connecting the windmill to the irrigating machine used in raising water into the fields had slipped from the drive shaft. However, despite the obvious importance of this fact to his neighbor—the planting of his rice seedlings was completely dependent on the noria raising a sufficient amount of water into the field at the right time—the friend failed to tell his neighbor what had happened. When asked why, he said that he was *ʔaaj* about making his friend unhappy.

What is important about the above illustrations is not so much their typicality—one can cite instances where friends are considerably more realistic and helpful—but rather the legitimacy of the rationalizations of the inactive friends. All Bang Chaners can understand and accept the reluctance of a villager to be the person who actually triggers off another individual's discomfort. There is a genuine (albeit misplaced) sense of responsibility about not making another unhappy. What is important is the immediate, face-to-face situation. If a person must ultimately suffer, that is his own problem; but at least the friend can say, "I did not 'cause' it."

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Villagers also recognize the reluctance of an individual to become involved in another person's problems on the grounds of avoiding the accusation of *actually* having caused them. They say (but again, empirical instances of this type are very hard to find) that frequently the person with good intentions is turned on by the very friend he is trying to help, for example, "Since you know so much about the broken windmill perhaps you were the one who broke it!" Both these attitudes result from a rather overinflated view of one's importance to the friend, as if the friend would be more concerned with the agent of information than with the information itself. This is not so much a confusion of means and ends as a re-identification of them. Finally, some of the villagers' reluctance is probably also due to simple indifference or laziness regarding the plight of the friend.

Other expressions of the "ʔaaj-ness" complex are more clearly altruistic than the above. Villagers explain, for example, that the reason there is never any more than one candidate for the post of hamlet or commune headman, on the rare occasions when such elections are held, is to avoid embarrassing the individuals involved. The eventual headman would be embarrassed because the presence of a competitor would suggest doubt about his competence; the candidate who lost would be embarrassed by the very fact that he lost. To avoid hurt feelings, only one candidate is presented, voted on, and elected.

We have been talking above about politeness primarily in a negative sense, that is, about the lengths to which villagers will go to *avoid* discomforting others or upsetting peaceful relationships. This aspect was stressed because its expressions represent a somewhat unique form of patterned social interaction. However, the many positive forms of the villagers' politeness to friends and kin should not be minimized: their concern with choosing topics of conversation they think will interest or entertain others; their search for opportunities to flatter them, sometimes in pseudo-mocking fashion, but more often to make them feel good; their attention to providing others with a pleasing audience—being silent, attentive, and eager when others are declaiming on a favorite subject. Of course, many times the villagers are not listening, but they try to behave as if they were. The aim here is to make others feel that what they are saying is worthwhile. An important part of this is that one almost never directly challenges the veracity or logic of the speaker's statements. If disbelief is the only appropriate response, it should be done silently. Nothing except personal pain and interpersonal tension would be gained from a direct challenge. If one feels strongly enough about the issue, which is very rare,[16] the presentation of an *alternative* view would not be inappropriate. But one

[16] The rarity of strong feelings is due to the fact that so often the very purpose of such conversations is to convey politeness and nothing more. The actual topic of conversation is simply a medium of contact, not a matter to be seriously discussed.

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must be extremely careful not to phrase it as a direct refutation of the speaker. Again, there is present in this approach the Thai assumption that the most important aspect of a social relationship is the psychic comfort and welfare of the persons involved, not the truth or validity of the matter under discussion. The overriding ethic is that each person not only has a right to be heard, but should be made to feel comfortable as well.

Related to the above, but distinctive enough to require a category of its own, is the form of politeness expressed in the villagers' nervous laughter and in their preoccupation with inconsequential topics of conversation. Laughter and smiling is such a universal attribute of Thai demeanor (an early volume on Siam by W. A. R. Wood was in fact entitled *Land of Smiles*) that it is not always easy to distinguish precisely between this particular form and other more relaxed expressions of lightheartedness. From the point of view of social intention—to be appealing and inoffensive to others—they are probably not distinguishable. What sets this form apart is mainly the situation in which it is found: a villager is apt to laugh nervously when talking about unhappy or unfortunate experiences. Likewise he will laugh or resort to inconsequential topics when trying to get something from another person or knowing that someone is trying to get something from him, in either case being unsure of how the other person will react; when meeting a person, often of higher status, for the first time and feeling compelled to relate to him, but not knowing quite how. Again, this mode of interaction is clearly not unique to Bang Chan. However, villagers resort to it so frequently, or define so many situations as the kind necessitating its use, that it emerges as one of the most salient modalities of Thai interaction. In a sense, the nervousness that is betrayed indicates some of the internal strain that villagers undergo in maintaining a constant front of politeness.

It should be noted, however, that they are well aware of their uneasiness: they will often admit it to you in more relaxed moments. Also, other villagers in attendance can immediately spot it, and will tell you that the person was nervous. What is so characteristically nice about the villagers, however, is that they will almost never take advantage of a person's nervousness to score a point for themselves. Uneasiness is defined simply as a neutral personality trait, part of the way in which an individual presents himself and not a symptom of psychic weakness. In fact, from the point of view of influencing the purpose or direction of an interaction, it is usually ignored. What is *socially* important is that a person act nicely, not how he feels about the way he acts; the latter is his own business. It might further be noted that the recognition of one's own uneasiness, without at the same time feeling threatened by its exposure, is symptomatic of the villager's relatively strong ego structure. A Bang Chaner can maintain a certain

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front, know that it actually elicits and betrays his anxiety, but have such implicit trust in his own resources that he feels no need to alter his behavior. Simply stated: uneasiness when it occurs is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality.

The actual expressions of nervousness and inconsequential conversation vary considerably. Perhaps their most obvious (and justifiable) expression is when a villager, who wants to get something from another person, for example, a job, a loan, higher rent on land, is uncertain about the other's reaction and approaches him by hedging around the issue with giggles and light, irrelevant comments. This mode of behavior typically occurs when there is no history of reciprocal benefits between the parties or when a middleman cannot be used.[17] Although villagers themselves do not consider such comments "irrelevant" (probably because from a ritualistic point of view they are not), it is hard to define a detailed discussion of a person's buttons or belt buckle as anything but a kind of phatic communion. Sometimes conversations of this type will go on for twenty and thirty minutes, often branching off to include more topical interests such as the size of eggs or the calls of birds, before reaching the point. Frequently they never reach the point, since somewhere along the line the individual recognizes from the tone of the conversation that the other person is not in the proper mood to entertain his request; in this case, the individual will explain that he came simply "to chat." Sometimes the friend will begin to giggle uneasily (particularly if the protagonist's references to him contain an excess of flattery) as he becomes aware of the purpose of the conversation and wishes to evade facing the ultimate issue. Very often, even when the final request comes out, he can avoid it simply by giggling. Under such circumstances a giggle is crucially communicative: it is the person's polite substitute for "No," or "Let us bring this particular topic of conversation to an end." Giggling is a wonderfully effective way of carrying on a "conversation" (for those who can read its "vocabulary") because one can so readily convey his refusal, wariness, and even hostility while at all times maintaining the illusion of friendliness. It is precisely because the villagers' giggling frequently rests on such devious attitudes that it appears

[17] The *quid pro quo* basis of the former would permit a considerably more direct approach. It is not difficult to be frank with a person when both you and he realize that you are asking for an earlier obligation to be repaid or that you are creating a new one which may be called upon later when needed. Villagers are highly responsive to such obligations, often going to considerable effort and personal discomfort to meet them. A middleman, on the other hand, is used precisely to avoid the kind of delicate encounter described here. As a disinterested third party, he can be completely candid in his requests. However, for reasons of secrecy (usually when the request involves some potential competition or envy of other villagers, or perhaps some sharp-dealing) the use of a middleman may be inappropriate.

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571 521 152 201 154 to be somewhat nervous. Like the conversational topics mentioned above, its purpose is to maintain social contact, but at a minimal substantive level.

152 154 731 57 Other uses of giggling are less consciously purposeful than the above. Perhaps the most frequent instance of this is when villagers are talking about or responding directly to an unfortunate situation: a flood destroying the rice crop, a friend or relative dying or being beaten up, a person committing suicide. Giggling under these circumstances seems to represent several related sentiments. On the one hand, it indicates a slight feeling of embarrassment over having discovered something or talked about something which would have been better left undiscovered and undiscussed. At the same time, it is an attempt to make light of the misfortune by suggesting that the speaker and those present should not be overly pained by what they are encountering. Giggling here serves very much the same kind of function as the phrase *maj pen raj* ("it is nothing") referred to earlier; it is a means of shrugging off and denying a feeling of distress. Finally, giggling often is also a kind of ironic commentary on the human situation—not in any abstract philosophical way, but in the sense that a tragedy is so often actually felt to be a comic exposure of human hopes and intentions. A little exchange between the writer and an elderly villager perhaps best illustrates this. During one of the two rainy seasons I spent in Thailand, the rains were especially heavy in the Central Plain and destroyed the rice crop of many Bang Chan farms. As might be expected, it was a topic of considerable discussion. Paddling down the canal one morning, we met a villager who was returning from inspecting his fields, and we stopped to chat. The discussion inevitably turned to the flood, and he told us, in a completely matter-of-fact way, that he had already lost about 50 percent of his crop. He then giggled nervously over what he had said, and followed it up with, "But that person over there has lost everything." His giggles then turned into laughter as he nodded his head in an attitude of pain. Months later, when things were considerably more comfortable for the villager (as it turned out, he had lost only about 5 percent of his crop) I recalled our meeting and asked him what he thought was so funny about the flood. He did not remember, but volunteered in a nice, didactic way: "When something like a flood happens, all you can do is laugh."

152 154 57 Giggling is also a favored mode of dealing with the countless situations that arise in daily life that are perceived by the villagers as potentially, or imminently, embarrassing. Here giggling is a substitute for an explanation of one's actions, particularly those that are considered annoying to others. Villagers who have missed an *important* appointment (lesser ones are missed with few qualms) will tend to giggle when they finally meet the person and there is the slightest indication of the latter's displeasure.

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Giggling is very often used in the marketplace when an item must be bargained over. Similarly, a villager who wants to quit working for another will usually preface his request with some giggling, although equally often he will just leave—saying absolutely nothing—and will later send a middleman to collect his wages and make the severance official. The latter alternative is prompted by the desire to avoid *all* awkwardness.

The third major form of the villagers' politeness—that associated with making a good impression on others—has to a certain extent been covered by the materials already presented. Thus, in terms of the actual manifestations, there is really little difference between flattering another person, for example, because it will make him feel good, because it will make getting something out of him much easier, or because it will make one appear much more attractive in his eyes. However, it is clear that the motivations in these three cases are all quite different. It is for this reason that this last category has been introduced. When villagers meet another person whom they regard as significant (and this by no means includes all their contacts) they do put forth considerable effort to make a good impression on him. And being polite—courteous, helpful, flattering—is one of the most suitable means for achieving this effect.

Discussion of this interactive mode would perhaps not be necessary were villagers themselves not so keenly aware of it. Village children are continually and consciously taught, by word and deed, the necessity always to put their best foot forward (cf. the earlier illustrations in *Characteristics of a Good Person*). Bang Chaners assess themselves and others in terms of their capacity to make themselves appealing: both the "good" and the "competent" person is one who can make himself attractive by speaking softly, gently, and if possible, beautifully and cleverly. Often villagers take offense at an individual who refuses to do this because his very refusal suggests that he does not feel respect for others. Again, it should be emphasized that we are talking here about the form of behavior, not the substance or commitment behind it.

What the ultimate psychological roots of this behavior are is unclear. It is apparent—largely because of the great attention given to formal considerations such as manners, proper speech, and the like—that this concern is not prompted primarily by the desire to be loved by others. Love would require a more substantial medium. Gaining the respect and approval of others is clearly an important component of the attitude, but one wonders why a people otherwise so self-loving and self-accepting should need their self-esteem repeatedly validated by others. Perhaps the most important reason behind the villagers' concern with impressing others really has little to do with the others themselves, although obviously at the behavioral level it implicates them—that is, I would suggest that the major factor behind the

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alone, he might have to wait months before an act of overt physical aggression actually occurred, or before an informant volunteered some of his reveries.[7] When these events do occur, it is exceedingly difficult for the analyst to assess how typical or deviant the event may be under the circumstances, whether it is characteristic of villagers of a particular age or sex and what other individuals may do or say in similar situations. Rather than depend upon what is essentially a "catch-as-catch-can" approach, the SCT brings the research problems to the informant and asks him to deal with them directly. It should be remembered that although the resulting data are not as naturalistic as observational materials, they are always the product of the villagers' own voluntaristic inclinations: their responses represent their own internal views of how to deal with the problems posed by the introductory phrases.

A corollary to the above is the fact that the SCT presents to a large number of individuals what are essentially the same stimulus situations. The primary advantage here is that it provides a solid empirical basis upon which to make statements about how typical or deviant a response may be.

The Selective Nature of the Responses

The third premise follows much of the preceding, but merits special consideration because of the cross-cultural phrasing of the study. In a sense, it is the basic methodological principle of all anthropological research.

In examining the SCT responses, it soon becomes apparent that the majority of our informants' statements make perfect sense and are the types of reactions that conceivably could be made by any human being. The word choice and style of many of the responses are of course inimitably Thai. For example, "*The most important thing in his life is* . . . ohhh! . . . having or not having something to eat. If you have something to eat: good. If you have nothing: trouble. We people are born in order to find things to fill our mouths and stomachs. Nobody can take his property and money with him when he dies." But the expressed meanings of the responses (in this case, practical survival) are not, despite perhaps anthropological expectations, alien or extraordinary.

The point to be emphasized is that although the villagers' SCT responses may not seem immediately familiar, they do fall well within the range of what is *objectively possible*. It is this element of objective possi-

[7] From an ethnographic point of view, the fact that such events do occur so rarely is not without significance. It is additional behavioral evidence of the amount of aggression control exercised by the villagers and of the fact that they prefer not to wear their hearts on their sleeves.

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"sweet speech." The second major response, representing 24 percent of the sample, is more generic in nature: it encompasses the trait of inciting other people to have arguments; the capacity to annoy people, in a manner akin to what is connoted by the American slang term, "to bug" a person; and the capacity actually to threaten others. The emphasis here is on intruding on the peace, stability, and self-concerns of other people. The last response, representing 10 percent of the sample, is interesting because of its rather non-psychological, highly practical, nature: people are disliked because they steal. Theft is something that one *hears* about in Bang Chan very frequently, but actual cases are almost never encountered. What its symbolic significance may be is unknown, unless it is simply a more concrete expression of the concern about the untrustworthiness of others.

The most striking characteristic of the above responses is that despite their diversity they almost all emphasize qualities that are directly interpersonal, rather than intrapersonal, in nature. There are no responses here which say that the most dislikable thing about a person is "his stupidity"; "his weakness"; "his incompetence." It is only when unattractiveness takes on a manifestly social dimension, when a person's activities can actually harm others, that most villagers become exercised. Otherwise, Bang Chaners seem to assume (and it is the assumption that is important) that a person can be any way he wants. To a large extent, this same assumption was implicit in the villagers' structuring of the previous item on "likable" qualities, and may help to explain why they often define positive qualities as the absence of negative ones. In that item, if a person could not be of direct help to the self or love the self (the major response), villagers desired that he deal with others in a "soft spoken" and gentle way (the second most frequent response) or at least lack offensive qualities (the third most frequent response). They seem to assume that it is better not to have a relationship at all than to have one that admits unpleasantness. Or, phrased in another way, they seem to assume that if a relationship is even to occur, it must be useful, pleasant, or harmless. What the person is otherwise like, outside of the relationship, is irrelevant to one's assessment of him.

This attention to the manifest nature of social relationships and to the necessity of keeping the relationships smooth and uncomplicated is revealed most sharply in the next two items, *"People who never show their feelings are . . ."* and *"It is sometimes good to hide your true feelings about a person because. . . ."* The latter item is clearly biased in the direction of sanctioning the social pose, and is valuable mainly for the kinds of justifications it reveals. The former item, however, has no evaluative connotations and permits villagers to respond in any direction. Examination of the responses indicates overwhelming agreement on the part of villagers about the desirability of hiding one's feelings. Eighty percent of

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*125 the sample responds approvingly; 12 percent responds disapprovingly
*128 (three quarters of whom are disturbed by the deceptiveness involved); and
*156 6 percent responds in a non-committed way. One of the non-committed is
• 152 almost literary as he describes a person who never shows his feelings as "a man who is like a sword in a scabbard." (His non-committment derives from the protective, as contrasted to the obviously aggressive, symbolism of the sword.)

In the majority group, more than half the informants describe people who hide their feelings as "good," "persons who do not want to cause trouble," "just men," and perhaps most cogently from a Thai point of view, "persons who realize that hiding one's feelings is a virtue that helps men to live together happily." Three of the majority informants, however, are

TABLE 16

People who never show their feelings are . . .
Khon *who never show their feelings are . . .*

APPROVAL:	80%	good people, because others do not know their feelings. thoughtful people. real men, serious men, men who do things seriously. careful people who do not want to cause trouble. people who do not want to be blamed. people who have very brave hearts.
DISAPPROVAL:	12%	bad people, because their mouths are one thing but their hearts are another.
NON-COMMITTAL:	6%	both good people and bad people.

more defensive in their justifications: they say that people who do not show their feelings do not want to be disliked or blamed by others. The balance of the majority (a dozen villagers) are the most expressive in their approval: they say that people who conceal their feelings are "patient," "brave," "pure," and "thoughtful." Their emphasis is on the highly desirable stoicism of such individuals.

Perhaps the most revealing aspect of the responses of the minority group who disapprove of the concealment of feelings is, again, the interpersonal point of departure that is used to evaluate the behavior. Such individuals are viewed mainly as deceptive, although one informant says they are cruel and another says that they are difficult to get along with. But nowhere is there any reference to the possibility of such concealment being undesirable because it makes psychic demands on the concealer or because it might be expressive of inadequacy on his part. There is no concern here

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over the possibility of these individuals being "fearful of others," "tight," or to use a readily available Thai term, *cuu cii* (compulsive, exacting). Why people do not show their feelings is their own business and their own problem (if not showing one's feelings could be thought of as a "problem"). As in the approving responses, the interpersonal effect of their behavior is what is most important.

The justifications with which villagers respond to the stimulus, *"It is sometimes good to hide your true feelings about a person because . . ."* are of three general, but closely related, types.

TABLE 17

It is sometimes good to hide your true feelings about a person because . . .
Sometimes it is good to hide true feelings about another **khon** ***because . . .***

AVOIDS ANGER:	37%	people will not be able to say that *raw* is not a good person; it makes them not angry with *raw* or dislike *raw*.
		he will not hate you.
		he will not detest *raw* and will give *raw* help.
		they will not hate *raw* in return.
AVOIDS TROUBLE:	26%	it prevents people from quarreling.
		it preserves friendships; it prevents quarrels and fights which break up friendships.
		there will be no trouble.
UNDERSCORING:	20%	it is not letting him see anything in our outward behavior. We don't let him see that we are angry and that we are controlling our feelings.
		you will not tell him what your true feelings are.
		it is bad if you do not hide your feelings.

The most frequent response, held by 37 percent of the villagers, is that by concealing their true feelings about another person that person will not dislike, hate, or be angry with them. Whether this response involves a projection (an unconscious attribution) onto others of their own aggressive feelings, which the concealment suggests to them they harbor, is uncertain. The response may simply reflect the omission of certain logical steps in the psychodynamic process, that is, "that if I did not conceal my feelings, and expressed what I felt, it could only lead to a series of events culminating in their hating me." It is interesting to note, however, that only one of all our informants makes the effort to point out that the point of the concealment may be to avoid hurting that other person ("it prevents the man from

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*125 *128 *156 • 152 having bad feelings and you do not lose anything"). All the other informants who are concerned about the other person (several are not) either invert the item to protect themselves or speak in more general terms of the concealment's value in preventing quarrels, preserving friendships, and the like. This kind of response is the second major justification, representing the responses of 26 percent of the sample: individuals holding this position point out that by not expressing their feelings, quarrels are precluded, "the work will not be messed up," and "coöperation and understanding" can be maintained. The third major group of informants, 20 percent of the sample, accept the value of concealing one's feelings as self-evident, and use the item to underscore the point. One informant offers a highly articulate justification for her concealment which, in its stoical overtones, is suggestive of some of the tenets of Buddhism: "one should not show one's happiness, attachment, or sorrow to anyone." Basic to this person's response is the emphasis in Buddhist doctrine on the ultimate psychological isolation of every soul.

The final item in this section, *"In his relations with people, the thing he is most careful of is . . ."* asks villagers to specify their major form of interpersonal anxiety. The "anxiety" here is intentionally low-keyed. Villagers are asked what they are careful of, not what they are frightened of.

TABLE 18

In his relations with people, the thing he is most careful of is . . .
In relations with other khon, *the thing* raw *is most careful of is (namely) . . .*

OWN BEHAVIOR (55%)		
NATURE OF WORDS:	37%	words and promises.
		that he speaks well (politely, pleasantly).
		that her words might be insulting to them.
		his own words.
MANNERS:	6%	his manners, his etiquette.
GOOD SELECTION:	6%	to try to associate with good people only.
OWN "HEART":	6%	his own feelings (mood), for fear that they will be angry with him.
OTHERS' BEHAVIOR (37%)		
THEFT:	13%	she is afraid they will steal her things.
		he is afraid that they might be thieves.
TREACHERY:	7%	he is afraid that they will double-cross *raw*.
PHYSICAL HARM:	6%	she is afraid they will attack her.

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Examination of the responses reveals two major reference points. Fifty-five percent of the sample responds in terms of what it is about their own behavior that makes them anxious; 37 percent respond in terms of what they are anxious about in the behavior of others toward them. Of those responses in the first category, the majority (in fact equal in number to all the responses in the second category) refer once more to the nature of their words. One informant sums up almost everything we have been saying about the villagers' concern with social cosmetics. He says that "*in his relations with people, the thing he is most careful of is* . . . not to talk about important matters." Other villagers point to words as the *sine qua non* of obtaining social admiration: one informant says that he is most careful of "talking. It is most important. If you talk well, people love you. If you talk badly people hate you"; another says, "his words; if a person does not speak well, he can't get anything from anybody; nobody loves him." Other informants anxious about their own behavior in this situation divide their responses equally (6 percent each) among three sub-categories: they say that they are most careful about having good manners; about being sure that they select only good, non-troublemaking individuals with whom to deal (involving an assumption that they do indeed have considerable control over the situations into which they place themselves); and a third group says that they are most careful about their own feelings and their own "hearts," indicating the concern they feel over controlling their own impulses in order to deal with others in a comfortable and amicable way.

Among the villagers who respond in terms of anxiety about what other people will do to them, the majority, 20 percent of the total sample, says that they are careful about other people stealing from them (13 percent) or being treacherous and cunning toward them (7 percent). Another 6 percent are careful lest others attack them and do them physical harm. The extremity of the replies of this sizable minority (26 percent) is perhaps what is most interesting, and somewhat surprising. The balance of responses in this category are mainly expressions of a diffuse wariness about the intentions of others ("he must keep watching and listening"; "that she must know whether they are good persons or not"), although two informants specify that they must be careful about the words, promises, or criticisms of others.

The foregoing discussion of the villagers' modes of "orienting toward others" may be summed up in the following manner. Despite the obvious tendency toward "multimodality," or high variability of response, on all items excepting the *"People who never show their feelings are . . ."* item, the villagers' reactions to the above stimuli go far in supporting our earlier remarks on the nature of social contact in Bang Chan. Villagers evaluate other people mainly in terms of how well they treat the self or how well

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*125 *128 *156 they manage not to harm the self. The interpersonal relationship is the major component of their evaluation in the sense that they are either indifferent to, or highly tolerant of, character traits of other people that exist outside the purview of their contact with them. In effect, villagers seem to assume that a person can be anything he wants to be, so long as his behavior is not detrimental to others. Villagers respond in a highly favorable manner to persons who conceal their feelings, and explain their approval by saying that such behavior helps minimize social conflict, particularly conflict of which they may be the object. Their commendation of people who control their feelings is extreme, taking the form of calling them "just," "good," "brave," "pure," and "thoughtful." In their interpersonal contacts, villagers say they are most careful about the effect of their words on others, and one informant presents what is perhaps the perfect summation of the role of politeness in their lives when he says that, in his relations with people, he is most careful "not to talk about important matters." For a sizable minority of villagers, the data also indicate a sense of untrustworthiness about the motives of others. The major forms of this lack of trust are that others will steal from or physically harm them, be treacherous, slander, or gossip about them. Our observational materials suggest that although their anxiety may have realistic foundation with regard to others gossiping about them, and perhaps slandering them, this would not be true in the case of others stealing or doing them physical harm. These fears are probably symbolic expressions of a more diffuse anxiety about harm to the self through the medium of interpersonal relationships. Whether anxiety about interpersonal relationships is indeed the major form of anxiety in Bang Chan will be investigated in the next section.

Anxiety and Reactions to Crises

121 152 In this section we are dealing with materials that present the most ticklish analytic problems we will encounter. We know from American culture that persons identify as sources of anxiety issues which are genuine existential problems (illness; payment of bills; how to deal with an arbitrary boss); issues which by most culturally "reasonable" standards should not be sources of anxiety, but which are nevertheless felt that way (how to obtain a beautiful or handsome figure with the least amount of effort); and issues which by both cultural and personal standards of "reasonableness" are not considered valid sources of anxiety, but which are nevertheless "understood" and tolerated (fear of thunder, wild animals, flying insects). In the last two cases, we know that the expressed anxiety usually symbolizes some other threat, which is considerably more crucial but unknown. And in the

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last instance, we know that the fanciful fear often serves the vital function of binding what might otherwise be extremely painful free-floating anxiety.[6] We also know from American culture that there are many objective sources of threat existing in the environment which are rarely identified as objects of anxiety, unless directly or imminently encountered, *e.g.*, being struck by an automobile. Finally, we know that there are objects or sources of anxiety that may be denied as such because of the cultural values associated with being fearful or brave: it is possible for a teen-ager to admit anxiety over an examination or an important "date," but usually not when he is asked to perform a daring deed by a group of his peers.

The point of these remarks is that despite our familiarity with the various forms and functions of anxiety, we are still hard put in most instances to identify the precise psychodynamic role of an anxiety response when it is expressed by individuals in our own culture. The problem is compounded immeasurably when we attempt to do this with members of another culture. It is for this reason that the responses below will be accepted as those things which actually frighten or worry the villagers of Bang Chan, and will not be examined for any intrapsychic functions that they may serve. The few interpretive excursions of this type that we took earlier in the text (e.g., the villagers' concern about a superior feeding them well) were sanctioned principally by the context in which the responses were made. Here, informants are asked to indicate their anxieties under a completely unspecified set of conditions.

Actually, most of the responses given below are, in terms of the villagers' culturally constituted reality, of a highly reasonable nature, suggesting that informants are reacting in terms of their genuine existential concerns. Being bitten by a cobra is a dangerous (although not a likely) possibility, and although a few villagers may hesitate *on direct questioning* to declare their belief in malevolent spirits (translated below as "ghosts"), all know about such spirits and at one time or another have performed acts to propitiate them, indicating considerable psychic investment in their reality. Although in some cases one might wonder about the motivations behind them, the responses make complete sense.

The responses to the first item, "*He was most afraid of . . .*" fall into three major categories. The vast majority of villagers (61 percent) are frightened by experiences, actually *possibilities* (and again, in their unpredictable world, the possible is psychologically critical) which threaten

[6] The major analytic difference between *anxiety* and *fear* is, in fact, that the latter is "bound" anxiety, *i.e.*, the anxiety has assumed a concrete, objective representation which the individual at least can deal with: by avoidance, doing battle with it, laughing over it, and the like.

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their physical well-being.[7] They specify such threats as poverty (15 informants), not having enough to eat (11), illness (4), flood and fire (3), death (3), and being bitten by poisonous snakes (2). There is no significant difference in the economic statuses of individuals who mention either poverty or famine as their greatest fear. While there are six references to these fears on the part of "poor" villagers, there are sixteen references on the part of "average" villagers and four references on the part of "rich" villagers, all accurate reflections of their representation in the sample. The second major category of responses, held by 20 percent of the informants, describe the actions of people as the source of greatest fear. In all cases, these refer to actions of people other than the self, and the reference in more than half the responses is specifically to thieves. In a few cases, younger informants speak of their parents scolding them or beating them. As suggested earlier, no villager recognizes any personal inadequacies as sources of fear, although the idiosyncratic *karma* (or *kam*) response, mentioned below, suggests this in a superficial way. In this regard, it might be noted that three informants assert that they are afraid of nothing. The third category, encompassing the responses of 10 percent of the villagers, mentions malevolent spirits as the sources of greatest fear. Interestingly, one of these informants tries to pooh-pooh her fear by noting that if there were no way to escape the spirit she could manage.

From the point of view of one of the major concerns of this book, the most significant finding of the above data, replicated in part and in an even more apposite way in the next item, is that only a minority of villagers admit to any fear, symbolic or otherwise, of the actions of other persons, and none indicate any anxiety over their own actions toward others. The relevance of this finding is, of course, that it places our earlier remarks in the "Orienting Toward Others" section in proper perspective. In that section, where we were concerned explicitly with interpersonal relationships, it was perhaps inevitable that the interpersonal mode of anxiety would loom large. Here, however, villagers are permitted to express any kind of anxiety—physical, interpersonal, intrapersonal, fanciful, magical—and only a minority do indeed give their anxiety an interpersonal form. In this connection, a remark made much earlier in the text might be recalled. In discussing the uneasiness that villagers frequently betray in their interpersonal contacts (nervous laughter and concern with inconsequential

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[7] By way of general intellectual interest, it might be noted that this finding, as well as the one emerging from our next item, offers strong support to some "admittedly impressionistic and unverified" observations of Skinner (1957: 309–310) who, in discussing the major concerns of the lower class Thai members of Bangkok society, who are mainly transplanted peasants, singles out as primary their concern with "basic well-being, *i.e.*, the health and safety of the organism."

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TABLE 19

He was most afraid of . . .
The thing raw is most afraid of is (namely) . . .

THREATS TO PHYSICAL WELL-BEING:	61%	poverty. If he had enough, he would not be afraid.
		having nothing to eat. I mean when there is a flood, and all the paddy is lost, and we will starve because there is no rice to eat.
		not having enough to eat.
		having fever; getting sick and having no money.
		fire, because when a house catches fire it is a great loss.
		death.
		snakes. He is not afraid of ghosts. He can walk in the dark. But snakes are dangerous. He does not like to go anywhere after dark.
ACTIONS OF OTHERS:	20%	people. When she had money, she was afraid she would be robbed. When she did not have any, she was in difficulty.
		her father beating her.
MALEVOLENT SPIRITS:	10%	ghosts; but if there were no choice (no place to go, no way to get out of the situation), then she could manage.
		death; of ghosts haunting him. If the ghosts don't haunt him, he is not afraid.

topics) it was noted that, "uneasiness, when it occurs, is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality." The data here would tend to reinforce that conclusion. At the same time, however, it must be remembered that 20 percent of the informants do give what is at least symbolic expression to their fear of others, and it would, therefore, be most inappropriate to go to the other extreme and assert that villagers have no anxiety about interpersonal relationships. I also noted in the earlier discussion that "the nervousness that is betrayed indicates some of the internal strain that villagers undergo in having to maintain a constant front of politeness." This appears to be a case of their simply accepting—without worry, shame, or any other secondary anxiety—their own shortcomings. The anxiety that is experienced is just not *felt* as a psychological burden.

One of the responses above, although idiosyncratic, merits attention. This is the response of the villager, age 52, who says that she is frightened by her *karma*: "it depends on *raw*'s mind [or heart]. Some people are afraid of ghosts. They see things and they believe that they see ghosts. That is not right. They see falling leaves and they think that is a ghost. There is nothing when they approach. The most frightening thing is bad *karma*. It

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follows you. If you kill a living thing in this life, a living thing will kill you in the next life." What is surprising is that there are not more responses of this type, especially from older villagers. The psychological significance of this kind of response is of course most difficult to assess. Although on the surface it is an expression of personal inadequacy—an expression that the informant has not done as well for herself as she could have—its essentially timeless and unpredictable quality (one never knows when the product of bad *kam* will issue) almost takes it out of the sphere of direct emotional import. It is in fact an inordinately intellectualized response, probably just as expressive of the informant's sense of psychological security as it is expressive of her anxiety. Although bad *kam* is an omnipresent and unavoidable anxiety, the fact that one can make merit to reduce such *kam* and the possibility that one might in fact have less bad *kam* than one's anxiety would lead one to believe (one never knows) is a source of considerable psychological comfort.

The next item, *"His greatest problem was . . ."* is somewhat more cerebral and reflective than the preceding one. Villagers are asked to indicate not what frightens them, but what worries and generally concerns them. Thus, although their responses are in many ways similar to those given on the previous item, they are also considerably less extreme. All reference to malevolent spirits, for example, is missing here. Again, the majority of villagers (57 percent) describe as their greatest problem their well-being and survival. Their responses, however, lack the sense of trepidation that colored their earlier replies. Here, twelve villagers phrase their replies in terms of worrying about obtaining money, being rich, having money to spend, and the like, rather than in the more plaintive terms of being anxious about poverty, a response given by only one villager. Thirteen informants also say that they are worried about "making a living" or their "work," responses that are more ambiguous than the above in that it is difficult to determine whether villagers are worried about having sufficient income from the work or are disturbed by difficulties involved in the work itself (how their rice crop is coming along). Nine informants say that they are worried about starving, not having enough to eat; one is worried about illness; one about floods; and none about death or poisonous snakes. The reappearance of the food response should not of course be overlooked.

The second major category, encompassing the responses of 24 percent of the sample, relates to worrying about other people. However, almost half these responses (11 percent of the total) are protective and succoring responses, where ego is concerned with preventing harm to his family. The other 13 percent describe ego's concern about getting along with other people. Two of these responses refer explicitly to the informant's worry over the words he chooses in relating to others or that he speak sensibly.

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TABLE 20

His greatest problem was . . . *Raw greatest problem is (namely) . . .*		
SURVIVAL:	57%	how to have money to spend and not starve. earning his living, day after day, and finding money to spend. her occupation; which career was good for her, and also continuing to do it. making his living in the future. rice and fish: food. If one does not have enough to eat, life is difficult. having money and food to eat.
WORRY OVER OTHERS (24%) "PROTECTIVE":	11%	the happiness of *raw* family. the complicated events in the nation that brought trouble to his family.
"GETTING ALONG WITH":	13%	relations with people. ("Going to visit people and have them visit us.") if it concerns the affairs of other people's hearts, we cannot solve it.
HAPPINESS:	8%	how to be rich. When one has money, one has happiness.

Interestingly, these two completions reflect ego's concern about his own capacity for dealing with others, not about how others might affect him. Also, in contrast to the preceding item, few of the responses in this category seem symbolic of any interpersonal anxiety that the villagers might feel. Here when a villager says, "*His greatest problem was* . . . his relations with people," or ". . . when she got married, she was afraid of trouble," the villager is pointing directly at the cause of his anxiety.[8] In the second response, incidentally, the cause of worry may not be relationships with other people so much as it is the burdens which such relationships create: having to be responsible for and responsive to others; having to make oneself get along with them; and in this case, with the informant a young female, perhaps the burden of having children and the loss of personal freedom that this inevitably involves.

The fact that so few (but nevertheless some) villagers structure this item in terms of interpersonal problems is, of course, congruent with the

[8] On the other hand, some of the responses describing anxiety over lack of food and rice might be expressive of an anxiety over loss of self-esteem, *i.e.*, individuals who have no food are incompetent and must depend on others. Three informants (two of "average" economic status and one "poor") actually make this point explicit: ". . . what to do to have something to eat and not starve. Starvation, in addition to being uncomfortable, makes one feel ashamed in front of one's neighbors."

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findings of the previous item, as is the fact that the majority structure it in terms of survival issues. The relative differences between the two items in the percentage of individuals holding these views (20 percent vs. 13 percent regarding interpersonal anxieties; 61 percent vs. 57 percent regarding survival anxieties) are obviously not significant.

The remaining responses on this item resist easy categorization. Eight percent of the villagers speak in general terms about their greatest problem being their desire for happiness, a response whose major significance is probably the fact that it is given by such a small number of persons. This is not to suggest that the majority of villagers are either happy or unhappy; it is simply to indicate that few have the need to articulate a general sense of unhappiness. (Indeed, from a few of the items in the "Dominant Drives and Wishes" section, it is clear that a sizable minority of villagers feel that given the possibilities of this world, they are in fact quite content. See particularly the item, *"He wishes he were. . . ."*) A few villagers here, both young males, also speak about the uncertainty of their futures as sources of worry. One villager says that her greatest problem is that she wants too much, suggesting a desire on her part for greater self-control.

The remaining items in this section are of a different order from the above. They ask villagers to describe how they would react to frightening or worrisome situations. The items are, *"If one is frightened, the best thing to do is . . ."* and *"When something worried him, he usually. . . ."* One of the more interesting attributes of the responses to both items is the sense of familiarity with these situations that they reveal. The responses are pointed, emotionally loaded (although not excessively so), and unembarrassed, suggesting again the villagers' tolerance of their own existential limitations. Their emotional tone also suggests that my assistant was originally correct when he said that it was "easy" for villagers to express their feelings of fear. In both cases, the responses tend to follow a bi-modal distribution, although the two modes are clearly related to each other psychologically.

To *"If one is frightened, the best thing to do is . . ."* 40 percent of the informants respond by saying that they would keep cool, calm, and *chəəj*. However, what is intriguing is that this is all that they would do. Their aim is to get their emotions back under control, their personal stability being paramount to any other consideration, such as discovering what caused the fright, how they might deal with the cause, or fighting that cause. The other major response, held by 31 percent of the villagers, is to express dependency. However, what is most important here is that this is a metaphorical dependency, involving seeking help from the Lord Buddha or from Allah (for Moslems) or from one's "soul-stuff," rather than from other human beings.

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human beings. In fact, the absence of any reference to other human beings, especially parents, is striking.

Of the seventeen persons who ask for supernatural help, seven, all women, explicitly say that they would call their *khwaan* (or "soul-stuff") back. Since this is a distinctively Thai concept, it merits a few words of explanation. Thai ontology holds that every individual is inhabited by a *khwaan*, who during childhood (when the individual is unstable and immature) or during a crisis can escape the body through an invisible hole in the head. One of the major functions of the top-knot worn by half the children of Bang Chan is to cover the invisible hole so that the *khwaan*

TABLE 21

If one is frightened, the best thing to do is . . .
If raw is frightened, the best thing raw ought to do is (namely) . . .

EQUANIMITY:	40%	to keep his heart calm.
		to pull yourself together (to try to compose yourself). Sometimes, just run away.
		to control oneself.
		to control your emotions until they are better.
		to stay *chɔɔj-chɔɔj*.
DEPENDENCY:	31%	to exclaim, "Lord help me!"
		to call one's soul-stuff back; call upon God, Allah.
		to think of Lord Buddha, his teaching, and his priests.
		to sometimes exclaim, *"phra chuaj"* ("Lord Buddha, or Buddhism, or monks—help me.")
FLIGHT:	8%	to avoid the situation; to run away.

cannot escape; also most life-cycle ceremonies have a special ritual devoted to "calling the *khwaan*," who although obviously not absent from the individual at the time, is called to reaffirm the necessity of his being in his place when the individual needs him most. At the same time, the formal ritual of "calling the *khwaan*" memorializes the fact that the *khwaan* is in his proper place, thus indicating that the individual in whom he resides has had the internal stability to reach the point in life that he has in fact reached. The "calling of the *khwaan*" is usually, although not always, performed by women, which might explain why all the villagers who give this response are female. The *khwaan* has four crucial attributes: (1) although he is of the self, he does have an independent existence of his own; (2) he is that part of the self that gives the self stability, and from an analytic point of view, is really an objectification of human stability; (3) he

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774 is recognized to be capricious; and (4) his departure from the body is both cause and effect of the loss of one's wits, steadiness, and equilibrium. If the *khwaan* stays away too long, the individual may become deranged and may die.

*125 *128 • 152 181 828 In these terms, the seven individuals who say that when they are frightened they would call back their "soul-stuff" seem to be expressing two related needs: a recognition of their ultimate dependence on supernatural forces and, very much like the majority group of informants, a preoccupation with psychological stability. There is in fact implicit to these responses almost an assumption that one of the marks of an adult, civilized "human being" (in its basic ontological sense) is the achievement of stability, orderliness, and stoicism in a universe—both inner and outer—that at any time may regress to a more primitive, chaotic state. The great attention that villagers give to being *riab-rɔɔj* (neat, clean, well-organized in appearance, demeanor, and speech); the fact that they often distinguish between adults and children in terms of the disorganization and randomness of the latter's behavior; the very fact that an individual's *khwaan* is most wayward during childhood; the high value that is placed upon being *chɔɔj* and the negative value that is placed on having a "hot heart" (*caj rɔɔn*) are all expressive of this assumption.

*125 *128 152 There are a few other categories of response to the above item that should be mentioned, although none is held by more than 8 percent of the sample. Four villagers say that the best thing to do when frightened is to run away; three villagers assert that they are never frightened; three do say that they would investigate the cause of the fright, indicating that this response is not completely lacking in Bang Chan; two say that they would comfort themselves; two are simply afraid; and two more have no idea of what to do under the circumstances.

To the item, *"When something worried him, he usually . . ."* 45 percent of the sample responds by saying that they would feel anxious, uneasy, uncomfortable, or unhappy. In essence, they seek no solution to their hypothetical problem, but simply accept the state of anxiety that has been created. For a few of them, the anxiety is extreme: they say they "could not eat, could not sleep, could not work," a response that I have heard several times in Bang Chan from villagers who were actually worrying through a problem. The other major response, held by 40 percent of the sample, is to perseverate over the problem: to keep thinking about it, to think about it constantly, or, as one villager expresses it, *"When something worried him, he usually . . .* thought about it. Sometimes he dreamt of it too."

The major theme of both the above responses is, of course, that although villagers handle their worries in an emotionally meaningful way,

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TABLE 22

When something worried him, he usually . . . / *When something worries* raw, raw, *usually . . .*		
DISCOMFORT:	45%	felt rather uneasy about it. was worried, anxious and uncomfortable. suffered and felt down in the dumps. was anxious; wanted to know what would come next.
PERSEVERATION:	40%	paid attention to it; continually thought of it. thought of it and worried about it all the time. could not go anywhere until she solved the problem first. kept thinking about it; couldn't do other things easily because he couldn't help thinking about it.
SOLUTION:	6%	had to go and find the truth (find out whether the thing that was worrying him was true or not).
NO WORRIES:	6%	he has never been worried, so he does not know.

they never really resolve them or even hold out the hope of resolving them. They simply accept worry as an inherent, enervating, but tolerable part of their experience.

The minority responses here are not wholly insignificant: 6 percent of the informants do describe a happy solution of their problem in that they "find a way out," or "try to settle it first before going somewhere else"; 6 percent claim that they never worry; and a few say that although they worry, they try not to show it.

This section on "anxiety" may be summarized in the following way. In answer to a question posed at the end of the last section, the data indicate that anxiety about interpersonal relationships is not the major anxiety of the villagers. Rather, the responses of the majority of the informants focus on matters relating to survival and the physical and material well-being of the individual. However, a noteworthy minority, averaging 16 percent of the sample, do reveal symbolic or direct anxiety about their interpersonal relationships, suggesting that beneath the affable or *chəəj* exteriors of at least a few villagers there is some distress about the social psychological pressures placed upon them. On the other hand, when we consider that for most human beings the most important fact about the environment is the presence in that environment of other human beings and the pressures that they inevitably place upon the individual, it is impressive that a larger number of villagers do not phrase their anxieties in interpersonal terms. The only possible explanation for this is that most Bang Chaners feel a

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fundamental security about their own *psychological* worth. This is undoubtedly abetted by the fact that the modes of social interaction in Bang Chan do not demand too much from the individual, as well as the fact that the individual, with his profound sense of free choice, often ignores or isolates himself from the impingements of others. (That a stance of psychic isolation is not necessarily maladaptive will be discussed in the final chapter.) When asked how they would react to frightening or worrisome situations, most villagers respond in terms of maintaining their inner psychic stability and in terms of accepting and tolerating these familiar psychic pressures. Their responses are non-constructive, but are highly congruent with their passive and secure orientations to the world. Their responses to "anxiety" tend toward psychological "unimodality" at an interpretive level, although in the last two cases the descriptive similarity of the responses first suggest a bi-modal distribution.

Aggression: Causes and Reactions

Analyzing "aggression" in Bang Chan is very much like analyzing "sex" in contemporary American culture. The category represents at one and the same time one of the most obvious and one of the most convoluted areas of the villagers' psychological lives.

The most obvious fact about aggression in Bang Chan is that villagers cannot tolerate its spontaneous, direct expression in face-to-face relationships. This is demonstrated not only by the general absence of overt aggression in such relationships but by the elaborate array of devices that villagers use to control its expression: giggling when making or receiving an untoward request, using a go-between to soften the demand of an interpersonal lien, leaving the field at the slightest hint of provocation (whether the provocation is intended or not), as well as the more general use of flattery, comedy, and self-effacement (*kreeŋcaj*). The repeated use of these devices as well as the villagers' evaluations of "people who never show their feelings" (see tables 16 and 17) reveal their sensitivity to aggression as a latent, but intrinsic, attribute of most social encounters. In fact, their evaluations of people who inhibit their feelings—or their *assumptions* about the inherently hostile nature of such feelings—suggest that their recognition of the potentiality of aggression (whether in themselves or others) is quite conscious.

The net result of these orientations is to give face-to-face contacts an aura of surface pleasantness, but at the same time a high degree of brittleness. Over and over again, villagers indicate that they prefer not to have any relationship at all than to have one that is even tinged with hostility.

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Thus, in explaining why he loves one of his closest friends, a villager says: 152 156* 571

> We love each other because we never contradict each other or disagree. [572] That is why we love each other. If we disagreed, there would be no love. [Investigator: "It is normal sometimes even for close friends to disagree. About what kind of things do you and your close friend disagree?"] We never disagree. Only people who are drunkards and take opium disagree. That is why our friendship has lasted so long. [Investigator: "What would happen if you disagreed?"] We would not love each other, and maybe he would take revenge on me.

In another place, this same informant says of his relationship with his wife: [593] "My wife and I never quarrel. If we quarreled, we would have to separate. There would be nothing to divide—except the children." As indicated earlier, many villagers, fearing the volatility of a quarrel, actually do separate, often even before the dispute gets going. Similarly, individuals, particularly if they are in subordinate positions, hesitate even to approach others lest they stimulate, let alone elicit, anger. Villagers will hesitate to approach others even if they are not the object, but simply a possible catalyst, of another's potential aggression: witness the cases of the land sale deal and the broken noria cited earlier. Note that in these cases it is not manifest aggression but merely the anticipation of it that inhibits villagers from initiating or maintaining interpersonal involvements.

Although villagers decline to express or to be exposed to direct aggression, they do have several indirect, if somewhat more complicated, ways of venting these feelings. Of these, the simplest is to gossip nastily *about* people. The frequency of this characteristic peasant activity is considerable in the village: in fact, an uncharitable observer might, on the basis of Bang Chan, just as readily entitle a book about Thailand *Land of Gossip* as *Land of Smiles*. However, the very frequency of gossip seems to mitigate its intensity or effect. Villagers are so accustomed to it that it is almost a *way* of talking, a style of speech. And as is the case with much village speech, villagers listen to, but do not necessarily believe, the nasty things one person might say about another. Also, excepting those cases where a person's complaints are either realistic or justifiable, people are just as likely to listen to an individual's gossip for what it says about him as for what it says about the person whom he is criticizing. None of this is to suggest that the person gossiping does not attain release, or that the person about whom he is gossiping, *if* he found out, would not be hurt or peeved. Rather, it is the situation in which the hostility is expressed that mitigates its effect. 152 571 521

Less frequent and more painful than the above are the formal, almost 152 571

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152 571 ritualized, ways of expressing hostility. What is significant about these particular procedures is that their very formalism serves to keep the aggression controlled and within bounds. Thus, everybody knows precisely how to behave when a buffalo disappears in the middle of the night and an intermediary arrives the next day to arrange the price for its return. Similarly, the aggressor, his victim, and everyone else present knows what is meant when someone calls a dog by the name of a person who is within hearing range and claims it was simply a slip of the tongue. The victim might respond by stealing his antagonist's boat and returning it a few weeks later, after his adversary has suffered sufficient anxiety. Note that in all these cases a face-to-face confrontation is either avoided or concealed.

152 571 754 Related to the above is the use of magical aggression. Textor (1960) points out that magical aggression—from one *person* to another *person*—is on the wane in Bang Chan. Also, it is clear from his exhaustive inventory of the magical practices in the village that interpersonal aggression has a very minor part in what is otherwise an extremely elaborate belief and ritual system: there are no more than three or four supernatural "objects," out of more than one hundred and seventy, that even suggest witchcraft, and although these objects are considered highly potent, they are rarely used. Even in the most extreme case—a young man using the oil from the chin of a corpse to induce hysteria in a maiden who has rebuffed his advances[9]—the victim is held partially responsible for having succumbed to the magic, a consideration that diminishes the "magical" implications of the ritual.[10]

152 762 Finally, a word should be said about the most convoluted way of expressing aggression. This is suicide, a procedure which, obviously, is applicable to only a small number of people. Nevertheless, during the relatively brief period that I was in the field, three Bang Chaners (out of a population of 1,771) attempted to do away with themselves by hanging. They always selected a conspicuous place (a tree on the Minburi highway or over the main canal) and were always unsuccessful. The aggression here is convoluted not only because it is turned inward, but also because it is

[9] This blending of sex and aggression does not have the same meaning in Bang Chan as it has in the West. Although the young man is concerned with punishing the girl for not responding to him, he is more concerned with breaking down her defenses and equilibrium, the very factors which denied him access. In English terminology, he wants to "unhinge" her, with all the duality that such symbolism might imply.

[789] [10] While magical aggression between people is relatively minor, magical means of averting aggression by non-human forces is not. In fact, the largest number of magical practices in Bang Chan relate to protecting the health and welfare of the organism from malevolent spirits, accidents, and dangerous animals. These data, of course, are quite consistent with the SCT data on "anxiety," presented in the preceding section.

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intended to hurt others. The explicit justification in all three suicide attempts was to make a spouse feel "sorry and unhappy." [152] [762]

What is perhaps most intriguing about all these naturalistic ways of expressing aggression (even the last, which, despite its drama, is attempted, not actual, suicide) is that in their formalism and indirection they are actually quite flaccid. An obvious question, therefore, is whether the villagers' aggressive tendencies are, at bottom, quite weak, or whether they are simply bottled up, never to emerge in any but controlled and disguised ways. The answer to this question seems to be "both," depending upon one's analytic perspective. On the one hand, the villagers are so attentive in their relationships to shutting off aggression before it gets up a head of steam, that these relationships provide little basis—in an objective, realistic sense—for the development of aggressive feelings. When a potentially hostile act does not even take place, there is simply no reason to feel angry, other than perhaps to be angered because one's anticipations have been frustrated. However, the likelihood that overt hostility will be suppressed is itself so expectable that such secondary anger, if present, is minimal. Further, the villagers' self-concern is so great that they simply do not have that much to gain, psycho-dynamically, from being intensely angry at others. An act of interpersonal aggression assumes emotional investment in others (or obversely, that others provide the self with major emotional satisfaction). If such investment is hesitant, guarded, or otherwise weakened—as almost all of our materials have indicated—the aggression that normally accompanies that investment, or is allowed by it, will also be weakened. Simply stated: it is difficult for a person to be angry at people with whom he does not have much of an emotional relationship. [156]*

On the other hand, the great attention that villagers give to the control of aggression indicates that they are by no means at peace with these feelings. In fact, what is most impressive about aggression in Bang Chan is not its absence, but the amount and kinds of control that are exercised over it. This very process of control probably intensifies whatever "realistically derived" aggressive feelings they already harbor. Thus, although their overt social behavior does not provide a basis for the development of aggressive feelings, their covert behavior—vis-à-vis themselves—certainly does. [156]*

The fundamental issue, of course, is why villagers should be so concerned with controlling their aggressions in the first instance. This is not an easy question to answer. However, there are at least three considerations which, if taken together, might account for it. First, much of their aggression control might derive from the more generalized fear of losing equilibrium—of "falling apart" or becoming psychically disassembled; of

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losing their *khwaam*, as it were—if they release their anger. This is the fear of "letting go" and of regressing to a primitive psychological state. Every impulse of an adult villager is to fight this tendency. Second, by controlling their aggressions, they are not imposing their own problems on others and are maintaining the attitudes of "respect" and tolerance—as well as emotional indifference—that are otherwise so important to them. This consideration obviously does not account for the absence of aggression; it simply points up the fact that the aggression that does exist is dealt with internally, rather than socially. Finally, their aggression control seems to be based upon fear of reprisal. Although in a few instances this may be a realistic fear, it is principally a straightforward projection: they know only too well how painful the reprisals would be of people who hold the feelings of hostility that they themselves hold. This consideration is not inconsistent with my earlier remarks on the difficulty villagers have in investing hostility in others. Rather, it follows directly: the villagers' difficulty is not based upon lack of hostility, but upon the lack of social relationships which are sufficiently meaningful to merit that hostility. Rather than work out their aggressions behaviorally—in and with other human beings—they work them out in the isolation of their own inner psychodynamics.

I have gone into considerable detail here because "aggression" is the one area of the villagers' lives where the meaning of behavior is not at all apparent from its manifestations. Without such background material, the following SCT results would probably also have little significance.

The first item, "*He most often gets angry when . . .*," reveals some of those patterns with unexpected clarity. Ostensibly, the item asks informants simply to identify the various sources of aggression. However, the term for "angry" (*krood*) in this sentence explicitly means "angry toward other people." [11] Thus, one would expect villagers to focus on the activities or characteristics of others—or, at minimum, on some dimension of a social relationship—which elicits their ire. However, their most frequent response is to ignore the semantic pressure to refer to others and to dwell on characteristics within themselves that cause their anger. Thirty percent of

[11] The importance of this point becomes apparent when *krood* is contrasted with some of the other "angrys" in the Thai lexicon: *moohoo*, angry at the situation in which one is entangled rather than toward another person; *chun*, angry at the action of another person, but not the person himself, with a suggestion of helplessness (the blast of a radio as one is falling asleep); *chiw*, to *feel* angry at another person, but to conceal its expression; *moohoochunchiaw*, angry all the time, at anything, because one has a character trait to be angry; *khunkheen*, revengeful. That the villagers should have such a rich set of lexical contrasts in this area—and I have excluded terms which are simply variations on the intensity of "angry" ("irritated" vs. "enraged")—is not without significance. "Anger" obviously is an emotion to which villagers attend.

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the sample responds in this manner. Thus, they say that they are hostile toward other people when they themselves are "in a bad mood and tired," "are rattled," "have done wrong," or "are old. When one gets old, one's tongue becomes sharp and one gets angry easily." The emphasis on the loss of control or psychic equilibrium can be noted here, as well as the fact that although these disequilibrium forces are in themselves not very extreme, they are presented as ample justification for anger. Even when villagers do mention others, it is not in reference to others' actions so much as it is in reference to the emotions that those actions elicit, that is, *"He most often gets angry at other people when* . . . he is cross, such as, when other people are infuriating or annoying."

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TABLE 23

***He most often gets angry when* . . .**
Khon *most often get angry at other people when* . . .

SELF-REFERENCE:	30%	when *raw* make an error in the work. I, too, get angry. she has done something wrong. he is in a temper. he is drinking, drunk. If he is not drunk he does not become angry easily.
OTHERS DO NOT SATISFY SELF:	19%	they disobey him. they are not good to her.
GOSSIP:	23%	people say bad things about him. other people accuse him about something that has no truth.
QUARRELING:	23%	they quarrel. he has no happiness; when other people molest him often.

Related to the above are the responses given by 19 percent of the sample which, although referring to others, focus not on any objective negative quality or action of others (as in the two categories to follow) but on the simple fact that others do not satisfy the wishes and demands of the self. Again, the self—its needs, value, and significance—is primary. Villagers falling in this category say that they are most often angry at others when "people do not do what *raw* have told them to do," "they are not good to her," "people do not do things according to my wish." Informants giving these responses fall in all age and socioeconomic categories, suggesting that they are not necessarily the attitudes of social superordinates, which an older age or "wealthy" economic position might otherwise imply.

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The final two categories, each representing 23 percent of the sample, describe as the causes of anger the direct actions of others. In one case,

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*125 others deride and gossip about the self: "people speak of him in an envious
*128 way"; "they blame her according to what is not true." In the other case,
*152 people quarrel, scold, and otherwise aggress overtly toward one another:
*156 "people come to look for trouble and damn him"; "people pick a quarrel with her." It might be added that excepting two villagers, none of the overt hostility specified by the villagers is even suggestive of physical aggression. More important, there are no completions at all which are suggestive of Bang Chaners being angry because they have been taken advantage of or because their competence has been challenged or threatened. There are no thoughts on the order of: "when they have pulled a fast one on him"; "when he has been tricked"; "when he has been cheated." The point is important because being tricked, cheated, or otherwise "one-upped" are events which some Western observers (leMay 1930, Textor 1959) have seen as occurring with considerable frequency in Thailand. The point has been implied in a few places in this book as well. These data would suggest that although such events occur, in a behavioral sense, they have little *motivational* significance to the villagers; that is, villagers seem to assume that an act of trickery or cheating is not necessarily prompted by the desire to hurt or to be hostile toward others. To them, the intrinsic attribute of trickery or cheating is self-advancement, not aggression or a sense of evil. These latter elements are by-products, and they are not so much by-products of the cheater's motivations as they are of the situation into which the cheated party was foolish enough to place himself. *If* the cheated party were to feel anger in such a situation it would be toward himself, not toward the individual who simply "took advantage of a good opportunity."

The next two items ask for the villagers' reactions to being annoyed and insulted by others. Since these two experiences are essentially intensity variations on the same theme, they will be dealt with together.

The overwhelming response of the villagers to both experiences is to avoid action and to respond internally with emotion and feeling. This is the response of 66 percent of the sample to *"When people annoy me, I . . ."* and 69 percent to *"When he insulted me, I. . . ."* (Note that in the original Thai the annoyance is explicitly interpersonal; the insult, although not explicitly interpersonal, assumes a human agent.) Even when villagers do act out their responses in behavior it is mainly to flee, avoid, or get away from the annoyance (20 percent) or to improve themselves *in order* not to merit the insult (14 percent). Thus, even in these variant cases, there is no contact between the annoyer or insulter and the self, and informants, although acting out their responses, do so in isolation. Only three villagers indicate any propensity to retaliate against others (and, by definition, deal with them directly and overtly: they scold their annoyers)

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while another three, in inimitable Thai fashion, hedge their retaliations with conditions, or phrase them as intentions ("I would scold them if I could"; "I would like to rail at them, but I am not sure I can."). 125* 128* 152* 156*

In the item, *"When people annoy me, I . . . ,"* 43 percent of the sample responds either by feeling angry or by indicating that they dislike being annoyed. The majority of these informants state their anger or dislike flatly, although a few justify it by adding that the anger or its external

TABLE 24

When people annoy me, I . . .
***When someone annoys* raw, raw . . .**

EMOTION (66%)		
ANGER:	43%	am slightly angry. seethe inside. feel annoyed because I want to stay peaceful and cannot. dislike them. feel angry at them and I want them to go away quickly.
NO FEELINGS:	10%	well, well, I feel *chɔɔj-chɔɔj*. Nothing happens. have no feelings about being annoyed.
DEPRESSION:	13%	my heart and feelings are unhappy. am down in the dumps.
ACTION (30%)		
LEAVE THE FIELD:	20%	want to be far away. I don't want to be annoyed. want to get away from them. run away to find peace somewhere else.
ACTUAL RETALIATION:	5%	rail at them. Why should I spare them? They are not my parents.
INTENDED RETALIATION:	5%	scold them to stop annoying *raw*. If *raw* can find some way to make them stop annoying, *raw* will do it.

cause prevents them from "being at peace." Different from the above in content, but similar in its emphasis on inactivity, is the response of 10 percent of the villagers who say either that they have no feelings about being annoyed or simply feel *chɔɔj-chɔɔj*. In effect, these informants avoid or deny any reaction to the experience. Another 13 percent are also inactive, but instead of responding with stoicism or indifference, they perceive the annoyance as cause for feeling depressed and unhappy. Although not a complete withdrawal, as is the case in the category to follow, the response is another example of the villagers' emotional passivity in

[TEXT CONTINUED ON PAGE 193]

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TABLE 25

*125 *When he insulted me, I . . .*
*128 *When there is an insult to* raw, raw . . .
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EMOTION (69%)		
ANGER:	40%	felt *rapkiad* (disgusted or repelled by what the insulter did) and I did not want to speak with her either. A person who speaks too much, who is too sociable, is no good.
		felt a little angry, that was all. I did not feel much more than that.
		was annoyed. It was none of his business.
		felt displeased, as was natural, and I wondered why he insulted me.
NO FEELINGS:	16%	tried to control myself and not be perturbed. I tried not to let my base nature take control of me. Everyone suffers from contempt and backbiting: it is inevitable. If we remain undisturbed, they will stop of their own accord.
		was indifferent to him. I live my own life; I have my own work. I do not make my living by taking advantage of others or by cheating others. I do not steal from anybody in order to take care of my wife and children.
DEPRESSION:	13%	felt sorry. I live my own life; I do not trouble anyone; I earn my own living.
		felt unhappy and sorry. In the future I will try not to let him insult me again.
ACTION (28%)		
IMPROVE SELF:	14%	felt hurt and tried to improve myself.
		would behave better, so that they would stop insulting me.
"AVOID STIMULUS":	14%	it is not good to insult someone for no reason. There are a lot of people who like to insult others; they are men who like to gossip
		no one ever insulted me, because I never said anything bad about anybody. Therefore, they never said anything bad about me.

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psychologically stressful situations. Finally, 20 percent of the sample responds simply by leaving the field: they go away or run away from those who annoy them. Although an "active" response in the sense that energy is expended in overt behavior, the reaction is a patent evasion of the annoyance and its perpetrators.

The total of these various categories is 86 percent, indicating that the villagers' tendency to avoid dealing directly with people who annoy them is highly unimodal indeed.

The distribution of responses to *"When he insulted me, I . . ."* is strikingly similar to the above. Because it is a more extreme expression of hurt, some of the responses are a bit more dramatic; also, the internal frequencies of a few of the categories are a bit different. However, the overriding tendency is to deal with the insult by avoiding the insulter and simply feeling internally—angrily, "indifferently," or unhappily. Here, 40 percent of the sample responds with anger or dislike; 16 percent indicate that they have no feelings about the insult or are *chəəj-chəəj;* and 13 percent are depressed, sorry, or unhappy. Only a single individual, however, reacts by leaving the field.

There are two categories of response for which there are no equivalents on the earlier item. Fourteen percent of the informants indicate that the insult has provoked them into improving themselves or behaving better. However, they are explicit in indicating that this is principally a means of ridding themselves of their antagonists. Another 14 percent present what are essentially "avoidance of the stimulus" responses. They say that they have never been insulted or they discuss the immorality of insults. Not surprisingly, all but two of the Buddhist monks in the sample react in this manner.

In summary, the SCT data strongly confirm the villagers' behavioral tendencies to control, deny, and inhibit their aggressive impulses. The data indicate that they do not lack such impulses, but rather that they are unable to act them out in an overt, social manner. Instead, they respond internally and live with the hostility (in an angry, "indifferent," or unhappy fashion) or work it out in the privacy of their own minds. The data also indicate that this tendency is culturally unimodal.

Dominant Drives and Wishes

The materials covered in this section are to the author the most interesting of all the SCT data, not so much from the point of view of what they reveal about the villagers' psychic life as from that of providing answers to questions about an area that is virtually unknown. There are numerous things that the villagers do—make merit, grow rice, tell funny stories, treat

4:Phillips E-4,5 (1956-1957) 1966
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that an instrument such as the SCT should never be used by itself, or at least not without some reference to behavioral data. The SCT, or my particular version of it, could not readily get at the process of psychological commitment that plays such an important role in the lives of the villagers, and which underlies their "loosely structured social system." In fact, the handling of this process may well be one of the most interesting things about the villagers. In a somewhat oblique way, the SCT data implied the importance of this process: so many of the villagers' responses were phrased in terms of fulfilling social forms and rituals, that an analyst might question the degree of psychological commitment behind them. However, "psychological commitment"—the reliability, depth, and constancy of relationships; the degree of involvement necessary for insuring that an interactional event will even take place—cannot begin to be recognized as an analytic problem until one sees beyond the very social situations that presume it, and this can probably only be done by naturalistic observation and interpretation.

While the SCT and observational data did not contain any striking empirical inconsistencies, they did demonstrate the significance of an issue raised early in this study: the problem of whether the culturally interesting or distinctive is the same as the culturally frequent or modal. The analyses indicated that for the most part these two types of characterization were not incongruent. Thus, the extreme individualism and self-concern of the villagers emerged unmistakably from both sets of data. However, there were instances when the two kinds of characterization were not isomorphic, and resulted in conclusions quite different from those originally expected. Thus, on the basis of the observational materials, I fully anticipated that anxiety about interpersonal relationships would emerge in the SCT responses as the villagers' most frequent form of anxiety. The amount of gossip that occurs in the community, the references that one hears to slander, the touchiness that villagers exhibit in their actual relations with others, all pointed to this conclusion. These were the appraisals of an outside observer struck by the "different" and "unusual" facets of the culture he was studying. Yet the SCT data indicated beyond all doubt that interpersonal anxieties were not, from the villagers' point of view, their most typical form of anxiety. They were worried more about their stomachs than their hearts.[1] This conclusion, deduced from the villagers' own per-

[1] One might argue here from a psychoanalytic point of view that the stomach is simply a substitute for the heart. However, one might also argue from a psychoanalytic point of view that the heart is simply a substitute for the stomach. This Freudian principle of the substitutability of needs cannot by itself account for the *direction* of the substitution (unless one assumes a doctrinaire early Freudian or neo-Freudian position) nor can it prove the *existence* of the hypothetical substitution. These can be demonstrated only by detailed, empirical data on the traumata, repressions, fixations,

4:Phillips E-4,5 (1956-1957) 1966
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*125 ceptions, took on additional significance when related to the sense of
• 152 psychological worth and self-love that the people of Bang Chan *also* exhibit. Again, the essential issue here is not the presence or absence of anxiety about interpersonal relationships. There is little doubt that villagers do suffer such anxiety. Rather, the question is one of *relative* frequency, and, by implication, the *relative* importance of such suffering to the *total* need and deprivation system of the villagers. It is precisely with regard to this larger kind of question that an instrument such as the SCT can provide context and perspective.

Turning to the theoretical issues that have been raised or suggested by the data, perhaps the most important is the problem of "conformity" as it relates to the villagers' loosely structured social system. This problem is of course at the center of all social psychological research. It is concerned with how, why, and the extent to which individuals relate to their social environments. In fact, in a recent paper aimed at synthesizing the theoretical
114 premises underlying most current culture personality research, Bert Kaplan
121 (1961*b*) presents a cogently argued case for the necessity of anthropologists
*156 and psychologists to shift their attention from the study of why individuals behave in particular ways to the study of this more generalized disposition. He says (665–666):

> Up to now our emerging theory appears to suggest a jungle-like situation in which wholly free and autonomous individuals, in a relatively opportunistic way, make use of the available channels of social partici-

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*125 regressions, and other psychodynamic processes of informants. Even so, it is highly
121 unlikely that the anxiety responses of adults are *simply* the result of a series of
152 unconscious processes—substitutive, projective, or otherwise. It must be remembered that an anxiety response is just as often a function of the ego, oriented to and in the service of the organism's reality needs, as it is a function of unconscious needs derived from the difficulties of the developmental process. When we consider that the villagers live in one of the most unpredictable universes imaginable and that they are a people entering the throes of a revolution of rising expectations, it is not at all surprising that they should feel anxious about threats to their physical well-being, expressed as a fear of going hungry or being poor. In fact, I would suggest that at bottom these are expressions of an existential anxiety about the essential instability, uncertainty, and impermanence of all life (including their own), an anxiety which has its cognitive basis in the "Wheel of Law" and other Buddhist doctrine. It might be argued that since, objectively viewed, the villagers are well fed and enjoy one of the highest standards of living in Asia, such anxieties are without foundation. I would answer by saying that the villagers are not aware of the per capita income figures for Asia, and that "reality" for any people is how they subjectively perceive and define it, not what it objectively is. To say that there is no realistic basis for the villagers' anxiety about going hungry and being poor is like saying that there is no realistic basis for their belief in interminable existences or in the timeless continuity of the self. In both instances they believe these things to be the case, and ultimately that is what is important.

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775 Moreover, her life would some day begin again. Whether birth
844 was rapid or slow, the experience of the suffering deepened her sense of compassion and, as will be shown, brought her closer to fulfillment of her life role."[1]

Habit

153 If mutual help organized relationships, habit (khoei)
82 stabilized them. Khoei means "to be used to, accustomed to,
853 habituated." A first occurrence was an example and set the pattern for all subsequent occurrences. With one performance
[761] one was accustomed to an action. For instance, shortly after the temple was built 2 people died, deaths in Bang Chan "always occurred in pairs;" it was the temple's "habit." Moverover, "the head priest could never expel a priest because he had never done so." Again, a few women saw to it that during this period their babies were given a few grains of rice (even though they were far too young to be offered new rice regularly), so that "later on, if they got sick, they could always at least eat rice," for "they would be used
[171] to it." "Glutinous rice was not good for babies in Bang Chan, but in North Thailand [where it was a staple] it could be eaten because people were used to it." Someone had set the example which started the custom.

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844 1. Bang Chan's Buddhist phrasing of the meaning of pain and
154 death in childbirth seems to indicate that childbirth occurred
171 under psycho-cultural conditions that induced relaxation and
114 reduced fear and pain. An "easy" delivery lasted 2 hours. According to a modern medical theory, (Dick-Read: Childbirth Without Fear, passim) lack of fear of childbirth leads to mental and physical relaxation which in turn reduces pain and labor. Dr. Dan Bradley observed that labor was shorter among Siamese women than among non-Siamese. "Facts seem to prove that parturition is both shorter and easier to Siamese mothers than is usual to Europeans and Americans" (Bradley, 1865:79). We accept his first-hand observation because he had 40 or more years of experience in delivering babies, both Thai and non-Thai (missionary wives, etc.), and suggest that it may be taken as proof of mental and physical relaxation derived from lack of fear. Although the missionary women may have been frightened because they were in a far country, Dick-Read argues that fear of childbirth has long been present among American women and this fear has the effect of longer, harder labor.

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A major clustering of first experiences, and so of habit formation, was in intra-uterine existence. Every experience of the mother was shared by the fetus. After birth, a baby daily formed habits of eating, sleeping, and crying, and later, as a child, habits of respect, obedience, truth-telling, etc. To create good habits efforts were bent to control and ameliorate any first experience: to make it as correct as possible; to seek out favorable astrological moments; to ask auspicious, skilled, or learned persons to be part of the initial action. An example was the establishment of nursing. When the baby was put to the breast the first time, the objective was not nourishment but to establish a good habit, viz. copious and strong sucking from an ample milk supply. Only after this first nursing did breast-milk as nourishment become important. If on this occasion he did not nurse well, he would have the habit of eating poorly all his life. Moreover, whatever the mother's experience with her first-born, it would not only be repeated every time he nursed, but set the nursing pattern for all subsequent children she bore. For her first-born, though, a mother would have had no previous experience of making milk. She had to be taught, or shown, how to make good milk, just as the baby had to be taught to suck, and later taught to eat rice. Consequently, the first-born baby was almost always first nursed by another person (not necessarily a kinswoman) with copious milk. Then 2 or 3 days later, because the example had been set, good milk came in and the mother started nursing. What was to be avoided at all costs was a first suck of colostrum, which appeared to be "unfit, early milk" from an insufficiently lactating breast. This would be a poor precedent. Until a mother decided her milk was right for nursing, a baby subsisted usually on honey and water, and maybe a little crushed banana. If a woman were not satisfied with her nursing capacities for her first-born child, when the second child was born she might ask another lactating woman to give the baby a first nursing so as to improve her own habit.[42] One woman flatly said her own milk was always unfit as proved by her babies' health, so she used a bottle of (canned) cow's milk from the start. She felt she had the habit

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42. Bradley (79-80) felt that the dehydration attendant on lying by the hot fire significantly reduced the quantity and quality of the milk.

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[846]

153 of making poor milk. Any woman whose milk flowed early and
853 well needed no example, for she was seen as having the habit as an in-born characteristic so deeply ingrained that it came through from a previous incarnation.[43] After nursing was established by the mother, babies were not often given over to another woman's breast because they were reputed to refuse it, "being not used to it."

In sum, the nursing patterns in Bang Chan varied with the previous lactating experience (if any) of the mother, and the ordinal position of her children.

Hauck shows the old way of establishing good eating
262 habits in a baby. "If a mother ate small amounts of many
846 different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time" (1959:14). Through the beneficial effects of the fire, any deleterious qualities of the foods were eliminated (as we shall see in "The Fire of Maturity") and the child had his first experience with these foods in the breast milk.

153 Bang Chan's life was full of secondary opportunities for starting new habits. Every rice crop, every boat purchased, every house built, and all the rites of the life cycle could, if handled properly, start a fresh and fortunate sequence on its way. We shall have more to say of this in discussing maturity.

789 Imitation
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The familiar principle of imitation (Anuman Rajadhon: 154), the influence of like making for like, operated throughout daily life in Bang Chan. An action, event or presence emanated an analogous influence on its surroundings. A woman returned from a visit to the midwife with all possible speed in order to achieve a speedy delivery of her child a few weeks hence. Another pregnant woman visited the temple on the final day of the rainy-season Buddhist

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829 43. Bradley's informants gave an example of a deeply ingrained habit: "European and American mothers can better dispense [with the fire-rest] because their own mothers from time immemorial have never been in the practice of the custom, and consequently their constitutions do not at all require it (p.79)."

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

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A midwife or doctor could not be blamed, unless it was felt they did not help as much as they could have.

A child lacking in merit died. Such individuals, for some reason, did enough at their own birth. Words of comfort to a surviving mother were, "your baby did not have enough merit to live." If particularly sinful, it died after making delivery unusually painful. "Once a child was born dead, but it teased the midwife by moving its legs a bit. Consequently, its death was not the fault of the midwife." The child's lack of merit was proved by its death and its maliciousness. There was no hostility towards any child born in a hard delivery, for if both mother and child survived, the demerit that caused the suffering was the mother's.

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On the other hand, a meritorious woman with a meritorious baby had a short, easy delivery. Such a child was considerate: "he will not hurt his mother, will help her to bear him easily, and will live."

844 782

A woman who safely came through childbirth felt deep satisfaction and new security. Bearing a child in itself did not bring any merit, though it was an act of mercy. Merit could come later with the ordination of a son. However, why one woman had successful or short labor, and another not, was unequivocally clear and accepted. If delivery were normal, she was confident of her and her child's store of merit. If not, she bore the anguish, convinced that she had brought it on herself in some previous life. Since sins were worked off with pain, every thrust made her future lives happier. Fear was minimized, for if death came, it was merit-determined.

[154] [761]

761
775 Moreover, her life would some day begin again. Whether birth
844 was rapid or slow, the experience of the suffering deepened her sense of compassion and, as will be shown, brought her closer to fulfillment of her life role.[41]

Habit

153 If mutual help organized relationships, habit (khoēi)
82 stabilized them. Khoēi means "to be used to, accustomed to,
853 habituated." A first occurrence was an example and set the pattern for all subsequent occurrences. With one performance
[761] one was accustomed to an action. For instance, shortly after the temple was built 2 people died, deaths in Bang Chan "always occurred in pairs," it was the temple's "habit." Moverover, "the head priest could never expel a priest because he had never done so." Again, a few women saw to it that during this period their babies were given a few grains of rice (even though they were far too young to be offered any rice regularly), so that "later on, if they got sick, they could always at least eat rice," for "they would be used
[171] to it." "Glutinous rice was not good for babies in Bang Chan, but in North Thailand [where it was a staple] it could be eaten because people were used to it." Someone had set the example which started the custom.

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844 41. Bang Chan's Buddhist phrasing of the meaning of pain and
154 death in childbirth seems to indicate that childbirth occurred under psycho-cultural conditions that induced relaxation and
171 reduced fear and pain. An "easy" delivery lasted 2 hours.
114 According to a modern medical theory, Dick-Read: Childbirth Without Fear, passim) lack of fear of childbirth leads to mental and physical relaxation which in turn reduces pain and labor. Dr. Dan Bradley observed that labor was shorter among Siamese women than among non-Siamese. "Facts seem to prove that parturition is both shorter and easier to Siamese mothers than is usual to Europeans and Americans" (Bradley, 1865:79). We accept his first-hand observation because he had 40 or more years of experience in delivering babies, both Thai and non-Thai (missionary wives, etc.), and suggest that it may be taken as proof of mental and physical relaxation derived from lack of fear. Although the missionary women may have been frightened because they were in a far country, Dick-Read argues that fear of childbirth has long been present among American women and this fear has the effect of longer, harder labor.

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and postural forms expressive of respect cited earlier; the repeated hesitation to place others in embarrassing situations; the hesitation to tell others bad news so that "they will not feel sad" or will not have to dissemble (although more often the less delicate reason is the person's fear of embarrassing himself). Of a still different order is the uneasy affability that is expressed in the nervous giggling accompanying many face-to-face relationships and in the compulsive preoccupation with inconsequential or inoffensive topics while conversing with others. These responses appear to be either attempts to maintain minimal contact with others while jockeying to find out what they are really up to, or, in the negative sense, efforts to fulfill the minimum requirements of interaction while waiting (and hoping) for the contact to come to an end. And still different from all these is the affability associated with trying to make a good impression on others expressed in the constant concern with displaying good manners, with using pleasing or flattering words, with being a good host, and the like. Although this category is in many respects behaviorally similar to the "politeness" referred to above, it seems to differ from the latter motivationally in that it is concerned not with the state and comfort of others *per se*, but with ego's effect on others.

As described above in simple summary terms, these responses might appear quite ordinary and at certain times applicable to any group of human beings. However, what impresses the observer in Bang Chan is the insistence and constancy of their use. These are precisely the forms that the villagers choose in the vast majority of situations for expressing the degree and quality of contact that they feel toward others. That they are in fact social forms—stylized, often ritualized, modes of behaving—should not be overlooked. It is just this characteristic that engenders the theme underlying all the responses and which indeed sets the tone of most Thai interaction: that the relations between people should be friendly, genial, and correct, but need have little personal commitment or involvement. As will be seen below, it is this readiness to phrase most face-to-face contact in terms of social rituals while at the same time feeling little commitment to others that actually lies at the root of what has so often been called Thailand's "loosely structured social system."

Social Play

The first response mentioned above, the tendency to turn social situations into occasions for play, is probably one of the most common of all human tendencies (it is certainly one of the earliest), but one that strangely has received little attention in the psychological literature. The few writers who have expressed any interest in social play have tended to view it simply

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571 as a release mechanism from boredom or tension (Riesman and Bloomberg
1957, Roy 1959–1960), as a "healthy" escape from reality (Flugel 1954,
154 Bateson 1954), or as a normal and desirable regression to childhood pleas-
52 ures (Freud 1905 and 1928). Running through all these observations is the obvious Western bias that play somehow is divorced from, or a reaction to, the harsh facts of social reality.[8] On reflection, however, it is clear there is no theoretical necessity, either maturational or social psychological, for play to be limited to cathartic functions, or for regarding it as a less realistic or less mature psychological state than that which causes boredom, tension, escape, or regression. In fact, one might logically argue that the conditions which create the latter states are less realistic and immature because they represent retreats to forms of infantile masochism. Such questions of course belong to the realm of interpretive debate. The essential point is that in the process of learning to adapt to the social psychological realities of one's culture there is no inherent, ontogenetic requirement (other than that imposed by the peculiarities of one's culture) for human beings to renounce their motivations for play. Simply stated, having fun need not be so much a retreat from or defense against adult reality and responsibility as it is something to be sought after for its own sake.

121 The fundamental analytic issue here may well be whether play is a
154 psychobiological "given" of the human animal, on the same order as
52 hunger, sex, and other precultural needs, or a learned, secondary cultural

[8] Of these various interpretations, the most broadly conceived and carefully argued is Freud's, where play activities are linked theoretically to the interrelationships of the id, ego, and superego and the aims of the "pleasure principle." However, even here Freud was caught up in the Western cultural bias that only children, those who have not yet had to come fully to terms with social reality, could easily "afford" the luxury of play. This same cultural bias often appears at a totally different interpretive level in the rather crass pronouncements of journalists and travelers who, in writing about the Thai, refer to the "child-like" behavior of these people who spend so much time, energy, and money in having fun.

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Radcliffe-Brown's famous essay on the "joking relationship" (1952) is of course a special sociological case of the "tension release" function of play. In a brief paper, Keesing (1960) lists some seven overlapping functions of play, but here too play is seen largely as divorced from "everyday 'reality' activities." Callois (1958) brings together valuable cross-cultural data in what is otherwise a classification of organized games.

Probably the most comprehensive study of play ever written is *Homo Ludens: A Study of the Play Element in Culture* (1938; English translation 1950) by the late cultural historian, Johan Huizinga. Although Huizinga is concerned mainly with structured play activities (games of skill, chance, guessing games) and with the relationships between play and ceremonials, one of his observations is worth noting: "Nature, so our reasoning mind tells us, could just as easily given her children all those useful functions of discharging superabundant energy, of relaxing after exertion, of training for the demands of life, of compensating for unfulfilled longings, etc., in the form of purely mechanical exercises and reactions. But no, she gave us play, with its tension, its mirth, and its fun. Now this last element, the *fun* of playing, resists all analysis, all logical interpretation. As a concept, it cannot be reduced to any other mental category. . . ."

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need. The problem is that we really do not know, although comparative data from primatology (Yerkes 1943, Kroeber 1948: 27–29 and 60–61) clearly suggest that play belongs to the former category. If this is indeed the case it would imply that play is subject to the same degree of cultural influence, channeling, and socialization as are hunger, sex, and aggression, but can no more be fully obliterated than can these needs. Assuming, for the sake of argument, that this reasoning is correct, then the compensatory "escape" and "regressive" functions attributed to play by the authors noted above would not be at all unreasonable: play might well come to serve as an escape from adult reality in the same way that food sometimes serves as an escape from sexual anxiety or sex from food anxiety (Holmberg 1950). However, the point is that these are not the primary or typical functions of these needs, but secondary and defensive ones; although significant, they hardly comprise the necessary conditions for their being. If this approach is valid, we would be considerably wiser in our present state of knowledge (the Protestant Ethic and its intellectual extensions notwithstanding) to direct our attention to identifying the varying forms of play from culture to culture rather than to dwell on its secondary, compensatory functions.

Whatever its ultimate motivational basis, there is no doubting either the spontaneity or ingenuousness with which Bang Chaners turn social situations into occasions for play. For the most part they seem prompted in these situations by the simple desire to have a good time rather than to affect others in a socially pointed way, that is, their humor is not typically aimed at being sarcastic, didactic, or even exhibitionistic, although the person who excels at being funny is quickly recognized as such and is to an extent admired.[7] There is, in the negative sense noted earlier, an element of interpersonal effect operating here: comedy is a technique which almost by definition reduces the potentiality for face-to-face conflict. However, the villagers' play seems aimed primarily at satisfying personalistic function: their *individual* needs for pleasure and amusement.

The forms that these play activities take are numerous.[8] Perhaps their

[7] In the more explicitly institutionalized forms of comedy—*likes* (folk dramatic shows) or newspaper and magazine cartoons—these aims do come into play and often assume extreme, sometimes even biting, proportions. However, this is the comparatively safe world of theatre and "literature." Among themselves, in the world of face-to-face contact, villagers are considerably more gentle (or less sophisticated) and do not focus explicitly on such purposes.

[8] We will be concerned primarily with the forms of play, not its content. For whatever reason, humor and comedy seem to be the last refuge of what is genuinely private in a culture. Intercultural translations may succeed in communicating the manifest content of another people's humor, but they so frequently miss its intent that the result is either perplexity or disappointment ("Yes, and what happens then?").

The dangers of trying to share humor interculturally were perhaps never brought home better than when I tried to get the villagers' reaction to a story that received

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181 461 476 salient: the free food, drink, and chitchat at the end of a hard day's work; the fun of working together with several other individuals. Notice that in this kind of situation there is no overseer demanding the person's effort. His labor is freely given and may be freely withdrawn.

181 *156 571 In describing *sanug* as a measure of how much villagers wish to commit themselves to a particular activity, I mean to communicate a point and not merely to turn a phrase. The word "commit," which appears often in this book, is used to convey the idea that coöperative, mutually expectable interaction as we know it in the West does not "simply take place" in Bang Chan. Rather, there is always the intervening factor of whether individuals want it to take place. Siamese are, first and foremost, free and independent souls. Much of the time they fulfill each other's expectations, but this is only because they want to, not because others expect it of them or because the situation demands it. It is the individual that is primary, not the social relationship. The strength of this principle is demonstrated by the fact that one is almost never surprised when one's expectations about another are not fulfilled. The assumption is: "If he did not do it, he must have had his own good reason."

181 • 154 *156 571 The potentialities for interpersonal frustration that are inherent in such a system are minimized largely by the hesitation on the part of individuals to build up strong expectations about people or events. In general, the Thai are a people who do not live at, and rarely reach, a high emotional pitch. Witness, for example, the specifications of "sanug-ful activities," those which afford the greatest pleasure: they are novel, diverting, comfortable, and frivolous, but there is no Faustian intensity about these joys. They are all rather muted emotional experiences. The point here is simply that in this kind of psychological environment, people rarely permit themselves to become so committed to an activity or to another person that the frustration of that commitment will be overly disturbing to them. They proceed from a premise which says in effect: "Well, it is really not that important that he did not do what I expected of him. I will simply have to make do."

181 154 *156 There are a few aspects of the villagers' concern with *sanug* that warrant underscoring. First, from an analytic point of view, *sanug* seems to reflect an attempt on the part of the villagers to lead a psychologically integrated life, wherein the time and energy one gives to an activity is rewarded immediately and directly with pleasure. This low-keyed pleasure should be an inextricable part of the total situation in which one finds oneself (or more accurately, into which one places oneself), not something to be deferred until a later, "more appropriate" time when it becomes an isolated segment of experience. Essentially, *sanug* should be—it not always is—a concurrent aspect of almost everything that one does. At the same time, however, these conditions are also the source of an inevitable paradox. Since "sanug-ful" activities are, by definition, novel and divertin[illegible] and

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since even the most novel activities eventually become routine or stale, it is obviously impossible for all one's hours to be animated with *sanug*. From a total time perspective, many of the villagers' activities are of course either "sanug-fully" fallow or "sanug-fully" short-lived. To a large extent, this paradox is resolved *subjectively* by the short-term time perspective of the villagers. This is the second major point to be noted about *sanug*, that is, *sanug* reflects a more generalized tendency on the part of the villagers to concern themselves with activities that require only brief time commitments or whose effects are immediately forthcoming. Bang Chaners are not an impatient people in an active, negative sense, but they do have difficulty in attending to tasks that demand from them a sense of compulsiveness or staying power. They will often drop demanding tasks right in the middle once they have recognized that the work is taking longer than originally expected. What is striking is that they will do this with apparently no sense of frustration over not having fulfilled their aims and with no regret over having wasted their time. It is as if their original purposes had simply become irrelevant, and they had gone on to other things. This is precisely the attitude, for example, surrounding the construction of the unusable road referred to earlier leading from the Minburi Highway to the Bang Chan school. After devoting considerable labor to building the high mound that would form the foundation of the road, villagers lost interest when they were unable to obtain funds for its surfacing. Since no one was ever interested in maintaining it, the road now lies in the middle of a rice field, rutted and pitted; much of the foundation has sunk back to the level of the adjacent fields. However, no villager has ever considered the road a fiasco or "folly"; it was just something done in the past and has since been forgotten. The road project might be revived in the future, but from the villagers' point of view that too is irrelevant. The point is that *sanug*, with its emphasis on novelty and diversion, is expressive of this same underlying time orientation. In the villagers' way of thinking, no activity is really worth doing unless it has the potentiality for fun.

Another expression of the villagers' concern with play, related in some respects to what will be discussed in the next section, is their preoccupation with humorous *topics* of conversation. For the most part, they enjoy hearing and telling stories with a "banana peel" twist: of a husband who is caught by his wife sleeping with another woman; of an individual who, through his failure to take heed, is cheated out of his money. Such stories of course always concern other people, not those immediately present. Too, stories that combine whimsy and the supernatural—for example, of a "super-dog" that can find buried treasure or foretell the future—elicit laughter, although often with a tinge of apprehension that the stories may be true. However, what is most impressive about these and similar stories is the amount of time given to them.

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521 522 538 The sociological context of a story-telling is probably what is most important here. Bang Chan is a community where other than cultivating the single rice crop and attending to daily household chores and religious activities, the villagers realistically have little else to do but talk to each other. This is clearly not an inevitable attribute of the peasant condition, but it is true of Bang Chan where little attention is given to such creative leisure activities as craftsmanship, music, and art, and where there is little occupational specialization. In fact, probably more time is given to gossiping than to any other single waking activity except daydreaming. Bang Chaners talk of many things, serious as well as lighthearted: the price of rice, religion, gambling, the doings of "big people," family disputes, and the like. However, by far one of the largest segments of their total conversational repertoire is given over to "funny" stories. Of course, no story is ever *exclusively* humorous in nature; all communication is inherently multidimensional, and even the funniest story has a substantive, non-humorous message. However, if stories may be judged by their behavioral effects (laughter) irrespective of their intellectual content, then the function of a major part of Bang Chan gossip is amusement.[10]

538 154 The motivations for the selection of banana peel type stories are more complex. In part, the choice seems prompted by a "there but for the grace of God go I . . . " mentality. As suggested earlier, Bang Chaners have a keenly developed sense of the possible: to them, this is a world where anything, not only the probable or the predictable, can happen. The banana peel story, with its emphasis on the painfully ludicrous and extreme, is a perfect representation of such an uncertain world. Its beauty is

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[123] [114] [126] [10] During the early stage of field work, I attempted to do systematic naturalistic observations of these gossip groups. The purpose was simply to identify the kinds of topics uppermost in the villagers' minds and the modes of interaction that most frequently developed during the sessions; it was hoped that the latter information might be related to the psychological test materials of the discussants. As a precisely designed and executed project, the effort, however, was dropped after a short time. For one thing, it was too difficult for two observers to record the *simultaneous* verbal and kinesthetic interaction of *several* people without the aid of a self-powered tape recorder and with the added burden of having to strain the material through the translation process. The task was further complicated by the fact that the membership of these groups continually changed as people would leave and enter the conversations. Also the groups would often break down into smaller sub-groups. Most important was the sheer multidimensionality of the conversation: any one utterance could simultaneously be funny, aggressive, boastful, carry practical information, etc. However, enough information was culled from these early attempts and later less ambitious ones to prompt the statements presented here. It is this writer's observation that one of the reasons behind the success of so much of the "small group" research conducted in the United States is that the groups studied have been *problem solving* or *task-oriented*, rather than simple gossip groups. The highly functional nature of the former has provided built-in constraints on the freedom of action permitted the discussants, and has made observational problems comparatively easier to deal with.

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that it is simply a "story," a description of the plight of other people, not the self. The story-teller or listener has the pleasure of a vicarious experience, but none of the pain of the real life situation. He can laugh over his good fortune in not being the person who was cheated out of his money or who was caught philandering by his wife. On the negative side, these stories also serve as a means by which the participants can express, through identification and projection, some of their own hostilities. The veil of humor provides in fact the ideal dress for hostility: one can be completely unabashed about expressing one's feelings (of wanting to steal, say, or wanting to humiliate), since what is expressed, in a form so exaggerated as to be acceptable, is simply the feeling and not the act itself. The hostility is made even more acceptable by the fact that it is projected onto the person in the story rather than referred to ego himself. In these terms, the telling of these stories probably does have something of the cathartic function cited earlier in the chapter: aggressions and hostilities that are otherwise kept under careful control are here permitted to emerge not only painlessly, but with a bit of relish. Finally, some of the laughter at these stories is probably also based on the feelings of embarrassment evoked in listeners. This is similar to the "there but for the grace of God . . ." motive but is different in that it is not based on personal identification with the person who suffers but rather on a diffuse feeling of discomfort over the expression of aggression—aggression toward anybody. There is embarrassment over things not being as they should be, over one's moral universe being temporarily out of joint. Also, the laughter is probably symptomatic of the listener's uneasiness as he becomes aware that the hostilities portrayed in the story are strikingly similar to those he himself harbors toward others. Embarrassed about his own aggressive impulses, he assuages them with laughter.

The motives for focusing on whimsical topics of conversation are less recondite and defensive than the above. Stories of the type describing "super-dogs" who find buried treasure are told because they are at the same time such outrageous and yet gentle distortions of reality. It is the juxtaposition of incongruous elements that is so appealing here. In ordinary Thai thought, for example, the dog is generally considered to be one of the most inconsequential and worthless of creatures. He is tolerated for his ability to warn of strangers and dispose of refuse, but nothing remotely approximating the feeling of "man's best friend" is associated with him. For such a lowly creature to be the sudden possessor of miraculous power is just too foolish. An elephant, monkey, or cobra perhaps, but not a dog.[11] Only "uncivilized" forest people would accept such a story. Yet, because the dog is such a familiar part of one's environment and also a living creature

[11] Doubt would exist for these creatures too, but because of their mythological and historical significance it would be somewhat tempered.

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front, know that it actually elicits and betrays his anxiety, but have such implicit trust in his own resources that he feels no need to alter his behavior. Simply stated: uneasiness when it occurs is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality.

The actual expressions of nervousness and inconsequential conversation vary considerably. Perhaps their most obvious (and justifiable) expression is when a villager, who wants to get something from another person, for example, a job, a loan, higher rent on land, is uncertain about the other's reaction and approaches him by hedging around the issue with giggles and light, irrelevant comments. This mode of behavior typically occurs when there is no history of reciprocal benefits between the parties or when a middleman cannot be used.[17] Although villagers themselves do not consider such comments "irrelevant" (probably because from a ritualistic point of view they are not), it is hard to define a detailed discussion of a person's buttons or belt buckle as anything but a kind of phatic communion. Sometimes conversations of this type will go on for twenty and thirty minutes, often branching off to include more topical interests such as the size of eggs or the calls of birds, before reaching the point. Frequently they never reach the point, since somewhere along the line the individual recognizes from the tone of the conversation that the other person is not in the proper mood to entertain his request; in this case, the individual will explain that he came simply "to chat." Sometimes the friend will begin to giggle uneasily (particularly if the protagonist's references to him contain an excess of flattery) as he becomes aware of the purpose of the conversation and wishes to evade facing the ultimate issue. Very often, even when the final request comes out, he can avoid it simply by giggling. Under such circumstances a giggle is crucially communicative: it is the person's polite substitute for "No," or "Let us bring this particular topic of conversation to an end." Giggling is a wonderfully effective way of carrying on a "conversation" (for those who can read its "vocabulary") because one can so readily convey his refusal, wariness, and even hostility while at all times maintaining the illusion of friendliness. It is precisely because the villagers' giggling frequently rests on such devious attitudes that it appears

[17] The *quid pro quo* basis of the former would permit a considerably more direct approach. It is not difficult to be frank with a person when both you and he realize that you are asking for an earlier obligation to be repaid or that you are creating a new one which may be called upon later when needed. Villagers are highly responsive to such obligations, often going to considerable effort and personal discomfort to meet them. A middleman, on the other hand, is used precisely to avoid the kind of delicate encounter described here. As a disinterested third party, he can be completely candid in his requests. However, for reasons of secrecy (usually when the request involves some potential competition or envy of other villagers, or perhaps some sharp-dealing) the use of a middleman may be inappropriate.

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to be somewhat nervous. Like the conversational topics mentioned above, its purpose is to maintain social contact, but at a minimal substantive level.

Other uses of giggling are less consciously purposeful than the above. Perhaps the most frequent instance of this is when villagers are talking about or responding directly to an unfortunate situation: a flood destroying the rice crop, a friend or relative dying or being beaten up, a person committing suicide. Giggling under these circumstances seems to represent several related sentiments. On the one hand, it indicates a slight feeling of embarrassment over having discovered something or talked about something which would have been better left undiscovered and undiscussed. At the same time, it is an attempt to make light of the misfortune by suggesting that the speaker and those present should not be overly pained by what they are encountering. Giggling here serves very much the same kind of function as the phrase *maj pen raj* ("it is nothing") referred to earlier; it is a means of shrugging off and denying a feeling of distress. Finally, giggling often is also a kind of ironic commentary on the human situation—not in any abstract philosophical way, but in the sense that a tragedy is so often actually felt to be a comic exposure of human hopes and intentions. A little exchange between the writer and an elderly villager perhaps best illustrates this. During one of the two rainy seasons I spent in Thailand, the rains were especially heavy in the Central Plain and destroyed the rice crop of many Bang Chan farms. As might be expected, it was a topic of considerable discussion. Paddling down the canal one morning, we met a villager who was returning from inspecting his fields, and we stopped to chat. The discussion inevitably turned to the flood, and he told us, in a completely matter-of-fact way, that he had already lost about 50 percent of his crop. He then giggled nervously over what he had said, and followed it up with, "But that person over there has lost everything." His giggles then turned into laughter as he nodded his head in an attitude of pain. Months later, when things were considerably more comfortable for the villager (as it turned out, he had lost only about 5 percent of his crop) I recalled our meeting and asked him what he thought was so funny about the flood. He did not remember, but volunteered in a nice, didactic way: "When something like a flood happens, all you can do is laugh."

Giggling is also a favored mode of dealing with the countless situations that arise in daily life that are perceived by the villagers as potentially, or imminently, embarrassing. Here giggling is a substitute for an explanation of one's actions, particularly those that are considered annoying to others. Villagers who have missed an *important* appointment (lesser ones are missed with few qualms) will tend to giggle when they finally meet the person and there is the slightest indication of the latter's displeasure.

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Giggling is very often used in the marketplace when an item must be bargained over. Similarly, a villager who wants to quit working for another will usually preface his request with some giggling, although equally often he will just leave—saying absolutely nothing—and will later send a middleman to collect his wages and make the severance official. The latter alternative is prompted by the desire to avoid *all* awkwardness.

The third major form of the villagers' politeness—that associated with making a good impression on others—has to a certain extent been covered by the materials already presented. Thus, in terms of the actual manifestations, there is really little difference between flattering another person, for example, because it will make him feel good, because it will make getting something out of him much easier, or because it will make one appear much more attractive in his eyes. However, it is clear that the motivations in these three cases are all quite different. It is for this reason that the last category has been introduced. When villagers meet another person whom they regard as significant (and this by no means includes all their contacts) they do put forth considerable effort to make a good impression on him. And being polite—courteous, helpful, flattering—is one of the most suitable means for achieving this effect.

Discussion of this interactive mode would perhaps not be necessary were villagers themselves not so keenly aware of it. Village children are continually and consciously taught, by word and deed, the necessity always to put their best foot forward (cf. the earlier illustrations in *Characteristics of a Good Person*). Bang Chaners assess themselves and others in terms of their capacity to make themselves appealing: both the "good" and the "competent" person is one who can make himself attractive by speaking softly, gently, and if possible, beautifully and cleverly. Often villagers take offense at an individual who refuses to do this because his very refusal suggests that he does not feel respect for others. Again, it should be emphasized that we are talking here about the form of behavior, not the substance or commitment behind it.

What the ultimate psychological roots of this behavior are is unclear. It is apparent—largely because of the great attention given to formal considerations such as manners, proper speech, and the like—that this concern is not prompted primarily by the desire to be loved by others. Love would require a more substantial medium. Gaining the respect and approval of others is clearly an important component of the attitude, but one wonders why a people otherwise so self-loving and self-accepting should need their self-esteem repeatedly validated by others. Perhaps the most important reason behind the villagers' concern with impressing others really has little to do with the others themselves, although obviously at the behavioral level it implicates them—that is, I would suggest that the major factor behind the

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IV

The Sentence Completion Technique

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The following discussion details the logical considerations which underlie the analysis of the SCT responses and the procedures which have been devised for such analysis. At the same time it will serve as an introduction to the general nature of the SCT responses.

The analysis rests upon five premises.

How the SCT Works

First, despite its title and appearance, there is nothing particularly esoteric about the Sentence Completion Technique. It is primarily a useful and efficient way of asking questions about matters which are of central concern in personality research—feelings of rejection, failure, anxiety, and the like—but which might be considered sensitive or personal by our informants. That the questions are phrased as incomplete sentences rather than as direct interrogations is an attempt to get at these issues in a psychologically comfortable way. Concomitantly, it is an attempt to circumvent the tendency for individuals to set up resistances and blocks when queried on such matters.[1]

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[1] Whether Bang Chan villagers consider feelings of rejection, failure, and so forth, to be sensitive or private topics is, at bottom, problematic, since we have little reason to assume that they or the members of any non-Western culture share our attitude in this regard. The writer suspects that in some areas Bang Chaners do share Western attitudes about what sentiments should be concealed from (or revealed to) others, and in other areas do not. For instance, Bang Chan men would no more discuss their sexual impulses toward their daughters than would American fathers—in contrast, for example, to Pilaga Indian men (Henry 1955: 265). In contrast, most Bang Chaners seem considerably more reticent than Americans about revealing their aggressive feelings, but are considerably freer in discussing feelings of personal failure. Such discussion, of course, always varies in terms of the degree of intimacy between people.

[123] Two general considerations thus seem clear: (a) Bang Chan villagers are precisely like other human beings in that they have a tendency to conceal and reveal certain feelings, although the specific feelings concerned may or may not be the same as those of members of other cultures; and (b) since in the beginning of his research, an investigator really does not know in what areas or to what degree his informants are sensitive, it would seem prudent to use a technique which assumes sensitivity in all areas and attempts to get at these feelings in the least uncomfortable way.

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*156 858 to choose, even if in this case it was seemingly to his own detriment—he knows what is best for himself. Even the incompetent, helpless infant is an independent soul with his own will and right of determination, and his dignity must be respected.

858 828 It must be recognized of course that in the cosmology of Bang Chan the infant is anything but a conative *tabula rasa*. When he enters the world of human beings he brings with him not only a stock of individually accumulated merit (*bun*) and demerit (*baap*) from countless previous lives which will affect his being in this one, but also a host of other forces which predetermine his character: his *khwaan* (soul-stuff), *winjaan* (psycho-biological motive power), *caj* (heart), and *nidsaj* or *ʔupanidsaj* (ingrained [114] character), among others. (J. R. Hanks 1959 has a brilliant exposition of the role of these elements.) In a very real sense the infant enters the world of humans as a developed, or partially developed, psychological being. Human influences, particularly virtue and "good habits," can be inculcated into him, but they are ultimately limited by these pre-natally determined 861 characteristics. Much of Bang Chan child rearing is actually a series of 155 perpetual compromises between (a) parents surrendering to what they think are the child's predetermined traits (and while this represents an extraordinary respect for his infantile individuality, it also leads in a developmental sense to much of the solipsism to which we have been referring throughout); (b) parents trying to come to terms with, or overcome, his preordained characteristics by inculcating good habits through example, coaxing, and whipping (the three modes of socialization, in order of priority, although villagers are more prone to talk about whippings than actually give them; most are too tenderhearted, and the rare whipping is almost always the result of sudden rage); and (c) leaving the child to his own devices. The third differs from the first in that it focuses on the parent's concerns rather than the child's and indicates indifference rather than respect. Thus, in contrast to the illustration above, one constantly sees children, generally under eight years of age, "annoying" conversing adults (primarily by making noises, although not necessarily to get the latter's attention) to which the parent responds with continuous but intermittent "tsk, tsks." The adult never raises the volume of his admonition, never gets increasingly disturbed, and eventually gives up while the children continue on their merry, noise-making way. The parent's lack of genuine concern and compulsion is not lost upon the child. Although events of this type are not overly noticeable in Bang Chan—precisely because they occur in such an easygoing and unremarkable way—they do take place repeatedly, and represent one of the principal interactional themes of the parent-child relationship. Children learn quickly that although parents will go through little ritualistic forms of controlling them,

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the parents often do not really care and children can pretty much get away with doing what they want.[14]

With regard to other expressions of the recognition of individual dignity, one rarely sees in Bang Chan any physical or even verbal coercion. (The rare use of whipping, noted above, is to punish transgression, not to implement action.) Other than in horseplay, children do not push each other around; in my twenty-two months in Thailand, I saw not one case of young children in a serious fight, despite the fact that I looked for it. Very rare indeed is the parent who uses force or the threat of force on his child; there is no Siamese equivalent to the American intimidation, "You had better do that or else. . . ." In general, Bang Chaners proceed on the simple assumption that if people, including children, do not do what you ask them, they have good—and more important, private—reasons for responding that way; there is no need for, or interest in, self-justification. The major means of inducing recalcitrants to conform to your wishes is to cajole, wheedle, and flatter them (see particularly the responses to the Sentence Completion items, *"The best way to treat a subordinate is . . ."*; *"The worst way to treat a subordinate is . . ."* in chapter V). A less conscious but more frequently practiced alternative is simply to withdraw support: the parent who turns his back on the child and walks out (particularly evident in our TAT stories),[15] the older sibling who refuses to take his younger ones with him when there is entertainment to be seen, and the like. It must be noted, however, that social disengagement, although frequently utilized, does not always work; often the individual who is left suspended merely accepts the fact and continues about his business. The major point to be recognized is that villagers do not use forms of direct, blatant coercion on others. If soft words or the withdrawal of love will not move them, then their decision, freely determined, must be respected.

Love and affection within the family appear primarily in two forms. Their most typical expression is shown through the gifts, favors, and services people do for each other. The degree of affection that individuals feel toward one another is in fact explicitly measured in these terms. Thus, a father says that of all his daughters, the one who has given him the greatest pleasure is "the one who sells things . . . When she gets money,

[14] In qualification, however, it must be noted that all Bang Chaners are extremely sensitive to social cues—partially as a consequence of having to balance off their individualistic propensities against the demands of the authority system—and here the children ignore their parents only because the latter have indicated by their very halfheartedness that they do not care. The children can, and do, quickly hop to it on the slightest indication of parental seriousness: a stern look, for example. My point, however, is that such looks are comparatively rare.

[15] In another paper, Hanks and Hanks (1963) make the same observation on the basis of behavioral materials.

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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[18] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[18] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

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as do rejected lovers who fear suffering again. Without strong bonds, they develop no sense of guilt for those they injure and stand ultimately responsible only to themselves, individuals among individuals who differ mainly in the amount of influence they wield. Thus Dang [the informant] can make demands of others but feels little obligation toward them. As he left his father and uncle with scarcely a second thought, so others can leave him. Of course, as was indicated by Dang's projective test data, this form of individualism is not entirely without its psychic toll. But on the level of action and conscious decision, the moral for a Thai runs: invest not thy love in a shadow.

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The piece by this writer (Phillips, 1959) is essentially an amplification of some of the findings of the above paper and a confirmation, in the life histories of two other informants, of their typicality. The paper was confined to an examination of the development and expression of the needs for dependence and independence in the lives of these villagers. Three major points emerged from the analysis. First, the most common expression of dependence was in the area of subsistence and economics, in the individual's desire to attach himself to others who would give him sustenance in return for services rendered. Over and over again, the informants viewed their relationships with other people, particularly kin, in terms of the others' economic value to themselves. However, this mode of dependence was not so much an overriding compulsion as it was a basic postulate about human relationships: the measure of another person's love was explicitly the degree to which in material terms he served the self. The second point, in contrast to the above, was that marriage was seen as the means by which a person could free himself from the obligations of economic dependence. This freedom has two aspects: freedom from the frustrations caused by others; and freedom to set oneself up as master of one's own household, thus reaping the psychological satisfactions—status, power, and prestige—of having others dependent on oneself. The third and perhaps most striking point concerned the fact that all these informants spent their childhoods being shuttled from one family to another. Although this experience may not have been culturally modal, it occurred with sufficient frequency to be a possibility for every Bang Chan child. It was further suggested that in part such experiences taught villagers at a very early age that they had to fend for themselves, and that the experiences served as psychological prototypes for the sense of fragility of social relationships that is so characteristic of village life.

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In contrast to most of the literature cited above, the last two articles are based on data which are products of interviews heavily weighted toward the psychologically expressive. Two of the informants admitted that they told us things that they had never shared with anyone, and the agitation (a

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None of the above is meant to imply that 79 percent of the adults of Bang Chan would in fact give away their children. But the relatively high frequency of agreement they exhibited in admitting to such a possibility and the fact that as many as 65 percent agreed that it was either good or justifiable reveals something of the psychological environment within which the Bang Chan child is reared and where he learns his basic orientations toward other persons. The responses to this single stimulus must of course be seen in the context of the more naturalistic, behavioral materials presented earlier. The point of all these illustrations, however, is that they indicate there is nothing sacrosanct about any human tie in Bang Chan, even that which exists between parent and child. If necessity or personal predilection requires, then this tie too may be broken. What is perhaps most significant here, from a developmental point of view, is that the breaking of the tie always exists as a realistic potentiality in the life of the child. Reared in an environment where he learns that no human tie need be permanent or sustaining, the developing child inevitably takes on some of these same patterns of expectation in his own dealings with others. Thus the villager who abandons his spouse or the employee who with little warning leaves his employer are acting in terms of patterns the prototypes of which they either actually experienced as children or came to expect as part of the realities of interpersonal relations in Bang Chan.

The second major source of the villagers' loose relationships lacks the developmental reference of the above. To a certain extent it is not even social relational in nature, although our concern with it stems from its having crucial consequences to the social orientations of individuals. I am referring here to the Buddhist emphasis on the primacy of individual action and individual responsibility. Without going into a lengthy discussion of the subtleties of Buddhist doctrine, it is imperative to point out that the principal tenet of Hinayana Buddhism is the complete psychological freedom, isolation, and responsibility of every person. This is not the Occidental idea of "free will," but rather the notion that every person is a free agent, responsible only to and for himself, and that he inevitably reaps the fruits of his own conduct. Buddhist canonical literature is replete with references stressing the centrality of this doctrine. The last words of the Lord Buddha before he left this world to achieve the sublime state of *nibphaan* (nirvana) are said to have been: "Work out your own salvation with diligence." A frequently quoted passage of the *Dhammapada* reads: "By oneself is evil done; By oneself one suffers; By oneself evil is left undone; By oneself one is purified." The whole complex cosmology relating to the accumulation of merit and demerit is phrased in terms of the individual's lonely journey through cycles of interminable existences working out his own moral destiny. Who his progenitors were, what kind of environment he was born

Thus she performed several rites involving the maintenance of the immature khwan of children and of rice.[54]

The acme of maternal virtues was manifested in the "good nourishers" (lîang dî). These women had borne many children who "nursed and slept well, did not cry, and easily established good habits." They were lîang dî not just because of the time spent by the fire, for that time could be matched by persons who had lost babies. They were special persons of more than usual capacities for success in nurture. Good to have around for their auspicious influence, they were called upon to inaugurate or help processes concerned with health and growth. They performed, or caught the child in the winnowing ceremony, or gave babies their first suck. They were the persons to whom a sickly child was brought so that his health might be improved by calling the soul and tying holy cord at wrist and ankle (riak khwan).

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54. If a child indicated by continuous crying that he had lost his khwan, a mature (suk) woman had to be asked to call it back ritually and re-tie it into the body with sacred cord at wrist and ankle. There was no special magic. Her words suffice. Khwan-ladling, a more elaborate and compelling form of the same ceremony, used magical formulae (Textor:401-407). One of Phillips' sentence-completion tests was, "If one is frightened, the best thing to do is..." Of the respondents, 7 women, including one Muslim, would set to work to "call back the khwan" (Phillips:267-268). No man suggested the latter.

In the agricultural rites, women handled the rice's khwan in basically the same way when it was immature: inviting the young Rice Goddess to stay and grow in the field, and transporting to the house the child-like seed that only next year would grow to maturity. For these rites a woman used an incantation if she knew one. That she could also handle the rice khwan by speaking "extemporaneously" (Textor:429), indicated that her mere words were enough. If no one else were available, a non-suk woman could call the khwan of a child or of the Rice Mother by reason of her in-born female potency, but could not "ladle" a khwan.

When the khwan was mature (after a person was about age 10) men took over its care. In the men's thap khwan (khwan-strengthening) rite, here, too, women were the ones to carry off the cloth-and-leaf covering of the bàisĭ (tiered offering) into which the khwan had flitted during the ceremony. The rice-ceremony at the threshing floor was a thap khwan, so was performed by men.

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156 (riak khwan). Theirs was an augmented personal potency[55] in nurture not unlike the mana so widespread in the Asian-Pacific area.[56] The best midwives were liang dī, though not all liang dī were midwives. This societal peak was not an unattainable ideal. In the community, certain women were pointed out as liang dī and some of them recognized in themselves the validity of this title.

562 794 796 262 The association of rice, motherhood, and khwan now stands clear. Rice made auk by cooking over a fire, was the essential food not only for the body but for the khwan. Growth and life depended on the nourished khwan. Rice came from a maternal figure, the Rice Goddess, Mae Phosop (cf. J.R. Hanks, 1960). Human mothers, too, when made auk, gave auk nourishment: the milk of the breast was merely transformed rice. Whenever rice was eaten throughout human adulthood, the Rice Mother continued her nourishment, for in each grain was a bit of her khwan, nourishing to the human khwan. The rice-bowl and ladle, used in many a ceremony, stood for the maternal care given a human khwan, and by extension, personal care throughout life. Whenever the rice bowl with offerings (khwan khao: soul-[of]-rice) was presented by a parturient or by a sick person, loving care comparable to maternal care was being requested.

182 885 846 562 372 The idea of re-birth, of a fresh start within the pure area encircled by the holy cord, with auspicious words and consecrated fire, was deep in every life-cycle rite. The particular circumstance of the fire of parturition was a forthright cooking to bring out and increase a woman's essential femaleness, to transform her from a youthful, partial giver into a complete, mature donor of nourishment. Such was the satisfaction of women in this female role that many said they would like to be reborn as women. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:375) for a quick run-down on a definition of mana.

overlap at all. Magic was wielded by men to gain power over spirits, persons, elements, and forces. It had either social or personal benefits. The role of highest social benefit, corresponding to the liang dī in women, was the khwan-specialist (mǭ khwan) who conducted the life-cycle, khwan-strengthening (thām khwan) (for persons and for the rice) and many other ceremonies for the mature khwan. This role demanded men of the highest qualifications in probity, erudition, and personal dedication. Men also had the formulae for curing, house- or boat-blessing, invoking guardian spirits (sān phrs phūm), etc. Men could make protective amulets to render the wearers safe from bullets, knives, spirits, and all sorts of hostile forces in the world.

On the other hand men's magical objectives could be aggressive and hostile. The gamut of amulets, missiles, love-oil, and incantations (Textor:passim) showed the potential for attack and why the converse need for invulnerability was so strong. Men had a nurturing (liāng) role, but only for non-human beings, e.g. buffalo, pet birds, and guardian spirits of house and land. Subverting this role for hostile ends, they obtained possession of the ghost of a recent corpse by gathering the drop of oil at the chin, and nourishing it (liāng) for use in sorcery. For a man, nourishing something gave control.

All of the powers of men's magic were available to women on request for any purpose, hostile or not, but the "owner" had to be the mediating agent.

A woman's magical knowledge was linked exclusively to her female task. It did not give power over people. It could not be destructive. No female sorceress existed in Bang Chan. No woman feared the magic of another woman in childbirth nor at any time. A woman's magic was devoted solely to promoting the processes of growth and life. Thus it controlled the searing heat of the fire, invoked the Spirits of the 4 elements, and helped at various points in childbirth. It handled the soul of the Rice Goddess and of Mother Sū, guardian of children. It restored any frail and wandering khwan to its proper bodily abode. Such was a woman's magic.

To insure separateness the respective provinces of magical activity were ringed with sanctions. Contact with a woman's skirt, undergarments, or menstrual blood completely negated any of a man's protective amulets (re tattooing, cf. Textor: 102). Though this reflected the traditional avoidance between sexual phenomena and Buddhism, it might also indicate a tacit moral evaluation of the magical powers of men and women: the powers for growth were ultimately ascendant over those for power, for men had nothing that undid a woman's powers. Though women were easily prey to men's magical control, as by

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with men's magic, a severe sanction fell on her. She became the host of the phi krasu who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mo, she could do everything a mo could do. Men were never mediums. Bang Chan's only medium was possessed by a male mo.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

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[832] [156] [688] [626] [593] 59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phi krasu as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "sul" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phi krasu's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

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[For information on various aspects of the Bang Chan social personality as revealed in the interpretation and analysis of the results of the Sentence Completion Test, see category 116, pp. 30-38, 51-52, 60-61, 67-83, 88-95, 108-109, and 143-196.]

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*125 15 should conform. (For example: *"The best way to treat a subordinate is . . . to speak to him with kind and agreeable words"*; *"When he thinks of his father, he thinks of . . .* the goodness and kindness his father has done for him.") This is not a universal pattern since definitions of the ideal are ambiguous, lacking, or inappropriate for many of the items; also, such definitions seem not to be applied to items which imply immediate action. However, they do appear with sufficient frequency to be noticeable.

• 156 None of this should be surprising, inasmuch as viewing behavior in terms of "the good" and "the proper" is a central characteristic of the villagers' thought and idiom. They tend, *considerably* more than Americans, to evaluate (in an ethical sense) people and events rather than describe them, and even to describe by evaluating. Ask most villagers: "What kind of a person is so-and-so?" and their replies will consistently be in terms of whether he is "bad" or "good," rather than in terms of non-evaluative description, *e.g.*, he is "funny," "passive," "interesting." The words, *khon maj dii* and *khon dii* ("a bad person" and "a good person") are two of the most frequently occurring items in the Thai lexicon. One might epigrammatically characterize much of the villagers' thought as "super-ego-dominated." That this mode of thought should be applied to many of the SCT situations is hardly unexpectable.[9]

121 15 Having recognized this tendency, however, there is the problem of assessing its psychocultural meaning. Do such appeals to the ideal, especially as applied to the self, in any way weaken our definition of the responses as "predispositions to action?" Are many of the responses mere verbalisms that have little to do with real behavior?

121 114 15 A number of theorists, notably Murdock (1940 and 1954) and Kluckhohn (1943*b* and 1951) have taken the position that cultural behavior should be distinguished into two fundamentally different forms: ideal patterns and real patterns. The former are "those norms which are verbalized as the ideals to which behavior should conform" (Murdock 1954: 22); and the latter, patterns of actual, overt behavior. Opler has taken issue with the necessity for this distinction, and has argued (1948: 116):

> My own feeling is that the concern over precepts or ideal patterns which contrast with or stand apart from behavior is a pleasant distraction which will not get us very far. In my opinion the disparity between rule and behavior in society has been greatly exaggerated. Actually, behavior remains remarkably close to rules or precepts which are

[9] This same characteristic has been described in other contexts (Wilson and Phillips 1958, Phillips 1958, L. M. Hanks 1959*a* and 1959*b*) as the essentially moral nature of the villagers' universe: the tendency, largely implicit, for Bang Chaners to perceive events of the most diverse kinds within an ethical frame of reference. It might well be, as Redfield had argued for many years (1941, 1953, and 1956) that such a cognitive orientation is characteristic of all peasant peoples.

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TABLE 1. THOSE WHO OWN OR USE SMALL MOTOR ARE MORE LIKELY THAN OTHERS TO TRY OTHER AGRICULTURAL INNOVATIONS (FARMERS ONLY)

	Owns motor	Does not own motor but uses it	Neither owns nor has used motor
(Total cases)*	(70)	(150)	(106)
Have you ever used fertilizer?**			
Yes	18%	16%	3%
No	82	84	97
Have you ever raised tilapia?			
Yes	53%	29%	22%
No	47	71	78
Have you ever grown mushrooms?			
Yes	48%	49%	37%
No	52	51	64

[125]

* The bases on which per cents are computed appear in parenthesis at the head of each column in this and subsequent tables. Actually the bases vary by a few cases, table to table, since there were always a few respondents who did not answer a given question or whose answers were unclassifiable.

** Asked of farmers only. The bases are:

Owns motor	65
Does not own motor but uses it	141
Neither owns nor has used motor	82
NA	5

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177*
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There is some evidence, then, that if a person is willing to try out one agricultural device, such as the motor, he is more likely to try out other agricultural innovations. However, this "clustering" cannot support the hypothesis that there is something like "innovation mindedness" in general, or that acceptance of any innovation in a series is predictive of acceptance of all other innovations in the same series.

Evidence may be cited to substantiate this contention. In the first place, if such a clustering indeed prevailed, one would expect users of any of these agricultural innovations to be more disposed than others to use, as well, certain non-agricultural innovations, such as hospital or clinic facilities, for example.

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 8. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

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bringing them into the world; of helping siblings because of the kind things they have done; of loving children so that they will care for them when they are old [11]—but they do condition how and when such sentiments will be expressed. It is difficult to recall any instance of a Bang Chaner being caught in a situation of which *he was aware of* a conflict between satisfying his own desires and fulfilling his obligations to kin, so it is difficult to say which sentiment would ordinarily take precedence in his own mind; but to an observer, it would seem that the former would most likely have priority. (See Hanks and Phillips 1961 for evidence in support of this point.) [12] Actually, most villagers seem eminently successful in keeping the sentiments apart, which helps to account in part for the "centripetal" forms of kinship arrangement referred to earlier. Self-interest is of course not the same as selfishness, and when circumstances and inclinations permit, Bang Chaners can become among the most generous and hospitable of people (and in no sense paradoxically). Rarely have I seen, for example, people derive so much genuine pleasure from doing favors for others. In fact, these are among the first things that one notices about them: free agents helping others—but also ignoring them—when they see fit.

[11] This phrasing here in terms of *reciprocal benefits* is in the villagers' idiom, not mine.

[12] It is not insignificant that nowhere in Thai folklore does one find a recognition of possible conflict between the motives of self-interest and family obligation or of any moral lesson to be drawn from it: that is, there are no stories of a parent sacrificing himself for his children, or of children for their parents or, for that matter, of any moral value at all in self-sacrifice. On the other hand, one does find stories of individuals in conflict over which of two self-satisfying alternatives to select. In *Khun Chang and Khun Phaen*, for example, Wan Thong, the inconstant lover, could not make up her mind between love and wealth, and eventually was slain because of her indecision, the moral being that the person who cannot make up his mind deserves nothing.

On a more realistic level, one rarely finds anyone in Bang Chan being condemned for self-interest—the mother who abandons her children or the gallivanting husband —although one very frequently does encounter sympathy for those who suffer, the sympathy being elicited by the person or the fact of suffering, not the cause. The majority of Bang Chaners generally consider the motives of the self-interested party as the person's own business. This concern with sympathy (*soŋsaan*) for those in difficulty, and simultaneous indifference to the source of their problem has deep roots in Buddhist doctrine and should not be glossed over.

To have compassion (*mettaa* and *karunaa*) is among the noblest of Buddhist virtues. It is at one time a kindly expression of concern with others and a recognition of —or coming to terms with—what is considered intrinsic to the human situation. "Life is suffering" is the first of Buddhism's Four Noble Truths. However, since such suffering is intrinsic, there is little to be gained by assigning blame for it. Equally important, villagers assume that a person who suffers may well have brought it upon himself. The other person, acting in his own natural self-interest, may have simply been an agent or catalyst. His motives are his own business because they will eventually contribute, for better or worse, to his own denouement. The dynamics of these attitudes are discussed in detail in the next chapter.

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tions are more penetrating, but in these instances he works himself into the more serious problem of interpreting overt behavior without examining the meaning that it has for those who are experiencing it. Thus, in discussing pedicab drivers' relationships with the police, he asserts that the drivers need closer police supervision because they lack strong inner controls. He argues that when they get out of control, they "go all the way," and try to get away with as much as they possibly can, particularly with regard to traffic and license regulations. Textor's *description* of the overt behavior of pedicab drivers and police is accurate, but what is not shown in his *interpretation* is that for a Thai there are, in the relations between authority figures and subordinates, several *other* considerations that take precedence over the need to observe regulations: that authority figures should be benevolent and helpful, rather than demanding; that one tries to avoid placing others, especially subordinates, in embarrassing situations; that in most interpersonal situations, Thai have an extraordinarily high tolerance for deviation from the rules, regardless of the confusion that may ensue (as the most superficial observation of Bangkok traffic would demonstrate). Textor's recommendation in fact flies in the face of these more deeply-rooted norms and expectations. Despite these various shortcomings, Textor's study is an interesting and readable commentary on some of the social psychological dimensions of culture change in Thailand.

Together with Benedict's study, the papers by Hanks and Phillips (1961) and Phillips (1959) represent the few excursions made into the analysis, as contrasted simply with the description, of Thai personality. The article by Hanks and Phillips is a discussion of a portion of the life-history and projective test responses of a young Bang Chan man, focusing on the events leading up to his marriage, his motives for getting married, and the psychological complications that this event entailed. Emerging from the informant's account was evidence pointing to two related areas of psychic tension: (1) a conflict between the informant's desire for independence, based on the expectation of becoming master of his own household and establishment, and the necessity for him to make himself dependent on others, his social superiors, as the very means by which to achieve this end; and (2) a conflict between the desire for the security provided by these individuals and the fear of expressing his hostility toward them when they, involved with their own concerns and never completely independent themselves, are unable to fulfill his untoward demands. The informant resolved these predicaments simply by continuing his demands on others but ignoring any psychological obligations he had toward them. The behavioral implications of this resolution are summarized in the article's final paragraph (655–656):

> From this vantage point, the Thai personality stands more encapsulated, alone, and isolated than the Chinese. Thai resist strong affiliation

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114 *157 156 as do rejected lovers who fear suffering again. Without strong bonds, they develop no sense of guilt for those they injure and stand ultimately responsible only to themselves, individuals among individuals who differ mainly in the amount of influence they wield. Thus Dang [the informant] can make demands of others but feels little obligation toward them. As he left his father and uncle with scarcely a second thought, so others can leave him. Of course, as was indicated by Dang's projective test data, this form of individualism is not entirely without its psychic toll. But on the level of action and conscious decision, the moral for a Thai runs: invest not thy love in a shadow.

114 *156 155 866 The piece by this writer (Phillips, 1959) is essentially an amplification of some of the findings of the above paper and a confirmation, in the life histories of two other informants, of their typicality. The paper was confined to an examination of the development and expression of the needs for dependence and independence in the lives of these villagers. Three major points emerged from the analysis. First, the most common expression of dependence was in the area of subsistence and economics, in the individual's desire to attach himself to others who would give him sustenance in return for services rendered. Over and over again, the informants viewed their relationships with other people, particularly kin, in terms of the others' economic value to themselves. However, this mode of dependence was not so much an overriding compulsion as it was a basic postulate about human relationships: the measure of another person's love was explicitly [581] the degree to which in material terms he served the self. The second point, in contrast to the above, was that marriage was seen as the means by which a person could free himself from the obligations of economic dependence. This freedom has two aspects: freedom from the frustrations caused by others; and freedom to set oneself up as master of one's own household, thus reaping the psychological satisfactions—status, power, and prestige—of having others dependent on oneself. The third and perhaps most striking point concerned the fact that all these informants spent their childhoods being shuttled from one family to another. Although this experience may not have been culturally modal, it occurred with sufficient frequency to be a possibility for every Bang Chan child. It was further suggested that in [571] part such experiences taught villagers at a very early age that they had to fend for themselves, and that the experiences served as psychological prototypes for the sense of fragility of social relationships that is so characteristic of village life.

114 124 In contrast to most of the literature cited above, the last two articles are based on data which are products of interviews heavily weighted toward the psychologically expressive. Two of the informants admitted that they told us things that they had never shared with anyone, and the agitation (a

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achievement, and dependency, or by discussing those traits which are significant in the daily round of life, irrespective of the analytic categories to which they refer. In this section we will emphasize the latter, more naturalistic approach. Its advantage is that it permits us to identify and develop certain issues which play a crucial role in the interactive world of the villagers, but which might otherwise go unnoticed should they not be represented by, or not quite fit, any of the predetermined categories. The Thai attitudes toward the body referred to earlier, for example, is an issue of extreme importance in their interpersonal relationships, but one that is actually given little explicit attention in most personality studies. This section is designed in part to deal with such problems, although inevitably there may be some overlap between the materials covered here and those discussed in later sections.

The Pleasures of Social Contact

Of all the personality traits that come to the attention of the foreign observer there is perhaps none more compelling than the affability, gentleness, and good humor of the villagers. It is difficult to think of a people more consistently ready, *once contact has been made,* to treat others amicably and convivially than the peasants of Bang Chan. (The italics are necessary simply because the villagers are equally primed to ignore others.) However, this jovial cordiality is not an easy thing to conceptualize. In the earlier paper by Hanks and Phillips (1961) we spoke of these happy characteristics as "not so much the expressions of any basic lightheartedness as they are techniques for implementing the main precept of social interaction: 'Avoid face-to-face conflict!'" Although the villagers' good humor does serve this purpose, I would now suggest that it involves several additional dimensions and motives.

First, there is a whole complex of responses represented here. The tendency to keep situations and conversations jocular, amusing, and at times gently ribald, is perhaps the most relaxed expression of this attitude. It is most obvious in the behavior of village gossip groups and in the relationships between individuals who consider themselves acquaintances but not quite close friends. The essential ingredient of this mode of affability is that interaction should be a great deal of fun but of little social consequence. Of a different order, and more common, is the villagers' ubiquitous politeness. This takes a host of forms: the genial hospitality that is expressed toward a newcomer, usually in the form of "personal" questions serving both to identify the person and to make him feel that others are interested in him ("How old are you? Any children? How much did you pay for your shirt or your land? Why don't you have any children?"); the numerous linguistic

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1950; and Wheelis 1958.) At best, it would suggest that the Thai informant was faced with a difficult problem external to himself—perhaps finding a job or a spouse, or thinking of his future—and was appraising his ability to deal with that problem. Also, such an appraisal would have a strong constraining element: the necessity to control one's hopes and desires (perhaps for the hypothetical job or spouse) in order to avoid potential pain or disappointment; in essence, "beware of your limitations; do not forget your station." This is in turn supported by certain Buddhist concepts, such as *ʔubeegkhaa*, or stoical indifference to the vicissitudes of life, among others.

Whether there is *any* way to express handily in Thai the Western notion of "the need for self-acceptance" is doubtful. Most villagers are too thoroughly narcissistic to require such a concept in their cognitive maps. Alternatively, there are other more direct ways of saying what "knowing myself" might mean in Thai, for example, "controlling my desires," "knowing whether I have the ability to do the job," or by referring directly to Buddhist doctrine. As such, these statements would be an expression of piety or the bolstering of one's self-confidence (or steeling oneself against failure) rather than psychic introspection.

A similar interpretive problem exists with the completion "his family." Because Thai kinship relations are so strongly influenced by concepts of benevolent superiority and dependent inferiority, most expressions of the need for affiliation with the family immediately imply the related need of succorance: security, support, protection, and sympathy, either as source or beneficiary.

The point of these comments is that the responses must always be first interpreted in the villagers' terms, not ours. Once made, precisely by explanatory notes such as these, these interpretations become part of the "data" and serve as a basis for our analysis. It should be recognized, however, that anthropological mythology (and these particular examples) to the contrary, not *all* the responses are interpretively dissimilar. When a villager says, *"When he hit me, I . . .* must hit him back," he means precisely the same thing we do. The point, therefore, is to be extremely sensitive to the possibility of differential meanings, underscore and explain it when it occurs, and use the native interpretation as a prerequisite and corrective to our own. For a brief but brilliant theoretical discussion of this problem see Bohannan 1959.

The Psychological Meaning of the Responses

The fourth premise concerns the psychological "meaning" of the responses. There are several aspects of this problem which require specification.

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like to look down upon people" and ". . . probably was not generous with them, so they avoided him." The significance of this underlying interpretation becomes even more apparent when the three responses are contrasted with other possible but unoffered completions which belong to totally different interpretive categories, for example, ". . . tried to make up with them" or ". . . asked them why?" signifying *attempts to reintegrate or understand the interpersonal rupture* and ". . . felt terribly hurt," indicating *emotional pain or disturbance.*

A Working Conception of Modal Personality

Our fifth and final premise is concerned with developing a workable conception of modal personality despite the inevitable paradoxes which attend such an endeavor.

The fundamental problem here is that in abstracting out the psychological similarities which the villagers share with one another, we become unavoidably involved in the difficulties of working with "conjugate variables"; that is, the more we concern ourselves with the commonality of a personality trait, the less we simultaneously learn about the role of that trait in the functioning of the individual members of the sample. The significance of this is not so much that we sacrifice an understanding of individuals for an understanding of the group, but that in so doing we must also sacrifice some of the depth and perceptiveness of our analysis. A successful personality study is in large measure achieved by descriptive contrast: we learn more about human beings the less they appear like other people. When subtle individual differences must be submerged for purposes of group characterization, the resulting descriptions must necessarily be less sensitive and precise.

The root of the problem lies in the fact that our basic units of analyses are individuals who, despite all the similarities they share as members of Thai culture, are obviously different from one another in specifics. Moreover, as Wallace points out in a recent article (1961*a*: 147–148), from the point of view of culture-personality theory, they *must* have certain psychological differences:

> The problem of psychic unity is sometimes obscured by our tendency to regard human societies as populations and not as groups when we make psychological statements. A population of individuals may be described without references to their interrelationships; but a group cannot be considered apart from its organizational structure. Thus physical, demographic, or personality characteristics of the members of a population can be stated, explicitly or implicitly, as a statistical distribution on one or more dimensions, and to the extent that the data

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> permit, some measure or estimate of central tendency can be calculated which will allow the attribution of some value or range on one or more dimensions to all, or a specified sub-population, of the population itself. . . .
>
> But such predicates, universally applicable to all members of a population, are inadequate for the psychological analysis of that population as a group, as an elementary consideration reveals: most culturally organized groups not merely permit but require that their members perform different roles in interaction. . . .

114 121 157

Although Wallace does not state it in so many words, it is apparent that he is referring to differences in age, sex, and occupational roles, or to any other roles that may be deemed important, and is assuming that the individuals who perform the roles have in some respects different personality types. (Whether the latter assumption is completely valid is still another problem. For a provocative discussion of the analytic complexity of the personality-role relationship, of the non-congruence which may occur, and of consequent psychological adjustments see Levinson 1959; Nadel 1957 also touches on the issue.) In any case, it is clear that whatever psychic unity informants have as members of the same culture, they are differentiated from each other on at least two counts: (1) their individual life experiences and genetic-constitutional backgrounds which ultimately give them each a unique personality; and (2) their performance of different social roles.

These differentiae are of course virtually self-evident. But what is not self-evident—nor easy to decide—is how much emphasis should be given to them in formulating or qualifying our conception of Thai peasant modal personality. Any decision that we make is from some point of view unsatisfactory. Should we treat our informants solely as individuals, and pursue our analysis with rigor, we would get an increasingly refined picture of the uniqueness of these individuals but, at the same time, a decreasingly clear picture of their cultural or shared characteristics. The analysis would undoubtedly be more precise but, in effect, we would be studying "idioverses"—idiosyncratic versions of culture (Mead 1958)—with little basis for determining what is culturally typical or deviant. In fact, questions of the normative or variant would become logically irrelevant. On the other hand, should we group the informants into age or sex groups and contrast the responses of these groups, it might well seem that the personality differences between men and women, for example, are greater than the similarities, or even that Thai women are more like Navaho or American women than they are like Thai men. Although I suspect that culture makes for greater psychological similarity than does sex and, as Sharp has pointed out (Sharp *et al.* 1953) Bang Chan culture is, from a cross-cultural point of view, impressive for its slight differentiation of the adult

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121 roles of the sexes, such findings are not empirically impossible. Finally,
• 157 should we de-emphasize the distinctions between individuals and role-defined sub-groups, and consider all the responses as a whole, we would as suggested earlier be in the best possible position for determining the villagers' modal personality but would proportionately lack analytic precision. There would always be some intra-sample differences—as far down as the individual level—which the critic could point to as requiring discrimination, although such discrimination would obviously have to be achieved at the cost of group identification.

Given these various alternatives, each of which has its merits and shortcomings, what should the analyst do? I have decided to conform to the principal aim of this research and focus primarily on total group responses, that is, on those abstracted psychological similarities which all or, more realistically, large numbers of our individual informants share with one
* [125] another. Operationally, this entails investigating the responses of all informants on each SCT item rather than those of each informant on all items, and explicating the major underlying psychological theme or themes of these responses.

The inclusion of both the singular "theme" and plural "themes" in the preceding sentence is not only intentional but crucial to our formulation of modal personality. Its significance will perhaps best be seen by contrasting our approach with the two prevailing points of view governing most modal personality formulations. On the one hand, the majority of the culture-personality and particularly "national character" studies of recent years have been characterized by an assumption of psychological *unimodality*; that is, an assumption that the culture being investigated has such a high degree of psychological homogeneity that it can be portrayed as having a *single* personality pattern, with perhaps a few deviant sub-types. The assumption is based partially on precedents established within the history of ethnographic method (Herskovits 1954); partially on unconscious aesthetic considerations involved in the presentation of data (Opler 1948 on Benedict); and partially on the apparent validity of the concept in some areas of psychocultural functioning in which, once established, it is tacitly extended to include all areas. Even Wallace's sophisticated study of the modal personality of the Tuscarora (1952) is based on the premise of unimodality, although his aim is to find out precisely how *unimodal* the Tuscarora actually are.

Whatever attractiveness the premise of unimodality may have, it is clearly an oversimplification of psycho-ethnographic facts. Human beings in any culture are simply too complex to be of the same psychological stamp
[114] in all respects. In his recent paper (1961*a*), Wallace points out that a research design for the study of modal personality which involves only

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twenty binary dimensions (which is considerably less than is actually employed in most Rorschach analyses) will yield up to 1,048,576 structural types, to which Wallace adds, "the uniformity of the population on each dimension must be impressive, or the types must be very crudely defined, before any one type is likely to acquire prevalence over any substantial proportion of the group. . . ."

Having recognized the oversimplification of the unimodal approach, however, there is no inherent necessity to go the the opposite extreme and posit a complete *multimodality*. Yet this seems to be the position taken by Inkeles and Levinson (1954) and Kaplan (1954, 1957, and Kaplan, Rickers-Ovsiankina, and Joseph 1956) who, genuinely disturbed by the stereotypy and lack of sophistication of the unimodal viewpoint, argue that cultural groups are characterized by a plurality of personality patterns. Kaplan's arguments are particularly compelling in that he bolsters them with empirical cross-cultural evidence, although he himself admits (1954) that his results may be a consequence of his particular sorting and categorizing techniques. He concludes his comparative study of Navaho and Zuni TAT's with the statement that (1957): "The influence of culture on personality does not appear to create a common personality configuration in its members, but instead tends to foster a variety of personality tendencies in small groups or clusters of individuals while leaving many aspects of personality free to vary without respect to group membership."

My position, in comparison, is that the cases for complete unimodality and complete multimodality are both overstated. What both viewpoints seem to overlook is the likelihood of there being *specific areas* of psychocultural functioning in which a high degree of homogeneity exists and *other specific areas* in which a high degree of heterogeneity comes into play. This more flexible formulation not only provides a more realistic picture of modal personality than can be had from ascriptions of wholesale uniformity and diversity but directs our attention to identifying the areas of differential frequencies and attempting to account for them. For example, I suspect that those areas characterized by a high degree of homogeneity are ones likely to be surrounded by strong cultural sanctions, or are areas of psychological "focus" (psychological parallels to Herskovits' "cultural focus," [10] as it were) or, perhaps, are areas of greatest cultural conditioning; conversely, I would think that areas of high heterogeneity most likely do

[10] Although Herskovits seems to have changed his definition of "cultural focus" over time (1945 and 1948), his first definition is most relevant to our present meaning: "that area of activity or belief where the greatest awareness of form exists, the most discussion of values is heard, the widest difference in structure is to be discerned." However, unlike his formulation, which in practice assumes only one focus in one culture, our use of the term presupposes that a culture can have a number of psychological foci.

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121 not involve important social stakes (although they may involve very impor-
157 tant personal ones, their highly charged personal nature perhaps being the very source of the heterogeneity). In these terms, I would expect Bang Chan SCT responses to be highly unimodal in the realm of authority—an area of sharp psychological focus—but relatively multimodal in the area of friendship. In any case, it would seem to me that whatever the ultimate reasons for an area being unimodal or multimodal, the identification of these areas is in itself an important task.

125 In the light of these remarks, I have tried to avoid establishing rigid
128 rules about the number of major themes which may emerge from the responses to the various SCT items. The discussion which follows, and the SCT material itself, is organized in terms of specific areas of psychological functioning, and a table accompanies each SCT item. The tables are organized thematically and are designed to exemplify characteristic responses for each theme discussed in the test, although some of the minor themes and sub-themes are excluded for the sake of simplicity. The number of responses given under each thematic heading reflects the *approximate* percentage of all responses which are included in that theme. A theme is defined as an underlying, generalized psychological orientation encompassing the raw responses of two or more informants—the supposition being that it takes at least two to make a theme shared or "cultural." [11] The determination of a theme is explicitly weighted in the unimodal direction but is constrained by the nature of the responses themselves. No explicit criteria have been established for deciding the number of themes which may emerge before declaring an item, and the area it represents, either unimodal or multimodal. In fact, in terms of our empirical operations, these terms are viewed simply as ideal types. Also, it should be remembered that some of our responses are multidimensional in nature; that is, like much communication they simultaneously reveal several meanings and are interpretable from several perspectives. In this case, each perspective can conceivably yield a different number of themes. The number of simultaneous themes that occur are determined solely by the patterning of the responses themselves. Given these considerations, the statements that are made about the unimodal or multimodal nature of an area are phrased simply in terms of general comparisons as we move from one area to another. Since we are not using any fine statistical methods, this procedure is clearly the most efficient to follow.

[11] It is recognized, of course, that it is possible for responses to be shared by two or more informants solely on the bases of fortuitous factors or on the basis of the principle of limited possibilities. All human behavior, cultural or otherwise, is ultimately limited by such simple statistical considerations.

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593 she gives it to me." In describing his relationship with his maternal grand-
152 parents, with whom he spent all but two of the first twelve years of his life,
159 this same person says:
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> My younger sister and I were born one year after the other. So mother gave me to grandmother to be weaned. I lived with her until I became a novice at the monastery at the age of twelve. I lived with grandmother, so I loved grandmother and grandfather more. I loved grandmother even more than my own mother and father. Wherever grandfather and grandmother went, I went too. Grandmother loved me: she always gave me sweets and toys. I had everything I wanted because I was the only young thing in the house. She loved me. She was going to give her property to me, land and gold, as much as she was going to give to her own children. But it was only a promise. I got the gold, but not the land, because when grandmother died, grandfather got a new wife. She was young. . . . I didn't quite like her. The young woman was too economical. . . . Sometimes she prevented grandfather from buying good things for me. When grandfather was going to buy gold or anything for me, she stopped him. She wanted him to buy for her more than for his grandchild.

593 This excerpt, taken from the biography of one of the life history informants and comprising almost the complete portrayal of the relationship between the informant and the individuals with whom he spent the crucial years of his childhood, is by no means atypical. The point is that of all the myriad
(431) elements in the relationship, or of all the loving characteristics that in his
(603) eyes the grandparents had, he chose to emphasize only the material gifts they had given him as the measure of their love. Other informants are no different: one man said he knew his father did not love him because when he died he left the family home to the Buddhist monastery; and a woman said she admired her father because "when he died there was property left. He was a good man: he did not abandon his children. He was worried about them." (Her other reason for *admiring* him was that "he was the person who brought me into the world.")

596 The other major form of familial love is evidenced in the camaraderie,
593 warmth, and generosity that surrounds the family in planning and ac-
243 complishing the various tasks associated with rice farming. As indicated earlier, the cultivation and harvesting of rice is not only an economic operation in Bang Chan, but almost a way of life. When villagers must deal with the very real and complex problems of planting and bringing in the harvest, all the individualistic propensities, and even to an extent the authority patterns, with which they normally indulge themselves recede before the cooperative requirements of the task at hand. In a very real sense the functional requirements of the economic activity, particularly during

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essence, much of the villagers' interaction is based on certain formal, rather than substantive, considerations,[14] the net effect of which is to minimize the impact that they might have upon each other but to maximize each person's sense of psychic independence and integrity.

Our phrasing here is principally in analytic not evaluative terms. However, it should be clear that from an evaluative point of view, there are both "positive" and "negative" consequences to the continuing use of this interactive mode. On the positive side, the villagers' politeness contributes to their extraordinary tolerance for nonconformity, personal deviance, failure, or the inability of individuals to live up to standards. In effect, the villagers seem to be saying that if another person is poor, weak, stupid, or naïve, that is essentially his own business (or problem), not cause for ridicule or even amelioration. People are publicly accepted and respected for what they are, despite their shortcomings. The sense of psychological security that such treatment affords is clear: it means that no matter what an individual's status or personal qualities may be, he can generally expect to be treated well by others. The canons of courtesy require this. On the other hand, to have to be continually sensitive to one's effect on others is, from ego's point of view, not without its psychic costs. Thus, although politeness is aimed at keeping social relationships smooth and uncomplicated, it frequently results in a lack of spontaneity and in the inhibition of genuine feelings. A cosmetic is supposed to enhance one's natural qualities, but inevitably it also conceals them.

To what extent this concealment "troubles" the villagers is most difficult to determine. There clearly are circumstances in which certain negative consequences follow directly from such concealment. But whether villagers are generally unhappy because they cannot express what they feel is problematic. Their admiration for individuals who "speak their feelings from their hearts" is occasionally unmitigated; but far more frequently, they speak of the "kindness" and "good hearts" of those who hide their feelings "so as not to hurt others." [15]

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[14] All interaction is of course based on both formal and substantive considerations. The issue here is the relative emphasis given to one over the other, and how one may even be used as a substitute for the other when presenting the self.

[15] The case of Dang (Hanks and Phillips 1961) referred to earlier is an excellent example of the kinds of difficulty that may follow from the concealment of one's real sentiments. Dang's story is a somewhat plaintive tale: how, because of his anxiety about revealing his true feelings to his father, uncle, and aunt (his social superiors) he lost a house, some land, and married a girl he "did not quite want to." Yet at all times he maintained courteous relationships with all concerned. What is most significant about Dang's case, however, is the position of psychic isolation to which politeness brought him. Basically, Dang substituted in his relationships with his relatives the *forms* of politeness for the more enduring *substance* of love, loyalty, and obligation. Rather than trust to the strength of such sentiments to help resolve his

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609 Of the various forms politeness takes, its most relaxed, least contrived
574 form in the cordiality that villagers extend to newcomers. Strangers to Bang Chan are hardly swept off their feet, but once contact has been established, they are welcomed with a degree of attention far exceeding simple tolerance of their presence. People express a curious interest in them as individuals, as if somehow their presence were adding a new dimension to the lives of their hosts. In the case of many Bang Chaners, this is probably true: the lives of these villagers are sufficiently routine and insular that the appearance of a new face is identified also with the advent of a significant and new experience. Still other villagers approach the newcomer with an attitude that says in effect: "One should try to meet and know as many persons as possible. Who knows what good may come of it?" The implied meaning here is that the cursory contact may in time develop into a firm relationship of reciprocal rights and obligations, whereby person A could turn to B to borrow money, ask his help in finding a job, help sponsor his son's ordination, and vice versa. There is in this attitude a sense of gentle optimism combined with opportunism. And still other villagers, probably the majority, approach the newcomer with no self reference at all, but with the simple intention of trying to make him feel comfortable. Whatever the intention in each case, however, the dominant behavior exhibited to the newcomer is openness, amiability, and curiosity.

576 The actual expressions of conviviality are at all times simple and
574 straightforward. They involve asking the person such questions as his age,
521 place of birth, whether he is married, or whether he has yet served in the
609 monkhood. (Notice the phrasing of this last question. The polite Thai form is never whether a person has been a monk or not, but rather whether he has already been a monk or not *yet* become one. The syntax of the interrogative form assumes the good intentions of the other person.) If the individual is identified as coming from a locale with special or distinguishing characteristics, the conversation will often involve humorous allusions to the place. For example, if he is from the North, there will most likely be joking references to the beautiful women of Chiengmai; if he is from the Northeast, to the funny accent of the people of that area. If the relative statuses of visitor and host can be quickly identified (based upon age, clothes, speech patterns, and occasionally surname), the conversation may turn to topics whose very purpose is to emphasize status considerations and thus make the participants more comfortable with one another. If they

156 difficulties (ask his father to save the family land for him; tell the aunt he did not
159 want to marry the girl she had chosen—which he could have done had he felt secure about his relatives' love for him), he politely said nothing. The net result of all of this, as indicated in the text, was a deep sense of personal inadequacy and resentment that loved ones cannot be depended on. Further, Dang had begun to treat others as he felt others had treated him.

4:Phillips E-4,5 (1956-1957) 1966
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particularly that of the one who went to Burma, had considerable effect on me and on the continuity of the research, it appeared to affect the villagers not at all. In their less predictable world, such movement was quite customary. 114

Because three of the assistants were with me for substantial periods of time, a few words should be said about them as individuals and their role in the community.

My principal assistant was an individual whose own life history, although not unusual for Thailand, describes one of the most important and least known psychological types emerging in the newly developing countries of the world today. Born and reared in a Northeastern village, he came to Bangkok in his bare feet at the age of sixteen to fulfill a childhood dream of becoming a newspaperman. (He once said to me that "if the first *farang* who came to Thailand in the sixteenth century had wanted to study a village, they would have had to pick a village just like the one in which I was born.") After working on a road construction gang during the day and going to school at night, he accumulated enough money to support himself and to enter Thammasart University. While working as a newspaperman, he became ill, had to leave Bangkok, and took a job as a forest ranger in the North, which gave him considerable free time for writing. It was while he was in the North that I heard about him, and asked him to come down and work with me. While working in Bang Chan, he was able to reëstablish some of his old Bangkok ties so that after my departure, he and a wealthier associate established a publishing company, one purpose of which was to have an outlet for their own writings. He has since published a volume of short stories, and has undertaken with his colleague and others a field survey of Thai peasant oral literature. His ultimate aspiration at the time was to start the first newspaper in the Northeast, one addressed especially to the interests of Northeastern peasants. When we first met he had just turned twenty-five. 114 159

Despite his worldly experience, his primary reference remains that of a peasant, albeit a well-educated one. I have seen him discussing the beauty of a field of fresh growing rice with a group of Bang Chaners exactly as if he were one of them. Similarly, his spontaneous use of peasant idioms, fictive kin terms, and body gestures were indistinguishable from those of almost any Bang Chaner. He "knew" precisely when to take a villager by the hand or to place his own hand upon the villager's leg as a sign of affection. Even his wisecracks to the girls were perfectly delivered: cute enough to raise a titter but never broad enough to be considered offensive. Although some of these actions were prompted by his desire to get on good terms with the villagers, most of them were quite spontaneous. 114

None of this of course was lost on a people as socially perceptive as the

4:Phillips E-4,5 (1956-1957) 1966
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114 villagers of Bang Chan. Although in their eyes he probably never ceased being identified in some ways with the *farang*, he was defined primarily as "one of us." He helped reinforce this definition by referring to himself and the villagers as "we Thai" or "we Thai farmers," as contrasted with the *farang*. Often, not out of any enmity but simply because he had a ready foil, he would make fun of my *farang* ways for the benefit of the villagers. It was conduct like this, repeatedly expressed, that permitted him later to ask the villagers their opinions of the *farang* without raising any eyebrows. On the other hand, when the need arose, he readily assumed the role of the gentle, guiding, probing representative of the research who, in his efforts to get the villagers to participate, would appeal to everything from pride in country ("Don't you want the *farang* to know the true way we Thai people think") to the principle of reciprocity ("We do a favor for *Aacaan* Herb by helping him pass his examination, and he helps us by bringing us fame").

The two female graduate students who worked part-time were not as distinctive as their male counterpart, but in their own way, were equally as effective in the research. One was the daughter of a high-ranking Army Officer School teacher; the other was the daughter of a low-level bureaucrat. In their early twenties, they had been closest friends during college and graduate studies. To a certain extent, they were prototypes of the upper-middle-class, college educated Thai female.[2] Confident about their 114 562 577 professional abilities and aware of how much they are needed, they are caught in the conflict of whether to participate in "worldly affairs" and thus become independent and admired social leaders, or to become wives and mothers, and thus live in the shadows of their husbands. Their problem, unlike the case in the United States, is that both alternatives are equally valued and equally available and that because the social need is so great, they can actually become leaders with not too much effort. The conflict is further aggravated by the fact that they come from the social class that emphasizes a double sexual standard. At the same time as they are expected to be assertive and competent in their jobs, they are also expected to be sweet, docile, and compliant females. They resolve this conflict to a large

[159] [2] The daughter of the lower-level bureaucrat had this status by virtue of her own accomplishment, not her father's. In fact, one of the most touching scenes I ever observed in Thailand was when the girl's entire family assembled at Don Muang Airport to see her off to the United States where she had won a graduate fellowship. She had become the hope and pride of her family. Her mother, in the traditional cropped hair style of the Thai female and her mouth stained with betel juice, was trying to stand on the pair of oversized high heels that she had bought especially for the occasion. Tears were flowing down her eyes, both in pride over her daughter and because she could hardly walk on her first pair of "modern" shoes. My male assistant, in his inimitable way, turned to me and whispered: "Khun Maese [the honored mother] wants to be just like her successful daughter."

*243 marriage did take place, the couple were usually obliged
162 to stay with the parents of either the husband or the wife.
178 It is reasonable to believe that the nascent period was
592 prolonged during this period of hard times. Thus, the
182
[582] family size tended to be larger than it normally is. This is especially true for rice farming families where there always is some work for members able to work. It is not surprising, then, that the average size of farm operating families in Bangchan was 6.3 in 1948 while the average size of all families was 5.7 according to the 1949 census. A steady rise in the price of paddy after the war has improved the economic condition of rice farmers. The increased income, however, had to be spent first on replacement of equipment and housing facilities which had been long overdue.
[792] Finally, the bumper crop of 1948 with an ever-increasing price put an end to farm misery, and the following dry season saw a record number of newly ordained priests and
[591] merit making activities. From then on proportionately more marriages took place and there were fewer economic obstacles to keep newly wed couples from starting out independently. The combined effect of termination of prolonged nascent period and freer establishment of new families was that the size of the farm operating family was considerably reduced.

• 16 It may seem strange that more marriages should bring about a drop in the number of the young from 2.5 per family in 1948 to 2.0 in 1952. By the young is meant, however,

*243 • 16 178 463 Of the 48 families disappearing from the 1953 list of farm operators in the village, 21 moved out, 2 were annexed, and 25 were dropped from the list because they had changed their occupations to some other kinds. Among these last mentioned, four had become investors, three traders, thirteen laborers, one public servant, and four had obscure occupations.

Of the 35 new farm operating families, 17 were immigrants moving into the village during the period between 1949 and 1953, 14 had evolved from pre-existing families, and four were families already existing in the village in 1949 but were then having some occupations other than farm operating. Among the four families last mentioned, three were formerly farm laboring families, and one was formerly an investor family.

*243 178 463 The fact that there were as many as twenty-five families leaving farm operating occupation as against only four families entering it within the same period seemed to indicate that farm operation as an occupation had become less attractive in Bangchan during recent years.

It may be argued that former farm operators who had given up farming did so because of the force of special circumstances beyond their control, and that the change to other occupations was not due to the relative unattractiveness of farm operation. A tenant operator, for example, might have to leave the farm because his landlord no longer wanted him to work on the parcel. In fact one such case was

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Chapter I

THE COMMUNITY OF BANG CHAN

The Geographical Setting

In the populous flat central plain of Thailand where Bang Chan was located, fenceless geometric rice-fields, dotted by clumps of trees, stretch as far as the eye can see. Houses, clustering occasionally into hamlets, line the canals that serve for domestic use, drainage, irrigation, and communication. A few rounded-up roads lead out from Bangkok, the national capital on the Menam Chao Phraya, the great central river.

The monsoon divides the year into three seasons: a hot and wet (late May through November); a cool and dry (December to mid-February); and a hot and dry (late February to mid-May). The temperatures range annually from 58° to 89° F. (15° to 32° C.) with monthly means of 77° to 86° F. (25° to 30° C.) (de Young:5). A drop at night averages around 18° F. (10° C.) in April, and 22° F. (12° C.) in January, while the relative humidity varies between 65 per cent and 81 per cent (Hauck, et al.:12). Rainfall averages about 50 inches a year, 40 of which fall in the wet season (Janlekha:21). Because of the run-off from the mountains in the north, once a year the Menam Chao Phraya slowly rises, fills the canals and then overflows its banks, covering the plain for hundreds of miles to a depth of three feet or more. In Bang Chan, the water stood on the land from June until January, with its peak in October. From February to May the canals ran low, and the land dried and cracked from the intense heat.

The Community

In 1954, 1700 persons (336 families) lived in Bang Chan. Muslims, comprising 10 per cent of the population, lived as fully Thai citizens in all parts of the community in economic and social symbiosis with Buddhists. A few ethnic Chinese had married into Thai families and were accepted.

The community spread over an area of about 7000 rai (1000 hectares or 5 square miles). Bang Chan Canal bissected

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132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [463] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [220] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [433] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part [028] of the Thai-Buddhist community. Information to be presented on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

133 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the nearest market town, ran through one edge of the village. Bus 484 service was available along this road, to either Bangkok or 487 [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 • 621 634 624

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. So also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People morely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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CHAPTER II

THE COMMUNITY

Geography

131 The community of Bangchan is situated some twenty road-miles northeast of Bangkok in the heart of the economically all-important commercial rice growing area of central
361 Thailand. Surrounded by their rice fields, the population
• [161] of about 1,600 persons lives on some three hundred small
[503] family homesteads scattered along a half dozen connecting
*[243] canals. The community occupies an area of 6,500 rai,[1] or 2,600 acres, all of which, with the exception of about 300 rai of homesites and narrow strips bordering canals, is given over to the production of wet rice.

134 The soil of Bangchan area is heavy dark clay with
*243 an impervious layer at a depth of about six to eight inches and is suited only to rice growing.

133 The area is essentially flat, rising slightly toward
312 the north. It receives, in addition to rain water, irrigation water channeled into it through the Saen-saeb Canal one mile to the south, Samwa Canal one mile to the east, and Khlong-song Canal one mile to the north.[2]

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[804] 1. One rai is equal to two-fifths of an acre.

2. See map on page 162.

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Population

161 A census covering all households of the seven hamlets defined as constituting the Bangchan village was made during the late months of 1948 and the early months of 1949 and was finally corrected and established for May 23, 1949. On this date there were 1,582 persons residing in Bangchan.[5] In a subsequent census made in 1953, the population rose to 1,694, giving an increase of 112 persons during the four elapsing years. Table 1 shows that there was not only an increase in the total population but also in the average size of the family.

While figures in Table 1 indicate an annual compound rate of increase in population of 1.7 per cent and an annual compound rate of increase in the size of the family of 0.5 person, these annual rates should not be accepted at face
161 value. It was observed that population moved freely between
162 Bangchan and the bordering villages. The extent of migration to and from Bangkok is also quite large. Moreover, the size of the family depends on a number of factors, some of which are of temporary influence.

The preliminary study based on the village census of 1949 indicates that Bangchan was not troubled with a burgeoning population. According to that study, "Children

5. The population figure of 1,608 was reported by Lauriston Sharp, Hazel M. Hauck, Kamol Janlekha, and Robert B. Textor in "Siamese Rice Village -- A Preliminary Study of Bangchan, 1948-49." This new figure was arrived at after obvious errors such as duplications and omissions in the original census had been detected.

[TEXT CONTINUED ON PAGE 59]

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TABLE 1

POPULATION OF BANGCHAN IN 1949 AND 1953

• 161
162

Hamlet	May 23, 1949 Families	Persons	May 23, 1953 Families	Persons	Increase Families	Persons
BC4	43	250	40	236	-3	-14
BC5	27	136	28	136	1	0
BC6	44	251	47	270	3	19
KY5	54	305	63	356	9	51
KY6	28	156	31	168	3	12
KY7	43	231	42	250	-1	19
KY8	49	253	47	278	-2	25
Total	288	1,582	298	1,694	10	112
Av. fam. size		5.5		5.7		0.2

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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161 in the age group 0-4 years constituted 17 per cent of the
162 total Thailand population reported in 1937, yet this age group is only 10 per cent of the present /1949/ Bangchan population. The estimated crude annual birth rate -- 1/5 x children 0-4 years divided by total population x 1,000 -- is 20.3. This figure is slightly lower than the actual rate because infant mortality is not taken into account, but it may be compared with the following crude rates: Burma, 32.3; India, 33.0; Philippines, 32.4; United States, 17.9, all for 1939; and Federal Malay States, 39.7, for 1940. The Bangchan fertility ratio -- children 0-4 years divided by females 20-44 years multiplied by 1,000 -- is 620, actually less than the fertility ratio of 752 for the United States rural native white population in 1950."[6] This somewhat optimistic picture fades, however, in the light of the data of the 1953 census of the same population taken only four years later. From Table 2 the crude birth rate as of this later date may be estimated at 26.2, approaching those of prewar Burma, India and Philippines, while the fertility ratio has now become 779, a gain of 159 placing it higher than that of the 1950 United States rural native white population. These abrupt increases in the figures for birth rate and fertility ratio in themselves are not of much statistical significance, since the population is small and infant mortality and migration factors are not considered.

6. Lauriston Sharp, Hazel M. Hauck, Kamol Janlekha, and Robert B. Textor, Siamese Rice Village -- A Preliminary Study of Bangchan, 1948-49 (Bangkok: Aksoniti Printing Press, 1954), p. 25.

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434 amounted to somewhere around 5,000 baht, which was about
469 four times as much as the labor earnings of an average rice
621 farm operator as we shall see later.

178 The present occupational situation and accounts of
463 the changes in the past few years alone may not be enough to give us a complete picture of occupational development since the beginning of the history of Bangchan. Fourtunately, however, since settlement in the village in a considerable scale took place only some eighty years ago, evidence from genealogical studies has provided us with ample materials on which a reconstruction of the past development may be made.

[175] When Bangchan was being settled in the 1870's, as a probable consequence of the increasing national and international demand for rice and the revolutionary change in Thai society, every family was naturally a farm operator family. As long as there was land available for clearing, opportunity would be open for every new family, either branching off from the old ones or moving in from the outside, to operate a rice farm.

[161] Eventually, population grew up to a size large enough
[194] to support a temple in 1895. Population growth and the
[176] emergence of a village center at the temple prompted occupational specialization. At the beginning, investing, trading, professional servicing, and home enterprising probably took the forms of secondary occupations, while farm operating remained the primary occupation throughout. In time, these secondary occupations became more and more specialized and

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243 hypothesize that the presence of farm laborer families in
464 a rice growing village indicates a condition of land scar-
621 city. This is to be distinguished from the presence of farm
463 laborer families in intensive farming areas such as the truck gardening villages along the Damnegnsaduag Canal and plantation villages in Cholburi where the marginal product of labor, even with the same crude implement, is much higher than that in the non-intensive rice growing areas. Usually, there are farm laborers in any commercial rice growing region, but they consist of members of farm operator families with excess family workers who work for their own lampai. With low marginal product of labor, the demand for extra labor outside the family is not great and is highly seasonal in rice growing villages, resulting in extremely low total income for farm laborers. Piece-working is thus only good as a subsidiary income for an under-employed farm operator family, and certainly not as the main source of income for any family. Farm laborer families such as those existing in Bangchan are indigenous and are the outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent in any land. These people prefer to remain in the home village, willing to accept meager income from piece-work which is perhaps the only type of job they could get in the village, in the meantime trying to eke out as much as possible from what nature has to offer in the form of fish or uncultivated aquatic plants. The
[161] [178] abrupt rise of farm laborer families in Bangchan from nine

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per cent in 1949 to thirteen per cent in 1953 suggests that the problem of population pressure on land has become more acute, although it may also indicate changes in the cost structure of rice production which will be discussed in Chapter VI.

Concluding the discussion of this section, we may say that rice growing is the core of the occupational structure of Bangchan around which other occupations rotate. It is not uncommon that one family has several occupations, and in addition to income from these most families get "free" food in the forms of fish and uncultivated aquatic plants. This is the principal reason why families with apparently no cash income still thrive.

It is conceivable that in years of poor rice crop the family put more effort in the secondary occupations; when such an attempt does not work out well -- for example, no work for manual labor and no capital for trivial trade -- an effort is made to obtain subsistence directly from nature.

In any event, every family in the village is engaged in fishing in varying degree. It is because of this fact coupled with the fact that the village fish supply is decreasing that the problem of fish conservation is very important.

Finally, the dynamic nature of rice farming, with varying efforts on getting extra jobs and securing free food outside the farm depending upon the increase and decrease of the rice crop, suggests that the economy of any rice

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243 farm operators who hired regular laborers did so because
464 full utilization of the effort of all the family workers was not adequate. This assumption would seem to be reasonable in view of the rather high cost of hiring such laborers. It was concluded, then, that some farms in the community were below optimum size for the number of workers in the family.[11]

243 This condition of farm under-employment is our basic
464 assumption in discussing rent rates in Bangchan. With an
161 increase in population in an area where farm operating is
178 the core around which other less important occupations rotate, it may be reasoned that the aggregate demand for rice land in 1952 was at least as high as that in 1948 if not greater. As for the extent of under-employment of farm labor, it is interesting to note that the number of families directly engaged in rice farming, the farm operating and farm laboring families, was 256 in 1949 and 254 in 1953. With a constant supply of land (in the popular sense of the term), this more or less constant number of families directly engaged in rice farming indicated that the extent of farm under-employment in 1952 was just about the same as that in 1948. Although the average size of the family was found to be slightly smaller in 1953,[12] that slight decrease was certainly not large enough to materially affect the situation.

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11. Sharp et al., op. cit., p. 158.

[162] 12. The average size of the family was 5.7 in 1949, and 5.5 in 1953.

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*243 466 Difficulty arises when farm workers are classified individually because of duplication. It was mentioned in Chapter II that family members might work for their lampai after they had fulfilled their obligation on the family farm work. It is seen, then, that a family member may be considered as both family worker and piece-worker. Even the farm operator himself may earn extra income from piece-working and thus becomes also a piece-worker. In fact, most farm operators who had only a small area to work did have time to earn extra income this way. It is only the hired laborer that could not earn extra income from piece-working because he is bound by contract to devote all his time to his employer's farm and household work. It is considered unbecoming for a hired laborer to take time out, even at night, to fish for his own biological family.

Sampling Technique

*128 621 So far we have been dealing mostly with the universe of our study -- the total population of our "natural" Bangchan Village as defined in Chapter II; although occasionally, it might have been noticed, reference has been made to a sample of 104 farm operators and of 96 continuing farm operators.

[121] [161] Our primary attempt in this community study is to cover the entire village. It is obvious, however, that all relevant information cannot be gathered on some 300 families comprising this village of about 1,700 people. We may, for

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592 as it might seem to be, for there was a wide range of
464 ordination expenses and the family head naturally tended
792 to arrange one that was not so expensive unless it was for his own son. He might even arrange a joint ordination of
592 which the cost was much reduced. Moreover, most of the cost
464 of the ordination would be covered by the customary contributions made by neighbors. The lampai arrangement, which was nothing but a sophisticated term for wage, was a real concession on the part of the family head, indicating that he really wanted to keep the transient member in the family even at a certain cash expense.

464 The presence of transient family workers and their
592 relatively low remunerations indicated a condition of popu-
466 lation pressure onhand. Already, these people had adversely
• [167] affected the labering sector of the village economy because they represented an additional supply of cheap labor. Although they had contributed to a low cost of producing paddy and thus benefited the operators, with the rise of the price of foods which farmers had to buy and with the decline of free food (in the forms of fish and aquatic plants) transient family members may in time become a liability rather than an asset to the family. To be sure, when such a time has arrived, the family would be reluctant to admit a transient member. The trouble, however, is that the cost of maintaining an extra family member is implicit and not readily distinguished by the family. It would thus take some time before the real situation would be recognized.

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434 production method and farm organization remained the same throughout, there had arisen in the course of the past four or five years new items of consumption including wrist watches, fountain pens, hair do, Coco-cola, invitation cards, admission to Miss Thailand contest, etc., which demonstrate the operation of the principle of demonstration effect par excellence. It is not difficult to see, then, that any chance increase in cash incomes due to favorable weather and economic conditions tends to be absorbed in consumption.

While consumption correspondingly expands with an increase in income, it does not decline with a contraction of income -- at least not in the same proportion. This is the principal reason for farm poverty in rice growing areas where only a single-crop system is practiced and where fluctuation of crop yield is a normal phenomenon.

As a result, the excess of expenses over incomes
[426] tends to persist. High rates of interest also have made this excess greater and greater among those who fail to make proper adjustment in their credit situation. Thus, the less affluent farmers are not only poor but are actually getting poorer and poorer.

Population Pressure

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434 While low incomes and inherent excess of expenses over incomes are basic problems of Bangchan, discussions in the early chapters reveals that there are some factors contributing to the acuteness of the basic problems. One

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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161
434 among these contributing factors is population pressure.

243
161 Disguised unemployment in the case of farm operators
434 and their family workers and actual unemployment in case of
464 farm laborers indicates a condition of over-population in Bangchan in the sense that a certain part of its population can be removed without materially reducing total production in the area.

178
226 In view of a continually decreasing supply of fish,
433 it may be said that the situation has reached the point where
262 it not only affects the per capita income of Bangchan residents but actually exerts pressure on means of subsistence. There are several indications of decreasing supply of fish and other marine animals in the village. First, it is the consensus of opinion gathered by our daily informal talk with villagers non of whom was found to hold a contrary view. Second, a passage in our 1948 log, "X is very lazy. Everybody here in Bangchan catches shrimps and makes his own shrimp paste. He alone does not catch shrimps even though he is among the poorest," indicates that purchase of shrimp paste was in 1948 an exception rather than a rule. In 1952, however, it was found that a total of 22.7 kilograms of shrimp paste consumed in a year by an average family, 6 kilograms, or more than a quarter, was purchased. In this latter year, 83 baht worth of fish and 54 baht of fish sauce were purchased by an average family in addition to shrimp paste as against negligible amounts for the same items in 1948 (we did not conduct a systematic consumption

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226 made that any program of fish raising in a closed pond, no
654 matter how effective it may be, should not preclude the need for conservation of fish naturally existing in the open canals.

243 It has been pointed out that Bangchan operators
226 produce 52 per cent of the things they need for ordinary
433 consumption. Thus, rice growing may be seen as a farming-
434 to-reduce-cost enterprise where maximization of profit ceases to be the primary motive of production. It has been pointed out also that rice growing is a losing concern to many operators (in terms of labor income and operator's labor earnings), but the loss has been compensated by the privilege to fish
[144] which is open to all village residents. Since the amount of fish caught constitutes the main and probably the only source of protein intake and at the same time a considerable share in the diet of villagers, continually decreasing supply of fish therefore underscores the immediate need for an effective program for fish conservation as a means to prevent the standard of living of the villagers from falling below the minimum level of subsistence.

161 Over-population in an area of limited job opportuni-
464 ties naturally creates an over supply of labor, which in
465 turn results in low wages. This is further complicated by a wide variation of individual earning from labor of from two thousand baht annually to almost nothing, the latter being the case of transient members of farm operating families.

*243 Finally, it has been pointed out that the kind of
• 161 training and the type of financial preparation given to young
178 married couples have served only to confirm Bangchan people
464 to their preference for rice cultivation. This together with limited job opportunities open to them elsewhere have tended to keep the villagers on the farms, and thus have tended to regenerate the condition of population pressure in Bangchan.

Lack of Effective Control and Regulationof Water Supply

*243 Another contributing factor is the lack of effective
458 control and regulation of water supply, which has caused annual fluctuation of rice crop. On the whole, this crop fluctuation is not as high as is the case in most of rice
[731] growing areas elsewhere. Famine certainly has not been known in Bangchan. Nevertheless, it is a certain sector of rice growers -- the marginal farmers with limited ability to adjust or with relatively little command over capital -- who are seriously affected by annual fluctuation of rice crop.

*243 When affluent farmers have a poor crop, their credit
426 purchase accounts may go up beyond the normal level, but they are usually in a position to clear this type of high interest bearing debts at the end of the business year by their net cash incomes or at least by securing loans with lower rates of interest to pay the accounts. On the other hand, marginal farmers are not in a position to seek low interest bearing loans. In case of crop failure, therefore,

Chapter I

THE COMMUNITY OF BANG CHAN

The Geographical Setting

In the populous flat central plain of Thailand where Bang Chan was located, fenceless geometric rice-fields, dotted by clumps of trees, stretch as far as the eye can see. Houses, clustering occasionally into hamlets, line the canals that serve for domestic use, drainage, irrigation and communication. A few mounded-up roads lead out from Bangkok, the national capital on the Menam Chao Phraya, the great central river.

The monsoon divides the year into three seasons: a hot and wet (late May through November); a cool and dry (December to mid-February); and a hot and dry (late February to mid-May). The temperatures range annually from 59° to 89° F. (15° to 32° C.) with monthly means of 77° to 86° F. (25° to 30° C.) (de Young:5). A drop at night averages around 18° F. (10° C.) in April, and 22° F. (12° C.) in January, while the relative humidity varies between 65 per cent and 81 per cent (Hauck, et al.:12). Rainfall averages about 50 inches a year, 40 of which fall in the wet season (Janlekha:21). Because of the run-off from the mountains in the north, once a year the Menam Chao Phraya slowly rises, fills the canals and then overflows its banks, covering the plain for hundreds of miles to a depth of three feet or more. In Bang Chan, the water stood on the land from June until January, with its peak in October. From February to May the canals ran low, and the land dried and cracked from the intense heat.

The Community

In 1954, 1700 persons (336 families) lived in Bang Chan. Muslims, comprising 10 per cent of the population, lived as fully Thai citizens in all parts of the community in economic and social symbiosis with Buddhists. A few ethnic Chinese had married into Thai families and were accepted.

The community spread over an area of about 7000 rai (1000 hectares or 5 square miles). Bang Chan Canal bissected

Chapter VIII

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[162]

CHANGES

In studying change in the customs surrounding childbirth in Bang Chan, we have D.B. Bradley's description of birth in Bankok in 1865 as a base-line on which to project our findings. Since most of the population of Bang Chan (Thai, with a few Laotians, Mon, Muslims, and Chinese) stems from Bangkok, we may reasonably assume that the parallels derive from a true historical connection. Bradley's description fitted Bang Chan as if written today:

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> "Siamese theory in regard to the part which external and internal fire plays in the functions of life and health is made to work powerfully...There is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which, if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child...[Thus a woman lies by the fire]... exposing all parts of her body, and more particularly her abdomen, to that drying process, so that the uterus shall be forced to shrink up quickly to its normal dimensions, and the sanguineous streams which had been diverted to support the child before birth, shall, by fire, be driven backward to their more usual limitations, all which is...a sine qua non to a sound constitution and good health in the future..." (Bangkok Calendar, 1865:78-84).

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846
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Bradley showed that some behavior one might call "change" today was a recognized alternative in 1865. For instance, in Bang Chan a few women "are made too unhappy (klum) by the fire so cannot use it. They should take extra amounts of pickled medicine" (yā dong). Bradley wrote, "a few delicate females...who cannot endure [this] usual treatment, are compelled, against all their ...fears of the consequences, and all the importunities of their

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132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [463] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [221] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [435] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part of the Thai-Buddhist community. Information to be presented [028] on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

133 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the 484 nearest market town, ran through one edge of the village. Bus 587 service was available along this road, to either Bangkok or [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the families, living in tiny separate cottages.[1] Usually with inadequate or no land, they earned an irregular income by hiring themselves out for farm or other work. At the other extreme, in a hamlet-like cluster of dwellings, lived a closely affiliated group of kin. A senior couple more or less headed the married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying home from school to do so. Where the adult cooperative group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

Plowing could be done by a man and wife, but for both transplanting and harvesting which had to be done within a few days, large groups were necessary. Two patterns of auxiliary group labor prevailed: reciprocal cooperative work, and hiring of labor.

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1. Janlekha, 1955, categorized families as 5% "one-person," 59% nuclear, 8% limited extended (including one or more parents of a spouse), 27% extended (including dependent married couples or other collateral relatives), and the temple residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

BANG CHAN

FOREWORD

The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, Minburi. A century-old canal and to the north of it a post-war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

In 1954, when data for the present study were still being gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the households were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupation of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple food of the people. During the wet season and into the cooler dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

The Thai countryside is divided into hamlets, each with a headman in charge of the thirty to sixty households of the hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

and KY followed by a number.) The center of social life in Bang Chan is the Buddhist monastery or wat and the adjacent government primary school. The community simply consists of the clientele which regularly patronizes Wat Bang Chan and this school rather than other comparable institutions elsewhere in the region. Within the area of the community lives a minority of Thai Moslems constituting about ten per cent of the population. They have their own mosque which happens to be just outside Bang Chan, but they attend many secular and some Buddhist functions at Wat Bang Chan. A number of small stores, which also serve as coffee houses and men's clubs, are used as neighborhood centers in different parts of the village. Near the central wat and school, there is also a store, and the house provided by one of the headmen for use as the Project headquarters.

This present interim report of the Cornell Thailand Project includes some of the data necessary for the design of a program to improve health and diet in Bang Chan. Another report, now in preparation, will give the results of a detailed dietary survey made in the community following the health survey reported on here. These two studies together will indicate existing deficiencies in health and diet, and will permit the formulation of recommendations for needed changes in behavior as these can be realized in the context of the village and national culture.

The author of this study, Dr. Hazel M. Hauck, is Professor of Food and Nutrition in Cornell University. She has been associated with the work of the Cornell Thailand Project since 1950. She not only designed and supervised the research on health, nutritional status, and diet in Bang Chan, but during almost a year of field work in Thailand she obtained valuable data on many other topics for the Project's files. Some of her daily work in Bang Chan made little sense to the villagers, but they nevertheless became devoted to her. Her energy, tact and fine spirit in facing the discomforts and difficulties of rough field work in a tropical foreign land inspired both her Thai and American associates. Working with Professor Hauck were Dr. Amusith Rajatasilpin, now a teacher in the School of Public Health in Bangkok; Miss Sapha Indrasud, now in the Ministry of Public Health; Dr. Chumlong Kittiveja, of the Dental School of the University of Medical Sciences, Bangkok; and Miss Saovanee Sudsanoh, who has been doing post-graduate work in nutrition at Cornell and Harvard. To all of these faithful workers, the Cornell Thailand Project is greatly indebted.

Lauriston Sharp, Director
Professor of Anthropology

Southeast Asia Program
Department of Far Eastern Studies
Cornell University
Ithaca, New York
September, 1956

BANG CHAN

12 As advocated by the Joint FAO/WHO Expert Committee on Nutrition (1951), this study combined clinical appraisal with dietary surveys. The only laboratory tests done were for hemoglobin content of blood, and examination of stools for parasites. Suggestions for planning the schedule for the clinical appraisal were obtained from the report on the second session of the Joint FAO/WHO Expert Committee on Nutrition (1951), Nicholls (1951) and especially from Professor Dean Smith of the London School of Hygiene and Tropical Medicine (1952).

125 Choice of physical measurements, and of procedures in making them, were influenced by a tentative list of specifications for anthropometric measurement, developed by the Committee on Anthropometry, Food and Nutrition Board, National Research Council (1951).

The schedule used for clinical examinations, and a description of procedures used, are included in Appendix A.

Sampling. - All of the children attending the Bang Chan primary school were examined. Three or four children who were listed on the school rolls were not present at any time during the period when examinations were in progress, and were considered by the teachers as non-attending.

Persons in a random sample of households in 5 of the 7 hamlets in the Bang Chan community were also examined. The two most outlying hamlets were excluded from the population to be sampled because of the difficulty, during the dry season, in getting to them or having them come to us. Of 230 households in the 5 hamlets, 31 were included in the random sample. Age and sex distribution of the 166 persons in the sample were roughly similar to distributions for the approximately 1700 persons in the village as a whole, as determined in the census of December 31, 1953. Following is a summary of the age distribution:

[162] [624]

Age in Years	Bang Chan, 7 Hamlets	Random Sample, 5 Hamlets
0-14	38%	41%
15-19	11%	10%
20-59	44%	41%
60 and over	7%	8%

[162] The sample included one Muslim family of 13 members.

In the 31 households, 166 of 184 persons, i.e. 90% were examined. Of the 10% non-response group, half were unavailable, for example away at work when the examinations were in progress. The remaining members of the non-response group

[123]

[See pp. 51-52--Analyst]

Cf Goldsen and Rallis Z-4.5 (1955) 1957
AO7 Central Thai AO7

APPENDIX B

Cornell Methodology Project
Thailand, May 1958

BANG CHAN STRUCTURED QUESTIONNAIRE (Frequency Distributions)

A. Ser. No. B. Hamlet and H C. Date of Interview D. Name of Respondent

F. Sex
9. male 213
X. female 90

G. Religious Affiliation
0. Buddhist 298
Y. Muslem 35

H. Main Occupation
8. Farm operator 249
9. Farm laborer 24
X. Trade and commerce 18
Y. Service 10
0. Other, Specify_____ 12

I. R is HH or not HH
1. HH 277
2. Not HH 56

J. If not HH, relationship to HH
3. Husband —
4. Wife 41
5. Son 10
6. Daughter 2
7. Father —
8. Mother —
9. Mother-in-law —
X. Other relative 3

1.a. Were you born in Bang Chan Commune, Khanna Yao Commune, Minburi Commune, or outside?

b. If outside, in what province were you born?

1. BC Commune 116
2. KY Commune 141
3. Minburi Commune 11
4. Commune unascertainable 2
5. Outside BC, KY, Minburi 30
7. Unascertainable 33

2.a. How old are you?
b. In what zodiac year were you born?
1. 20 to 29 41
2. 30 to 39 81
3. 40 to 49 85
4. 50 to 59 68
5. 60 to 69 41
6. 70 and over 17

b

27.a. Excuse me, but at present do you have a (wife/husband) who lives and eats with you, or not? [592] 125

1. Yes	255
2. Yes, qualified _____	6
3. No	72

b. IF NO: Excuse me, but is this because you are widowed, separated, divorced, or is there some other reason? [589] [586]

4. Widowed	45
5. Separated	9
6. Divorced	1
7. Other, specify	10
— No Answer	7

28.a. Your own children, all of them that have ever been born, how many are there? [592] [162]

0. None	26
1. One	38
2. 2 to 3	70
3. 4 to 5	76
4. 6 or more	133

b. How many of your children are still living?

0. None	29
1. One	50
2. 2 to 3	83
3. 4 to 5	82
4. 6 or more	97
— No Answer	2

c. How many of your children have died? [165]

0. None	199
1. One	58
2. 2 to 3	56
3. 4 to 5	17
4. 6 or more	9
— No Answer	9

29.a. Have you ever been ordained as a priest, or not? [793] [792]

1. Yes	187
2. No	31
— No Answer	1

[Male Buddhist (192)]

b. IF NO: In the future, do you want to be ordained as a priest, or not?

3. Yes	20
4. No	11

c. ASK ALL: How many sons do you have twenty years old or over? [592] [162]

5. None	176
6. One	56
7. Two	29
8. Three or more	29
— Unascertainable	43

50

125 19.d. IF A MAN HOME BO AND VP: Of your sons over twenty, how many have been ordained as Buddhist priests, or not?

[793]	7. DA	
	A. None	613
[593]	9. One	82
	X. Two	50
[792]	Y. Three or more	25
		18
[162]	e. Do you have any sons under twenty?	
	9. Yes	
	X. No	188
	-- No Answer	108
		37
[793]	f. IF YES: In future, do you want your sons under twenty to be ordained as priests, or not?	
[782]	Y. Yes	156
	O. No	—
	-- No Answer	1

g. IF YES: But aside from your admirable desire to have them ordained, in your true heart how sure is your expectation? Are you very sure or not very sure, or fairly sure that they will be ordained?

1. Very sure	110
2. Not sure	26
3. Fairly sure	12
4. Unascertainable	7
NA	1

h. All over Thailand there are some Thai men who are over 50 but have never been ordained as priests. For what various reasons might this happen?
(See code at end)

[461] 30. Suppose there was some work you could do individually, or that could be done in a small group of two or three, or that could be done in a large group. Which way would you prefer to do the work--as an individual, or in a group of two or three, or in a large group?

8. Individually	60
9. Small group	55
X. Large group	209
Y. Undecided, depends	4
O. Unascertainable	12

[572] 31. Around here in NC-KY there are some people who have many close friends and there are other people who have few close friends. And how about yourself? Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?

5. More than most	62
6. Fewer than most	96
7. About the same	154
8. Unascertainable	10

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

Population

161 A census covering all households of the seven hamlets defined as constituting the Bangchan village was made during the late months of 1948 and the early months of 1949 and was finally corrected and established for May 23, 1949. On this date there were 1,582 persons residing in Bangchan.[5] In a subsequent census made in 1953, the population rose to 1,694, giving an increase of 112 persons during the four elapsing years. Table 1 shows that there was not only an increase in the total population but also in the average size of the family.

While figures in Table 1 indicate an annual compound rate of increase in population of 1.7 per cent and an annual compound rate of increase in the size of the family of 0.5 person, these annual rates should not be accepted at face 161 value. It was observed that population moved freely between • 162 Bangchan and the bordering villages. The extent of migration to and from Bangkok is also quite large. Moreover, the size of the family depends on a number of factors, some of which are of temporary influence.

The preliminary study based on the village census of 1949 indicates that Bangchan was not troubled with a burgeoning population. According to that study, "Children

5. The population figure of 1,608 was reported by Lauriston Sharp, Hazel M. Hauck, Kamol Janlekha, and Robert B. Textor in "Siamese Rice Village -- A Preliminary Study of Bangchan, 1948-49." This new figure was arrived at after obvious errors such as duplications and omissions in the original census had been detected.

[TEXT CONTINUED ON PAGE 69]

TABLE 1

POPULATION OF BANGCHAN IN 1949 AND 1953

161
162

Hamlet	May 23, 1949 Families	Persons	May 23, 1953 Families	Persons	Increase Families	Persons
BC4	43	250	40	236	-3	-14
BC5	27	136	28	136	1	0
BC6	44	251	47	270	3	19
KY5	54	305	63	356	9	51
KY6	28	156	31	168	3	12
KY7	43	231	42	250	-1	19
KY8	49	253	47	278	-2	25
Total	288	1,582	298	1,694	10	112
Av. fam. size		5.5		5.7		0.2

TABLE 2

DISTRIBUTION OF POPULATION BY AGE AND SEX
Bangchan, Thailand, 1953

• 162

Class Interval Years of Age	Frequency			
	Male	Female	Total	Per Cent
Young	(327)	(317)	(644)	(38)
0- 4	115	107	222	13
5- 9	98	107	205	12
10-14	114	103	217	13
Adult	(431)	(449)	(880)	(52)
15-19	84	102	186	11
20-24	87	77	164	10
25-29	57	68	125	7
30-34	45	51	96	6
35-39	37	43	80	5
40-44	41	45	86	5
45-49	44	34	78	5
50-54	36	29	65	4
Old	(85)	(85)	(170)	(10)
55-59	27	29	56	3
60-64	25	24	49	3
65-69	17	12	29	2
70-74	8	7	15	1
75-79	7	7	14	1
80-84	0	5	5	0
85-89	1	1	2	0
Total	843	851	1,694	100

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7 Bangchan

161 in the age group 0-4 years constituted 17 per cent of the
162 total Thailand population reported in 1937, yet this age group is only 10 per cent of the present /1949/ Bangchan population. The estimated crude annual birth rate -- 1/5 x children 0-4 years divided by total population x 1,000 -- is 20.3. This figure is slightly lower than the actual rate because infant mortality is not taken into account, but it may be compared with the following crude rates: Burma, 32.3; India, 33.0; Philippines, 32.4; United States, 17.9, all for 1939; and Federal Malay States, 39.7, for 1940. The Bangchan fertility ratio -- children 0-4 years divided by females 20-44 years multiplied by 1,000 -- is 620, actually less than the fertility ratio of 752 for the United States rural native white population in 1950.[6] This somewhat optimistic picture fades, however, in the light of the data of the 1953 census of the same population taken only four years later. From Table 2 the crude birth rate as of this later date may be estimated at 26.2, approaching those of prewar Burma, India and Philippines, while the fertility ratio has now become 779, a gain of 159 placing it higher than that of the 1950 United States rural native white population. These abrupt increases in the figures for birth rate and fertility ratio in themselves are not of much statistical significance, since the population is small and infant mortality and migration factors are not considered.

6. Lauriston Sharp, Hazel M. Hauck, Kamol Janlekha, and Robert B. Textor, Siamese Rice Village -- A Preliminary Study of Bangchan, 1948-49 (Bangkok: Aksonlit Printing Press, 1954), p. 25.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

597 621 593 As of 1953 seven adopted children were reported to be living in Bangchan. Since only those mentioned by family heads as their adopted children were so recorded and since some of the information on family members were not given directly by the family heads, it is possible that there might be some more adopted children who appeared in the 1953 census as nephews or nieces. The authenticity of the term 'adopted child' as used in the village is nevertheless rather questionable. There has never been such a practice like legal registration of adopted children in the village, although this is provided by law. Moreover, maltreatment of an adopted child was not unheard of. In 1952 one family head reported that his adopted daughter had "run away" to Bangkok. In 1953 a young widow, an adopted daughter of an operator of a coffee shop in the village, also "ran away". When her whereabouts became known, no effort was made by the foster parents to return to the woman her golden necklace valued at one thousand baht. Later she was forced back home, being beaten all the way in spite of her complaint that she was pregnant. It was also not infrequent that an adopted child left his foster parents and took residence as a dependent relative in another family in the neighborhood. Such incidents points toward the possibility of 'adopted child' being used as a nom de grace for a prospective free family laborer.

162 592 621 Table 4 shows that with the exception of the ecclesiastical family the size of families in Bangchan ranges from one to fourteen, averaging 5.7 persons per family. This

[TEXT CONTINUED ON PAGE 66]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 4

DISTRIBUTION OF FAMILY SIZE
Bangchan, Thailand, 1953

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592
621

Family Size	Frequency	Per Cent
One-person family	16	5.4
Two-man family	18	6.0
Three-man family	34	11.4
Four-man family	35	11.7
Five-man family	43	14.4
Six-man family	48	16.1
Seven-man family	38	12.8
Eight-man family	26	8.7
Nine-man family	23	7.7
Ten-man family	10	3.4
Eleven-man family	1	0.3
Twelve-man family	2	0.7
Thirteen-man family	2	0.7
Fourteen-man family	1	0.3
[942] Forty-one-man family*	1	0.3
Total	298	100.0
Mean	5.7	
Median	6	

* Ecclesiastical family.

• 162 592 621 average size of family in 1953 is slightly larger than that calculated from the 1949 census.

Disappearance of Some Families from Bangchan

162 178 592 621 When the 1949 and 1953 censuses are paired hamlet by hamlet, appearance of new families and disappearance of some of the old families may be detected. Table 5 shows that during the four years between 1949 and 1953 forty-three families had disappeared from the lists of the seven hamlets constituting Bangchan. This loss was compensated by fifty-three new families, giving a net gain of ten families. In other words, of 288 families existing in 1949, 245 families remained throughout the period. When 53 new families were added to the continuing 245 families, a new total of 298 families was arrived at for 1953. A closer examination, however, will reveal that there were five families which disappeared from one hamlet only to appear in another hamlet of the same Bangchan village. If the seven hamlets are to be considered as one geographical unit, these five families should be deducted from both the disappeared and new families, giving a net disappearance of 38 families and a net appearance of 48 new families, while the number of continuing families becomes 250.

[166] Of 38 families which disappeared from Bangchan, 27 moved out to other villages nearby or afar, while 11 were disintegrated or simply annexed by other families in Bangchan itself.

[TEXT CONTINUED ON PAGE 68]

• 162
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621
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TABLE 5

CHANGES IN NUMBER OF BANGCHAN FAMILIES FROM 1949 TO 1953

Hamlet	Number 1949	Number 1953	Continuing			Disappeared				New			
			Total	(1)	(2)	Total	(1)	(2)	(3)	Total	(1)	(2)	(3)
BC4	43	40	32	32	0	11	6	0	5	8	3	1	4
BC5	27	28	24	18	6	3	2	1	0	4	1	0	3
BC6	44	47	38	36	2	6	4	0	2	9	4	1	4
KY5	54	63	45	40	5	9	6	1	2	18	13	2	3
KY6	28	31	27	26	1	1	0	1	0	4	0	1	3
KY7	43	42	37	33	4	6	5	1	0	5	3	2	0
KY8	49	47	42	36	6	7	4	1	2	5	3	0	2
Total	288	298	245	221	24	43	27	5	11	53	27	5	21

Explanation

Continuing (1) . . same family head
Continuing (2) . . different family head

Disappeared (1). . moved out of the village
Disappeared (2). . moved to other hamlet in the village
Disappeared (3). . disintegrated or annexed by other family

New (1). . . . . moved into the village from other village
New (2). . . . . moved in from other hamlet of the village
New (3). . . . . separated from other family in the village.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

178 to which surviving elements of the disappearing families
592 were subsequently attached. It was noticed that in the
621 last four cases -- Cases 8, 9, 10, and 11 -- merging with new families was arranged on the basis of mutual convenience, and the disappearing families moved en masse into the new ones (with the exception of Case 10 -- a lone woman when arrangement for merging was being made). It may even be said that the initiative came from the receiving families, although the new members may have been more anxious for the union. In the remaining six cases -- Cases 1, 2, 3, 4, 5, and 7 -- there was no element of mutual convenience, and the surviving elements of the disappearing families did not move into new families as a body but as an individual. It seemed in these latter cases that the force of circumstances -- death or extreme poverty -- had prompted either party, usually the disintegrating elements, to seek the union as a quick way out. Because of the purposive nature of the arrangement in the former cases, the process may be called 'annexation'; while for want of a proper term, the process seen among the latter cases will be called 'disintegration'.

[162] [423] [464] None of the eleven cases undergoing disintegration or annexation owned landed property. Table 6 shows that six of these were farm laboring families. The five others were distributed among the following occupational groups: farm operator, public servant, and no occupation.

[166] Among the 27 families that moved out of Bangchan, eleven families were known to be living in the bordering

[TEXT CONTINUED ON PAGE 75]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 6

DISINTEGRATION AND ANNEXATION OF FAMILIES
Bangchan, Thailand, 1949-53

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Case	Occupation	Landed Property	Immediate Cause	Number of Surviving Elements	Number of Attached Families
Disintegration:					
1.	F. laborer	no	poverty	11	4
2.	Public servant	no	death	1	1
3.	F. laborer	no	death	2	2
4.	F. operator	no	death	1	1
5.	F. laborer	no	death	5	3
6.	no occupation	no	death	0	0
7.	F. laborer	no	death	2	2
Annexation:					
8.	Public servant	no	convenience	4	1
9.	F. laborer	no	convenience	3	1
10.	F. operator	no	convenience	1	1
11.	F. laborer	no	marriage	3	1

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 farm operators who hired regular laborers did so because
464 full utilization of the effort of all the family workers was not adequate. This assumption would seem to be reasonable in view of the rather high cost of hiring such laborers. It was concluded, then, that some farms in the community were below optimum size for the number of workers in the family.[11]

243 This condition of farm under-employment is our basic
464 assumption in discussing rent rates in Bangchan. With an
161 increase in population in an area where farm operating is
178 the core around which other less important occupations rotate, it may be reasoned that the aggregate demand for rice land in 1952 was at least as high as that in 1948 if not greater. As for the extent of under-employment of farm labor, it is interesting to note that the number of families directly engaged in rice farming, the farm operating and farm laboring families, was 256 in 1949 and 254 in 1953. With a constant supply of land (in the popular sense of the term), this more or less constant number of families directly engaged in rice farming indicated that the extent of farm under-employment in 1952 was just about the same as that in 1948. Although the average size of the family was found to be slightly smaller in 1953,[12] that slight decrease was certainly not large enough to materially affect the situation.

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11. Sharp et al., op. cit., p. 158.

[162] 12. The average size of the family was 5.7 in 1949, and 5.5 in 1953.

369 It should be noted also that once a villager has moved
167 into Bangkok he will be deprived of the privilege to
162 acquire free food from nature -- an important economic advantage of living in the village which counts heavily when emigration to the city is being seriously contemplated.

427 It is seen, then, that the demand for land on the
423 part of land-thirsty operators -- the tenants, part-owners, and owner-operators -- was high and inelastic, while the demand for land on the part of land-saturated landlord-operators was low and elastic. Since the combined demand of all landlord-operators constituted only a small fraction of the total demand (Table 20), it may be safely concluded that the aggregate demand for land in Bangchan at the period we are dealing with was high and inelastic.

311 Let us now consider the supply side of land. For
423 the purpose of this discussion we may differentiate four
427 sources of supply of a total of 6,722 rai considered to
463 represent our natural Bangchan area. They are:

1. Land-thirsty operators -- all for implicit rent.	
a, Owner-operators	2,131 rai
b, Part-owners	227 rai
c, Tenants	225 rai
Sub-total	2,583 rai
2. Land-saturated operators (landlord-operators).	
a, For implicit rent	517 rai
b, For explicit rent	683 rai
Sub-total	1,220 rai
3. Local non-operators -- all for explicit rent.	
a, Traders	189 rai
b, Investors	149 rai
c, Public servants	165 rai
Sub-total	503 rai

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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125 it would deny any benefit that would arise out of continuous observation of each farm and farm operator through a series of years. With a view to retaining this benefit of continuity, we decided to adopt the first method -- that,is, we included in the sample the ten new families branching out from the original sample-families. Thus, in our subsequent study in 1952 the size of our sample became 106 farm operating families.

There were, however, some types of data which involved records in the past four or five years, such as harvested crop during 1948-52, accumulation of wealth, major receipts and expenses during the same period. In these cases we naturally used the continuing sample of 96 families.

*243 Composition of Farm Operating Families

• 162 Table 31 shows that the size of the farm operating
592 family decreased from 6.3 in 1948 to 5.7 in 1952. It also shows that, while the number of adults remained more or less constant, the decrease in the size of the family was due almost entirely to the decrease in the number of the young from 2.5 in 1948 to 2.0 in 1952.

*243 A possible explanation for this lies in the economic
162 consequence of the war. Strict government control of the
592 price of rice and of the internal movement of paddy during
182 the war and also in the immediate postwar period has so
178 adversely affected the economic condition of rice farmers
[582] that marriage has often been postponed. In cases where

[TEXT CONTINUED ON PAGE 182]

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TABLE 31

COMPOSITION OF FARM OPERATING FAMILIES
Bangchan, Thailand, 1948 and 1953

Year	Number of Families	People Included			Average Family Composition		
		Young*	Adult**	Total	Young*	Adult**	Total
1948	104	256	398	654	2.5	3.8	6.3
1952	106	215	391	606	2.0	3.7	5.7

* Age 14 years and under.

** Age over 14 years.

7: Jānlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 162 178 592 182 [582] marriage did take place, the couple were usually obliged to stay with the parents of either the husband or the wife. It is reasonable to believe that the nascent period was prolonged during this period of hard times. Thus, the family size tended to be larger than it normally is. This is especially true for rice farming families where there always is some work for members able to work. It is not surprising, then, that the average size of farm operating families in Bangchan was 6.3 in 1948 while the average size of all families was 5.7 according to the 1949 census. A steady rise in the price of paddy after the war has improved the economic condition of rice farmers. The increased income, however, had to be spent first on replacement of equipment and housing facilities which had been long overdue. [792] Finally, the bumper crop of 1948 with an ever-increasing price put an end to farm misery, and the following dry season saw a record number of newly ordained priests and [591] merit making activities. From then on proportionately more marriages took place and there were fewer economic obstacles to keep newly wed couples from starting out independently. The combined effect of termination of prolonged nascent period and freer establishment of new families was that the size of the farm operating family was considerably reduced.

16 It may seem strange that more marriages should bring about a drop in the number of the young from 2.5 per family in 1948 to 2.0 in 1952. By the young is meant, however,

243 except for the question of some of these adults being tied
178 up with other jobs. Nevertheless, when limited job oppor-
592 tunity was considered, it was unlikely that this last
128 factor would appreciably affect the estimate. It was assumed, therefore, that 313 out of the total of 391 adults in our 106 sample-families, or an average of 3.0 persons per family, were working members in 1952.

[162] Table 32 shows that the size of farm operating families in 1952 ranged from one to thirteen, averaging 5.7, the median being 6. Eighty-six of these 106 families, or 81 per cent, had a size between three and eight.

Training for Farm Work

243 Every adult in the village of both sexes is expected
462 to be able to do farm work. This includes the ability to perform the following jobs.

Minimum standard: Every step of rice production except uprooting of rice seedlings which is performed only by adult males (for various steps of rice production, see the chapter on farm technology); digging and mounding; paddling and rowing; hauling except a heavy load like gas engines; tending the buffaloes and livestock; gardening; pounding of cargo rice for consumption during the work season; fishing by line-and-hook, dipping net, and trap; food preparation.

In addition to the minimum standard listed above for both male and female adults, male adults are expected to be able to perform the following jobs: Uprooting of rice

[TEXT CONTINUED ON PAGE 187]

TABLE 32

DISTRIBUTION OF FAMILY SIZE 106 FARM OPERATING FAMILIES
Bangchan, Thailand, 1953

*243
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Family Size	Number of Families
1	2
2	4
3	15
4	16
5	17
6	12
7	14
8	12
9	8
10	4
11	1
12	0
13	1
Total	106
Mean size	5.7
Median size	6.0

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 50 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygynous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap. V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-141). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

761 Since only meritorious children were born into the
775 "right family," they were helpful and so easy to raise. The
593 easiest to raise were reincarnations of babies deceased in
829 the mother's present life. "A girl of three died. Her father
782 dreamed he was at her coffin. She asked for water which he gave her, then brought her home. Months later a boy was born, so easily raised up that people knew it was a reincarnation of that girl." Here amiability and the change to male sex demonstrated merit. In another tale, "a woman lost many babies at birth. Her husband, thinking it was the same child trying to be born to that mother, marked the forehead of the last deceased baby. His surmise proved correct, because the next baby born had this mark on its forehead."

This assumption that a woman's children were born to her over and over led to a measure of control over the cooperativeness of the child in the womb. A child trained to "good habits" became a meritorious adult who, when reborn, would of course "help" his mother in childbirth. It was advisable to set one's own child into paths of proper behavior, for he could be born again to a descendent, and in all likelihood to oneself.

On the other hand, families were not closed groups. "Like a leech that sticks in one place, then goes to stick somewhere else, so a deceased person may be reborn somewhere else," said a priest. The marriage blessing stated, "May angels, not criminals or beggars, reincarnate as your children." Thus was explained why upright parents might have a disobedient, roaming child. He had roamed into a new family which perhaps he had met during a pleasant casual visit to them in another life. If he did not stay home to make merit with his present family, a wayward child would roam out of it as easily as he came in. Here was the ultimate danger in visiting around too much.

761 Because all individuals lacking in merit died off at
593 birth, some of whom because they got into the wrong family,
782 a selective process continuously weeded out the extremely non-meritorious so that those who were born usually survived. In fact, Hauck's figure of 90.6 live births
• [163] (1956:33), the percentage of total pregnancies shows how many meritorious babies were born to the right family!

852 The Winnowing Ceremony
844
774 This ceremony, described in Dĕan's tale, was usually performed shortly after delivery, though it might occur anytime during the first three days of a baby's life. The child, placed on the tray (twins were laid together or seperately) was claimed by the mother or the father, who

severe injury, such as bruising by excessive pressing, or even in hysteria pulling the child to pieces in their effort to get it out.[66] [759] [845]

Secondly, a midwife offered success, not only as proof of competence, but as a substantive asset. It will be remembered that the initial shape of an event set the invariable pattern for its subsequent occurrences. Thus a parturient was virtually certain of successful childbirth if she called on a person who had the habit (khôei) of success. It could not turn out otherwise. We have also seen that these successful midwives were good nourishers (liang dî). A new mother wanted to associate herself with such a fortunate sequence. Once established, a midwife's reputation was not unduly tarnished by the loss occasionally of a mother or baby. She might explain, "The woman did not do as I said," or "I was not given permission to do what I could have done, for her family feared she would be even more hurt by my putting my hand into the vagina." Death was, of course, only due to the running-out of the deceased's merit. [761]

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66. To give something of the measure of their skill: if the feet of the baby appeared first, one man "straightened the legs by hand inside, held the chin carefully as the head came through," while another said, "Do not press or reach into the vagina. Let the baby come naturally." If an arm came first, or it were a breech presentation ("the baby is turned over"), the procedure was to "pull and press lightly," but it was conceded that neither the mother nor child could be saved. Expulsion of the placenta was frequently difficult. "It may take 2 hours or stay in 2 days or more. Some die when it is left in, but some do not." The technique of removal was to give a medicine, press, pull with the hands rubbed with alum for a better grip, with the woman in a crawling position. Some reached into the vagina to locate it. One woman had analyzed her practice so as to know when to expect trouble: namely, in the later pregnancies and childbirths, i.e. the sixth and seventh, say, rather than in the early ones during a woman's younger years.

As to mortality, one "professional" man estimated 30 deaths of babies out of 230 deliveries in 50 years. Hanks (1956) reported 90.6% live births (pp. 32-33), 7% of the babies dying in the first month, 11% within the first year (pp. 39-41). One should remember that the professionals had a greater proportion of difficult cases. One woman had delivered over 100 babies and "all lived." [165] [163]

124 Information on growth in height and weight is based on observations of 71 children, most of whom were weighed and measured 6
125 or 7 times. For 30 of these children, observations were made both before and after weaning.

HEALTH AND GENERAL CARE OF MOTHERS

145 Information obtained on menstrual history of girls and women in Bang Chan has been reported previously (Hauck, 1956). The median and modal reported age at menarche was 15 years with a range from 13 to 19 years.

• 161 Most married women in Bang Chan had children, and of 438 pregnancies reported by 84 mothers, over 90 per cent resulted in live births (Hauck, 1956).

163 Clinical History and Complaints During Pregnancy.

164 Most of the women interviewed reported no history of disease which might affect, or be affected by, nutritional status.

Four women had a history of beriberi; 3, a history of malaria; and one had active tuberculosis of which she later died. In relation to the current pregnancy, 6 women had minor complaints such as nausea in early pregnancy, faintness, and leg cramps. The physician considered these as probably physiological. Of the 4 women with more serious complaints, one who said she had pain in the abdomen and legs and difficulty in walking had manifest beriberi when seen a few days after delivery.

144 Delivery and Care of Mothers After Childbirth.

146 Information was obtained from 49 mothers concerning
125 delivery and care after childbirth. For 43 of these women, ages reported were as follows:

Reported Age (years)	Number of Mothers
20 or under	7
21-25	11
26-30	12
31-35	6
36-40	6
over 41	1

The mothers interviewed had borne from 1 to 13 children. For 8 of them, this was the first child; but 25, a majority,

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among children in Bang Chan is not known. One thing which residents of Bang Chan appeared to have in common with other populations which have been reported to be relatively caries free, was low intake of sugar, particularly in a form which would be apt to adhere to the teeth.

Adults up to 44 years of age, in the random sample, retained most of their teeth. A few adults in Bang Chan have had missing teeth crowned. More sound than missing teeth were found to be crowned, however, i.e. in this community a crowned tooth appears to have cosmetic value.

A variety of serious illnesses were found to occur among residents of Bang Chan. As a rule, local traditional practitioners were consulted first, but most persons reported to have been seriously ill eventually received treatment by outside practitioners with some training in modern medicine.

The majority of mothers in childbirth were attended by local traditional midwives, but a few difficult cases were taken to the government Health Center in the nearby town of Minburi, where a trained midwife was in attendance.

Of 438 pregnancies reported by 84 mothers, over 90% resulted in live births. Of the 397 living children born to these women, 81% survived at the time of interview. Within the first month of life, 7% had died, and a total of 11% died within the first year. Tetanus was prominent among causes of death of infants under one month of age. Infantile beriberi caused some deaths among older infants. In a majority of cases, the cause of death of infants could not be clearly identified, but fever, debility and convulsions were the symptoms most commonly described.

Almost half of the persons examined for possible signs of nutritional deficiency, 46% of the school children and 47% of the family sample, were free of such signs. The remainder, slightly more than one half of persons examined, had from 1 to 7 signs each. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Signs most often noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine in the diet. The only clearly defined deficiency disease observed among residents of Bang Chan during the field study was beriberi.

Hemoglobin values of 11.5 g or less per 100 ml. were

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Table 13

163 Relation of Reported Number of Pregnancies[1] to Years of Marriage During the Child-bearing Period, for 77 Women in Bang Chan

Years Marriage During Child-bearing Period	Number of Women	Range, Number of Pregnancies	Total Pregnancies	Average No. Pregnancies Per Woman
2 or less	10	1-3	13	1.3
3-4	7	1-3	13	1.9
5-6	6	2-3	16	2.7
7-8	3	2-5	9	3.0
9-10	7	3-5	27	3.9
11-15	15	2-9	74	4.9
16-20	10	1-12	66	6.6
21-25	6	3-13	52	8.6
26-30	5	2-12	35	7
31 or more	8	3-14	52	6.5
Total 21 or more	19	2-14	139	7.3

1. 2 women, married 10 and 21 years respectively, who reported no pregnancies, were omitted from the tabulation. A few others could not be included because of inadequate information.

All but one of the 84 mothers surveyed had living children at the time of interview. One woman, aged 23, had been pregnant 5 times in 5 years of marriage, with 1 miscarriage, 1 death in utero, and 1 stillbirth. The 2 children born alive to this mother were considered by the interviewing physician as probably premature, and were classified as dying because of "debility." Of a total of 438 pregnancies reported, however, 397 or over 90% resulted in live births (Table 14).

A [see p. 33-Analysis]

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Table 14

Relation of Live Births to Total Pregnancies as Reported by 84 Women in Bang Chan

	Number of mothers	Total cases	Percentage of total pregnancies
Pregnancies	84	438	100
Miscarriages	23	33	7.5
Deaths in utero	4	4	0.9
Stillbirths	3	4	0.9
Live births	84	397	90.6

Illness and Injury

Medical Services Available to Residents of Bang Chan. - Within the community of Bang Chan, about 8 traditional "doctors" and 15 traditional midwives practiced their skills. Three of the traditional practitioners were Buddhist priests. The others earned their living chiefly by farming. In addition, two or three persons who were skilled at massage, and at least one medium had some reputation for success in treating sick persons.

The nearest source of trained medical assistance was Minburi, the market town about 3 miles from Bang Chan. The staff of the Minburi Health Center, which was under Thai government auspices, included a first-class doctor, a dentist and a nurse-midwife. One or two beds were available for the use of critically ill patients until they could be taken to a hospital in Bangkok. For less critical illnesses, the second-class doctors who operated private clinics in Minburi seemed to get more patronage from residents of Bang Chan than did the doctor at the Health Center.

The majority of women in Bang Chan were delivered at home, by the traditional midwives. During 1952-53 we learned of two pregnant women who planned to go to the Minburi Health Center for delivery, but time did not permit them to carry out their plans. Some cases of prolonged or difficult labor were, however, brought from Bang Chan to the Health Center, where a labor room and a delivery room were available in a separate wooden building. Facilities were very simple. Patients lay on

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speeded up with heat to the point of blasts. The strength of the contractions of labor was in direct proportion to the speed of the winds' circulation. The great pushes of the expulsive lom beng "broke down" the sac with the amniotic fluid (nam thun hua: water-that-supports-the-head-of-the-child), and forced out the child, water, and the placenta.

After the child was out, the mother was cold, weak, and exhausted. Her uterus was full of harmful fluids. Heat was needed more than ever not only to warm her but to give the winds "the power and push" to drive out three undesirable birth-waters: "The blood that looks like ordinary blood but is bad,"; the amniotic and abdominal body water (nam khram:refuse water); and the pale, viscous, repugnant "fish-water" (nam khao plā). Therefore, a hot fire was built, close to which the mother lay (yu fai), turning all sides of her body towards the flame. She bathed in or drank hot or warm boiled water (nam suk: cooked, or ripe, water). She ate safe foods like rice and dried fish,[1] and kluai nam bananas, continued to take alcoholic medicines of the hottest sort, such as Snake Brand, and occasionally might be given cobra or other hot curries to eat. For a first-born, a woman stayed eleven or nine days by the fire (always an odd number), with stays shorter for each successive child, but never less than five days.

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[372]
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Complications sometimes developed because of inadequate control of the heat. A "headache and a hot body" indicating "stagnation of the blood and the fishy-smelling-water," was cured by a heat-producing decoction. Rashes often occurred, causing small boils that might develop into sores. To soothe these, turmeric was painted on. In the most dangerous cases the heat "drove the bad blood to the heart, to the face or belly" where it was recognized by serious swelling, with resulting madness or death. In fact, one mō felt that the

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31. The reasons for rejecting fresh fish during pregnancy ("lest a creature of hell be born") would not hold after parturition. Yet fresh fish was rejected then too "as bad for the womb." One suspects that the less odorous dried fish was substituted so that the odor of fresh fish, like air-borne, incompatible food, would not affect adversely the "fish-smelling" post-partum discharge (nam khao plā). In Hauck's list of foods "bad for mother during the post-partum rest," the reasons are apparent: Sour tastes did not dry out the body, but built up water; egg was too cooling; jackfruit brought in wind; glutinous rice and the sugar of sweets "wet the uterus;" fruits did not give strength and were excessively cooling (cf. Hauck,1959:18).

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Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

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Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire. For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

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Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous medical protective needle. [755]

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"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments, modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1955:185-191). It was sometimes better not to claim competence outside these customary lines. One man said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease. [164]

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Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "woman are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

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Average intakes of riboflavin were estimated to be about a third, or less, of the allowances. Estimates of calcium intake were, on the average, only 20% of the allowance for Group A, and 30% of that for Group B. Although the calcium allowances were thought to be conservative, estimated requirements based on calcium balance experiments are believed by some investigators to reflect usual intake rather than need, and the extent to which man may adapt to a low calcium diet is still undetermined. Among residents of Bang Chan, no evidence was noted other than short stature and small bones, which might suggest a calcium deficiency.

The vitamin A value of diets of both Groups A and B appeared to be low. Clinical signs possibly associated with vitamin A deficiency, i.e. xerosis and phrynoderma, occurred among residents of Bang Chan (Hauck, 1956), and as would be expected from the method of selection of the two groups, such skin signs were more prominent among members of Group A than Group B. On this basis one would expect the vitamin A intake of Group A to be less than that of Group B, whereas the reverse appeared to be the case on the survey days; but the higher estimated vitamin A value for the diets of Group A than Group B may not represent a real and consistent difference. The yellow (2)sa-(5)na flowers, for which no nutrient values were found, were used rather liberally by some families in Group B at one season and may have contributed vitamin A value. Moreover, owing to unavoidable changes in the plan for alternating visits to the two groups of families, those in Group B were visited more often when the level of water in the canals was low and the leafy water plants were not available. The unusual intake of a large amount of yellow sweet potato by one family in Group A on one survey day may also have tended to distort the picture. Families in Group A, however, used substantial amounts of sweet basil leaves, whereas in Group B, this herb was used for seasoning only.

The estimated amount of thiamine available per capita, before cooking, was 73% of the estimated allowance for Group A and 79% for Group B. Since over four-fifths of the thiamine content of the foods used by each group came from rice, and the thiamine loss when rice is cooked as it was in Bang Chan has been estimated as 75% or more (Tuangraksatve and Srisukh, 1955) the actual per capita intake of thiamine must have been below the value of 0.23 mg. per 1000 calories which the Food and Nutrition Board, National Research Council (1953) considered to be the minimal requirement for adults. According to Nicholls (1951, p. 87), a ratio of Thiamine: Non-fat Calories of 0.3 - 0.35 is borderline and too low, and ratios below 0.3 are associated with beriberi-producing diets. That the diets of some of these people, as eaten, were in fact dangerously low in thiamine, is attested by the occurrence of beriberi and history of beriberi among them. Of the 15 persons, 20 years of age or older in Group A, 7 had knee jerk

146 absent, and in 6 of these, ankle jerk was absent also. In
• 164 Group B, the apparently better nourished group, one adult and two school boys had knee jerk only absent. In Group A, Household 12, the father, mother and 21 year old son all had both knee jerk and ankle jerk absent. The son was diagnosed by the examining physician as having frank beriberi at the time of the medical inspection. In Household 2, the father and 23 year old son had both knee jerk and ankle jerk absent, but the mother had no signs of thiamine deficiency. In Household 67, mother and father had both knee jerk and ankle jerk absent. The mother had lost 3 of her 6 children when they were 3 or 4 months old, with symptoms such as convulsions and voiceless crying, suggestive of infantile beriberi. When the third child died, the mother had symptoms of beriberi, and the physician who conducted the medical inspection considered the death of this child to be due to infantile beriberi. Clearly the thiamine content of diets of some of the families studied was inadequate to meet their needs under varying conditions of activity and stress. Beriberi was the one frank deficiency disease observed while these studies were underway in Bang Chan (Hauck, 1950).

146 Fat provided only about 9 to 10% of the calories. Coconut oil contains only about 0.5% of linoleic acid (Anantakrishnan, et al., 1949), but the essential fatty acid content of the diet as a whole was not estimated.

146 In summary, although the estimated nutrient intakes of
164 Group B were in general more favorable than those of Group A, the contrast between the two groups was not striking. Perhaps we should have anticipated this from the fact that the groups did not present a clear contrast in apparent nutriture. In Group A, 19 of the 30 persons examined had a total of 36 possible signs of nutritional deficiency. In Group B, 8 persons had a total of 9 such signs. Judging by both the apparent nutriture of the household members, and by their estimated nutrient intakes, the diets of both groups were in need of improvement.

146 Contribution of Food Groups and Certain Common Foods to the Nutritive Values of the Diets

[illegible] Contribution of Food Groups and Individual Foods. - The percentages of the total calorie and nutrient intakes provided by various food groups for households in Group A and B are shown in Table 12.

146 Rice and other cereals. - Rice was the staple food,
262 which provided over 4/5 of the calorie intake and more than half of the protein for both groups. Much of the difference in calorie and protein intake of the two groups was due to the greater rice consumption of Group B. Rice was also the

[Text continues on page 72 --- Analyst]

[196] [282] higher caloric intake in these periods. In general, the level of calories, phosphorus and thiamine and to some extent the protein varied with the rice consumption. The greater consumption of fish when fish ponds were drained during Round IV, accounted for the relatively higher protein content of the diets of both groups at this time, even though caloric intake was not at its peak. During this period, animal foods provided 45 and 53% of the total protein intake of Groups A and B respectively, whereas for the year as a whole, 37 and 40% of the protein intake of these groups was of animal origin.

The relatively high vitamin A and C intakes of families in Group A, during Round I as compared to other periods, was associated with a higher consumption of green leafy vegetables, and the use of sweet potatoes in quantity by one family. During Round II, families in Group A had few green vegetables, and their average intake of vitamin A was very low. The use of papaya, obtained as a gift, by one family in Group B during Round II raised the average ascorbic acid intake for this group substantially. Better average intakes, by one or both groups, of vitamin A, thiamine, riboflavin and calcium during the first Round, were not such as to provide liberal body stores to be called upon when food supplies of these nutrients were low.

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SOME RECOMMENDATIONS FOR IMPROVEMENT OF DIET AND NUTRITURE AMONG RESIDENTS OF BANG CHAN

[166] Attempts to improve nutritional status in Bang Chan should be directed both toward increasing the supply and intake of certain nutrients and toward improvement of sanitary conditions so that intestinal infestation, diarrhea and other related illnesses will not lead to needless loss or increased requirement of nutrients.

Solution of the related problems of disposal of human excreta and provision of a year-round safe water supply are in the province of the sanitary engineer. Intestinal parasitism [164] [312] was common, but little can be done through treatment of individuals so long as the water supply is contaminated. [271] Rain water was preferred for drinking, so provision of adequate and sanitary storage for rain water, coupled with sterilization of water from ponds and canals when rain water is not available, would do much to ensure safe drinking water. [846] [253] The custom of giving mother and infant boiled water only, during the post-partum rest period, provides a starting point for extending use of boiled water to other ages and conditions.

Growing other kinds of green and yellow vegetables should be fostered. Although vitamin A value and riboflavin content appear to be critical, in choosing vegetables to be stressed, specialists in agriculture should consider greens with high calcium and low oxalic acid content also. A variety of edible leaves of trees were used by a few families; some used sweet basil as a vegetable rather than just a seasoning; pumpkin and sweet potato were familiar, but less often used than would be desirable. More green or yellow vegetables which mature when canals are low and aquatic plants no longer available, would be especially good. If increased production by most households[1] is not practicable, a few of the more successful gardeners might be persuaded to produce vegetables and fruits which would help to bridge the gap between rainy seasons. Mushrooms, which can be grown readily, would provide a good source of riboflavin when leafy vegetables are in short supply. The boom-and-bust experience in mushroom culture (See Appendix A, pp. 101-102) might, however, make its revival as a source of healthful food for home use more difficult than if the villagers did not think of mushrooms as a cash crop for which the market failed.

Eating more fruit would help to tide over the dry season. Fruits were commonly used as snacks, not at mealtime, hence snacks of fruit should be encouraged for adults as well as children. Bananas grew in all gardens and were available the year round. The (4)nam (4)waa variety, which was used in ceremonies, and considered safe for all, should be stressed. More families could grow pineapple, which is relished both raw and in curries. Mango and papaya, fruits of outstanding value for both vitamin A and ascorbic acid, would be excellent, but the idea that growing papayas is "unlucky" must be taken into account. If a few of the more thoughtful and forward-looking farmers could be persuaded to start papaya trees, even though they were not willing to plant them near the house, the practice might spread in time.

On the average, the Bang Chan diet did not seem to be very deficient in protein, but distribution is not proportional to need, and protein deficiency may be in part responsible for periods of weight loss, or failure to gain, so common among infants and children. The presence of other essential nutrients in animal foods is important also. If, the local supply of fish is indeed diminishing, efforts to increase it through pond culture should be continued. Abandonment of tilapia culture in Bang Chan, after about one-third of the families had tried it, (Appendix A, p. 101) suggests that not enough of the right kind of help was given

1. Tenant farmers may not be permitted to enlarge gardens by mounding at the expense of rice fields.

SUMMARY

Information on health, care, and diet of mothers and small children in Bang Chan, Thailand, was obtained primarily by interview, although some direct observations were made. In general, three areas of inquiry were included in this study: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project.

In all, 66 mothers of young children were interviewed. Information on diet during pregnancy, postpartum, and lactation was obtained from women who were either in the stage under discussion or had only recently passed through it.

The description of child feeding practices is based on records obtained concerning 57 children from birth to two years of age, a majority of whom were visited from 5 to 7 times.

Information on growth in height and weight is based on observations made on 71 children, most of whom were weighed and measured 6 or 7 times. Observations were made for 30 of these children both before and after weaning.

During pregnancy most women in Bang Chan continued to eat as usual. A few expressed cravings for certain foods, and a minority thought some kinds of food should not be eaten during pregnancy.

During the postpartum rest period most women ate a very restricted diet. Rice and fish, with salt, were the foods considered by all informants to be appropriate for this period.

As a rule, diet during lactation, after the mother resumed her usual work, was the customary family diet. A minority of informants mentioned foods which should not be eaten by a nursing mother.

Evidence of the need to improve diets in this region was provided by the occasional occurrence of beriberi or the history of beriberi among mothers as well as by medical inspection and family dietary studies.

Breast feeding was the rule in Bang Chan. For a majority of infants observed, breast feeding was continued into the second year, and some were breast fed for more than two years. Few received animal milk after weaning.

124 Information on growth in height and weight is based on observa-
125 tions of 71 children, most of whom were weighed and measured 6 or 7 times. For 30 of these children, observations were made both before and after weaning.

HEALTH AND GENERAL CARE OF MOTHERS

145 Information obtained on menstrual history of girls and women in Bang Chan has been reported previously (Hauck, 1956). The median and modal reported age at menarche was 15 years with a range from 13 to 19 years.

161 Most married women in Bang Chan had children, and of 438 pregnancies reported by 84 mothers, over 90 per cent resulted in live births (Hauck, 1956).

843 Clinical History and Complaints During Pregnancy.

• 164 Most of the women interviewed reported no history of disease which might affect, or be affected by, nutritional status.

Four women had a history of beriberi; 3, a history of malaria; and one had active tuberculosis of which she later died. In relation to the current pregnancy, 6 women had minor complaints such as nausea in early pregnancy, faintness, and leg cramps. The physician considered these as probably physiological. Of the 4 women with more serious complaints, one who said she had pain in the abdomen and legs and difficulty in walking had manifest beriberi when seen a few days after delivery.

844 Delivery and Care of Mothers After Childbirth.

846 Information was obtained from 49 mothers concerning
125 delivery and care after childbirth. For 43 of these women, ages reported were as follows:

Reported Age (years)	Number of Mothers
20 or under	7
21-25	11
26-30	12
31-35	6
36-40	6
over 41	1

The mothers interviewed had borne from 1 to 12 children. For 8 of them, this was the first child; but 25, a majority,

853 fish and vegetables, when asked if they did anything to stimulate milk secretion. Other preparations, each mentioned once or twice, were cobra curry, fried (3)หนู (1)chaaj flower, pork soup with (3)หนู (1)chaaj leaves, dried peas and peppers cooked in palm sugar syrup. Some of the medications used were reputed to stimulate milk flow. Three women spoke of peacock brand medicine and one of a Chinese medicine in this connection. With respect to the Chinese medicine, another informant said she took it "to remove the serum which interferes with milk secretion." One midwife put herbs on her daughter's breast and expressed and discarded the "early milk" which was considered bad for the baby. No association appeared to be made between putting the baby to the breast and stimulation of milk flow.

96 312 Drinking water. - Information concerning sources of drinking water used by the mothers was obtained from 46 mothers of young babies. Of these, 20 used canal water, 23 rain water, and 3 used either one. In general, there was a relation between season and source of water used. Most of the mothers whose babies were born between March and October drank rain water, whereas from November to February a majority drank canal water. Some families had enough water jars to preserve rain water for much of the dry season, whereas others had few or no jars and, therefore, could save only small amounts of rain water on a day-to-day basis. In all instances, the water, whatever its source, was boiled for the mother during the postpartum rest period. Forty-six women said they drank the water hot; one said it was warm. One popular traditional midwife said, however, that if the mother had her baby in the hospital, use of boiled water for drinking and bathing was not necessary.

CONDITION AND CARE OF BABIES AT BIRTH AND IN EARLY INFANCY

125 All information to be reported concerning condition and care of babies at birth and in early infancy relates to infants who were under one year of age when first visited. Thirty infants were seen when they were under 3 months of age.

Condition at Birth.

164 165 The condition of the baby at birth was generally described as satisfactory. One infant who died on the third day, before we saw the mother, was said to have cyanosis, failed to cry at birth, and needed to be "helped" for about one-half hour afterward. Three infants had congenital defects: umbilical hernia, inguinal hernia on the right side, and hemangioma on the right groin.

One infant had congenital stridor when seen by the physician[1] at 3 months, but the difficulty in breathing had disappeared spontaneously before the baby was next visited at 3 1/2 months of age.

Illness in Early Infancy.

One infant that died on the fifth day was seen when one day old, at which time neither mother nor physician made any adverse comment on its condition. The mother, who was not living with her husband, returned to her work outside the village a week after delivery, and we were unable to talk with her again. So far as we could learn from neighbors, this infant had none of the symptoms concerning which we routinely inquired; namely, convulsions, vomiting, diarrhea, or fever.

A third infant in this series died when he was nearly 2 months old. At 13 days of age, when first seen, this infant had white patches on his tongue which were diagnosed as moniliasis. When the physician saw the child again at 6 weeks of age he made no adverse comments on its condition. Emotional reaction to the infant's death was such that we were unable to get a clear description of events which led up to it from either parents or neighbors.[2]

Three infants had skin infections when seen within a few days after birth. The physician commented that skin was more susceptible to infection when moist than dry and that the babies had become very warm. The weather was hot, and babies were bundled up and/or were near the fire. He gave directions for keeping the skin clean and dusting with sulfa powder.

No deaths from tetanus occurred in this series, although infantile tetanus was prominent among causes of death of infants under one month old (Hauck, 1956).

Medicine Given to Babies During the First Few Days of Life.

On this point, information was obtained concerning 36 of 40 babies seen before they were 6 months old. Thirty of these were given medicine, sometimes more than one kind. Most of the

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1. A physician was present at all interviews with pregnant women and mothers with very young infants.

2. Although the mother had children by a previous marriage, this was the first child of this union, born after the parents had lived together for 9 years. The mother was 41 years old.

Exposure of Infants to Sunlight.

854 Even during the rainy season sunshine was usually abundant in Bang Chan, but taking a baby out of doors at an early age was generally thought to involve some risk. Many houses had low or wide eaves, and an infant was usually kept in a cradle in the house where sunlight could not penetrate. When old enough to hold up its head while sitting astride an older person's hip, the infant might be carried about the compound by parents or older siblings. As the question was worded ("When did you take the baby outside the house?" or "At what age did you take the baby with you when you went out for pleasure?") the answer did not mean that the baby was taken out with any degree of regularity at the specified age. Most of the babies in this series had been taken outdoors by the time they were 3 months old, but 4 were a year or older when first exposed to [144] sunshine. Nevertheless, the physician found no evidence of rickets among the infants he examined.

One informant, a school teacher's wife, said she thought that taking the baby into the sunshine was not harmful; in fact she believed it made the baby stronger than usual. She thought, however, that too much exposure to sunshine might "bring cold into the baby" and she spoke of the beret as a protection against this.[1] In Bang Chan, as otherwise naked infant might wear a beret when being taken out of doors.

MATERNAL DIET

Diet During Pregnancy.

843 242 [125] Of 31 mothers who furnished some information on diet during pregnancy, 17 were pregnant when interviewed, and the remainder had young infants, in most cases under 3 months of age. Eighteen of the interviews were based on schedule 4 (Appendix p. 83) and provided fairly detailed information on the kinds of foods eaten. Other informants gave more general information, such as foods craved or disliked.

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[171] 1. Wellin (1956) mentioned the small woolen cap made or bought by mothers in the Valley of Ica, Peru, for the infant to wear. The cap was put on soon after birth and was worn, off and on, for many months. The function of the cap was to prevent the entrance of cold via the fontanel, which was defined as a particularly vulnerable point of entry. Wellin noted that all infants he saw in maternity wards in the Valley of Ica wore woolen caps.

In some age groups fairly large numbers of children were observed and in other groups relatively few. Most of the groups up to 4 1/2 years of age with whom the children in this series could be compared included fewer than 30 individuals. The numbers of boys and girls measured at each age were about the same.

Dr. Amara Chandrapanond (1957) reported the mean heights and weights of 20 babies who were weighed and measured at monthly intervals over a period of a year. She did not report values for boys and girls separately, but, in general, at each age these fell between those for males and females as reported by Dr. Mostri (1939).

In figure 1[1] the median heights of boys and girls in Bang Chan together with the number of individuals who were measured at 3, 6, 9, 12, 15, 18, or 21 months are shown in comparison to the height curves constructed from values reported by Dr. Mostri (1939). Corresponding median weights are shown in figure 2.[2] Although the groups are small, the tendency for both height and weight of young children in Bang Chan to be below that of children attending a well baby clinic in Bangkok is clear.

One should note, however, that Dr. Mostri characterized the children he observed as "free from disease", whereas some of the children of Bang Chan had colds, skin infections, or other minor disorders which might have affected their weights. Such disorders are very common, and we do not know whether or not they disqualified children attending the Well Baby Clinic from inclusion in the series for which heights and weights were reported.

Graphs of height-age and weight-age were plotted for each child in this study and for small groups of children who were observed regularly over a year or so at the same ages.

Most of the children increased in height in a fairly regular fashion, the slopes of their height curves being about the same as the curve drawn from Dr. Mostri's[1] values, although there were individual variations in this. The height curves of many more children of Bang Chan were below than were above the curve drawn to Dr. Mostri's values. Of the 36 girls measured, the height curves of 6 were above, 6 were about the same as, and 23 were below the curve drawn to Dr. Mostri's values for girls. Of the 36 boys measured, the height curves of 9 were

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1. Mean values reported by Dr. Mostri were plotted at 1-month intervals for the first 11 months, then at the midpoint of the intervals he reported. For example, measurements reported for children 1 to 1 1/2 years of age were plotted at 1 year 3 months.

FIGURE CONTINUED ON PAGE 40 b.

4 [see p. 39 - Analysis; 2 [see p. 40 - Analysis]

about the same as the 3rd percentile of male infants in the U.S.A., and from one year on the values fell below the 3rd percentile. Norms for American children are inappropriate for use with Thai, but an increasing lag in growth such as we observed may be a matter for concern.

Weight Loss and Failure to Gain. - Many of the children in Bang Chan failed to gain or actually lost weight over periods of time. This occurred frequently between two weighings which were 1 to 4 months apart and occasionally when a child was reweighed after an interval of 6 months. In some children loss of weight or failure to gain extended over two weighing intervals. Such loss or failure to gain may be an important sign of malnutrition (Jelliffe, 1955).

Relation to age. - The ages at which the children experienced weight loss or failure to gain were determined by inspection of the weight-age graphs. As shown in Table 17, a period of loss of weight or stationary weight was noted for only one child below the age of 6 months. Between the ages of 6 and 12 months, a time when healthy infants usually continue to grow rapidly, such periods of weight loss or failure to gain for intervals of 1 to 5 months between weighings were observed in almost 40 per cent of the infants. Dr. Mastri (1939) and Dr. Amara (1957) did not discuss the growth of individual infants, hence we do not know to what extent failure of some infants to gain weight may account for the depressed growth, on the average, which both of these observers reported for infants of this age.

During the second year of life children may be expected to gain weight less steadily, but more than 40 per cent of the children of this age in Bang Chan lost weight or failed to gain over intervals of 1 to 7 months.

After 2 years of age approximately one-half to two-thirds of the children weighed in a given 6-month period lost or failed to gain weight. Of 68 children who were weighed and measured over a period of a year or more, only 16 did not experience such loss or failure to gain between any two weighings. Most of these were in the youngest age group, only 3 were over 3 years old at the end of the study.

Possible reasons for failure to gain. - From the information available specific reasons cannot be given for the loss or failure to gain weight of so many of the young children of Bang Chan. Infection may have played a role, although we saw little evidence of severe infection and it was seldom mentioned. Increased activity as children grow older might affect rate of gain at the toddler age. For safety very young children in Bang Chan were closely tended which meant that their activities were rather restricted. As they became older and learned to

[See p. 17 - Analyst]

clear evidence of a seasonal effect. If weight gain in Thai infants is related to seasons, this could be better defined by weighing groups of children at monthly intervals and determining when or if changes in rate of gain occur.

Although our records were not made for the purpose of correlating food intake with weight gain, and no quantitative information was obtained on the diets of mothers and babies, we attempted to see if any obvious relation existed between the variety of food eaten by the mother or the child and the child's growth. For this purpose, case studies were made of 7 infants whose records from birth onward were fairly complete. The age at last observation was from about 14 to 18 months. Four of these children had gained at each weighing and weighed more at one year of age than the average infant observed by Dr. Mastri (1939). Three were chosen because they had lost weight or failed to gain at some time during the period of observation and weighed less at one year of age than the average infant observed by Dr. Mastri. Infants of both sexes were included in each group. No illnesses or abnormalities were recorded in the clinical histories of any of these babies or their mothers. No evidence was obtained from the qualitative food records as to why some infants gained consistently and at a fairly "normal" rate, whereas others gained relatively slowly and failed to gain or lost weight at times (Smith, 1956).

Quantitative food records might have provided evidence on this point but our observations were inadequate for this purpose. Such quantitative records should include estimations of the amount of mother's milk obtained by the infants, based on the baby's weight before and after nursings, as well as records of supplementary food given. Analysis of the mother's milk, particularly for the content of the water soluble vitamins which are influenced by the mother's diet, should also help to shed light on the cause or causes of the common failure to gain weight among older infants and small children in Bang Chan. No cases of beriberi occurred among the infants we observed, but in two instances siblings had died of infantile beriberi.

Evidence of protein malnutrition has not been commonly recognized in rice eating areas, but one must consider the possibility that these children may be in a state analagous to pre-kwashiorkor. Development of the clinically recognizable protein deficiency disease may be forestalled when the child learned to feed himself and eats more liberally of rice with some fish and egg. Of the 54 children with kwashiorkor observed by Petrasiri and Petrasiri (1955) in Bangkok, many were weaned earlier than was usual in Bang Chan. Most of them, however, had been breast fed, and 4 were still being breast fed when the disease was diagnosed.

BANG CHAN

Summary

12 The general condition of health and sanitation in the village of Bang Chan, Thailand, and the nutritional status of 166 persons in a random sample including 31 village households and of 233 primary school children are described.

141 The mean height for adult men in the random sample was 158.6 cm. (62.4 inches) and for women, was 151.3 cm. (59.6 inches).

Mean weights for adult men and women were 53 kg. (116.6 lb.) and 45.3 kg. (99.7 lb.) respectively. Mean and median weights for various age groups did not differ markedly nor consistently.

145 In general, the Thai children were shorter and weighed less than western children of the same ages. Mean heights and median weights fell below the 10th percentile of Iowa school children whose measurements have been reported by Stuart and Meredith (1946).

The reported age at menarche, for 94 females in Bang Chan, ranged from 13 to 19 years, with a median age of 15.

As judged by the median ages of eruption of specific permanent teeth and the number of permanent teeth per child at each age level, dental maturity of children in Bang Chan was approximately the same as that of children in other regions, both western and eastern, for which data are available. Although the average number of teeth at some ages was lower for children in Bang Chan than for American or English children, the differences were neither marked nor consistent.

164 Children in the Bang Chan primary school were found to be relatively free from caries. Of 226 school children 7 to 14 years of age, whose teeth were examined by a dentist, 42% were completely free of caries of both deciduous and permanent teeth. Of the total group of children, 68% (76% of 116 boys and 60% of 110 girls) were free of caries of permanent teeth. The average number of carious permanent teeth per child was 0.5 for boys and 0.9 for girls. For children with caries experience, the figures were 1.9 and 2.3 for boys and girls respectively. None of the children examined had any filled teeth.

The reason for the relatively low incidence of caries

BANG CHAN

164 among children in Bang Chan is not known. One thing which
[146] residents of Bang Chan appeared to have in common with other populations which have been reported to be relatively caries free, was low intake of sugar, particularly in a form which would be apt to adhere to the teeth.

Adults up to 44 years of age, in the random sample, retained most of their teeth. A few adults in Bang Chan have had missing teeth crowned. More sound than missing teeth were [301] found to be crowned, however, i.e. in this community a crowned tooth appears to have cosmetic value.

759 A variety of serious illnesses were found to occur among
[164] residents of Bang Chan. As a rule, local traditional practitioners were consulted first, but most persons reported to have been seriously ill eventually received treatment by outside practitioners with some training in modern medicine.

[834] The majority of mothers in childbirth were attended by
[743] local traditional midwives, but a few difficult cases were taken to the government Health Center in the nearby town of Minburi, where a trained midwife was in attendance.

165 Of 438 pregnancies reported by 84 mothers, over 90%
[163] resulted in live births. Of the 397 living children born to these women, 81% survived at the time of interview. Within the first month of life, 7% had died, and a total of 11% died within the first year. Tetanus was prominent among causes of death of infants under one month of age. Infantile beriberi caused some deaths among older infants. In a majority of cases, the cause of death of infants could not be clearly identified, but fever, debility and convulsions were the symptoms most commonly described.

196 Almost half of the persons examined for possible signs of nutritional deficiency, 46% of the school children and 47% of the family sample, were free of such signs. The remainder, slightly more than one half of persons examined, had from 1 to 7 signs each. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Signs most often noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine [164] in the diet. The only clearly defined deficiency disease observed among residents of Bang Chan during the field study was beriberi.

14 Hemoglobin values of 11.5 g or less per 100 ml. were

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14 observed in 9% of the school children 7 to 14 years of age who were examined, and in about 6% of the males and 25% of the females over 15 years of age. Of 337 persons examined, however, 2 only, one child and one adult female, were found to have hemoglobin values under 9.75 g per 100 ml.

744 514 164 364 Modern sanitation was practically unknown in Bang Chan. Few families had covered pit latrines or made any effort to cover excreta. Intestinal parasitism was common. Garbage might be fed to animals, but was frequently thrown into the canal or elsewhere about the compound. Provisions for protecting foods from contamination were meager.

When rain water was available, it was used for drinking, but several months each year water from the canals or fish ponds was used without prior treatment. For washing vegetables, cooking and washing dishes, canal and pond water was used throughout the year.

744 751 A few changes in sanitary practices, if they could be brought about, might reduce some kinds of illness substantially. For example, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

758 121 Modern medicine will probably not be readily or generally available to a majority of the residents of Bang Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

125 included adults of both sexes and some preschool children who
123 were unwilling to allow the physician to examine them. The small non-response group included persons of both sexes and a wide range of ages, and would therefore not be expected to bias the sample seriously. In general, rapport and cooperation were excellent.

Reproductive Function in Females

[145] Information concerning menstrual history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 35).

Information on child-bearing history was obtained from women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied (See Appendix A, schedule 3, item 36).

Illness and Injury

12 [164] Evidence concerning the nature and extent of illness and injury in Bang Chan was obtained from various sources:

1) direct observation by the physician at the time of the physical examination, or when the physician was asked to visit a sick person in the village;

2) field notes in which information concerning illnesses, accidents and deaths were recorded as research workers learned of them; and

3) information obtained by structured interview in connection with surveys conducted by various persons working on the Cornell Thailand Project.

Adults in households which were included in the random sample were asked after the clinical examination whether any family member had been ill or injured during the past year. If so, the interviewer asked the nature of the illness or injury and what was done. The portion of schedule 6 which relates to this is included in Appendix A.

Some questions on illness were included in a survey of household heads in Hamlet KY-7 (Hanks, 1954) and in a structured interview to which there were 335 respondents from the

[see pp. 51-52--Analyst]

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Among the men and boys in the random sample of households, however, mean height and weight was distinctly less for the age group 15-19 (mean age 17) than for the older age groups (Table 4), and mean height and weight increased with age among the subgroups. Thus mean height of 4 boys 18 and 19 years old was 157.6 cm., and mean weight 50.2 kg. as compared to 150.1 cm. and 38.5 kg. for 4 boys aged 15-16. Among the 20 men in age group 20-39, 3 were age 20, and 4 either 23 or 24. Mean heights for both of these subgroups were 157 cms. The number of young men examined in Bang Chan is too small to permit judgment as to when adult stature is attained. On the basis of measurements of Siamese males, from the medical service of the Royal Siamese Navy, Dr. Yong concludes that "growth, as regards both height and weight stops at age 22" (Chutima, 1939). According to Zimmerman (1937) rural Siamese boys increase in height steadily until about 19 years of age, at which time they seem to have reached maturity. Adult men in Bang Chan were on the average a little shorter than other groups of Thai men whose measurements were available to us (Table 7).

Bicristal Diameter. - Some additional information concerning body build is obtained from this measurement. In general, for Bang Chan children of elementary school age (Tables 1 and 2), mean bicristal diameters correspond to hip widths for Iowa school children one to three years younger (Stuart and Meredith, 1946). Mean bicristal diameters of adult men and women in Bang Chan (Tables 4 and 5) correspond approximately to the values for the 10th percentile of the 18 year old boys and girls in the Iowa study. Andrews (1943) found the hip breadth of Central Thai men to be 26.98 ± 1.48 cm., which is similar to the mean of 26.9 cm. for 31 adult males, aged 20-59, in Bang Chan.

Cristal Height. - At the time this study was undertaken, the Committee on Anthropometry of the Food and Nutrition Board, National Research Council had tentatively recommended cristal height as an additional measurement pertaining to the long dimension of the body. Mean values and ranges, for various age groups, are presented in Tables 1, 2, 4 and 5.

Dental Status

A dentist examined the teeth and mouths of 226 school children, 7 to 14 years of age, in good natural light, using mouth mirror and probe. Teeth of persons in the random sample of village households were inspected by the physician in the course of the clinical examination. Data on dentition and dental health were analyzed by Kamalanathan (1956).

As noted by the Joint FAO/WHO Expert Committee on

[TEXT CONTINUED ON PAGE 21]

[see p.: 16; 20; 9-13; 16, 17; 9-13, 16, 17]

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As noted by the Joint FAO/WHO Expert Committee on Nutrition (1951) the part played by diet in the production of tooth which are unduly susceptible to caries is still controversial, although in general, the importance of nutrition, especially in the formative period, is widely accepted. In accordance with the recommendation of this Committee, caries rates are recorded as a separate item, and are not taken as a criterion of malnutrition.

Dentition. - Median ages of eruption of specific permanent teeth in 240 Bang Chan children, ages 7 to 14, are shown in Table 20 (Appendix B). For this purpose, data on 226 children in the Bang Chan primary school, and 14 additional children between these ages, in the random sample, were included. The percentage of boys and girls at each age, having each specific tooth erupted, was calculated. Median ages of eruption were estimated according to the method suggested by Klein et al. (1937). A graph was drawn for each kind of tooth, for each sex. Cumulated percentages for each specified kind of tooth erupted were represented on the x axis and age in years at one year intervals on the y axis. Median age of eruption was estimated by determining the point at which the age percentage eruption curve cut the 50% perpendicular.

In Bang Chan, as elsewhere, the median age of eruption for specific teeth is lower for girls than for boys. In some cases the difference is slight, in others, from several months to more than a year. The difference is most marked for lower canine teeth.

The average number of teeth, deciduous, permanent and total, at each age, is shown for children 7 to 14 years of age, in Table 21 (Appendix B). For ages 8 to 13, the greater dental maturity of girls than boys is reflected in the larger average number of permanent teeth present at each age.

On the basis of median ages of eruption for specific teeth, and the number of permanent teeth per child at each age level, dental maturity of children in Bang Chan appeared to be approximately the same as for children in other regions, in both eastern and western hemispheres, with which they were compared. Although the average number of teeth at some ages was lower for children in Bang Chan than for American or English children, the differences were neither marked nor consistent (Kamalanathan, 1956).

Caries Incidence. - Caries incidence was found to be low among Bang Chan children as compared to many regions in which surveys have been made. Of 226 children examined by the dentist, 42% (45% of the boys and 38% of the girls) were totally free of caries. When all carious teeth, both deciduous and permanent, were included, the average number of carious teeth per child was 1.8 (1.6 for boys and 2.0 for girls).

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164 Considering deciduous teeth only, in a group of 173 children, 93 boys and 80 girls who had deciduous teeth, 56% of the boys and 50% of the girls were free from caries. The average number of carious deciduous teeth per child was 1.4 and 1.5 for boys and girls respectively. For those with caries experience, the number of carious deciduous teeth per child was 3.2 for both boys and girls.

In the entire group of 226 children, 76% of 116 boys and 60% of 110 girls were free from caries of permanent teeth. The average number of carious permanent teeth per child was 0.5 for boys and 0.9 for girls. For children with caries experience, the figures were 1.9 and 2.3 for boys and girls respectively. None of the 30 boys with caries of permanent teeth had more than 4 such teeth, whereas 5 of 43 girls had more than 4 carious permanent teeth.

164 171 Data for children aged 12 to 14 in Galesburg, Illinois and Colorado Springs (Dean et al. 1942) have been chosen for comparison of caries experience in permanent teeth, with that in Bang Chan. In these cities, the fluoride content of the water is conducive to low caries incidence, yet the percentage of children aged 12 to 14 having caries experience was 72.2 and 71.5 for Galesburg and Colorado Springs, respectively as compared to 41% for Bang Chan, and the number of DMF[1] permanent teeth per child was 2.36 and 2.46 as compared to 0.88 carious permanent teeth per child in Bang Chan.

The reason for the relatively low incidence of caries among children in Bang Chan cannot be stated with certainty. Similarly low or even lower caries incidence has been reported for certain age groups of children in various parts of the world, for example in North China (Afonsky, 1951), in the northern islands of Samoa where the people had little access to store foods (Losee, 1952) and in a small isolated village in Greece [146] (Phillipas, 1955). One thing which residents of Bang Chan appeared to have in common with such other populations which are relatively caries free, was low intake of sugar[2], particularly in a form which would be apt to adhere to the teeth.

757 Restoration of Decayed and Missing Teeth. - None of the children examined had any filled teeth. Up to 44 years of age, the adults examined had retained almost all of their teeth, and [145] no evidence of restoration, other than crowning was noted. Decline in average number of teeth was marked after age 55.

Of 92 adults with teeth, at least 7 men and 6 women had been to a dentist as evidenced by the presence of crowned teeth

1. DMF denotes decayed, missing and filled. Children in Bang Chan had no filled teeth.

2. Sudsaneh (1956) found the average per capita intake of sugar in 11 families to be only 6 grams per day.

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757 in their mouths. More than half of the teeth crowned were said to have been sound, and no crowned molars were noted. The services of a dentist appear to have been sought more for their cosmetic value than for dental care as such.

276 164 Betel Chewing and Dental Health. - Betel chewing was not habitual with any of the adults under 25 years of age who were examined. Among adults above this age in the random sample, 13 of 29 men, or 45%, and 34 of 40 women, or 85% chewed betel. The group of adults from 25 to 44 years of age was singled out for study of caries incidence in relation to betel chewing, since adults retained most of their teeth up to this age. Among 19 betel chewers, 3 persons had 5 defective teeth whereas among 19 non-betel chewers, 7 persons had 46 defective teeth. Others (Gerry et al. 1952; Shouric, 1948) have reported a lower incidence of caries among betel chewers than non-chewers. Caution must be used in interpreting our observations, however, because the sample is small, and the teeth were not cleaned before counting caries. Stain and calculus may have obscured small caries in betel chewers.

The impression was gained by casual observation that protruding incisors were common among habitual betel chewers, and that the teeth of some betel chewers appeared to be loose. Since such protruding incisors were not noted among the school children, nor among non-chewers, we associated them with habitual betel chewing. Both Gerry et al. (1952) and Balendra (1949) noted a higher incidence of gingivitis among betel chewers than non-chewers. Since most of the older persons in our sample chewed betel, our data offered no clue as to the possible effect of betel chewing on the loosening and loss of teeth among older persons. Another item of possible importance, and on which we have no data, is the extent to which tobacco is used as an ingredient of the mixture which is spread on betel leaves.

276 146 Platt (1945) considered betel chewing as a potential source of calcium in the diet. He stated that the amount and utilization of calcium ingested with 6 betel leaves was similar to that from 10 ounces of cow's milk.[1]

The amount of calcium ingested in this way doubtless varies not only with the frequency of betel chewing, but also with the amount of juice swallowed. In Bang Chan, spitting out the juice appeared to be more customary than swallowing it.

276 Further research is needed to decide whether the potential disadvantages of betel chewing outweigh its potential benefits. Moreover in any attempt to decrease the practice of betel

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1. Platt, 1945. Footnote, p. 21.

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Table 9

147 Hemoglobin Values of 104 Residents, Age 15 and Older, in Random Sample, Bang Chan, 1952-53

	Number of Persons	Hemoglobin, grams per 100 ml.					
		Under 9.75	9.75-11.5	11.75-12.5	12.75-13.5	Over 13.5	Not Ascertained
Male	48	0	3	7	9	28	1
Female	56	1	13	10	14	11	7
Total	104	1	16	17	23	39	8

146 125 Occurrence of Possible Signs of Malnutrition. - Most of the signs and symptoms included on the schedule for clinical examination were those known to be of value in the assessment of nutritional status (Joint FAO/WHO Expert Committee on Nutrition, 1951). Some items included need to be investigated more fully before their value can be determined. Among the 146 items on the schedule, (Appendix A) the following were not 164 observed in any of the persons examined:

Eyes: photophobia, lachrymation, blepharitis, xerophthalmia, Bitot's spots, gross corneal vascularization.

Face: Folliculosis, nasolabial seborrhea, dyssebacia, suborbital pigmentation.

Lips: Scars of cheilosis and of angular stomatitis.

Tongue: Edema, color change to scarlet or magenta. (In 30 adults, however, such color changes if present would have been obscured by the discoloration from betel chewing.)

Gums: Retraction, loss of interdental papillae.

Parotid glands: Enlargement.

Skin: Perifollicular congestion, petechiae.

Edema

Calf tenderness

Inability to rise from squatting A1 [see p. S1-Analyst]

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In addition, the two cases of symmetrical dermatosis observed were not of the pellagroid type and should probably not have been included with the possible signs of nutritional deficiency.

The only instance of thyroid enlargement noted (an obvious thyroid adenoma) was in a 13 year old boy who had always lived in Bang Chan. He knew of no one else in the family with such enlargement.

Five girls and women in the random sample refused to permit the examining physician to palpate the liver and spleen, but he was able to carry out the rest of the inspection.

Almost half of the groups examined, 46% of the school children and 47% of the family sample, were free of the possible signs of nutritional deficiency. The remainder had from 1 to 7 such signs. Persons in the random sample were grouped according to age, and the percentage of each group found to have each number of signs is shown in Table 10. Note that most of the

Table 10

Number of Possible Signs of Nutritional Deficiency Occurring in 166 Individual Residents in the Family Survey, Grouped According to Age

Age Group, years	Number of Persons Examined	Percentage of Each Group Found to Have Each Number of Signs			
		0	1	2	3 or more
6 and under	33	94	3	3	0
7-14	34	47	38	9	6
15-19	17	76	18	6	0
20-39	41	32	54	7	7
40-59	27	7	33	22	37
60 and over	14	21	7	21	50
Total Group	166	47	30	10	13

preschool children were free of signs. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Among the children, a larger proportion of school children than preschool children or adolescents had possible signs of malnutrition; i.e., more than half of the children 9-14 years of age, as compared to 6% of the children 6 years old or under, and 24% of the age group 15 to 19 years.

The incidence of specific signs among school children and persons in the random sample of families, is summarized in Table 22 (Appendix B).

Several points concerning the distribution of specific signs possibly associated with nutritional deficiencies deserve comment. The most prominent group of signs among school children were the skin signs: xerosis which occurred in 15% and phrynoderma in 5% of the children. Even loss of elasticity of skin occurred in 3 boys. Among adults, these signs were confined almost wholly to the group of older women.

Liver enlargement was next in frequency among school children, with 9% of them exhibiting this sign. We have no evidence as to the cause of liver enlargement. It is sometimes associated with protein deficiency, but our data on food intake (Sudsanoh, 1956) is on the basis of family consumption, hence we do not know whether school age children have relatively low intakes of total protein or of animal protein. Liver enlargement may also be associated with intestinal parasitism, which was common in Bang Chan.

Dry, "staring" hair was observed in 18 children. One case of diminution of pigment was recorded. A number of other cases in which dark hair had an auburn cast, were noted by the non-Thai nutritionist, but were accepted as normal hair color by the Thai physician.

Ulcers on the legs below the knees were observed in 14 school children. Such ulcers, though not associated with any specific nutritional deficiency, occur commonly in ill-nourished subjects (Smith, 1952).

Some school age children both in the random sample and in Bang Chan primary school, did not have knee and/or ankle jerk. These signs were more prominent among adults, however, particularly among men, than in the school age group.

The occurrence of skin changes among older women, together with the higher incidence of low hemoglobin values among women than among men, accounts for the seemingly higher incidence of possible signs of malnutrition among adult women than men. The only clear difference in occurrence of signs among

[see p. 67 - Analyst]

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146 164 women of childbearing age as compared to older women, was in the incidence of skin changes. Certain of these, i.e. xerosis, loss of elasticity and atrophic skin, were observed, in the adult group, only among older women. In some cases at least these signs may have been associated with aging rather than nutritional deficiency, unless, indeed some of the common signs of aging prove to be due to long continued intakes which are suboptimal. Among the school children, however, these skin changes were clearly abnormal.

At the clinical examination, redness of the gums was noted in a few cases only among school children, most of whom were examined in November. The dentist, who examined the children in February, noted redness of gums in about one-fourth of them. This difference may reflect a difference in standards used by the physician and dentist, or the incidence of this sign may have increased between examinations.

Certain groups of signs tended to occur together. Thus the various skin signs: phrynoderma, xerosis and loss of elasticity were often associated. Of 23 cases with absence of knee jerk, 16 had absence of ankle jerk also, and the various changes in tongue and lips not only tended to occur together, but these were often associated with absence of knee jerk and/or ankle jerk. The signs of possible nutritive deficiency most commonly noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine in the diet (Sudsaneh, 1956).

146 142 Bowleggedness was observed in a larger proportion of adults than children, but according to our criteria, did not occur in either group to the extent that we had been led to expect from previous reports. Among the 198 school children in Bang Chan who were examined by a physician in 1948-49, 69, i.e., about 35%, were reported to have bowed legs, with 4 cases called "severe" (Sharp et al. 1953, p. 249). Among the 233 children in Bang Chan school whom we examined, 9 only, i.e., less than 4%, were considered bowlegged according to our criteria, and none of these cases was severe. Chutima (1939) stated that "Another condition prevalent in Siam and fundamentally due to improper diets since infancy is bow-leggedness. Only about 25% have normal lower limbs, the rest being bowlegged and many are knock-kneed . . . The percentage of extreme bow legs is about 20% while mild bow legs form about 55% of our school children." Since these other observers determined bowleggedness by casual inspection[1], some of the difference between the earlier observations and ours may be due to difference in criteria used. The children

1. Personal communication from Dr. Yong Chutima.

pictured as bowlegged in Chutina's report (1939) are, however, clearly so, and represent more extreme cases than we encountered among the children in Bang Chan in 1952-53. If the incidence of bowleggedness among children in Thailand is indeed decreasing, an investigation into possible causes of the change would be of interest.

To the nutrition specialist on the team, who was not Thai, the knee joints appeared to be large. Moreover, although the term "knock knees" was not included on the schedule, it was entered frequently by the physician under comments (Appendix B, Table 22).[1] Whether this condition is related to heredity, nutritional status, or to some other environmental influence such as the life-time habit of squatting on the heels, is not known.

The physician's estimate of general appearance and vitality were recorded early in the examination, before he sought for specific signs. About 80% of all persons examined were rated as "good," and less than 1% as "poor." About half of all persons rated as "good" in general appearance and vitality were without clinical signs, as compared to about 30% of those rated "fair." Of persons with 3 or more possible signs of malnutrition, however, about 2/3 were rated "good" (Appendix B, Tables 23 and 24).[1] As has been observed frequently, such a general appraisal is not correlated with the presence or absence of clinical signs possibly associated with malnutrition. Clearly, in Bang Chan, there is little or no malnutrition of the sort that causes marked apathy.

In summary, a variety of possible signs of malnutrition were noted both in the school children and the persons in the random sample of village households. More than half of the total number examined had one or more signs possibly due to malnutrition, but the only clearly defined deficiency disease encountered was one case of beri beri[1] in a 49-year old man.

Reproductive Function in Females

Menstrual History. - Information concerning menstrual history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied.

Most of the women from whom information on age at menarche was obtained were under 40 years of age. A few could

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1. History of beriberi among nursing mothers and their infants was obtained in several instances, and cases of beriberi, in both sexes, were seen among persons not included in the population samples which were examined.

[see p. 71-Am.] [see pp. 72, 73-Analysis]

844 mats on the floor as most of them would have done at home.
[743] Relatives were welcome; indeed they were supposed to come and help.

• 164 12 Nature and Incidence of Illness and Injury, and Treatments Sought by Residents of Bang Ch[illegible] - Evidence concerning the nature of illness and injury in Bang Chan was obtained in connection with the clinical examination of school children and persons in the random sample of village households; from questions in two types of structured interviews with household heads: 1) in the entire village, and 2) in one hamlet, KY-7; and from the field notes of workers associated with the Cornell Thailand Project.

164 In connection with the clinical examination, information was obtained from heads of 30 of the 31 households whose members were examined (See schedule in Appendix A).[illegible] In this group, none reported any accident or injury, and 26 said that no member had been ill within the year. Illness was reported as occurring in 4 households only. In one of these, a 49-year old man reported loss of sensation over the extremities and other symptoms which led the physician in the research group to conclude that he had beriberi. As treatment, this man had used an herb recommended by a priest, a native medicine given him by a neighbor and had gone to a private clinic at Minburi where he received an injection.[1] In another family, a 39-year old man who had asthma, took an advertised remedy which he purchased from a drugstore. Two children in the third family had fever for 8 days, for which a traditional practitioner prescribed herbs. In the fourth family, a 1-year old child with eczema was taken first to a traditional practitioner, then to a private clinic in Minburi where he was given an injection.

164 128 On the basis of other observations, however, we believe that illness and injury are more common in Bang Chan than is suggested by the replies to this particular inquiry. For example, no mention was made in one of the households surveyed of a baby who had been too ill to be weighed and measured, when team members called, and who recovered in a day or two without outside help. Coming as they did at the end of the clinical examination which was new to most of these people, perhaps the questions asked seemed relatively unimportant. No attempt was made to probe beyond the person's reply to the questions as stated.

164 Replies to questions in connection with an intensive

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1. From casual observation, one is led to believe that the villagers have considerable confidence in "injections," although the nature of the injection received or desired, is not usually specified.

A [see p.51 - Analyst]

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164 survey made in one hamlet, KY-7, give a rather different picture of the extent of illness and injury in Bang Chan, if the situation in this hamlet is at all representative of the whole. Hanks (1954), found that serious illness had occurred within the previous year in 17 of 38 households[1] in the hamlet KY-7. Twenty-four persons of various ages were involved, and the illnesses were described as lasting from a few days to 3 years. Specific diseases were mentioned in 7 cases: diphtheria, typhoid fever, pneumonia (2 cases), malaria and beriberi (2 cases). In the majority of instances, however, symptoms rather than diseases were mentioned, i.e. fever, diarrhea, pain in chest, disorder of throat, lung complaint, swollen feet, and the like. One case, described as a wound in a 5-year old child, might have been due to accident.

757 In all, the 24 ill persons obtained a total of 40 "treatments,"[2] from one to four types of treatment per patient. Treatment by modern doctors was used more frequently than other means of help (Table 15) although such treatment is not available within the community of Bang Chan. Fifteen of the 24 persons who were seriously ill had treatment by modern doctors, several patients receiving treatment from more than one. Thirteen patients had one type of treatment only (as that from either traditional practitioner or modern doctor), 7 used 2 types, 3 used 3 types, and 1 had 4 types of treatment from 5 individuals. The latter case was that of a child who was described as sick for 60 days with pneumonia, neck swelling and fever, and was treated by a traditional practitioner, two priests who were also traditional practitioners, and a medium, all in Bang Chan, and a second-class doctor in Minburi. Another child who was sick with lom sandan (faintness, weakness or loss of consciousness) for three days was treated by 4 local traditional practitioners and a second-class doctor at Minburi. One child with saang (a disease of young children, said to be caused by the loss of the soul or spirit) was treated by the modern doctor at Minburi, only.

757 As a rule, local practitioners of one sort or another
759 were visited or called first, those in Minburi next, and those in Bangkok, only after nearby help had been consulted. This order was not invariable however. For example, in the Hamlet KY-7 series (Hanks, 1954) was one woman who was sick with beriberi for about 8 months after childbirth. She went first

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1. Interviews were not obtained with 3 of 41 household heads in the hamlet.

2. Each type of practitioner, as traditional practitioner or modern doctor, was counted as a separate "treatment."

[TEXT CONTINUED ON PAGE 37]

A [See p.36-Analyst].

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757 to a second-class doctor in Minburi, then to a nearby Muslim
759 masseuse, then to a local traditional practitioner who gave her some jaa tom (cooked medicine). Another instance, recorded in the field notes, is that of a school teacher's baby who had abscesses on her head. The mother took her child first to Minburi, where she was given an injection and a sulfa drug to be taken orally. The child did not get well immediately, and before all of the drug had been taken, the mother took the child to a local traditional practitioner who gave her a decoction of herbs which was to be given by mouth. Thus in some cases, modern doctors were consulted first, and local traditional practitioners later, if relief was not as speedy as was expected. The experience in this one hamlet suggested a willingness to try a variety of treatments, and the existence of a considerable degree of confidence in modern medicine.

758 According to Ralis (1955), 213 of 335 household repre-
743 sentatives interviewed had visited a clinic or hospital. Of these, 156 had gone to Minburi, and 135 to hospitals or clinics in Bangkok, some having gone to both places. Of 258 hospital or clinic visits, 125 were for treatment or hospitalization; the bulk of the rest were to accompany patients or to visit hospitalised relatives or friends. No significant difference in reports about seeking treatment or hospitalization was found between groups of persons differing in literacy, or in socio-economic level.

• 164 Infectious disease. - The principal evidences of infectious disease noted in the course of the clinical examination for assessment of nutritional status were trachoma and smallpox scars. Occasional cases of ringworm and other fungus infection, and of pediculosis were observed by the physician.

When the 233 school children and 148 additional persons included in the random sample of village households are considered together, i.e. a total of 381 persons or more than one-fifth of the total population of the village, only 3% were found to have trachoma. Eleven of 13 cases found were among 237 children 7 to 14 years of age, i.e. an incidence for this group of 4.6%. Zimmerman (1931) reported 119 cases or 4.3% of all persons examined in Central Thailand, and 277 cases or 2.9% of persons examined in the whole Kingdom. Among the school children examined, however, he reported an incidence of 12.6%.

Of 381 persons examined in Bang Chan, only 10, or fewer than 3% had smallpox scars. Two cases only were in adults, the remaining 8 being among children of school age. Our records do not show when the most recent cases occurred in the village.
751 According to Zimmerman (1931), 88% of over 2200 school children examined had been vaccinated. No information was obtained concerning the proportion of residents of Bang Chan who had been

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751 vaccinated but among school children the percentage is very high. During the survey period a health officer came to the Bang Chan elementary school to vaccinate children; and at that time at least one nearby resident, a school teacher's wife, brought her infant for vaccination.

• 164 Illnesses probably, in most cases certainly, of infectious origin, which were mentioned in the field notes, include the following, which are listed roughly in the order of frequency: skin disorders such as abscesses and boils, fever, respiratory disorders including colds and influenza, tuberculosis, "upset stomach," measles and diphtheria. Two cases of diphtheria with one death, occurred while the survey was in [744] progress. At this time health authorities came to the village to inoculate the children on a voluntary basis (Hanks et al. 1955). As already noted, malaria and typhoid (one case each), were mentioned as occurring during the year previous to the inquiry in Hamlet KY-7 (Hanks, 1954).

[759] [743] A number of references were made to history of cholera, smallpox and malaria, but these did not appear to be current threats. Two cases of severe diarrhea were called "cholera" but one was on the way to recovery the next day. The traditional practitioner who was asked to treat the other, urged that she be taken to the hospital, and himself accompanied the patient and family members. At the hospital, they were told that members of the family and neighbors should "get vaccinated and have their toilet covered."[1] No further mention of this case is made in the field notes, hence the correct diagnosis is not known to us.

Since a modern doctor was frequently not seen, diagnosis of disease was often uncertain. More often, major symptoms were described or the disorder was given a local name, for which there is no good English equivalent, such as various kinds of *saang* and *lom*.

Non-contagious disorders. - Among current non-contagious disorders mentioned in the field notes, in replies to questions on surveys, and in some cases observed by the physician, were the following, listed roughly in order of frequency: menstrual disorders, headaches, beriberi, cancer, asthma, eczema, nephritis, and rheumatism.

Accidents. - Accidents which were recorded in field notes include bites of dogs, spiders, leeches and snakes, falls from buffaloes and down ladders, burns, cuts, drowning and poison from drinking kerosene. Among the school children examined,

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1. Field notes, S.S., April 29, 1954.

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164 malunion of old fractures was observed in two cases.

165 Deaths. - Information concerning deaths in Bang Chan during the period of the field study was obtained primarily 12 from field notes. Mothers interviewed or examined by members of the research group which was specifically concerned with health and diet provided further information on infant mortality, and Ralis (1955) obtained some information concerning deaths of children in the respondent's family.

165 Deaths occurring while the field study was in progress. - During approximately 21 months of field study, members of the research group noted 14 deaths in the village. Three infants died, two within a few days of birth, and one at about two months of age. Two children died by accident, one as the result of a fall from a water buffalo, and the other by drowning. One child died of diphtheria and one of Hodgkin's disease. Of the seven adults who died during this period, one was a pregnant woman who became acutely ill and died while enroute to the Health Center at Minburi by boat. The cause of her illness was not known. One young man committed suicide, two adults died of tuberculosis, two of cancer, and one of colitis. One of those who died of tuberculosis was a young woman, the mother of seven children. She was urged by the physician on the team to go to the hospital in Bangkok, but she was unwilling. A sibling 8 years old, who lived in the same household, had died previously with a severe cough.

Mortality among infants and children. - Of the 397 living children born to 84 women interviewed, 323 or 81% of the children survived at the time of interview. Forty-three, or 11% had died within the first year, and 26 or 7% within the first month of life.

Although the data obtained by Ralis (1955) did not permit us to calculate the exact number of children born to the 335 household members interviewed, the number dead, and the number surviving at the time of interview, apparently more than twenty per cent of the children born into these families died (Appendix A). This estimate, for the village as a whole, tends to substantiate the figures obtained from the 84 mothers whom we interviewed.

Some information was obtained from 36 mothers concerning the cause of death of 58 children who were born alive. Twenty-one of these had lost one child only, 8 had lost 2 each, and 7 had lost 3 children each. Reported causes of death are summarized by ages, in Table 16.

In most cases, no specific cause could be assigned, and the case was classified according to the most prominent symptom as fever, convulsions or digestive disturbance.

A [see p. 51 - Analyst] B [see p. 40 - Analyst]

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Deaths of infants a few days old, with a description of lockjaw, inability to suck, stiff back and clenched hands, were recognized as due to tetanus. The common practice of native midwives is to place the cord over a hard rhizome or clod of earth and to cut it with a tapered piece of bamboo. Thus, infection with the tetanus organism may occur from contact with the soil. Foto that 12 of 26 deaths reported for infants under 1 month, were diagnosed as tetanus or probably tetanus. Zimmerman (1931) summarized important causes of death in Siam, based on the physician's diagnosis made after symptoms were described by the head of the household. Of 1800 deaths which occurred in the 18 months preceding the survey, 2% were diagnosed as tetanus. For the Central area, 3.8% of 495 deaths were from tetanus. Most, if not all of the cases of infantile tetanus could be prevented if native midwives learned to avoid contact of the cord with earth or a soil-coated rhizome. By using sterile scissors for cutting the cord instead of tapered bamboo which must be pressed against another surface to accomplish the cutting, contact with soil could be avoided. Of 335 household heads interviewed, 220 owned scissors of some kind (Ralis, 1955).

Infants several months old, who had some of the symptoms of infantile beriberi, as convulsions and almost voiceless crying, were considered as cases of infantile beriberi only if the mother had symptoms of beriberi, such as numbness or tingling in the extremities, or difficulty in walking, at the time. One mother had lost 3 infants at 3 or 4 months of age, with similar symptoms, but described the symptoms of beriberi in herself at the time of the death of the last baby only. The other two cases were therefore listed as convulsions, cause unknown. The occurrence of infantile beriberi reflects the unsatisfactory nutriture of the mother, whose milk is therefore low in thiamine content. To prevent deaths from infantile beriberi, the general level of nutrition in the village, and particularly the food habits of pregnant and nursing women, should be improved.

Note also the number of deaths from "debility." As the Joint FAO/WHO Expert Committee on Nutrition (1951) has pointed out, the number of early deaths from "congenital debility" becomes insignificant where the health and nutritional status of pregnant women approaches the optimal.

Intestinal Parasitism and Bowel Habits

Intestinal Parasitism. - All school children were provided with tin containers labelled with their names, and asked to bring a stool sample to school. Fourth grade children whose first stool samples were negative, were asked to bring a second specimen. Parasites were found in some of these second

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125 specimens. In all, specimens were obtained from 189 or 81% of
126 the children and of these 32% were negative. In 128 stools
containing parasites, 196 infecting organisms were found, or an
• 164 average of 1.5 per infected child. Protozoa and helminths which
are pathogenic or which may cause severe diarrhea were identified 126 times, and harmless forms 70 times. Of the harmful forms, Ascaris lumbricoides was found in 96 or 51% of the stool samples, Giardia lamblia in 19, or 10%, and hookworm, Endamoeba histolytica, Trichuris trichiura and Diphyllobothrium in 2% or less. Of the harmless forms noted, Endamoeba coli was found in 45 specimens or 24%, Iodamoeba williamsi in 21 or 11%, Endolimax nana and Chilomastix mesnili each in less than 2%. Doubtless the extent of intestinal parasitism in these school children was greater than the figures indicate, since some cases would be missed in examination of single stool specimens collected in this way. One might expect intestinal parasitism to be relatively common, also, among other family members.

125 Bowel Habits. - In connection with the clinical survey,
147 persons examined were asked whether they had "constipation" or
514 "diarrhea" frequently, occasionally, or never, i.e. not within the past 6 months. As the physician phrased the questions concerning "constipation," the replies indicated whether the respondent had daily bowel movements ("never constipated"), or usually had a bowel movement each day ("occasionally constipated") or usually had longer intervals between bowel movements ("frequently constipated"). Replies are summarized in Table 17. A

126 Considering the inadequate sanitation in Bang Chan, and
147 the prevalence of intestional parasitism, the fact that 3/4 of the persons questioned said they "never" had diarrhea, is worthy of note. Most persons who reported having diarrhea
[146] were troubled occasionally rather than frequently. The fact that nearly 2/5 of those questioned had bowel movements less often than once a day, is not surprising in view of the fact that diets which are relatively low in fibrous foods and in the B complex vitamins frequently result in sluggish behavior of the large intestine. That approximately 3/5 of the respondents in Bang Chan usually had a daily bowel movement is perhaps more noteworthy. Even in areas where diets tend to be much more liberal, some persons usually have bowel movements at intervals of 2 or 3 days or even longer. If such persons have stools of normal character and experience no discomfort, this bowel habit may be considered normal for them.

A [see p. 43 – Analyst]

32. Last night, when you ate at your own house, did you eat with your hands, with fork and spoon, or with spoon alone? 125

9.	Hands	242
X.	Fork and Spoon	11
Y.	Spoon alone	73
0.	Unascertainable	7

[264]

33.a. Have you ever been to a clinic or a hospital? [743]

1.	Yes	214
2.	No	119

b. IF YES: In what various places?

3.	Minburi	156
4.	Bangkok	135
5.	Other place	7
6.	Unascertainable what place.	

c. IF H HAS BEEN TO CLINIC OR HOSPITAL: For what various purposes did you go?

7.	Treatment or hospitalization	123
8.	To bring a patient there	77
9.	Visit relatives or friends	45
X.	Other reason, specify_____	11
0.	Unascertainable	—

34.a. During the last year, did it occur to you frequently, sometimes, or never that you had difficulties falling asleep? [513]

1.	Frequently	73
2.	Occasionally	151
3.	Never	109

b. During the last year, did it occur to you frequently, sometimes, or never that you had a headache? [164]

4.	Frequently	50
5.	Occasionally	174
6.	Never	109

c. During the last year, did it occur to you frequently, sometimes, seldom or never that you lost your appetite?

7.	Frequently	50
8.	Occasionally	173
9.	Never	110

d. During the last year, did it occur to you frequently, sometimes, or never that your hands trembled so as to bother you? [164]

X.	Frequently	17
Y.	Occasionally	93
0.	Never	218
—	No Answer	5

e. During the last year, did it occur to you frequently, sometimes, or never that your heart beat so fast as to bother you?

1.	Frequently	36
2.	Occasionally	154
3.	Never	141
—	No Answer	2

severe injury, such as bruising by excessive pressing, or even in hysteria pulling the child to pieces in their effort to get it out.[66]

Secondly, a midwife offered success, not only as proof of competence, but as a substantive asset. It will be remembered that the initial shape of an event set the invariable pattern for its subsequent occurrences. Thus a parturient was virtually certain of successful childbirth if she called on a person who had the habit (khōei) of success. It could not turn out otherwise. We have also seen that these successful midwives were good nourishers (liang dī). A new mother wanted to associate herself with such a fortunate sequence. Once established, a midwife's reputation was not unduly tarnished by the loss occasionally of a mother or baby. She might explain, "The woman did not do as I said," or "I was not given permission to do what I could have done, for her family feared she would be even more hurt by my putting my hand into the vagina." Death was, of course, only due to the running-out of the deceased's merit.

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66. To give something of the measure of their skill: if the feet of the baby appeared first, one man "straightened the legs by hand inside, held the chin carefully as the head came through," while another said, "Do not press or reach into the vagina. Let the baby come naturally." If an arm came first, or it were a breech presentation ("the baby is turned over"), the procedure was to "pull and press lightly," but it was conceded that neither the mother nor child could be saved. Expulsion of the placenta was frequently difficult. "It may take 2 hours or stay in 2 days or more. Some die when it is left in, but some do not." The technique of removal was to give a medicine, press, pull with the hands rubbed with alum for a better grip, with the woman in a crawling position. Some reached into the vagina to locate it. One woman had analyzed her practice so as to know when to expect trouble: namely, in the later pregnancies and childbirths, i.e. the sixth and seventh, say, rather than in the early ones during a woman's younger years.

As to mortality, one "professional" man estimated 30 deaths of babies out of 238 deliveries in 50 years. Hauck (1956) reported 90.6% live births (pp. 32-33), 7% of the babies dying in the first month, 11% within the first year (pp. 39-41). One should remember that the professionals had a greater proportion of difficult cases. One woman had delivered over 100 babies and "all lived."

853 fish and vegetables, when asked if they did anything to stimulate milk secretion. Other preparations, each mentioned once or twice, were cobra curry, fried (3)kuj (1)chnaj flower, pork soup with (3)kuj (1)chnaj leaves, dried peas and peppers cooked in palm sugar syrup. Some of the medications used were reputed to stimulate milk flow. Three women spoke of peacock brand medicine and one of a Chinese medicine in this connection. With respect to the Chinese medicine, another informant said she took it "to remove the serum which interferes with milk secretion." One midwife put herbs on her daughter's breast and expressed and discarded the "early milk" which was considered bad for the baby. No association appeared to be made between putting the baby to the breast and stimulation of milk flow.

846 312 Drinking water. - Information concerning sources of drinking water used by the mothers was obtained from 46 mothers of young babies. Of these, 20 used canal water, 23 rain water, and 3 used either one. In general, there was a relation between season and source of water used. Most of the mothers whose babies were born between March and October drank rain water, whereas from November to February a majority drank canal water. Some families had enough water jars to preserve rain water for much of the dry season, whereas others had few or no jars and, therefore, could save only small amounts of rain water on a day-to-day basis. In all instances, the water, whatever its source, was boiled for the mother during the postpartum rest period. Forty-six women said they drank the water hot; one said it was warm. One popular traditional midwife said, however, that if the mother had her baby in the hospital, use of boiled water for drinking and bathing was not necessary.

CONDITION AND CARE OF BABIES AT BIRTH AND IN EARLY INFANCY

125 All information to be reported concerning condition and care of babies at birth and in early infancy relates to infants who were under one year of age when first visited. Thirty infants were seen when they were under 3 months of age.

Condition at Birth.

164 165 The condition of the baby at birth was generally described as satisfactory. One infant who died on the third day, before we saw the mother, was said to have cyanosis, failed to cry at birth, and needed to be "helped" for about one-half hour afterward. Three infants had congenital defects: umbilical hernia, inguinal hernia on the right side, and hemangioma on the right groin.

One infant had congenital stridor when seen by the physician[1] at 2 months, but the difficulty in breathing had disappeared spontaneously before the baby was next visited at 3 1/2 months of age. 164

Illness in Early Infancy.

One infant that died on the fifth day was seen when one day old, at which time neither mother nor physician made any adverse comment on its condition. The mother, who was not living with her husband, returned to her work outside the village a week after delivery, and we were unable to talk with her again. So far as we could learn from neighbors, this infant had none of the symptoms concerning which we routinely inquired; namely, convulsions, vomiting, diarrhea, or fever. 165

A third infant in this series died when he was nearly 2 months old. At 13 days of age, when first seen, this infant had white patches on his tongue which were diagnosed as moniliasis. When the physician saw the child again at 6 weeks of age he made no adverse comments on its condition. Emotional reaction to the infant's death was such that we were unable to get a clear description of events which led up to it from either parents or neighbors.[2]

Three infants had skin infections when seen within a few days after birth. The physician commented that skin was more susceptible to infection when moist than dry and that the babies had become very warm. The weather was hot, and babies were bundled up and/or were near the fire. He gave directions for keeping the skin clean and dusting with sulfa powder. 164

No deaths from tetanus occurred in this series, although infantile tetanus was prominent among causes of death of infants under one month old (Hauck, 1956). 165 164

Medicine Given to Babies During the First Few Days of Life.

On this point, information was obtained concerning 36 of 40 babies seen before they were 6 months old. Thirty of these were given medicine, sometimes more than one kind. Most of the 854 278

1. A physician was present at all interviews with pregnant women and mothers with very young infants. [124]

2. Although the mother had children by a previous marriage, this was the first child of this union, born after the parents had lived together for 9 years. The mother was 41 years old.

clear evidence of a seasonal effect. If weight gain in Thai infants is related to season, this could be better defined by weighing groups of children at monthly intervals and determining when or if changes in rate of gain occur. 145

Although our records were not made for the purpose of correlating food intake with weight gain, and no quantitative information was obtained on the diets of mothers and babies, we attempted to see if any obvious relation existed between the variety of food eaten by the mother or the child and the child's growth. For this purpose, case studies were made of 7 infants whose records from birth onward were fairly complete. The age at last observation was from about 14 to 18 months. Four of these children had gained at each weighing and weighed more at one year of age than the average infant observed by Dr. Montri (1939). Three were chosen because they had lost weight or failed to gain at some time during the period of observation and weighed less at one year of age than the average infant observed by Dr. Montri. Infants of both sexes were included in each group. No illnesses or abnormalities were recorded in the clinical histories of any of these babies or their mothers. No evidence was obtained from the qualitative food records as to why some infants gained consistently and at a fairly "normal" rate, whereas others gained relatively slowly and failed to gain or lost weight at times (Smith, 1958). 145 262 [125]

Quantitative food records might have provided evidence on this point but our observations were inadequate for this purpose. Such quantitative records should include estimations of the amount of mother's milk obtained by the infants, based on the baby's weight before and after nursing, as well as records of supplementary food given. Analysis of the mother's milk, particularly for the content of the water soluble vitamins which are influenced by the mother's diet, should also help to shed light on the cause or causes of the common failure to gain weight among older infants and small children in Bang Chan. No cases of beriberi occurred among the infants we observed, but in two instances siblings had died of infantile beriberi. [164] [165]

Evidence of protein malnutrition has not been commonly recognized in rice eating areas, but one must consider the possibility that these children may be in a state analagous to pre-kwashiorkor. Development of the clinically recognizable protein deficiency disease may be forestalled when the child learned to feed himself and eats more liberally of rice with some fish and egg. Of the 54 children with kwashiorkor observed by Metrasiri and Metrasiri (1955) in Bangkok, many were weaned earlier than was usual in Bang Chan. Most of them, however, had been breast fed, and 4 were still being breast fed when the disease was diagnosed. 121 [862] [171]

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164 among children in Bang Chan is not known. One thing which
[146] residents of Bang Chan appeared to have in common with other populations which have been reported to be relatively caries free, was low intake of sugar, particularly in a form which would be apt to adhere to the teeth.

Adults up to 44 years of age, in the random sample, retained most of their teeth. A few adults in Bang Chan have
[301] had missing teeth crowned. More sound than missing teeth were found to be crowned, however, i.e. in this community a crowned tooth appears to have cosmetic value.

759 A variety of serious illnesses were found to occur among
[164] residents of Bang Chan. As a rule, local traditional practitioners were consulted first, but most persons reported to have been seriously ill eventually received treatment by outside practitioners with some training in modern medicine.

[844] The majority of mothers in childbirth were attended by
[743] local traditional midwives, but a few difficult cases were taken to the government Health Center in the nearby town of Minburi, where a trained midwife was in attendance.

• 165 Of 438 pregnancies reported by 84 mothers, over 90%
[163] resulted in live births. Of the 397 living children born to these women, 81% survived at the time of interview. Within the first month of life, 7% had died, and a total of 11% died within the first year. Tetanus was prominent among causes of death of infants under one month of age. Infantile beriberi caused some deaths among older infants. In a majority of cases, the cause of death of infants could not be clearly identified, but fever, debility and convulsions were the symptoms most commonly described.

146 Almost half of the persons examined for possible signs of nutritional deficiency, 46% of the school children and 47% of the family sample, were free of such signs. The remainder, slightly more than one half of persons examined, had from 1 to 7 signs each. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Signs most often noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine
[164] in the diet. The only clearly defined deficiency disease observed among residents of Bang Chan during the field study was beriberi.

14 Hemoglobin values of 11.5 g or less per 100 ml. were

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164 malunion of old fractures was observed in two cases.

165 12 Deaths. - Information concerning deaths in Bang Chan during the period of the field study was obtained primarily from field notes. Mothers interviewed or examined by members of the research group which was specifically concerned with health and diet provided further information on infant mortality, and Ralis (1955) obtained some information concerning deaths of children in the respondent's family.

165 Deaths occurring while the field study was in progress. - During approximately 21 months of field study, members of the research group noted 14 deaths in the village. Three infants died, two within a few days of birth, and one at about two months of age. Two children died by accident, one as the result of a fall from a water buffalo, and the other by drowning. One child died of diphtheria and one of Hodgkin's disease. Of the seven adults who died during this period, one was a pregnant woman who became acutely ill and died while enroute to the Health Center at Minburi by boat. The cause of her illness was not known. One young man committed suicide, two adults died of tuberculosis, two of cancer, and one of colitis. One of those who died of tuberculosis was a young woman, the mother of seven children. She was urged by the physician on the team to go to the hospital in Bangkok, but she was unwilling. A sibling 8 years old, who lived in the same household, had died previously with a severe cough.

Mortality among infants and children. - Of the 397 living children born to 84 women interviewed, 323 or 81% of the children survived at the time of interview. Forty-three, or 11% had died within the first year, and 26 or 7% within the first month of life.

Although the data obtained by Ralis (1955) did not permit us to calculate the exact number of children born to the 335 household members interviewed, the number dead, and the number surviving at the time of interview, apparently more than twenty per cent of the children born into these families died (Appendix A). This estimate, for the village as a whole, tends to substantiate the figures obtained from the 84 mothers whom we interviewed.

Some information was obtained from 36 mothers concerning the cause of death of 58 children who were born alive. Twenty-one of these had lost one child only, 8 had lost 2 each, and 7 had lost 3 children each. Reported causes of death are summarized by ages, in Table 16.

In most cases, no specific cause could be assigned, and the case was classified according to the most prominent symptom as fever, convulsions or digestive disturbance.

A [see p.51-Analyst] B [see p.40-Analyst]

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Table 16

Reported Causes of Death of 58 Infants and Children in Bang Chan. (Information obtained from parents.)

	Number of children dying at each age			
	Under 1 month	1 month to 1 year	1-5 years	5-10 years
Cause of death:				
Tetanus	8			
Probably tetanus	4			
Infantile beriberi		2		
Convulsions, cause unknown	1	4	2	
Fever	6	7	4	
Debility	4	2		
Digestive disturbance		2	2	
Sepsis	1		1	
Drowning				3
Diphtheria			1	
Other	2			2*
Total	26	17	10	6

*one with severe cough (tuberculosis ?)

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• 45 Deaths of infants a few days old, with a description of lockjaw, inability to suck, stiff back and clenched hands, were recognized as due to tetanus. The common practice of native midwives is to place the cord over a hard rhizome or clod of earth and to cut it with a tapered piece of bamboo. Thus, infection with the tetanus organism may occur from contact with the soil. Note that 12 of 26 deaths reported for infants under 1 month, were diagnosed as tetanus or probably tetanus. Zimmerman (1931) summarized important causes of death in Siam, based on the physician's diagnosis made after symptoms were described by the head of the household. Of 1800 deaths which occurred in the 18 months preceding the survey, 2% were diagnosed as tetanus. For the Central area, 3.8% of 495 deaths were from tetanus. Most, if not all of the cases of infantile tetanus could be prevented if native midwives learned to avoid contact of the cord with earth or a soil-coated rhizome. By using sterile scissors for cutting the cord instead of tapered bamboo which must be pressed against another surface to accomplish the cutting, contact with soil could be avoided. Of 335 household heads interviewed, 220 owned scissors of some kind (Ralis, 1955).

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Note also the number of deaths from "debility." As the Joint FAO/WHO Expert Committee on Nutrition (1951) has pointed out, the number of early deaths from "congenital debility" becomes insignificant where the health and nutritional status of pregnant women approaches the optimal.

Intestinal Parasitism and Bowel Habits

126 Intestinal Parasitism. - All school children were pro-
125 vided with tin containers labelled with their names, and asked
164 to bring a stool sample to school. Fourth grade children whose first stool samples were negative, were asked to bring a second specimen. Parasites were found in some of these second

k9

27.a. Excuse me, but at present do you have a (wife/husband) who lives and eats with you, or not? [125] [592]

1. Yes	255
2. Yes, qualified _____	6
3. No	72

b. IF NO: Excuse me, but is this because you are widowed, separated, divorced, or is there some other reason? [589] [586]

4. Widowed	45
5. Separated	9
6. Divorced	1
7. Other, specify	10
— No Answer	7

28.a. Your own children, all of them that have ever been born, how many are there? [592] [162]

8. None	24
9. One	32
X. 2 to 3	70
Y. 4 to 5	74
0. 6 or more	133

b. How many of your children are still living?

0. None	29
1. One	40
2. 2 to 3	83
3. 4 to 5	82
4. 6 or more	97
— No Answer	2

c. How many of your children have died? [165]

0. None	198
1. One	44
2. 2 to 3	56
3. 4 to 5	17
4. 6 or more	9
— No Answer	9

29.a. Have you ever been ordained as a priest, or not? [793] [792]

1. Yes	187
2. No	31
— No Answer	2

[Male Buddhist (220)]

b. IF NO: In the future, do you want to be ordained as a priest, or not?

3. Yes	20
4. No	11

c. ASK ALL: How many sons do you have twenty years old or over? [593] [162]

5. None	176
6. One	56
7. Two	29
8. Three or more	19
— Unascertainable	13

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 16.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)		Twice or more (Proportion who own or use the motor)	
Illiterate	44%	(40)	58%	(51)
Literate	83	(36)	88	(83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

APPENDIX B

Cornell Methodology Project
Thailand, May 1955

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BANG CHAN STRUCTURED QUESTIONNAIRE (Frequency Distributions)

A. Ser. No. B. Hamlet and H C. Date of Interview E. Name of Respondent [162]

F. Sex	9.	male	243
	X.	female	90
G. Religious Affiliation	0.	Buddhist	298
	Y.	Moslem	35
H. Main Occupation	8.	Farm operator	269
	9.	Farm laborer	24
	X.	Trade and commerce	18
	Y.	Service	10
	0.	Other, Specify_____	12
I. R is HH or not HH	1.	HH	277
	2.	Not HH	56
J. If not HH, relationship to HH	3.	Husband	—
	4.	Wife	41
	5.	Son	10
	6.	Daughter	2
	7.	Father	—
	8.	Mother	—
	9.	Mother-in-law	—
	X.	Other relative	3

[46]

1.a. Were you born in Bang Chan Commune, Khanna Yao Commune, Minburi Commune, or outside?

b. If outside, in what province were you born? [166]

1.	BC Commune	116
2.	KY Commune	141
3.	Minburi Commune	11
4.	Commune unascertainable	2
5.	Outside BC, KY, Minburi	30
7.	Unascertainable	33

2.a. How old are you?
b. In what zodiac year were you born? [162]

1.	20 to 29	41
2.	30 to 39	81
3.	40 to 49	85
4.	50 to 59	68
5.	60 to 69	41
6.	70 and over	17

125

b. And how about mushroom growing? Do you think mushroom growing yields very good money, good money, or little money? [244]

5. Very good money	68
6. Good money	160
7. Little money	49
8. Unascertainable	56

c. And what about Tilapia. Do you think tilapia raising pays very good money, or good money, or little money? [228]

9. Very good money	15
X. Good money	73
Y. Little money	175
O. Unascertainable	70

39. Do you believe in mediums strongly, somewhat, or not at all? [787]

1. Strongly	12
2. Somewhat	192
3. Not at all	105
4. Unascertainable	24

40.a. Suppose you could do the same work in another rural place and earn ½ more than here. For example, it would be a place 100 kilometers from here. Would you be willing to leave for that place or not? [166]

5. Yes	118
6. No	203
7. Unascertainable	12

.b. IF NO: For what various reasons would you not be willing to go?
(See code at end)

41.a. If you had no land to work in EC-KY would you move to another place or not?

X. Yes	166
Y. No	112
O. Unascertainable	20
— No Answer	35

b. IF NO: For what various reasons?
(See code at end)

42.a. Some people say that, generally speaking people who live in Bangkok have more genuine and lasting happiness than people here in EC-KY. Do you agree or disagree? [369] [829]

1. Agree	136
2. Disagree	134
3. Unascertainable	63

b. IF AGREE: For what various reasons do you agree?

If Agreement (See code at end)

62.c. IF YES: What is the total number of months that you lived in Bangkok? 125 [166].

5.	One year or less	31
6.	13 to 24 months	30
7.	25 to 60 months (5 yr)	21
8.	More than 5 years	35
9.	Unascertainable	

63.a. Is there anyone now eating and living in your house who once lived in Bangkok, or not? [592] [166]

9.	Yes	36
X.	No	296
Y.	Unascertainable	1

b. IF YES: What is your relationship to this person(s)?

1.	Son	9
2.	Daughter	6
3.	Father	2
4.	Mother	-
5.	Brother	2
6.	Sister	3
7.	Other relative	14
8.	Unascertainable	-

c. IF YES: At what age did he leave BC?

1.	Below 15 years	5
2.	15 to 19	8
3.	20 to 29	15
4.	30 years or more	4
5.	Unascertainable	4

d. IF YES: How long did he (she, they) live in Bangkok?

6.	Less than one year	5
7.	1 to 4 years	19
8.	5 to 9	6
9.	10 years or more	5
X.	Unascertainable	1

64.a. Is there anyone who has previously eaten and lived in your house and who is now working in Bangkok, or not?

1.	Yes	92
2.	No	241
3.	Unascertainable	

b. IF YES: What is your relationship to this person(s)?

4.	Son	35
5.	Daughter	21
6.	Brother	16
7.	Sister	8
8.	Other relative	18
9.	Unascertainable	—
—	No Answer	2

60

125 64.a. IF YES: At what age did he leave BC?

[166] [592]

1.	Below 15 years	8
2.	15 to 19 years	28
3.	20 to 29 years	50
4.	30 years or more	5
5.	Unascertainable	8

d. IF YES: For how long has he (she, they) been gone from BC?

6.	Less than one year	12
7.	1 to 4	42
8.	5 to 9	19
9.	10 years or more	19
X.	Unascertainable	

[464] [463] e. IF YES: What various duties or jobs does he (she, they) do in Bangkok?

1.	Housewife	17
2.	Unskilled laborer	19
3.	Skilled laborer	33
	Armed forces	17
	Service	9
	Employee	5
4.	Other (retired, selling things)	2
5.	Unascertainable	4

{166} {593} {602} f. IF YES: During the last year, have you seen this person(s) several times, once, or not at all?

9.	Several times	65
X.	Once	16
Y.	Not at all	8
O.	Unascertainable	3

g. IF YES: Does he (she, they) make regular remittances to this house?

X.	Yes	31
Y.	No	56
O.	Unascertainable	5

[207] 65. Do you listen to the radio regularly, daily, occasionally, seldom, or never?

6.	Regularly-daily	45
7.	Occasionally	66
8.	Seldom	148
9.	Never	60
—	Unascertainable	14

[525] 66.a. Do you play the lottery regularly, occasionally, seldom, or never?

1.	Regularly	20
2.	Occasionally	54
3.	Seldom	220
4.	Never	38
5.	Unascertainable	—
—	No Answer	1

b. IF REGULARLY, OCCASIONALLY, OR SELDOM: Suppose you were to win the second prize of 40,000 baht. What various things would you do with this money?

(See code)

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

162 592 621 average size of family in 1953 is slightly larger than that calculated from the 1949 census.

Disappearance of Some Families from Bangchan

162 178 592 621 When the 1949 and 1953 censuses are paired hamlet by hamlet, appearance of new families and disappearance of some of the old families may be detected. Table 5 shows that during the four years between 1949 and 1953 forty-three families had disappeared from the lists of the seven hamlets constituting Bangchan. This loss was compensated by fifty-three new families, giving a net gain of ten families. In other words, of 288 families existing in 1949, 245 families remained throughout the period. When 53 new families were added to the continuing 245 families, a new total of 298 families was arrived at for 1953. A closer examination, however, will reveal that there were five families which disappeared from one hamlet only to appear in another hamlet of the same Bangchan village. If the seven hamlets are to be considered as one geographical unit, these five families should be deducted from both the disappeared and new families, giving a net disappearance of 38 families and a net appearance of 48 new families, while the number of continuing families becomes 250.

[166] Of 38 families which disappeared from Bangchan, 27 moved out to other villages nearby or afar, while 11 were disintegrated or simply annexed by other families in Bangchan itself.

[TEXT CONTINUED ON PAGE 68]

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TABLE 5

CHANGES IN NUMBER OF BANGCHAN FAMILIES FROM 1949 TO 1953

Hamlet	Number 1949	Number 1953	Continuing			Disappeared				New			
			Total	(1)	(2)	Total	(1)	(2)	(3)	Total	(1)	(2)	(3)
BC4	43	40	32	32	0	11	6	0	5	8	3	1	4
BC5	27	28	24	18	6	3	2	1	0	4	1	0	3
BC6	44	47	38	36	2	6	4	0	2	9	4	1	4
KY5	54	63	45	40	5	9	6	1	2	18	13	2	3
KY6	28	31	27	26	1	1	0	1	0	4	0	1	3
KY7	43	42	37	33	4	6	5	1	0	5	3	0	2
KY8	49	47	42	36	6	7	4	1	2	5	3	0	2
Total	288	298	245	221	24	43	27	5	11	53	27	5	21

Explanation

Continuing (1) . . same family head
Continuing (2) . . different family head

Disappeared (1). . moved out of the village
Disappeared (2). . moved to other hamlet in the village
Disappeared (3). . disintegrated or annexed by other family

New (1). . . . . moved into the village from other village
New (2). . . . . moved in from other hamlet of the village
New (3). . . . . separated from other family in the village.

178 the family members we were informed that A's daughter and
592 her four children had moved out of the village separately
621 to different places which could not be traced, while B's brother and sister went to live with a relative in Lam-loogga, also a rice growing village some fifteen miles to the north. The two chief bread winners of the family, A's husband and B's father, managed successfully to get themselves ordained and are now residing in the village temple. Early in 1953 B went to live with her relatives in Lam-loogga, leaving the sick old grandmother alone in Bangchan.
[792] The arrangement was that the old woman was to quit the old
[888] shack and take refuge in the secular part of the temple where it would be possible for her ex-husband, now a priest, to have two meals delivered to her every day. Just before the 1953 census was taken, however, she was taken to Lam-loogga. The last member of the disintegrating family was thus left out of the 1953 census.

178 Case 2: After the death of his first wife, an old
592 man in B24 gave his two sons equal shares of his property.
587 He then acquired a second wife and built a separate quarter
736 apart from the main building, thus creating a new family of
621 two. In 1952 he was fatally hit by a truck on the Rinburi road. After a few months of unhappy stay with one of her step sons, the widow acquired a new husband and moved out to a neighboring village.

178 Case 3: There was in B24 a laboring family of three
592 consisting of an old man, his daughter, and her son. After
621

178 the death of her father, it was reported that the woman
592 and her son moved to Bangplee, another rice growing village
621 some fifteen miles to the south. After checking with some
[166] of the former Bangchan residents who are now living in that village, the first report was found to be inaccurate. In fact no one in Bangchan seemed to know where they were. The only hint available to us concerning the mother and son was "Family disintegrated. Mother went one direction, son another direction."

Case 4: A woman and her adopted son were operating
[702] a 22-rai rice farm in BO6. After the death of the mother, the man remained in the village alone for a short time and then was conscripted into the army.

Case 5: After the death of the head of a laboring family in BO6, the wife and their four grownup children left the village separately. In the eyes of villagers this was
[166] another case of "family disintegration." The wife's birth place was in KY8, but she could not go back to her old family because there was not enough land to work.

Case 6: An old woman, age 76, was reported in the
[737] 1949 census to be living alone in KY5. Later she moved
[792] into the secular compartment of the temple (she was an aunt of the headpriest) where she died before the 1953 census was made.

Case 7: A man, age 50, was living in KY8 with his older sister, age 60, and their nephew's son, age 6. When the man died, the older sister pursued her brother's farm

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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178 to which surviving elements of the disappearing families
592 were subsequently attached. It was noticed that in the
621 last four cases -- Cases 8, 9, 10, and 11 -- merging with new families was arranged on the basis of mutual convenience and the disappearing families moved en masse into the new ones (with the exception of Case 10 -- a lone woman when arrangement for merging was being made). It may even be said that the initiative came from the receiving families, although the new members may have been more anxious for the union. In the remaining six cases -- Cases 1, 2, 3, 4, 5, and 7 -- there was no element of mutual convenience, and the surviving elements of the disappearing families did not move into new families as a body but as an individual. It seemed in these latter cases that the force of circumstances -- death or extreme poverty -- had prompted either party, usually the disintegrating elements, to seek the union as a quick way out. Because of the purposive nature of the arrangement in the former cases, the process may be called 'annexation'; while for want of a proper term, the process seen among the latter cases will be called 'disintegration'.

[162] None of the eleven cases undergoing disintegration
[423] or annexation owned landed property. Table 6 shows that
[464] six of these were farm laboring families. The five others were distributed among the following occupational groups: farm operator, public servant, and no occupation.

[166] Among the 27 families that moved out of Bangchan, eleven families were known to be living in the bordering

[TEXT CONTINUED ON PAGE 75]

178 villages, and six in villages within a distance of from four
592 to fifteen miles from Bangchan. These seventeen families,
621 whose locations were known, were engaged at the time of the
• 166 study in the same occupations they had been when they were in Bangchan -- either farm operating or farm laboring. Our investigation, however, covered only the whole family as a unit -- that is, we cannot say that every single individual constituting these seventeen families when they moved out of
[464] Bangchan was doing farm work in his new location. Only one case was known in which the family head got a permanent job as a janitor in Wat Makasan Primary School in Bangkok. This man was nevertheless commuting regularly between his farm home in Bangplee and his office in the suburb of Bangkok. His taking up a new job was thus a question of an individual member, not of the family as a whole.

It is not likely that the ten families whose locations were not known to us would take up new occupations in Bangkok. If they did work in Bangkok, they should pay some visits to Bangchan at least during festival time or family re-union occasioned by ordination or cremation, and their presence in the village would certainly be known to us. Besides, we were in constant contact with the core of a group of young men who went to work in Bangkok and who knew one another's whereabouts fairly well, and no information about these ten families was available from this source either. Our impression was that they were doing farm work in some villages not too close to Bangchan.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

Appearance of New Families in Bangchan

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In the pairing of the 1949 and 1953 censuses against each other the appearance of new families was detected as was the disappearance of some of the old families which has just been discussed. Table 5 shows that there were 53 new families, but five of these were merely cases of reappearance of existing families from other hamlets of the same village. Actually, therefore, there were only 48 families that were really new in Bangchan.

Of these 48 new families, 27 moved into the village from the outside and 21 evolved from existing families in Bangchan. Of the 27 immigrating families, 18 came from the bordering villages and 9 from distant villages in all directions ranging from Lardprao and Samsen, some ten miles to the southwest, to Prachin, over a hundred miles to the east. [463] While the eighteen families from the bordering were accustomed, as expected, to rice growing, not all of the nine families from distant villages had been farmers. A family head of one of these nine families came from a family of fruit growers, while another family head, who apparently had a more spectacular record, had been engaged in international rice trading. This latter man, who knew some English, had worked in a large rice mill in Nonburi which was exporting rice under strict government control after the war. Discovery by the government agent of irregularities of the firm led to the man's flight abroad to Hongkong or Swatow some eight years ago. It is assumed with his

178 appearance in the village that the case has been closed.
592 One reason he chose to take up residence in Bangchan after
621 business failure in Bangkok was that his wife owned through
166 inheritance a 17-rai parcel of rice land in the village. Another equally important reason was the relatively low cost of living in the village as compared to the city, which could not be overlooked especially when he had a large family of ten.

162 Of the 21 families evolving or separating from
178 existing families in Bangchan during the period from 1949
592 to 1953, sixteen were young married couples seeking inde-
591 pendent families of their own. Eight of these were married
621 before 1949, and the rest after that year. These sixteen young couples altogether contributed, in the 1953 census, 21 children of age-group 0-4 years or about ten percent of all children of that age-group in the whole village.

This process of separation of young married couples from the old families is normal, in fact a characteristic feature, in areas where the nuclear family system predominates. Although some newly wed couples were able to establish independent families immediately, the pattern was that they remained for a year or more with family of either side, during which time they accumulated capital necessary for future establishment. A separate section will be devoted to this important feature of the village economy.

178 In contrast to the above normal separation from old
592 families, the remaining five of the 21 families underwent
621

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 30

CHANGES IN OCCUPATION OF 104 SELECTED OPERATORS*
Sangchan, Thailand, 1948-53

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Occupation	1948	1949	1950	1951	1952	1953
Farm operator	104	103	98	96	96	87
Farm laborer	-	-	-	-	1	3
Trader	-	-	-	-	-	2
Investor	-	1	1	1	1	3
Professional	-	-	-	-	-	-
Public servant	-	-	-	-	-	-
Home enterpriser	-	-	-	-	-	-
Priest or novice	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	1
Disappeared	-	-	5	7	6	8
Total	104	104	104	104	104	104

* Explanation for those changing occupation:

1949 A became an investor.

1950 B moved out to unknown locality.
C moved out to Lam Kralog.
D moved out to Sai Kong Din.
E moved out to Bang Plee.
F moved out to Bang Plee.

1951 G died, and family moved out to unknown locality.
H moved to Bangkok.

1952 H moved back from Bangkok into the village, became farm laborer.

1953 I moved to Lard Krabang.
J stopped farming, became an investor.
K stopped farming, became an investor.
L stopped farming, became a trader.
M stopped farming, became a farm laborer.
N stopped farming, became a farm laborer.
O's occupation became obscure (under miscellaneous).
P stopped farming, became a trader.
Q's family lost its identity, was annexed by a farm operating family not in the sample.

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The lean time from the middle of February to the end of May is devoted by some villagers, mostly young men, to wage earning outside the village. The size of this temporary labor migration depends on the job opportunities, and these job opportunities depend largely on personal contact. Seasonal off farm jobs are: (a) crude carpentry work usually on nonpermanent construction where cheap temporary labor is preferred; and (b) plantation work in the sugar cane region of Cholburi some eighty miles east of Bangkok.

Inherent Excess of Expenses over Incomes

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The prevalence of debts in the form of credit purchases among Bangchan farmers indicates an excess of expenses over incomes. It has been shown that most cash loans were sought to clear high interest bearing credit purchase accounts, although some were for productive purposes. Even in this latter case, it has been observed that farmers usually borrowed no more than an amount that was immediately needed together with cash on hand to pay for the capital investment. This means that after such capital purchases there was less cash for the household and operating expenses, and so there would be a higher credit account to be settled in the following harvest.

Low incomes coupled with relatively high expenses leave little or no room for internal savings.

*243
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The situation is aggravated by an increasing rate of consumption relative to the ability to produce. While

4:Phillips E-4,5 (1956-1957) 1966
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423 184 from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

369 177 A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital [494] does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey [484] conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise 369 177 of regular wages, lighter work, and the bright lights of the city, leave Bang 167 Chan with the hope that they will never have to return, although of course [464] many do. The Goldsen-Ralis survey reveals that 26 percent of their respondents had lived in Bangkok for a year or more, although for most this [701] was in fulfillment of military service.

369 177 181 Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

369 177 The frequent transit between Bang Chan and Bangkok,[8] however,

[8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

[207] [204] [871]

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

174 596 "extended families." The aim of all Bang Chan families even then was to attain a position in which they would be free from such obligations or would have other families dependent upon them.

596 594 177 178 In the intervening years the influx of new families into Bang Chan, the increased self-sufficiency of the individual nuclear families and, most important, the increased acceptance of commercial values, have served to break down kindred groups so that today few kinsmen work their fields together and even fewer share their food or equipment with one another, beyond what has been noted above. Perhaps the only remaining *universally* practiced function of the old kindred groups is the celebration of ceremonials involving members of the family, particularly cremations and ordinations, the cost and merit of which are shared among the participants, depending upon their wealth. Very often people do not want to borrow from or lend money or equipment to kinsmen precisely because the intrusion of the kinship tie makes the collection of such debts doubly awkward ("relatives take twice as long in repaying money; I do not want to lend anything to them"). However, the old forms have not been completely obliterated and when necessity requires or personal convenience moves an individual to look to others, the traditions of extended kinship, as indicated earlier, may be invoked.

[476] [796] [426]

596 For purposes of conceptual convenience, two types of kindred may be specified: the kind referred to above which involves kinsmen living in the village and to which Kaufman (1960) gives the name "spatially extended family"; and the type descriptive of relatives living outside Bang Chan, dispersed throughout other villages and provinces or in Bangkok, and called by Kaufman "the remotely extended family" and by L. M. Hanks (1959c) "the multi-local extended family." These terms are of course generic labels descriptive of actual or potential relationships between individuals, not of specifically delimited groups. Sometimes Bang Chaners attempt to extend the definition of the latter type of relationship to individuals who have never heard of them, but who may be in a position to help their son obtain a job in the city or get him admitted into a vocational school. Hanks has shown how the multi-local extended family has to a limited extent in recent years rejuvenated extended kinship ties by becoming the major institutional mechanism through which villagers leave Bang Chan to seek their fortunes elsewhere. (This last phrase is not merely a figure of speech; many young Bang Chan men have what could be called almost a Dick Whittington view about leaving Bang Chan for Bangkok.) A cousin who undertakes to serve as a villager's liaison to a city job or who offers him a place to stay usually does so willingly, for it creates obligations which may be called upon later if need be.

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596 The above description of variations and extensions has been presented

369 It should be noted also that once a villager has moved
167 into Bangkok he will be deprived of the privilege to
162 acquire free food from nature -- an important economic advantage of living in the village which counts heavily when emigration to the city is being seriously contemplated.

427 It is seen, then, that the demand for land on the
423 part of land-thirty operators -- the tenants, part-owners, and owner-operators -- was high and inelastic, while the demand for land on the part of land-saturated landlord-operators was low and elastic. Since the combined demand of all landlord-operators constituted only a small fraction of the total demand (Table 20), it may be safely concluded that the aggregate demand for land in Bangchan at the period we are dealing with was high and inelastic.

311 Let us now consider the supply side of land. For
423 the purpose of this discussion we may differentiate four
427 sources of supply of a total of 6,722 rai considered to
463 represent our natural Bangchan area. They are:

1. Land-thirsty operators -- all for implicit rent.
   a, Owner-operators 2,131 rai
   b, Part-owners 227 rai
   c, Tenants 225 rai
   Sub-total 2,583 rai

2. Land-saturated operators (landlord-operators).
   a, For implicit rent 517 rai
   b, For explicit rent 683 rai
   Sub-total 1,220 rai

3. Local non-operators -- all for explicit rent.
   a, Traders 189 rai
   b, Investors 149 rai
   c, Public servants 165 rai
   Sub-total 503 rai

BANG CHAN

164 [146] among children in Bang Chan is not known. One thing which residents of Bang Chan appeared to have in common with other populations which have been reported to be relatively caries free, was low intake of sugar, particularly in a form which would be apt to adhere to the teeth.

Adults up to 44 years of age, in the random sample, retained most of their teeth. A few adults in Bang Chan have had missing teeth crowned. [301] More sound than missing teeth were found to be crowned, however, i.e. in this community a crowned tooth appears to have cosmetic value.

759 [164] A variety of serious illnesses were found to occur among residents of Bang Chan. As a rule, local traditional practitioners were consulted first, but most persons reported to have been seriously ill eventually received treatment by outside practitioners with some training in modern medicine.

[844] [743] The majority of mothers in childbirth were attended by local traditional midwives, but a few difficult cases were taken to the government Health Center in the nearby town of Minburi, where a trained midwife was in attendance.

165 [163] Of 438 pregnancies reported by 84 mothers, over 90% resulted in live births. Of the 397 living children born to these women, 81% survived at the time of interview. Within the first month of life, 7% had died, and a total of 11% died within the first year. Tetanus was prominent among causes of death of infants under one month of age. Infantile beriberi caused some deaths among older infants. In a majority of cases, the cause of death of infants could not be clearly identified, but fever, debility and convulsions were the symptoms most commonly described.

196 Almost half of the persons examined for possible signs of nutritional deficiency, 46% of the school children and 47% of the family sample, were free of such signs. The remainder, slightly more than one half of persons examined, had from 1 to 7 signs each. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Signs most often noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine [164] in the diet. The only clearly defined deficiency disease observed among residents of Bang Chan during the field study was beriberi.

14 Hemoglobin values of 11.5 g or less per 100 ml. were

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14 observed in 9% of the school children 7 to 14 years of age who were examined, and in about 6% of the males and 25% of the females over 15 years of age. Of 337 persons examined, however, 2 only, one child and one adult female, were found to have hemoglobin values under 9.75 g per 100 ml.

744 514 164 364 Modern sanitation was practically unknown in Bang Chan. Few families had covered pit latrines or made any effort to cover excreta. Intestinal parasitism was common. Garbage might be fed to animals, but was frequently thrown into the canal or elsewhere about the compound. Provisions for protecting foods from contamination were meager.

When rain water was available, it was used for drinking, but several months each year water from the canals or fish ponds was used without prior treatment. For washing vegetables, cooking and washing dishes, canal and pond water was used throughout the year.

744 751 A few changes in sanitary practices, if they could be brought about, might reduce some kinds of illness substantially. For example, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

758 121 Modern medicine will probably not be readily or generally available to a majority of the residents of Bang Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 • 17 43 Writing on economic change in Thailand since 1850, Ingram points out that soon after the Bowring Treaty (1854) the population of Thailand tended to specialize more and more in the production of one major crop (rice) and a small number of other primary products, selling these products for money, and using the money to buy various articles of consumption. "Money thus came to play an increasingly important role in an economy in which it had formerly been of but minor significance. When Western traders were freed by the Bowring Treaty to put such products as cheap cotton prints on the Thai market, the people bought these products and, if they could not buy they sought a source of money income. Money could most easily be acquired by producing some commodity for the export market. As villages and households turned to the production of money crops, and as they began to purchase bright-colored garments from the traders, the household crafts declined. Cotton fields were perhaps used for rice or abandoned in favor of land suitable for rice. With the money income earned through the export market, the farmer bought the goods he had formerly made for himself."[9] The money economy had brought along its inevitable companion -- credit, which had become accentuated by the fact that Thai rice farmers received their principal incomes only once a year. There has been a tendency to trace the perpetuation of farm indebtedness to farm poverty which is in turn traced to low productivity in underdeveloped areas. While this is

*243 178 426 43

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9. Ingram, op. cit., p. 36.

Sometimes these aberrancies were viewed as desirable sources of supernatural power, but on other occasions, they were seen as a sign of demerit, caused embarrassment, and were suffocated at once (if alive), and buried. 845 847

If a woman died pregnant, her body was at once brought to the temple where the unborn child was removed surgically. The usual solacing sermon, rites "to lead the deceased to live in her right place in the next world," and cremation took place, with the fetus laid beside its mother so that it "would come out normally." The mother and child were separated to prevent a ghost which was double-powered. No prayers were chanted at home before exsection "lest they make the power of the spirit stronger." Moreover, any violent or premature death caused an angry ghost. The ghost of a premature child had a heavy load of sin, for its stay in purgatory, where sin was worked off, had been interrupted (Textor:262). An unscrupulous mɔ̄ was eager to get possession of any ghost for use in sorcery, and a double ghost was stronger than any other. Ghosts were obtained by plundering the mortuary chambers of the temple prior to cremation. By feeding (liang) it, a mɔ̄ controlled it. The ghost of a male infant was preferable because it was "stronger than that of a female." In the light of this situation, not only should the body of a pregnant woman never be left alone " so that no one can get at them (sic)," but a pregnant woman herself ought not to be alone.[26] The behavior towards the Rice Goddess, Mother Posop, who was "pregnant" when the grains in the stalk filled out, illuminated many of these attitudes: "Mae Posop feels weak, hungry, and uneasy. She is a woman and beautiful in her pregnancy." To allay her hunger the 845 766 [775] 845 775 754 775 843 782 [754] 843 782 776

26. In Cambodia, a pregnant woman might be murdered, even by her husband, so that the murderer might gain the malevolent power that possession of her now double soul would afford. (E.R.E. "Cambodia": p.159). This specific statement was not found in Bang Chan but might be part of the shadowy background to local reluctance to leave a pregnant woman alone. [171]

844 In view of the stake of a child in the successful outcome of his own birth,[39] under what circumstances might a child not be helpful? This was explained by merit (bun) and habit (khoei).

Merit

782 828 761 844 Since merit, gained through virtuous behavior, determined a person's character, circumstances, health, and longevity, the merit of mother and child set the course of childbirth. It will be recalled that persons who lacked merit because of previous sins were cruel, lived short lives, and had to endure suffering, while meritorious persons enjoyed success, kindly natures, and long life. Yet an outwardly fortunate person might be at the point of merit-exhaustion, when suffering commenced. Any mother who suffered greatly lacked merit. In one case, "7 babies of a woman died young while the eighth and subsequent ones lived, proving she had to suffer greatly to work off some misdeed in former existences. She was given the trouble of bearing and feeding the child, and the child did not have enough merit to grow up, and so to feed her in return." Her punishment was to bear non-meritorious children who could not live. A woman's premature[40] death in childbirth was caused only by her own lack of merit.

• [171] 39. By way of contrast, consider how parturition is pictured in the United States. The active role is played by the midwife or doctor, or some other outsider, who "delivers," i.e. "liberates," the child from the womb, or frees the mother and baby from one another. "A child is born" presents the child as completely passive; in "to have a baby" the mother is relatively so. The most active English renderings are "to bear a child" and "to give birth to a child." It is noteworthy that modern anaesthetics have tended to increase the passivity of the mother.

40. The idea of a natural term of life was described in the Visuddhi-Magga: "The Karma that caused conception has ripened to a termination, although the dependence for continuing the series constituting the term of life be not exhausted. Death by the exhaustion of the natural term of life occurs when the span of life, the nutritive powers... proper to any given grade of existence come to an end..." (Warren:252).

761
775 Moreover, her life would some day begin again. Whether birth
844 was rapid or slow, the experience of the suffering deepened her sense of compassion and, as will be shown, brought her closer to fulfillment of her life role.[41]

Habit

153 If mutual help organized relationships, habit (khoei)
82 stabilized them. Khoei means "to be used to, accustomed to,
853 habituated." A first occurrence was an example and set the
[761] pattern for all subsequent occurrences. With one performance one was accustomed to an action. For instance, shortly after the temple was built 2 people died, deaths in Bang Chan "always occurred in pairs;" it was the temple's "habit." Moreover, "the head priest could never expel a priest because he had never done so." Again, a few women saw to it that during this period their babies were given a few grains of rice (even though they were far too young to be offered raw rice regularly), so that "later on, if they got sick,
• [171] they could always at least eat rice," for "they would be used to it." "Glutinous rice was not good for babies in Bang Chan, but in North Thailand [where it was a staple] it could be eaten because people were used to it." Someone had set the example which started the custom.

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844 41. Bang Chan's Buddhist phrasing of the meaning of pain and
154 death in childbirth seems to indicate that childbirth occurred
171 under psycho-cultural conditions that induced relaxation and
114 reduced fear and pain. An "easy" delivery lasted 2 hours. According to a modern medical theory, (Dick-Read: Childbirth Without Fear, passim) lack of fear of childbirth leads to mental and physical relaxation which in turn reduces pain and labor. Dr. Dan Bradley observed that labor was shorter among Siamese women than among non-Siamese. "Facts seem to prove that parturition is both shorter and easier to Siamese mothers than is usual to Europeans and Americans" (Bradley, 1865:79). We accept his first-hand observation because he had 40 or more years of experience in delivering babies, both Thai and non-Thai (missionary wives, etc.), and suggest that it may be taken as proof of mental and physical relaxation derived from lack of fear. Although the missionary women may have been frightened because they were in a far country, Dick-Read argues that fear of childbirth has long been present among American women and this fear has the effect of longer, harder labor.

NOTES ON THE PREPARATION AND NUTRITIVE VALUE OF COCONUT MILK AND COCONUT CREAM

252 The term coconut cream ((5)hua (2)ka-(4)thi), as it 262 was used in Thailand, referred to the product which was made by squeezing grated coconut with little or no addition of water. Cocomut milk ((4)naam (2)ka-(4)thi) was made by squeezing grated cocomut repeatedly with water. Coconut cream might be made first, and the residue extracted one or more additional times to obtain coconut milk. The terms coconut milk and coconut cream apparently are not used consistently. Losee (1952) commented on this when he described [114] the preparation of coconut cream in Samoa, and said that it [71] was sometimes called coconut milk. Miller et al. (1936), in describing the preparation of coconut milk said "If a thick coconut milk to serve over puddings, taro leaves, etc. is desired, 1/2 to 3/4 cup of coconut water or boiling water should be poured over 3 cups of grated coconut. . . . If the milk is to be used in curry sauce for chicken, eggs, shrimps, or in cornstarch pudding, a larger quantity of water (1 to 2 cups of water to 3 cups of grated coconut) may be used."

126 In carrying out the dietary study, the observer weighed the grated coconut meat, the residue and the final products, coconut milk or cream, or both. She did not weigh the water as it was added in successive portions, but the amount of added water could be calculated.

[illegible] 262 The ratio of coconut milk to meat varied considerably, but on the average, households in Group A obtained coconut milk which weighed more than eight times as much as the coconut meat from which it was made. Households in Group B obtained less than 2½ times as much milk by weight as coconut meat. The number of extractions made varied from 2 to 6, [illegible] with a mode of 3. Obviously, the products made by Groups A [71] and B, although both called coconut milk, had markably differ- 262 ent percentage composition, and neither was similar to "coconut milk" for which values could be found. These values were as follows:

Authors	Location	Coconut milk grams per 100 gm. E. P. Pro.	Fat	Carbo.
Bocobo et al.	Philippine Islands	3.6	33.2	38.4
Food and Drug Division	Thailand	3.52	34.75	1.52
Miller et al.	Hawaii	4.0	27.0	18.9[1]

1. Personal communication

Exposure of Infants to Sunlight.

854 Even during the rainy season sunshine was usually abundant in Bang Chan, but taking a baby out of doors at an early age was generally thought to involve some risk. Many houses had low or wide eaves, and an infant was usually kept in a cradle in the house where sunlight could not penetrate. When old enough to hold up its head while sitting astride an older person's hip, the infant might be carried about the compound by parents or older siblings. As the question was worded ("When did you take the baby outside the house?" or "At what age did you take the baby with you when you went out for pleasure?") the answer did not mean that the baby was taken out with any degree of regularity at the specified age. Most of the babies in this series had been taken outdoors by the time they were 3 months old, but 4 were a year or older when first exposed to [164] sunshine. Nevertheless, the physician found no evidence of rickets among the infants he examined.

One informant, a school teacher's wife, said she thought that taking the baby into the sunshine was not harmful; in fact she believed it made the baby stronger than usual. She thought, however, that too much exposure to sunshine might "bring cold into the baby" and she spoke of the beret as a protection against this.[1] In Bang Chan, an otherwise naked infant might wear a beret when being taken out of doors.

MATERNAL DIET

Diet During Pregnancy.

843 242 [125] Of 31 mothers who furnished some information on diet during pregnancy, 17 were pregnant when interviewed, and the remainder had young infants, in most cases under 3 months of age. Eighteen of the interviews were based on schedule 4 (Appendix p. 53) and provided fairly detailed information on the kinds of foods eaten. Other informants gave more general information, such as foods craved or disliked.

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[171] 1. Wellin (1956) mentioned the small woolen cap made or bought by mothers in the Valley of Ica, Peru, for the infant to wear. The cap was put on soon after birth and was worn, off and on, for many months. The function of the cap was to prevent the entrance of cold via the fontanel, which was defined as a particularly vulnerable point of entry. Wellin noted that all infants he saw in maternity wards in the Valley of Ica wore woolen caps.

clear evidence of a seasonal effect. If weight gain in Thai infants is related to season, this could be better defined by weighing groups of children at monthly intervals and determining when or if changes in rate of gain occur.

Although our records were not made for the purpose of correlating food intake with weight gain, and no quantitative information was obtained on the diets of mothers and babies, we attempted to see if any obvious relation existed between the variety of food eaten by the mother or the child and the child's growth. For this purpose, case studies were made of 7 infants whose records from birth onward were fairly complete. The age at last observation was from about 14 to 18 months. Four of these children had gained at each weighing and weighed more at one year of age than the average infant observed by Dr. Montri (1939). Three were chosen because they had lost weight or failed to gain at some time during the period of observation and weighed less at one year of age than the average infant observed by Dr. Montri. Infants of both sexes were included in each group. No illnesses or abnormalities were recorded in the clinical histories of any of these babies or their mothers. No evidence was obtained from the qualitative food records as to why some infants gained consistently and at a fairly "normal" rate, whereas others gained relatively slowly and failed to gain or lost weight at times (Smith, 1958).

Quantitative food records might have provided evidence on this point but our observations were inadequate for this purpose. Such quantitative records should include estimations of the amount of mother's milk obtained by the infants, based on the baby's weight before and after nursing, as well as records of supplementary food given. Analysis of the mother's milk, particularly for the content of the water soluble vitamins which are influenced by the mother's diet, should also help to shed light on the cause or causes of the common failure to gain weight among older infants and small children in Bang Chan. No cases of beriberi occurred among the infants we observed, but in two instances siblings had died of infantile beriberi.

Evidence of protein malnutrition has not been commonly recognized in rice eating areas, but one must consider the possibility that these children may be in a state analagous to pre-kwashiorkor. Development of the clinically recognizable protein deficiency disease may be forestalled when the child learned to feed himself and eats more liberally of rice with some fish and egg. Of the 54 children with kwashiorkor observed by Metrasiri and Metrasiri (1955) in Bangkok, many were weaned earlier than was usual in Bang Chan. Most of them, however, had been breast fed, and 4 were still being breast fed when the disease was diagnosed.

4:Phillips E-4,5 (1956-1957) 1966
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essentials not atypical of the region. Instead of villages being organized administratively on the basis of natural social groupings and demarcations—that is, social centers and groups with which people feel a primary identification, in Bang Chan's case the local Buddhist monastery and government primary school—so that governmental and social units are isomorphic, they are gerrymandered into highly arbitrary administrative units. Thus the village of Bang Chan is comprised of seven *muubaan* or hamlets, at the head of which are seven hamlet headmen; these hamlets are located in two different *tambon*, or communes (four in one commune, three in the other) headed by two commune headmen, neither of whom lives in Bang Chan; the two communes are located in two different districts headed by two different district officers and their staffs; the two districts fortunately are in a single province, Phranakhoon, the same administrative unit in which the metropolis of Bangkok is located. Yet the people who reside in these varying hamlets located in different communes and districts all perceive themselves as living in the single village of Bang Chan. The fundamental organizational problem here is that since the sources and lines of governmental authority do not follow the lines of the natural Bang Chan community, jurisdictional conflicts and confusions arise to threaten the effectiveness of those community-wide programs that occasionally may be initiated. For example, during a diphtheria immunization campaign in the village (Hanks and Hanks 1955), the public health officer from one of the district offices was reluctant to immunize all the children of Bang Chan on the grounds that some of them came from hamlets outside his district's jurisdiction; he yielded, as the Hankses note, only when a perceptive villager pointed out that if germs knew no boundaries why should he?

Not all villages of the Central region have such real or potential administrative difficulties. (And Bang Chan does not have them too frequently either, principally because the government does not initiate too many community service programs.) However, the basic organizational principle which admits them—that houses are grouped together as administrative "villages" on the basis of conceptual neatness rather than socially functional criteria—is a common feature of the administrative structure of the Central Plain.

The foregoing account describes some basic culture patterns which Bang Chan shares with other villages of either the region or the nation. In addition to these broader patterns, Bang Chan has certain traits which inevitably refer to local village conditions and contingencies. For example, the most active and viable social unit in Bang Chan beyond the familial level is the order of Buddhist monks associated with the monastery. It is the only organization within the village that has been successful in mobilizing community activity (Sharp *et al.* 1953), although much of this activity has

4:Phillips E-4,5 (1956-1957) 1966
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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[6] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

[6] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost a Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

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village; for how long his wife or child did not know: "maybe he will be back next week or next month; it is not certain." In a similar vein, we would encounter a youngster serving at the monastery, a week later working as a chore boy in someone's home, and a few months later living in still another home. And most fascinating of all are those seemingly amicable and placid families—and it should be remembered that Bang Chan is small enough, and in the daily round of life open and quiet enough, so that the slightest manifestation of family tension may easily become public knowledge—which suddenly split apart after a disagreement about something as inconsequential as a missing shirt. Here, the cause of fission is of course not the intrinsic importance of the missing item (although a white "city" shirt is expensive and does have symbolic significance), but rather the villagers' extraordinarily low tolerance for interpersonal conflict and the challenge to their pride: rather than permit the disagreement to mushroom into an emotionally expressive conflict, it is much easier to leave the field. Because the volatility of a dispute is what is often most feared, one rarely hears of any actual argument accompanying the disagreement; instead villagers say, "We had a few words and he left. That's all." [10]

None of the above is meant to imply that family fissions are typical, in a statistical sense, of Bang Chan or even less that discord is what causes them. (Our concern with discord was simply to illustrate that villagers feel so strongly about it that when it occurs, they will take the most extreme measure to avoid it.) However, together with the separations that result from economic opportunities, "arrangements of convenience," and the desire to be footloose, they do occur frequently enough to exist as potentialities in the life of every family; when they happen they are not completely unexpected.

These points have been raised primarily because Bang Chan is in fact a rather placid community, and in discussing kinship it is easy to mistake placidity for inertia, especially when our typical categories of description almost assume the latter state to be the case. However, accompanying this placidity is a kind of quiet dynamic resulting from 1,771 individualists—polite, gentle, non-aggressive, but nevertheless individualists—pursuing their own purposes. These pursuits do not preclude family obligations, loyalties, and love—Bang Chaners repeatedly speak and act in terms of repaying the love that their parents have given them; of repaying them for

[10] The desire to avoid emotional climax here seems very similar to what Bateson (1949: 40) found among the Balinese where, when individuals quarrel, there is an attempt at a "formal recognition of the state of their mutual relationship, and possibly, in some sort, a pegging of their relationship at that state . . . this method of dealing with quarrels would correspond to the substitution of a plateau for a climax." In Bang Chan, the "plateau" is achieved by having nothing to do with one's antagonist.

4:Phillips E-4,5 (1956-1957) 1966
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As the reader might by now suspect, it is not easy to determine the basis of the unity of the family. However, of all the factors that keep people living together in amity and affection, two come to the fore: a sense of love, obligation, and respect that is derived from the simple fact of kinship, but which must be continuously confirmed by mutual benefits; and economic considerations.

The economic foundation of the family is significant not only because the family is in fact the sole economic and occupational unit in the community (with the exception of the monkhood and school) but because the villagers themselves think of the family in terms of its economic functions. People say that they marry for wealth or because of the productive capacities of their spouses;[13] spouses stay together because the economic costs of a split are too great; most important of all, people are keenly *aware* of their economic interdependence. Fathers say that they need children to work in the fields and care for the buffalos, that a family needs a mother so that its members will be fed, that siblings are useful because it is easy to borrow from them (although, as noted earlier, some are unhappy about the intrusion of the kinship tie into what they regard to be a commercial transaction). Many villagers extend this economic, transactional type of thinking to other aspects of the kinship relationship. Thus they say that "the purpose of marriage is to have a companion who will take care of you when you get sick," or very frequently that "my parents went to the trouble of bringing me up so they would have a person to make merit for them when they die." The emphasis here is on independent agents serving each other because it is mutually beneficial.

The love and affection that people feel for each other is of course grounded in the close associations that one finds in most nuclear families. However, the attitudes of respect that one sees are perhaps more distinctively Thai. Almost all the literature on Thailand refers, at one point or another, to the patterns of respect (*khwaamnabthyy*) existing between people, both within and without the family. These patterns are based, in the first instance, on the status inequalities that exist in almost all social

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[13] In responding to the unstructured Sentence Completion Test item, *"He (she) wants to get a wife (husband) who. . . ,"* for example, thirty-one of sixty informants indicated that they wanted a mate who "was a good worker," "earned a living," "was rich," or otherwise had high socio-economic status. Only two persons said that they wanted a spouse for reasons that could be reasonably defined as sentimental: one woman wanted a husband who "would be a good friend with whom she could discuss things," and a man said he wanted a wife whom "he loved." Other informants gave completions distributed among a variety of categories: "polite, well-mannered, handsome, kind, strong, and good" spouses; and six women wanted husbands who would be faithful.

4:Phillips E-4,5 (1956-1957) 1966
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relationships: within the family, usually in terms of the relative ages of people; elsewhere, in terms of age, wealth, power, knowledge, religious or governmental role. Secondly, they are based on the assumption that every individual, regardless of his position in the hierarchy, deserves respect. The first is a respect associated with the proper performance of one's role; the second, a recognition of the essential dignity of every human being.

The role of these respect patterns cannot be emphasized enough. Benedict, in her study (1946) of Thai culture at a distance, referred to the learning of the *waj*, or gesture of obeisance, as "the first teaching the child receives." Although the *waj* is perhaps not the very first social act the child learns, I have seen infants no more than two weeks old being guided by the mother in raising the palms of their little hands to the forehead in expression of deference to superiors. The older infant who can do this on his own almost always receives acknowledgments of approval and delight from the adults in attendance. An older sibling really means it when he says of his relationship with his younger brothers, "when I ask them to do some kind of work, they go and do it. They never disobey, and when there is no disobedience, there is no hatred. . . . Formerly, whenever there was entertainment somewhere I took them with me. My younger siblings love me a lot. . . ." His position in the authority structure assumes the respect of those younger than he, and they willingly grant it for, among other things, he plays his role well as the kindly superior who takes them with him whenever there is entertainment. All the polite little linguistic forms (honorifics, expletives suggesting status and, most important, ordinary kinship terminology with its specification of relative age) as well as kinesthetic forms (lowering the body while passing a seated older person, holding the younger between one's legs and with arms around him in a position of protection) also serve to emphasize the respect that people grant one another because of their differential status. Perhaps the most revealing illustration of the strength of these patterns, at least the authority pattern, was provided by a two-year-old toddler who pointed to the stomach of his pregnant mother and said with pride, "My younger sibling is in there. When he is born he will be *my* responsibility." Little doubt that when the child is born he will give his older brother his due.

With regard to the other respect form, recognizing the dignity of every human being, more than once I have heard parents say that they disliked giving their child a certain medicine "because it offends the baby; he does not like it. It is better not to give it to him than to hurt his feelings." Although I do not doubt that in some instances the parents were annoyed more by the screams of the child than anything else, I am also convinced that for the most part they were respecting his basic individuality and right

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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[16] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[16] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

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571 given were equally oblique. Although I never really overcame my feeling
123 of helplessness in dealing with such situations, I did manage over a period
466 of time to communicate to those in my employ the appropriateness (at least regarding our own particular relationship) of giving me fair warning, *e.g.*, "Europeans are different in this way."

571 Again, there is nothing extraordinary or unique about personal desires and inclinations intruding on the stability of an interpersonal relationship. However, what is unique to Bang Chan and Thai culture in general is the frequency of such intrusions, the extent to which they take precedence over the responsibilities of the established relationship, and perhaps most im-
*[156] portant, their general expectability. No Bang Chaner is ever taken aback when another does not fulfill his assumptions about how that other will behave. Note that these intrusions may have little effect on the face-to-face contacts existing between people. My assistant's declaration that he was going to the movies was presented in a most affable way and in the other examples cited, where people were left in the lurch, there need not have been any contact whatsoever between the parties involved.

114 Reference was made to these modes of relationship in the section on
*156 Bang Chan social organization and kinship. However, they received their
• 171 first formal, and perhaps most elegant, formulation in a now famous article entitled "Thailand—A Loosely Structured Social System," by the late John F. Embree (1950). Embree's application of the notion of "loose structure" was mainly descriptive rather than analytic; it was used to summarize a wide variety of empirical materials. Thus (182): "The first characteristic of Thai culture to strike an observer from the West, or from Japan or Vietnam is the individualistic behavior of the people. The longer one resides in Thailand the more one is struck by the almost determined lack of regularity, discipline, and regimentation in Thai life. In contrast to Japan, Thailand lacks neatness and discipline; in contrast to Americans, the Thai lack respect for administrative regularity and have no industrial time sense." After providing an extensive series of examples—on the lack of binding filial piety, on the tendency to permit a thief to steal from a neighbor's house without raising an alarm or attempting to stop him, on the capacity to delay and double-talk those with whom one has business dealings, Embree concludes (184): "The point here once more is that . . . while obligations are recognized, they are not allowed to burden one unduly. Such as are sanctioned are observed freely by the individual—he acts of his own will, not as a result of social pressure."

114 While Embree's formulation is by definition phrased in social structural
*156 terms, it inevitably directs our attention to an underlying motivational issue: the nature of the villagers' dispositions to conformity. Conformity to the expectations of others—whether such expectations are shared, comple-

4:Phillips E-4,5 (1956-1957) 1966
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mentary, or emergent—is of course a basic requisite of all effective[19] social action. It is perfectly clear, as was demonstrated in the earlier discussion, that Bang Chaners are highly motivated to conform while in the direct presence of others. Often there is over-conformity when in such situations villagers become overly solicitous to what they think are the needs of others. However, the hallmark of Thai social relations is that there never is any certainty that such face-to-face contacts will take place, or if they do take place, that the conformity which exists during the direct encounter will be sustained once the contact has ended. The overriding inclination of the Bang Chaner is to separate the encounter itself from that which precedes or follows it; psychologically, they are independent and unrelated experiences. The typical Bang Chaner excels at the art of indicating agreement with people—responsiveness, coöperativeness, and compliance with their verbal requests and orders—and then once the situation has been concluded, doing precisely what he wants, often the exact opposite of that to which he had agreed.[20]

Ordinarily, this is not intended as a form of duplicity. Villagers are quite sincere (and probably correct) when they say: "People are much happier when you agree with them and tell them what they want to hear." Too, the behavior is explained in part by the fact that most villagers feel they can change their plans and intentions with impunity at the slightest provocation. Unfortunately, the other persons involved may not be informed of the change until it actually occurs. A Bang Chan employee who

[19] The term "effective" is inserted here to acknowledge that social action is just as likely to be characterized by ambiguity, confusion, and misunderstanding—the absence of clear expectations—and that in some cases (for example, greeting rituals) it is oriented mainly to *discovering* patterns of expectations. Further, insofar as such action occurs through time, it is never completely free of a minimum of both ambiguity and certainty: the ambiguity of not being able to anticipate what might *next* occur; the certainty of knowing that what does emerge has *some* relationship to what has gone before.

[20] Bang Chan and Thai culture in general evidently are not the only places in Southeast Asia where one finds these modes of response. Addressing himself to a rather different issue, Geertz (1956: 155), writing about the social attitudes of Javanese peasants, notes: "Now, as in the past, the central government and the *prijaji* [aristocratic, learned, upper class] outlook which justifies it sits uneasily in the general social context of Javanese peasant society, with much less actual control over the behavior of the villager than it would seem at first glance to have. Without the intricate ties between the rural and urban gentry one finds, for example, in China, or without the deeply rooted clearly defined, land-rights-linked social code of reciprocal obligations of feudal Europe, the *prijaji* has always found outward submission, exaggerated respect, and placating excuses easier to obtain from the *abangan* [traditionally oriented peasants] than actual obedience." This passage, of course, was concerned with the nature of the Javanese authority system rather then with more generalized patterns of interpersonal response. Whether Javanese respond in the same way to fellow villagers and to other social equals is unclear. However, the stylistic similarities between Thai and Javanese peasants are striking.

4:Phillips E-4,5 (1956-1957) 1966
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1923–1924], translated by Cunnison) and Homans (1961) have argued, that human relationships everywhere are based on just such a consideration, usually concealed by ethically palatable amenities (such as in American culture, from which most of Homans' empirical materials come). However, what is so intriguing about the Thai case is that *quid pro quo* factors are forever in mind as justifications and explanations of why people relate to one another. Although villagers, because they are such polite people, rarely say to others, "I am helping you because I know the day will come when I need your help," or "Do this for me because you owe me a favor," they do use such arguments *to explain* the basis of their ties: "Of all my friends I love Lek the most because she has done me the most favors (*bunkhuns*)"; "The purpose of marriage is to have a companion who will take care of you when you get sick"; "Of all my daughters, the one who gives me the greatest pleasure is the one who sells things. . . . When she gets money she gives it to me"; "Friends are very useful because it means that you have people who will do you favors. And when they need help you will take care of them. This is love." [21]

One of the finest discussions of the nature of reciprocal obligations appears in a recent paper by George M. Foster (1961) that deals not with a Thai community, but with the Mexican village of Tzintzuntzan. Foster outlines in his paper the notion of the "dyadic contract" which he presents as a model for the social structure of Tzintzuntzan. Or, more precisely: "Specifically, I suggest a model . . . to reconcile the institutionalized roles which can be recognized and described in the community with the underlying principle which gives the social system coherence." Foster's focus thus differs somewhat from our psychological emphasis. However, his abstract statement of the "dyadic contract" provides such an excellent summation of the major factor making for enduring social relationships in Bang Chan that it merits quoting in detail here. There are of course inevitable differences in cultural content between the two communities and the fact that

[21] Such explanations are not unique to Bang Chan. In his description of the Thai–Lue village of Ban Phaed in Northern Thailand, Moerman (1962) observes: "The society of Ban Phaed operates in terms of something got for every something given. This is not merely an analytic device which permits a predictive, if crass, view of any human society. It is the way in which villagers explain and evaluate their own behavior. Favor for favor, visit for visit, meal for meal, one should return what he receives. 'We help our kinsmen because they help us. If a kinsman however close didn't help me, I wouldn't help him.' 'We care for our children when they are young; they will care for us when we are old.' Actions which we would justify in terms of compassion, generosity, public-spirit, patriotism, pride in a job well done, the Lue villager speaks of in terms of reciprocal, short-term self-interest. Their actions are no more selfish than ours. Far from it. But the moral rhetoric of a Lue villager is different from our own. In politics, economics, family life, and religion it focuses on something got for something given."

4:Phillips E-4,5 (1956-1957) 1966
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114 status differences and the looseness of social ties loom considerably in Bang
* 156 Chan probably makes for some other structural variations.[22] However, as
• 171 stated below, Foster's formulation applies almost perfectly to Bang Chan
571 (1173–1176):

> The model appears to account for the nature of interaction between people of the same socio-economic status, between people of different statuses, between fellow villagers, between villagers and outsiders, and perhaps between man and supernatural beings as well. Although my analysis deals only with Tzintzuntzan, I think the model will prove useful for other societies with similar structural features . . .
>
> Briefly it is hypothesized that every adult organizes his social contacts . . . by means of a special form of contractual relationship. These contracts are informal, or implicit, since they lack ritual or legal basis. [This is not completely true for Bang Chan. There is, for example, a special "Teachers' Day," sanctioned by the national government, set aside for honoring teachers, and thus providing ritualistic reinforcement to the contract.] They are not based on any idea of law, and they are unenforceable through authority; *they exist only at the pleasure of the contractants.* The contracts are dyadic in that they occur only between two people; three or more individuals are not brought together. The contracts are noncorporate, since social units such as villages, *barrios*, or extended families cannot truly be said to enter contractual relations with other families, although spouses often honor the obligations inherent in each other's contracts.
>
> The implicit dyadic contract is made between members of a family as close as siblings [and in Bang Chan, as close as husband and wife, and parents and children] . . . ; and it unites neighbors and friends. Contracts are found between social and economic equals within Tzintzuntzan or with similar people in other communities. And they are found between people (or beings) of different status and category, as on those few occasions when outside political leaders or economic patrons have ties with villagers and when a villager invokes the aid of the
[776] Virgin Mary or a saint. [In Bang Chan, a functional equivalent of the
[782] latter would be when villagers propitiate the *caw*, or Spirit Lord,
[778] who resides in the *San Phra Phuum*, or house of the Guardian Spirit
of the home. This is a replica of a house, about the size of a bird cage,
[782] located in every house lot in Bang Chan. The offering of rice and
flowers to the *caw* is explicitly a form of payment to him for the use

[22] A second paper on Tzintzuntzan (Foster 1963) indicates that there are some crucial motivational differences as well, viz., Bang Chaners enter into dyadic contracts with a much greater sense of freedom than do Tzintzuntzeños. Their attitude is both more cavalier and cold-blooded than the Mexican peasant who feels that if he is to exist, he has no choice but to enter into these contracts. The Bang Chaner is animated by a sense of personal advantage; the Tzintzuntzeño by a sense of passive participation in a system he cannot change.

4:Phillips E-4,5 (1956-1957) 1966
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of the land upon which the human home is built. In effect, humans have temporarily "rented" the land from him.]

. . . [The] contract implies and is validated by reciprocal obligations . . . [In] its totality the system of complementary reciprocity validates, maintains, and gives substance to the implicit contractual networks. The symbolic meaning of exchanges (as contrasted to economic and other functions) is accepted without question by all villagers: as long as a person continues to give to and receive from a partner, he is assured that the particular relationship is in good order. *When an exchange pattern between two people terminates, it is overt evidence to both that the contract is dead,* regardless of the formal institutional ties or the religious validation which may, in theory, continue to bind the participants. [Italics added.]

In anthropological analysis it is customary first to seek and attempt to identify the factors which link human beings together rather than those which keep them apart. This is so much a part of our professional tradition—in effect, one of our "primitive predicates"—that we tend to gloss over the question of the extent to which people must have enduring interpersonal commitments. This question has not been pursued in precise detail in our discussion. However, the realities of Bang Chan social behavior are so weighted in the direction of atomistic and essentially non-relational considerations that any coherent discussion of them should be organized in approximately equivalent terms. It is for this reason that the bulk of our presentation has focused on the individualistic nature of the villagers and that the factors accounting for interpersonal linkage were left to the end. It is hoped that such an organization has accurately reflected the tone and quality of Bang Chan social life as it is encountered and felt by an outside observer trying to understand its meaning to those who experience it.

4:Phillips E-4,5 (1956-1957) 1966
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*125 *128 152 their physical well-being.[7] They specify such threats as poverty (15 informants), not having enough to eat (11), illness (4), flood and fire (3), death (3), and being bitten by poisonous snakes (2). There is no significant difference in the economic statuses of individuals who mention either poverty or famine as their greatest fear. While there are six references to these fears on the part of "poor" villagers, there are sixteen references on the part of "average" villagers and four references on the part of "rich" villagers, all accurate reflections of their representation in the sample. The second major category of responses, held by 20 percent of the informants, describe the actions of people as the source of greatest fear. In all cases, these refer to actions of people other than the self, and the reference in more than half the responses is specifically to thieves. In a few cases, younger informants speak of their parents scolding them or beating them. As suggested earlier, no villager recognizes any personal inadequacies as sources of fear, although the idiosyncratic *karma* (or *kam*) response, mentioned below, suggests this in a superficial way. In this regard, it might be noted that three informants assert that they are afraid of nothing. The third category, encompassing the responses of 10 percent of the villagers, mentions malevolent spirits as the sources of greatest fear. Interestingly, one of these informants tries to pooh-pooh her fear by noting that if there were no way to escape the spirit she could manage.

*125 *128 152 *156 From the point of view of one of the major concerns of this book, the most significant finding of the above data, replicated in part and in an even more apposite way in the next item, is that only a minority of villagers admit to any fear, symbolic or otherwise, of the actions of other persons, and none indicate any anxiety over their own actions toward others. The relevance of this finding is, of course, that it places our earlier remarks in the "Orienting Toward Others" section in proper perspective. In that section, where we were concerned explicitly with interpersonal relationships, it was perhaps inevitable that the interpersonal mode of anxiety would loom large. Here, however, villagers are permitted to express any kind of anxiety—physical, interpersonal, intrapersonal, fanciful, magical—and only a minority do indeed give their anxiety an interpersonal form. In this connection, a remark made much earlier in the text might be recalled. In discussing the uneasiness that villagers frequently betray in their interpersonal contacts (nervous laughter and concern with inconsequential

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[171] [7] By way of general intellectual interest, it might be noted that this finding, as well as the one emerging from our next item, offers strong support to some "admittedly impressionistic and unverified" observations of Skinner (1957: 309–310) who, in discussing the major concerns of the lower class Thai members of Bangkok society, who are mainly transplanted peasants, singles out as primary their concern with "basic well-being, i.e., the health and safety of the organism."

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164 Considering deciduous teeth only, in a group of 173 children, 93 boys and 80 girls who had deciduous teeth, 56% of the boys and 50% of the girls were free from caries. The average number of carious deciduous teeth per child was 1.4 and 1.5 for boys and girls respectively. For those with caries experience, the number of carious deciduous teeth per child was 3.2 for both boys and girls.

In the entire group of 226 children, 76% of 116 boys and 60% of 110 girls were free from caries of permanent teeth. The average number of carious permanent teeth per child was 0.5 for boys and 0.9 for girls. For children with caries experience, the figures were 1.9 and 2.3 for boys and girls respectively. None of the 30 boys with caries of permanent teeth had more than 4 such teeth, whereas 5 of 43 girls had more than 4 carious permanent teeth.

164 Data for children aged 12 to 14 in Galesburg, Illinois
• 171 and Colorado Springs (Dean et al. 1942) have been chosen for comparison of caries experience in permanent teeth, with that in Bang Chan. In these cities, the fluoride content of the water is conducive to low caries incidence, yet the percentage of children aged 12 to 14 having caries experience was 72.2 and 71.5 for Galesburg and Colorado Springs, respectively as compared to 41% for Bang Chan, and the number of DMF[1] permanent teeth per child was 2.36 and 2.46 as compared to 0.88 carious permanent teeth per child in Bang Chan.

The reason for the relatively low incidence of caries among children in Bang Chan cannot be stated with certainty. Similarly low or even lower caries incidence has been reported for certain age groups of children in various parts of the world, for example in North China (Afonsky, 1951), in the northern islands of Samoa where the people had little access to store foods (Losee, 1952) and in a small isolated village in Greece
[146] (Phillipas, 1955). One thing which residents of Bang Chan appeared to have in common with such other populations which are relatively caries free, was low intake of sugar[2], particularly in a form which would be apt to adhere to the teeth.

757 Restoration of Decayed and Missing Teeth. - None of the children examined had any filled teeth. Up to 44 years of age, the adults examined had retained almost all of their teeth, and
[145] no evidence of restoration, other than crowning was noted. Decline in average number of teeth was marked after age 55.

Of 92 adults with teeth, at least 7 men and 6 women had been to a dentist as evidenced by the presence of crowned teeth

1. DMF denotes decayed, missing and filled. Children in Bang Chan had no filled teeth.

2. Sudsanoh (1956) found the average per capita intake of sugar in 11 families to be only 6 grams per day.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 434 433 income and operator's labor earnings lies in the value of farm produce consumed by the family. Earlier, five kinds of produce were listed -- rice, fish, eggs, fruit and vege-
[235] tables. For technical reasons, we consider only rice and eggs as products of the farm, rice being the primary crop
[226] and eggs the secondary crop. Fish is not considered a farm product because Bangchan villagers fish for consumption, not for sale. Besides, fishing is done by every resident of the village, farmers and non-farmers alike. It is thus
[244] more of a way of life than an economic enterprise. The same
[245] is true for fruit and vegetable growing which is done in a very small scale.

If we agree on considering only rice and eggs as the products of the farm, it is not difficult to estimate the amount and value of farm produce consumed by the family for Bangchan operators can readily give a rather accurate information on their rates of consumption of these two products. Thus, under Bangchan condition the figure for operator's earnings is not as difficult to obtain as it appears to be the case among most American farms. The frequency distribution of operator's labor earnings of our 104 sample-farms is given in Table 48. It is seen that only 17 farms produced negative remuneration for the operator computed by this method as against 47 farms by the labor income method. As Professor Warren has said, of these two, labor earnings is a better
• [171] measure of profits. It is especially so in Bangchan and perhaps in other agricultural regions in Southeast Asia

[TEXT CONTINUED ON PAGE 306]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 where farm families are relatively large and agricultural
434 workers are usually under-employed.
433
[171]

Since farming in Bangchan is basically a single-crop enterprise, the major crop (rice) heavily outweighing the secondary crop (poultry), we are in a position also in this study to use another measure of success -- returns from rice over the cost of producing it -- without entailing the difficulty of cost allocation. We simply charge all items of expenses including the values of family labor and the operator's labor to the rice enterprise, the only exception being the value of paddy consumed by chickens and/or ducks. By returns from rice is meant the market value of the total harvest of paddy. This measure is similar to the net farm income when the farm products used by the family are included in the receipts (in some states of the United States this is done, but ordinarily not, the main reason for leaving these out being the difficulty of imputing accurate money values to them).

243 Tables 49 and 50 shows respectively the frequency
128 distribution of the cost of producing paddy per tang and
434 per rai for the 104 sample-farms. It is seen that the coef-
433 ficient of variability of the cost per rai is lower than that of the cost per tang, the former being 19 per cent and the latter 27 per cent. This is to be expected, for on the basis of such a unit area as rai there are seven items of cost that are somewhat fixed -- seeds, rent, human and buffalo labor in all steps of field preparation, planting, and

[TEXT CONTINUED ON PAGE 309]

243 and enhance income from the farm, but it would not sig-
434 nificantly affect the farm family income or income for the
461 family living (see definitions under Headings 7 and 8 of the section on the operator's remuneration and measures of success) unless more land is added.

243 In rice farming, rates of production of crops and
433 animals is reduced to rice yield per rai. At the present
434 stage of technological development in Bangchan, this is not as much a result of management as of nature -- the water condition and the quality of land (in both senses of soil fertility and levels of the fields). Since we already have quality of land as a factor, rates of production may thus be eliminated.

After eliminating factors that are either insignificant or duplicates of other factors under Bangchan conditions, the standard factors affecting farm profit are thus reduced to prices, quality of land, size of business, and markets and marketing. These influences are familiar to students in agricultural economics, and therefore do not need further elaboration here.

[171] In addition to these standard factors, there are certain special factors affecting farm profit which the author suspects to be appropriate not only to Bangchan but also to all other rice producing areas of Southeast Asia. These are the differentials in paddy prices, in rates of interest, rentals, and wage.

175
621 elephants still roamed. They thus opened up to commercial rice production a new region lying behind the thin fringe of population already occupying all land bordering Saensaeb Canal.

The genealogies suggest that it was not until the 1880's that any major settlement occurred in Bangchan. There is doubtless a correlation between the rapid development of the community from then on and the increasing national and international demand for rice. Many of the settlers of this period were persons displaced from a southern and a northern section of Bangkok who were uprooted by the government which forced purchase of their land for the first Thai railroad and a large munitions factory. The Thai Islam or Moslem group in Bangchan claims descent from Patani Malays who were sent north by the Thai government in the course of wars during the 1830's and 1840's; many of their families settled in Donburi or along Saensaeb Canal before moving into the Bangchan area. Another element came into the region in the 1890's when some Lao Thai were encouraged to settle here after having fled their countryiin the northeast when the French occupied it in 1893.

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By 1895 the Bangchan population was sufficiently numerous to support its own wat, which was established and officially recognized about that time and has flourished ever since.

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the village to find dependent relatives—siblings, cousins, nephews, nieces— who, unable to make a go of it elsewhere, are accepted into a relative's family, sometimes to the extent of eventually taking over the headship of the family. Sometimes, on the initiative and invitation of an elderly or lonely relative, an entire nuclear family will be asked to take over or share a household. Children of poor or "inconvenienced" families (where a new child is born before the first is weaned, where there are too many children for the mother to handle comfortably, where a youngster is simply being "troublesome") are adopted or "borrowed" by other villagers for varying periods of time. This is done preferably by relatives, sometimes by neighbors, and often, in the case of boys, by the monastery, where the children become hand-servants to the monks and are supposed to absorb, by a kind of osmotic process, righteous ways of behaving. (Of my three male life history informants, two were given over to relatives at the ages of two, the third at the age of eight; one spent his childhood with four different families, another with five families; one describes his adolescence as "wandering from place to place." The psychological implications of such displacement should not be underestimated.) On occasion, two independent nuclear families—almost always connected by some kinship tie—will join together for convenience to share cooking facilities, in which case they effectively become a single extended family. And in some cases, although rare, one will encounter adult children living in independent households but handing over their income to a parent, living in still another home, who disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a husband to be away for four or five months at a time earning money in Bangkok, or during the dry season on a vegetable farm, returning home to visit his wife and children whenever opportunity permits, with or without funds. The wife may still maintain their household, but often returns to live with her own parents.[1] In a similar vein, although obviously more extreme, it is not unusual to find families in Bang Chan which have simply "disintegrated," as the villagers say. Much depends here on the circumstances of family members. Bang Chaners usually reserve the term "disintegrated" for families that no longer have the economic wherewithal or justification for staying together as functioning units. In these instances, family members simply go their separate ways, if possible back to their families of orientation or to other relatives, husbands perhaps into the monkhood, and the children to whomever will take them. Most frequently, "disintegration" is characteristic of very poor families, and in the minds of

[1] This pattern may be related to the old *corvée* labor pattern when able-bodied village men were away from their families for extended periods of time.

4:Phillips E-4,5 (1956-1957) 1966
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596 182 586 [578] [576] the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

586 595 Precise figures on the divorce or separation rate in Bang Chan are unknown, primarily because many marriages as well as divorces are never registered on the government rolls; also, many separations seem to follow an on-again-off-again pattern; the sanctioned occurrence of polygyny (only eight known cases out of the 296 families) and even polyandry (two known cases) complicates the problem even further. However, the fact that *four months* after I had designated a sample of thirty families from which to [581] select informants, six of those families, or 20 percent of the sample population, had dissolved would strongly suggest that Bang Chan families are not particularly stable.

593 586 183 The causes of family fission in these specific cases are unknown, but what is impressive is the apparent ease with which it takes place and the equanimity with which people seem to accept it. Other informants, reporting their own experiences or observations, discuss family breakups as if they were among the more normal events of the workaday world and completely understandable. They seem to be of no greater emotional import—in the sense of eliciting recognizable feelings of distress—than losing a good price on the sale of a piece of land or on the sale of some rice. In fact, the latter kinds of situations are considerably more likely to evoke expressions of hurt or exasperation. One repeatedly encounters in Bang Chan instances on the following order: a family breaks up simply because the husband has an inclination to work for a particular person whom he likes; a wife ("she is a touchy woman") runs away every time she has a minor disagreement with her husband (minor even by village standards, for example, "Should I buy my lottery tickets from Mr. X or Mr. Y?"; "Should we invite seven monks or ten monks to officiate at this ceremony?"). The point here is that these explanations—and the low tolerance for discord, the importance to a person of a boss or job over a spouse, the desire to be footloose, which they imply—are to the villagers completely reasonable justifications for the dissolution of family units.

• 174 594 596 Many of the family relationships referred to above as "centripetal" in nature are clearly related to or derived from patterns of social organization characteristic of an earlier Bang Chan. Although most evidence indicates that even in the years immediately following the settlement of the village in

4:Phillips E-4,5 (1956-1957) 1966
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the 1880's, the nuclear family was the primary social unit,[8] it is equally clear that extended family relations played a highly significant role—considerably more so than they do today—in the total life of the community. The precise nature of that role resists easy terminological formulation. In his reconstruction of the history of Bang Chan, L. M. Hanks (1959c) speaks of two types of "extended families" typical of early Bang Chan, one organized along lineal lines toward a single parent, and the other based on an alliance of siblings. In both cases, members of these groups assisted each other "by working in the fields, sharing food and equipment, helping with chores and celebrating special occasions together," and effectively formed what Hanks calls "extended family hamlets." These larger family units, however, were based on personal compatability, or in the case of the lineally oriented family, on the wealth and leadership of a particularly dynamic individual. They were never based on compelling structural characteristics such as corporate ownership of land or homes. Since many of the individual nuclear families were poor and trying to live off a land that was essentially a frontier, it made sense that they should join together or attach themselves to a wealthier, more powerful individual, and that the primary criterion for association should be the kinship tie with its built-in sentiments of affiliation, familiarity, and trust. However, since the basis of association here was at all times an economic-functional one—it was *reciprocal* and *mutual* benefits that brought people together, not an overriding ethic of familial solidarity—it might perhaps be better to think of such families as associations of "kindred" in the technical sense rather than

[8] Since almost all Thai history, by Thai or foreigners, is primarily a court history and concerned with activities of the kingdom at large or activities at the seat of power (where, of course, most of the literati, writers and readers, lived) there is little documentation on the history of the peasant family or any changes it might have gone through. Phya Anuman Rajadhon's profoundly knowledgeable, but highly idealized, essays on "ancient customs" of Thailand (Radjadhon ["Sathien Koset"] 1957 and Rajadhon 1954, 1958) contain references vaguely suggestive of an extended family system among peasants: "the house a groom built always had to be in the home compound of his father-in-law," for example, the time and effort demanded by house-building suggesting a high degree of permanency, the compound implying extended family unity. But the data are too meager and uneven to form the basis of anything more than speculation. On the other hand, comparative distributional data on other Thai-speaking peasants (P. K. Benedict 1943, Seidenfaden 1958); the great emphasis in traditional law, going back to the decrees of Rama Tibodi I in the mid-fourteenth century, on the absence of family responsibility in the commission of individual crime (Lingat 1936 and 1952); and the background commentary in Thailand's great multi-authored love epic of the late eighteenth–early nineteenth century, *Khun Chang and Khun Phaen*, all suggest that the peasant family has remained remarkably stable through the centuries as a nucleated, independently functioning unit linked to other families in the community by loose ties of kinship. The fact that family names did not come into use in Thailand until 1916, and then only by royal decree, further suggests that the extended family was never the major kinship unit.

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"extended families." The aim of all Bang Chan families even then was to attain a position in which they would be free from such obligations or would have other families dependent upon them.

In the intervening years the influx of new families into Bang Chan, the increased self-sufficiency of the individual nuclear families and, most important, the increased acceptance of commercial values, have served to break down kindred groups so that today few kinsmen work their fields together and even fewer share their food or equipment with one another, beyond what has been noted above. Perhaps the only remaining *universally* practiced function of the old kindred groups is the celebration of ceremonials involving members of the family, particularly cremations and ordinations, the cost and merit of which are shared among the participants, depending upon their wealth. Very often people do not want to borrow from or lend money or equipment to kinsmen precisely because the intrusion of the kinship tie makes the collection of such debts doubly awkward ("relatives take twice as long in repaying money; I do not want to lend anything to them"). However, the old forms have not been completely obliterated and when necessity requires or personal convenience moves an individual to look to others, the traditions of extended kinship, as indicated earlier, may be invoked.

For purposes of conceptual convenience, two types of kindred may be specified: the kind referred to above which involves kinsmen living in the village and to which Kaufman (1960) gives the name "spatially extended family"; and the type descriptive of relatives living outside Bang Chan, dispersed throughout other villages and provinces or in Bangkok, and called by Kaufman "the remotely extended family" and by L. M. Hanks (1959c) "the multi-local extended family." These terms are of course generic labels descriptive of actual or potential relationships between individuals, not of specifically delimited groups. Sometimes Bang Chaners attempt to extend the definition of the latter type of relationship to individuals who have never heard of them, but who may be in a position to help their son obtain a job in the city or get him admitted into a vocational school. Hanks has shown how the multi-local extended family has to a limited extent in recent years rejuvenated extended kinship ties by becoming the major institutional mechanism through which villagers leave Bang Chan to seek their fortunes elsewhere. (This last phrase is not merely a figure of speech; many young Bang Chan men have what could be called almost a Dick Whittington view about leaving Bang Chan for Bangkok.) A cousin who undertakes to serve as a villager's liaison to a city job or who offers him a place to stay usually does so willingly, for it creates obligations which may be called upon later if need be.

The above description of variations and extensions has been presented

361 direction dividing it into two halves, the Bangchan half
312 consisting of BC4, BC5, BC6, and the Kannayao half consistingoof KY5, KY6, KY7 and KY8.

621 As mentioned earlier, our functional Bangchan village
634 is under two different administrative authorities, the Bangchan half consisting of part of Tambol Bangchan which is in turn part of Amphur Minburi in Changwad Phra-nakorn (Bangkok) and the Kannayao half consisting of part of Tambol Kannayao which is part of Amphur Bangkapi in the same Changwad Phra-nakorn.

History of Settlement

• 174 No official records on the history of the settlement
361 of Bangchan could be discovered, but evidence from genealo-
[503] gies provides a few clues on the subject. Following the digging of Saensaeb Canal some one hundred and twenty years ago, settlement was made along the banks of this important canal which provides one of the few connections between the
175 Menam and Bangprakong rivers. It was not, however, until
621 the 1870's, apparently, that people found it necessary to
361 move onto the land away from the canal. At that time, according to one of our older informants, her father was born in what is now Bangchan, his father and mother having come out from Bangkok as a young married couple to take up farm-
175 ing where plenty of land was available from the Crown. These
621 people and their followers, usually kinfolk or friends, cleared off scrub jungle areas in which, it is claimed, tigers and

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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The monsoon climate of the region in which the village lies gives the area an annual rainfall, averaged over a recent ten year period, of about fifty inches; the effective rainfall, for the critical months when the rice is in the ground, is about forty inches.[3] The minimum precipitation requirement for wet rice is about seventy inches a year. This rainfall deficiency in the central plain of Thailand is made up by direct flooding from the rivers which flow in from the mountains and plateaux on the northeast, north, and west, the run-off rate fortunately being low because forests still cover much of these uplands. The whole plain is channeled for simple distribution of the spate of these rivers which occurs during October, November, and December, just before the harvest of rice. Because most fields are fed by gravity without an artificial head of water, or with only small heads impounded behind water gates, the depth and duration of flooding cannot be wholly controlled. As a result, variable water supply produces a wide variability in harvests and crop risks may be considerable. For 117 years between 1831 and 1948 the ministry of Agriculture records four major damaging floods (1831, 1879, 1917, and 1942), four years of extreme drought, thirty-five years of severe drought, and twenty-one years of moderate drought, leaving only fifty-three years of optimal supply of water.[4]

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3. Central Service of Statistics, Statistical Yearbook of Thailand, No. 21, 1939-40-1944. Bangkok, 1950.

4. Ministry of Agriculture, Thailand and Her Agricultural Problems (Bangkok, 1950).

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175 ing where plenty of land was available from the Crown. These
621 people and their followers, usually kinfolk or friends, cleared off scrub jungle areas in which, it is claimed, tigers and

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621 elephants still roamed. They thus opened up to commercial rice production a new region lying behind the thin fringe of population already occupying all land bordering Saensaeb Canal.

The genealogies suggest that it was not until the 1880's that any major settlement occurred in Bangchan. There is doubtless a correlation between the rapid development of the community from then on and the increasing national and international demand for rice. Many of the settlers of this period were persons displaced from a southern and a northern section of Bangkok who were uprooted by the government which forced purchase of their land for the first Thai railroad and a large munitions factory. The Thai Islam or Moslem group in Bangchan claims descent from Patani Malays who were sent north by the Thai government in the course of wars during the 1830's and 1840's; many of their families settled in Donburi or along Saensaeb Canal before moving into the Bangchan area. Another element came into the region in the 1890's when some Lao Thai were encouraged to settle here after having fled their countryiin the northeast when the French occupied it in 1893.

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By 1895 the Bangchan population was sufficiently numerous to support its own wat, which was established and officially recognized about that time and has flourished ever since.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

434 amounted to somewhere around 5,000 baht, which was about
463 four times as much as the labor earnings of an average rice
621 farm operator as we shall see later.

178 The present occupational situation and accounts of
463 the changes in the past few years alone may not be enough to give us a complete picture of occupational development since the beginning of the history of Bangchan. Fourtunately, however, since settlement in the village in a considerable scale took place only some eighty years ago, evidence from genealogical studies has provided us with ample materials on which a reconstruction of the past development may be made.

• [175] When Bangchan was being settled in the 1870's, as a probable consequence of the increasing national and international demand for rice and the revolutionary change in Thai society, every family was naturally a farm operator family. As long as there was land available for clearing, opportunity would be open for every new family, either branching off from the old ones or moving in from the outside, to operate a rice farm.

[161] Eventually, population grew up to a size large enough
[194] to support a temple in 1895. Population growth and the
[175] emergence of a village center at the temple prompted occupational specialization. At the beginning, investing, trading, professional servicing, and home enterprising probably took the forms of secondary occupations, while farm operating remained the primary occupation throughout. In time, these secondary occupations became more and more specialized and

a condition which also affected the functioning of the others, he was ill or emotionally disturbed.[14] For example, dropsy, swelling, and yellow eyes came from excess water; cholera and constipation from earth mists. Wind and fire were the great trouble-makers. 753 826

Wind "was stronger than the other three elements." Either blowing wind or still air easily penetrated the skin and caused difficulties all the way from flatulence, stomach-ache and diarrhea to a minor head-ache and dizziness ("if wind whirls inside the body, the house swims around"); from incessant crying to serious interference with breathing, hence fainting and death. An accident, such as a cut or broken bone, disturbed, and might "let out," the air. Acute pain ensued if "rigidity" of earth, fire, or water interfered with the proper movements of the internal winds.

Anger and fever were both in the category of excess fire. Since fire was particularly implicated in disturbed social relations, coolness was emphasized as the desirable state of body and mind. The blessings for both sexes at birth and at the marriage ceremonies enjoined the individual to be "cool and happy." There was some evidence that cool natures were tender (on) natures. Since women by nature were assumed to be "tender," and men not, a difference in element constitution may have been sex-linked. However, everyone knew of women who were not tender. For persons abundantly endowed with fire, temper control through temperature control was a constant preoccupation, for the allowable margin of fluctuation was especially narrow. 828 826

Food occupied an especially important place in a person's welfare because food controlled the fire element.[15] The following material on diet is the background for some of the dietary injunctions during pregnancy and lactation. 262 826

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14. In view of Thailand's ancient Indian contacts, the parallels (and differences) between Bang Chan, and Hindu Ayurvada as described by Opler (1963:32-38), are noteworthy. [177]

15. "What was drunk or eaten by its decaying created the fire element in the body" (Suriyabongse 1954:12).

853 cried, Lek had dribbled from her finger warm boiled water into his mouth. Now she mashed up for him a little kluāi namwā banana, honey, and water. Song happened to pass as he was going to work and saying, "Let me give it to my son this first time," took the child in his arms, and pushed it gently in with his fingers. "This variety of banana does not cool, or give diarrhea because its tissue is harder. Uncooked is better than baked because it is easier for the baby to swallow," said Lek, "but baked food is incompatible if wind is in the body." Then she painted medicine on the baby's tongue with a feather.

Dūan turned to Lek. "Who would be the best person to start my child on good nursing habits?" Lek mentioned a relative who had much milk for her handsome child. This woman gladly came to give the baby his first suck.

Sāi came the third day for the same duties. It was the last day for her, unless something serious happened. Dūan's milk came in somewhat that day. She asked, "Is it true, as people say, that the 2 breasts give milk of different consistency, that one is water and the other rice?" Sāi answered, "That is an old saying. The important thing is to feed from both breasts at each nursing. Here is medicine for the baby of honey, charred betel leaf, and water. Give it 3 times a day to cool his neck. His medicine is mostly to cool him slowly; yours is to keep you hot on the inside, while the fire warms you outside. Both are to keep out wind. Dūan, I would suggest 13 days by the fire, but you are the one to decide. It was 15 for your first child, but each time can be less. Be sure it is an odd number of days. My, women are certainly making it short these days! My first fire-rest was 27 days. And think of all the changes coming in! That trader-woman across the canal is using one of those small hot-ashes pots on her stomach. She is lying on a mat under her net, with her new baby. Her 2 other little children come in and out! No fire at all! I have heard they use rubber hot water bottles and electric warming devices in Bangkok. Well, it probably is all right provided there is heat, but to have plenty of milk and strength to work in the fields, then you have to lie by a real fire. The longer you stay, the stronger you are. Bangkok ladies do not have to farm! They want the fire for the fine pale golden color it gives their skin (cf. footnote, p. 71)! Well, now I shall take my final leave." She reached up and took her khwan khāo bowl. Smiling, she left the house.

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From then on, Lek and Mī were certainly busy, caring for both children, doing things for Dūan, boiling up quantities of water, and cooking. Song put the wood on

178 a new way was a woman bearing her first child because she
184 was not yet ritually matured. This she wanted to be.
Moreover, her self-interest led her to try to profit as
312 much as possible from the experience of elders by first
846 following the old way. By incorporating the experience
885 of successful child-bearers into her own and the baby's
life and by asking them to initiate actions auspiciously,
she augmented by that much her own competence, and laid
the groundwork for her future progress. Self-responsi-
bility engendered respect for elders. Thus there was no
split between old and young over innovations. Experience
gave grounds both for conservatism and for changing, but
at different age levels.

178 Secondly, changes were adopted by the rich who,
184 spending their money rather conspicuously, sought to main-
556 tain and enhance their social position. Their wealth
and position were in themselves unquestioned as signs of
merit earned in another incarnation.

178 The changes being introduced to Bang Chan were of two
554 kinds: first the prestigeful, and second, those giving no
increment of esteem, i.e. idiosyncratic changes of taste
or convenience; or those reflecting individual circum-
stances. The prestigeful innovations were oriented to-
wards the use of market novelties, modern medical care,
urban standards of cleanliness and beauty, and other ways
termed "progressive" associated with the city of Bangkok,
cynosure of the eyes of the rich. These values were
leading certain families away from their original occupa-
tion of farming, into the fields of teaching, trading,
carpentering, cottage-industry, etc. Since these new
occupations brought in steady cash and large land holders,
too, had a good income, an association was found of
372 wealth, prestige, urban interests, and innovation. Com-
846 ment on the hot ashes container (fai chut) indicated that
178 it was a strong symbol of prestige and progress. To use
it was "to get away from ignorance and the old way of do-
ing things." It was "cleaner, not hot or ugly, and more
convenient." One teacher took it up after reading an
advertisement in the newspapers that described glowingly
its more efficient healing effect. On the other hand, one
woman abandoned the fai chut because "it was not hot
enough to rid her of stiff muscles," so she went back to
the use of the fire. "It is all right for rich Bangkok
ladies who want to avoid a scar, but it does not give
• 177 enough strength for a farmer." She had no urban preten-
178 sions. Also in this prestigeful aggregate, observed here
278 and there, were the market novelties mentioned above:
954 bed, mat, and mosquito net instead of the plank-bed; kits
of medicine from the Chinese pharmacist instead of the old

854 179 178 [278]

home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

178 743 758 554 [842]

To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Mīnburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 7 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccessibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grew up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

178 844 846

In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Mīnburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

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are less eaten today because they are too expensive."

A slight trend towards depersonalization might be part of the aping of urban behavior, or idiosyncratic, or of more general significance.[76] The Minburi Health Center may have been used to avoid certain face-to-face situations. A woman whose labor [743] was prolonged was taken there by her (male) midwife who had to get to a meeting. He preferred the impartiality of the Center to turning her over to another midwife. A woman took up the hot [571] ashes container so "others would not have to wait on her." Another appeared to have obtained a midwife from outside the community rather than seek out someone inside and closer at hand. A very poor woman used no boiled water because of inadequate help in the household to prepare it. Whatever the circumstances [812] of her social isolation, ordinarily kin or neighbors would have seen to it that this job was done. This episode too was watched by neighbors who commented that since her health remained good, boiling might be unnecessary. Finally, to advertise certain medicines, a firm handed out yan, the magically inscribed cloth, to suspend on the holy cord that surrounded the mother. This was a long way from the personally inscribed "yan" of old.

A final reason for the acceptance of change was the larger number of choices of behavior because of a broader horizon. Bang Chan had never been an isolated community, for pilgrimages and visiting through easy boat-travel had been for decades part [177] of its life. Yet the growing number of literates, the establishment of bus and other transportation services to the city, the experience, for a few, of work in Bangkok or of military service in Korea, the continuous association with non-Thai, (Chinese, Muslims, a Cambodian, and now the Americans), and the now somewhat diversified economy of the community all led to the increased familiarity with other ways of doing things. Patterns of childbirth were already reflecting this awareness.

Unchanging in the scene at childbirth was the necessity of supernatural assistance, and heat to ripen and restore the mother.

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76. I feel this evidence is slight, and set it down merely as a point for future observation.

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AQ7

Chapter IX

GUIDES FOR THE INTRODUCTION OF CHANGES

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The government of Thailand provides in Bangkok and in other centers of the country up-to-date facilities for training in modern midwifery. It has also created in some places special opportunities for the traditional midwives to upgrade their skills. One of the objectives of the Minburi Health Center was to carry on a certain amount of instruction in modern views. For reasons that have been explained, no one in Bang Chan ever had or even sought modern instruction. The midwives of whom we have spoken grew up entirely in the folk tradition.

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On the basis of the material presented at length in the previous pages, a few suggestions are here advanced which may be of help to these public programs in maternal and child health.

1. Build a program around the idea that it will help women in their age-old role of caring for, raising, and nourishing (liang) children. Emphasize that through new techniques they may increase their strength and care better for themselves and the babies.

2. Change existing practices as little as possible.

3. When a change is offered, ask that the midwife, mother, or whoever observed it watch for certain results which allow them to judge it in relation to the old. The idea is strong that aspects of the natural world can be analyzed and considered pragmatically, then legitimately utilized as a basis for modifying customary behavior.

4. Pay special attention to the places where the old and the new come into conflict and seek ways to resolve these conflicts.

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As an example, let us consider these points in relation to cutting the umbilical cord. Modern instruction recommends the use of scissors--neat, sterilizable, handy--to avoid infection while cutting the cord. People in Bang Chan wish to avoid this infection, too, but for them scissors are unsatisfactory for several reasons: they are scarce, they rust--and

844 178 179 412 this rust is believed to cause tetanus--and they are unsuitable for the ritual objective at the moment of cutting. It will be remembered that cutting the cord on a rhizome of phlai or soil with a bamboo sliver from the housepost guarantees that a child will not roam away from home. Could the bamboo sliver be dipped in "heating" alcohol, or passed over the flame of a holy fire? Could the old family kitchen-knife--long associated with the household--be substituted and dipped in the beneficial heat of boiling water? Such a knife once was substituted on the winnowing tray. Might the phlai or soil be covered with a boiled, clean, old cloth? If modern science succeeds in coming up with an acceptable substitute, one sees the possibility of a very small change making a big difference in the amount of tetanus poisoning observed (Hauck, 1956:41). One should then ask the midwives to watch as to whether the new method reduced the infection called "death because of a red or green face and clenched fists."

262 [261] In diet "the concept that a good choice of food is important to the health of both mother and child" (Hauck, 1959:2) was very much shared by modern science and by traditional ideas but the basis of choice was entirely different.77 Modern science has ascertained that certain foods are beneficial because of certain nutrients, while old beliefs have set up certain foods as desirable because of properties of heating, cooling, compatibilities with the elements, etc. The nature of these properties should be collected and listed. If dietary deficiencies in Bang Chan are noted, the foods that combine the needed beneficial qualities in both systems should be stressed. A hot-tasting tonic (yā) with appropriate dietary supplements, to be taken daily during pregnancy, and another kind during the post-partum period, might be acceptable. The period of the fire-rest is the best place to initiate dietary changes for whatever is done by the fire becomes a habit beneficial to mother and child. The 372 846 use of boiled water should be encouraged as "making for [illegible]th." Again, disturbance of customs is minimized, and the presence or absence of "increased strength" and healthiness can be observed experientially.

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77. Hauck felt the concept was lacking, but it appears only that the grounds of choice were different.

795 759 795 844 591 [852] the slight differences in ministrations. "The Muslim midwife massages more than the Buddhist." The women easily entered into reciprocal courtesies. The Muslim woman knew the steps in the Buddhist winnowing ceremony and performed them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khao in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 779 [774] [782] [197] Certain fundamental ideas of the Muslims led to reinterpretations of familiar Buddhist terms and activities. "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist, meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 [783] [304] [764] [831] [834] [562] Completely Muslim was the stress on physical and moral purification as an objective of every rite, and conversely, the prevalence of the idea of defilement. "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate procedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 843 844 [273] The events surrounding childbirth illustrated the differing viewpoints between Muslim and Buddhist. In the seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (fak thong: to deposit gold). On returning home, she went as fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim midwife prescribed large doses of liquor before and during parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclosed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, 795 844 [562] except for husband, brother, or father, were excluded from the scene. The Muslim khwan khao contained "7

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

262 constipation in infants, others that it caused diarrhea, whether
783 eaten directly by the infant or by the mother.
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The belief that eggs would cause dental caries, and should therefore be omitted from children's diets, was expressed by the mother in a poorly nourished family. The possibility that such ideas arose from unwillingness to spend much money on food for a child has already been noted (see p. 42).

262 Information on food suitable in illness was obtained
783 only incidentally. The Thai did not appear to have a consis-
788 tent theory as to the cause of disease (Sharp et al. 1956, p. 489), and residents of Bang Chan did not seem to associate any of their illnesses with contaminated food or water. Choice of food in illness was probably associated in some instances with the idea that the body is composed of the four elements: wind, water, fire and earth, and that sickness results from or is a symptom of imbalance in the proportions or arrangement of these elements. Thus the "fragrant banana" and eggs, because of their "cooling effect," were said to be forbidden in measles. A child who was getting measles was restricted to rice and dried fish. In contrast the small, rather flavorless banana, designated (3)kluaj (4)nam-(4)waa, was said to have "no cooling effect" and was considered an acceptable food in illness, as well as for newborn infants.

262 In one instance, when a patient had been taken to the
458 hospital with severe diarrhea, a nurse instructed other family
784 members not to eat ices, syrup (see p. 36), or raw vegetables, nor to drink unboiled water. The informant who told us about this offered no reason for these precautions. These foods were simply "forbidden" to the family of a patient with severe diarrhea.

777 Notions as to what is fortunate or unfortunate may also
824 affect agricultural processes. The many ceremonies associated
845 with culture and use of rice have been mentioned (p. 42). The idea that a papaya tree growing near the house was "unlucky" was attributed to Thai by a young Thai Moslem in Bang Chan. When we commented on the papaya tree near his front door, he said the papaya tree dies easily and does not like water, but his was planted on high ground. According to this informant few villagers would be willing to grow papaya trees near the house. He considered the non-specific threat of harm as unreasonable, though he said that if specific harm were said to result, he would be concerned about it. The midwife at Minburi Health Center said that she urged each woman who came there for delivery to have more banana, mango and papaya trees planted for home use. Before raising of papayas can be successfully encouraged, however, the idea that papaya trees bring back luck must be overcome.

Notes on Tilapia Culture in Bang Chan

226 654 In 1952, the Thai government, at the suggestion of FAO, began to encourage tilapia culture. Fingerlings and some information on tilapia culture could be obtained from the Minburi district office, where a demonstration pond was maintained. Early in 1953, we learned from the records of the district officer that three persons in Bang Chan, two of them hamlet headmen, had obtained tilapia from this source. In 1953 the commune chief called a meeting in the village and explained the importance of tilapia raising. In May 1955 when Ralis conducted a survey in Bang Chan (Goldsen and Ralis, 1957), tilapia raising had been tried in nearly a third (31%) of the households, but was considered by 2/3 of the respondents to pay little.

The authors comment:

> From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months. [494]

From the comments just quoted, tilapia culture appears to have been undertaken for the anticipated cash return. No information was obtained by Ralis concerning the extent to which the villagers used tilapia to increase their supply of fish for home use. In the summer of 1957 members of the research group who visited Bang Chan found that no one was raising tilapia; they were neither a source of food nor of cash. Some indication was obtained that their flavor and texture were not agreeable. Clearly the attempt to introduce a rapidly growing but unfamiliar variety of fish failed in Bang Chan. An understanding of the reasons for this failure might help to prevent other costly failures in future. [114]

Notes on Mushroom Culture in Bang Chan

177 294 Goldsen and Ralis (1957) commented as follows:

> Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per

cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

At the height of the boom, the demand for rice straw swept many of the fields clean of the stubble usually left there after harvest, thereby decreasing food for the roaming buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralis (1957) were 1) the cash outlay required was small, 2) returns were realized quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralis made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

Food for Homage-to-the-Teacher Rite Performed by a Buddhist Priest Who Was a Traditional Practitioner

Item	Amount	Cost in Baht	Item	Amount	Cost in Baht
Cereals and Legume Seeds:			Fish and Meat (cont.):		
Rice noodles		10.	Dried fish	6	gift
Soybeans & fermented vegetables	25 kg.	12.	Roasted fish	3 kg.	gift
			Shrimp paste	2 kg.	18.
Mung beans	10 lit.	25.	Lobsters		15.
Cassava flour		2.25	Lobsters (for soup)		7.50
Sugar and dessert:			Pig's skin (for soup)		10.
Palm sugar	1 pail	67.	Beef[4]	15 kg.	150.
Cane sugar	14 kg.	85.	Ingredients for Mussel-man curry[1]		27.
(2)Kha-(5)nom (3)tuaj-(1)foo	500 cups	35.	Boiled chickens[2]	2	22.
			Pig's head[2]	4 heads	222.
Fish and Meat:			Pork[2]	4 kg.	40.
Fish ((1)plaa (2)myk) for soup		6.			
Silurus and serpenthead	60 kg.	gift			

4:Phillips E-4,5 (1956-1957) 1966
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Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlooŋ (or Canal) Bang Chan, which links with Khlooŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlooŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *pay thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

4:Phillips E-4,5 (1956-1957) 1966
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from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise of regular wages, lighter work, and the bright lights of the city, leave Bang Chan with the hope that they will never have to return, although of course many do. The Goldsen-Ralis survey reveals that 26 percent of their respondents had lived in Bangkok for a year or more, although for most this was in fulfillment of military service.

Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

The frequent transit between Bang Chan and Bangkok,[9] however,

[9] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

4:Phillips E-4,5 (1956-1957) 1966
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continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959*b*: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family:

home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

4:Phillips E-4,5 (1956-1957) 1966
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"extended families." The aim of all Bang Chan families even then was to attain a position in which they would be free from such obligations or would have other families dependent upon them.

In the intervening years the influx of new families into Bang Chan, the increased self-sufficiency of the individual nuclear families and, most important, the increased acceptance of commercial values, have served to break down kindred groups so that today few kinsmen work their fields together and even fewer share their food or equipment with one another, beyond what has been noted above. Perhaps the only remaining *universally* practiced function of the old kindred groups is the celebration of ceremonials involving members of the family, particularly cremations and ordinations, the cost and merit of which are shared among the participants, depending upon their wealth. Very often people do not want to borrow from or lend money or equipment to kinsmen precisely because the intrusion of the kinship tie makes the collection of such debts doubly awkward ("relatives take twice as long in repaying money; I do not want to lend anything to them"). However, the old forms have not been completely obliterated and when necessity requires or personal convenience moves an individual to look to others, the traditions of extended kinship, as indicated earlier, may be invoked.

For purposes of conceptual convenience, two types of kindred may be specified: the kind referred to above which involves kinsmen living in the village and to which Kaufman (1960) gives the name "spatially extended family"; and the type descriptive of relatives living outside Bang Chan, dispersed throughout other villages and provinces or in Bangkok, and called by Kaufman "the remotely extended family" and by L. M. Hanks (1959c) "the multi-local extended family." These terms are of course generic labels descriptive of actual or potential relationships between individuals, not of specifically delimited groups. Sometimes Bang Chaners attempt to extend the definition of the latter type of relationship to individuals who have never heard of them, but who may be in a position to help their son obtain a job in the city or get him admitted into a vocational school. Hanks has shown how the multi-local extended family has to a limited extent in recent years rejuvenated extended kinship ties by becoming the major institutional mechanism through which villagers leave Bang Chan to seek their fortunes elsewhere. (This last phrase is not merely a figure of speech; many young Bang Chan men have what could be called almost a Dick Whittington view about leaving Bang Chan for Bangkok.) A cousin who undertakes to serve as a villager's liaison to a city job or who offers him a place to stay usually does so willingly, for it creates obligations which may be called upon later if need be.

The above description of variations and extensions has been presented

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[For information on contacts between Central Thai and Western culture, see Category 116, pp. iv, 6-22, 36-37 and 43.]

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*243 annual depreciation of the equipment in question. In cases
435 where the equipment still had some market values at the end of their servicable lives, these residual values were first deducted from the original costs before they were divided by the length of service. The most complicated cases were those of chala and mard boats and the noria, which involved annual maintenance and minor repair as well as periodical major repair in say every four or five years before they were finally and totally worn out at the end of their rather long services of from twenty to fifty years. In each of these cases, all items of such expenses -- annual maintenance and minor repairs as well as periodical major repairs -- were added to the original cost and the total was divided by the entire length of service in order to arrive at the annual depreciation figure.

*243 With few exceptions, all farm equipment enumerated
178 above have been used by Thai farmers for centuries. Thus, since the establishment of the village there has been no change in the use of such basic agricultural tools as the plow, harrow, hoe, weeding knife and sickle. Moreover, it may be said also that there have been only slight modifications, if any at all, in these equipment during the long course of their usage. The plow, harrow, or sickle which is now being used in Bangchan is perhaps of the same type and appearance as would have been seen centuries ago.

*243 Standing in contrast to these basic agricultural tools,
177 the first known propeller windmill in Thailand, according to
178 testimonies by Bangchan informants, was invented by Nai Yong
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243 Manichaem of KY8 in 1940. An official report to the Director
197 of the Department of Agriculture in 1940,[2] however, gives the
178 credit to Nai San of Lard Buakhao, Minburi, who lived only four
402 miles to the south of Manichaem's home. The buying up of gasoline engines by the Japanese during the occupation period served to facilitate the spread of this device. Gasoline engines probably came to the village about 1930 or slightly later. In 1948, there were five engines owned by Bangchan residents. Because of the exceptionally good water condition of that year, these engines were not used in rice production. They were not, therefore, included in our calculation of the cost of producing paddy in 1948. It was observed that their use was limited to fishing by the draining method. The winnowing machine, which utilizes a hand-operated fan arrangement, is relatively new. It is rather expensive, costing an average of 498 baht. Only 21 out of the 104 farmers in our 1948-sample could afford to own it, the rest being obliged to use the traditional winnowing method of simply tossing the grains into the air by wooden spatula and letting the wind carry away the chaffs.

According to historical improvement, farm equipment may thus be categorized as follow:

A. Old simple tools without any modification:

Shovel, spade, hoe, plow, harrow, roller, yoke, weeding knife, sickle, boat, pitchfork, rake, broom, wooden spatula, basket, mat bin, box bin.

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2. Submitted by Yingsakdi Israsena and Kamol Janlekha.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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B. Old equipment with slight modifications:

Noria (larger ones are now used because they are more adapted to windmills than smaller ones to which human energy was applied in the old days).

C. Recently employed equipment, mostly labor saving devices:

Gasoline engine, first used in Bangchan in 1930 or slightly later.
Winnowing machine, relatively new, date of introduction into the village not certain.
Propeller windmill, allegedly invented in the village, first used in 1940.

On the whole, it may be said that very few improvements have been made in farm equipment. For this, two opposing explanations may be advanced: (1) Little attention has been paid in the past to farm equipment, resulting in continual using of primitive implements which are inefficient and could be improved if enough attention and effort along the line were given; (2) These basic farm equipment are functionally efficient although they may be simple in form -- the fact that there has been no structurally change in the past few hundred years means that they have successfully stood the test of time rather than that the effort to improve these equipment has been lacking.

The author reserves his judgment on the validity of either of these two explanations, for scientific study of rice farm equipment in Thailand on which proper judgment may be based is not known to him.

Draft Animals

231 In Bangchan, as in most of the rice producing areas of the country, only one kind of draft animal is used -- the buffalo. This subject has already been dealt with in the

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779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

84 A soul desiring rebirth flew into the womb of a woman at
[775] conception. By care and imitative magical practices, both
[774] parents helped the fetus grow but the mother gave the baby its
[789] body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of
846 several days was taken beside a hot fire, the purpose of which
392 was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman.
793 The comparable ceremony of maturation for men, when they too were changed from "raw" to mature, compassionate, and strong
789 males for their calling of fatherhood and leadership, was
562 ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to
[688] nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

844 This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

128 The understanding of, and the attitudes toward, modern
844 medicine are given along with findings accounting for
846 acceptance or rejection of modern hospital care for parturients. Accepting the changes that were observed in the practices
369 surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step
178 towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

361 Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended 351 to live in proximity. Around the houses were kitchen gardens and threshing floors, and behind them, the fields. Bananas grew 245 abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, 241 while fish were plentiful. Water sources were the rain, kept 226 in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large 312 tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

General Nutritional Level

146 The population was physically well-formed with few physical [142] deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. Food at the not-infrequent festivals [292] was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The [178] change-over, some decades ago, from home pounding of rice to [256] steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community.

2. Dr. H.M. Hauck, personal communication, 1959.

close touch with each other's activities and needs.

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time.

Wealth Differences:

Way of Life

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable.

before completing these obligations, the parents lost out on their anticipated reward (cf. L.M. Hanks, 1962).

Since waywardness (pai thiaw) was considered a continuous threat, magical means were taken at the moment of birth to ensure that a child stay close to the family that raised him. The blessing following the winnowing ceremony invoked immovable things: the post, the cat that traditionally never roamed far, the pumpkin that sat and fattened:

> "...Stay at home like the bottom of the house post. Watch the house like a cat. Eat and stay here! Never leave home. Be fat and heavy as the ash pumpkin..."

The most important binding actions utilized, or brought the child into physical contact with, objects long associated with family, in particular the house and land. The umbilical cord was cut on earth or phlai dug from the house-land itself with a bamboo "knife" sliced from one of the deeply sunk house posts. Of these "the knife is the important thing." The phlai also had medicinal purposes. With a feather "from the mother's house" the baby's navel was smeared with cobwebs from a spider whose web indicated long undisturbed residence. They buried the placenta either under some large old tree that stood near the house, or under the house stair. The old family winnowing tray, old clothes, and well-used family possessions were used first before any new furnishings were purchased for the baby. A fire of sakae wood grown on premises boiled the water for the baby and mother, and heated the mother. Sakae "was planted when a house was first built so that every generation of occupants would have it available for use at confinement" and also for firewood at other times (cf. McF. 834). All these binding rites assured that the child being rooted to a home terrain, would not wander frightened, and so "would not cry." He also would be at home to participate in the merit-making that would reconstitute the family in another existence.

If a child were born away from home, how was this bond to his locality established? On one to two occasions when the child was born at the Minburi Health Center, Hauck (notes, 1954) observed a solution to this dilemma. The mothers returned home, as was customary, within a few hours of delivery and were established by their respective fires. Their babies were winnowed and laid on their trays with the usual auspicious book, pencil, and needle. Neither tray held any bamboo, clod, nor phlai, however, for these had not been used. On one tray, though, was laid a steel knife from the kitchen, mute proof that a family cutting instrument ought to be there. On another occasion, a father asked to be given his child's placenta so as to bury it on the house site. In so far as possible, people in Bang Chan tried to carry on the old rites.

Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire. For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous magical protective needle.

"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments; modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1951:151-191). It was sometimes better not to claim competence outside these customary lines. One MD said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease.

Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "woman are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

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An old woman summed up significantly 2 attitudes saying, "In the old days people made more merit and so lived longer, but because we had no hospitals, the children died younger." The relation of good health and longevity to proper religious and moral behavior was fundamental in Bang Chan. If merit did not suffice, medical attention, traditional or modern, could not prolong life. Children, however, were tender (อ่อน) and easily prey to sickness.

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Traditional care could help them, but being delicate and tender like city people, children could also be helped by modern hospital care.

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Between the 2 systems people sensed little conflict, for each patient made a preliminary diagnosis of his symptoms and sought the type of assistance his diagnosis and convenience indicated. Men with some knowledge of both systems might offer their patients a choice of remedy. With the right diagnosis, magic, and medicines, a quick cure was expected. If not forth-coming, people were disappointed and moved to another specialist for his help. Modern medicine merely took its place as one more recourse.

The basic handicap of modern medicine was that it had no magical resources or holy water. "Its effectiveness is limited to the properties of the ingredients." Old medicine on the other hand had, in addition to these properties, "The strength of the หมอ's incantation plus the power of every person who learned and used that incantation, back to the time of its discovery, centuries ago." Thus where the medical schemes offered the same specialty, as in fevers, bone-setting, or obstetrics, the old appeared to offer more resources.

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Besides its deficiencies in magic and strength-making attributes, modern medical care had other drawbacks. First, it was not accessible. A trip to Bangkok for medical purposes involved far more time than a day. Minburi's Health Center was a feasible trip, even for a woman in labor (stays ranged from 6 to 24 hours). Home arrangements for tending children, feeding buffalo, and other chores were less demanding. Bang Chan's eagerness for local modern care was shown when a Bangkok physician visited Bang Chan for a few times as part of a nutrition study. He was besieged with private requests for medical advice. Secondly, modern medical care was expensive. In Bangkok, after the expense of getting there, taxis, food, and housing costs for accompanying relatives, hospital, and doctor's fees sometimes meant losing the family gold and even land. Minburi's costs were closer geared to farm income, but medicines appeared costly. "Modern drugs taste and act better, but the poor have to use the old." Third,

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to make use of modern facilities one suffered confusing and unhappy experiences. Bangkok traffic was dizzying, even if one knew just where to go. Hospitals had beds, not mats, and the personnel were strangers. Foods were often unfamiliar or violated traditional injunctions concerning heating and cooling. People were brusque, impersonal, and overbearing to country people. One woman complained, "I am afraid of the doctor there. She scolds me and does not treat me like city people. She will not explain what the sickness is." Minburi's clinic was small, set up in more familiar terms, and the staff known personally to many villagers.

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Finally, there was the problem of finding an experienced escort, i.e. someone who "knew the way." More was involved than just convenience. In all walks of Bang Chan's life, no one ever presented himself to a school, to a household, anywhere, without a personal introduction from someone who had been there before, and so was accustomed (khoei) to it. It was not hard to find someone who had been to the Minburi Health Center, but it was difficult to find one who had been to a hospital in Bangkok, knew what to do, and had the time, money, and inclination to act as escort. The latter was always a relative by blood or marriage or the sick person's ex himself (Hanks and Hanks, 1955: 160). Actually, five or ten persons might accompany an ill person, only one of which was acting as the recognised go-between. Many of those who had been to a hospital or clinic as patients had previously accompanied others merely as escort, or to visit (Goldsen and Relis 1955:31).

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Who had actually tried modern medicine for one reason or another? About a third of the household heads had used some modern clinic or hospital for treatment or hospitalization (Goldsen and Relis 1955:31). Use was more frequent among (1) the literate, (2) those exposed to the mass media of radio and movies, (3) those accepting certain urban ways, and (4) those having greater contacts with the city in the way of visits, but users were not of a noticeably higher economic level (ibid:37). Women went no more frequently than men (ibid:32). No figures indicated how many of these occasions were for childbirth, but our interviews point to a small number. Taking the will for the deed, two women teachers who appeared to be the first to plan ahead to be delivered at the Minburi Health Center--but who did not get there because labor was too quick--seemed to be showing the use of modern methods as a means to higher status.

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Why was modern obstetrics so largely eschewed? What had been Bang Chan's experience, unfavorable or favorable, that colored their attitudes? First, home was the most convenient place for care. Bangkok was ruled out categorically as too far. In fact, Minburi might be too far if labor manifested its normal celerity as the case of the two teachers showed, or if complications had developed. Furthermore, a Chinese resident of Bang

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Chan during a period of residence in Bangkok was delivered at the Women's Hospital and at a later pregnancy at the Minburi Center. With her last baby, however, she elected to be delivered at home by the local midwife as more convenient in order to assure from her bed supervision and proper care for her other children. One young woman of very high social and economic standing preferred to import a midwife from a community six kilometers down the canal, and bear her child in her own home rather than attempt getting to a hospital.

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Moreover, basically the Minburi Health Center was seen as a place for sick people, while normal childbirth was not a medical matter. To plan ahead for medical care there was to invite an abnormal delivery. The Center also suffered a poor reputation for success because difficult cases, hopelessly advanced, were the usual ones brought in. "At the Center are many ghosts," people said.

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Some comments were genuinely favorable. The cleanliness of the hospital was greatly appreciated. Anyone who witnessed the skill of the doctor or nurse-midwife held it in respect.

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Techniques of delivery were sometimes mistrusted, sometimes admired. "They pull out the child with their hands, which is dangerous." "The fecal pump is unnecessary." "One may not crawl during labor." A mo-midwife who witnessed the nurse-midwife at work said approvingly, "She can force a baby out, but our midwives can only press harder," and "The hospital knows when a baby will come." The stopping of the flow of birth fluids by an injection was resented as affecting strength adversely, yet the injection that "made the placenta come so fast I couldn't notice it," or "gave the mother strength when the baby was stronger than she" was liked. The pills for pain were enthusiastically received. The hospital's closed windows "protected the baby from wind element," but the journey home dangerously exposed it and the mother to cooling wind. The dietary recommendations during recovery appeared wrong: eggs, which were "too cooling," or fruit, which "gave no strength." The suggestion of a nurse that scissors be used to cut the cord was resented as uncomprehending of village living problems ("we haven't any!" and "scissors always rust") and also as unwise ("rust gives tetanus poisoning").

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Another criticism was the lack of personal warmth and pity manifested by modern physicians and nurses, unlike the attentive, reassuring mo. By forbidding abdomen-pressing, they were accused of "not doing enough," even of

"not wanting to help." The mother and baby were seen as having to fend for themselves. The very confidence built up in modern medications led to a conviction that doctors maliciously withheld available, effective medicines. "She died at the Center because she needed medicine but was not given any." Personality factors sometimes were involved: one doctor was considered incompetent, fearful of complicated obstetrical cases, and brutally indifferent to a countryman's views and circumstances--("Since we have no room, why don't you charter a bus to take your parturient wife to Bangkok?"), whereas another was friendly and wise. Since doctors were part of the respected government hierarchy which enjoyed superior knowledge and status, and also of the supposedly compassionate medical tradition, they were expected to be competent, kind, and protecting. Those who failed in winning confidence undermined the status of modern medicine.

The midwives themselves thought of the Mīnburī Center not only as a recourse if a case were in deep trouble, but also as a personal convenience. One male midwife, who was also a headman, mō and carpenter-contractor, was often too busy to stay with a woman in prolonged labor. To turn her over to another midwife other than a kinsman would damage his reputation. Knowing Mīnburī well, he found the Center a convenient solution to his dilemma. He had respect for the nurse-mid wife's skills, which he had witnessed, and regarded the doctor as a colleague on his own level, a view probably not reciprocated. The women midwives, too, always considering themselves at bottom volunteers, when faced with pressing home chores and the "impossibility of turning a relative over to another midwife," utilized the impartial service of the nurse-midwife. One cloud impeded the female midwives from making full use of the occasion as an opportunity for observation and so instruction. They refused to identify themselves as midwives out of fear of legal sanctions. Having neither taken the course prescribed by the government for "ancient" midwives nor paid the fee, they were not licensed. Thus, they lived in dread of fines if their calling became known outside the community. They knew they were permitted to deliver babies within the family, but outside those rather hazy boundaries, they took refuge in an old view, "I am not a midwife. I only help out of pity."

All in all, the people of Bang Chan had fitted modern medicine into their broad medical scheme where it could be accepted on its merits, if not blocked off by inconvenience, high cost, and discourtesy.

Chapter VIII

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CHANGES

In studying change in the customs surrounding childbirth in Bang Chan, we have D.B. Bradley's description of birth in Bankok in 1865 as a base-line on which to project our findings. Since most of the population of Bang Chan (Thai, with a few Laotians, Mon, Muslims, and Chinese) stems from Bangkok, we may reasonably assume that the parallels derive from a true historical connection. Bradley's description fitted Bang Chan as if written today:

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> "Siamese theory in regard to the part which external and internal fire plays in the functions of life and health is made to work powerfully...There is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which, if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child...[Thus a woman lies by the fire]... exposing all parts of her body, and more particularly her abdomen, to that drying process, so that the uterus shall be forced to shrink up quickly to its normal dimensions, and the sanguineous streams which had been diverted to support the child before birth, shall, by fire, be driven backward to their more usual limitations, all which is...a sine qua non to a sound constitution and good health in the future..." (Bangkok Calendar, 1865:78-84).

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Bradley showed that some behavior one might call "change" today was a recognized alternative in 1865. For instance, in Bang Chan a few women "are made too unhappy (klum) by the fire so cannot use it. They should take extra amounts of pickled medicine" (yá dong). Bradley wrote, "a few delicate females...who cannot endure [this] usual treatment, are compelled, against all their ...fears of the consequences, and all the importunities of their

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friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of ...medicines" (p. 81).[74]

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The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: fai chut) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Minburi Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered net-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

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Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (suk) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a mɔ̌ did the same (with the possible exception of the sponging with tepid water), that as a mɔ̌-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorization, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calendar, 1871:107-109).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1930's.

178 184 312 846 885 a new way was a woman bearing her first child because she was not yet ritually matured. This she wanted to be. Moreover, her self-interest led her to try to profit as much as possible from the experience of elders by first following the old way. By incorporating the experience of successful child-bearers into her own and the baby's life and by asking them to initiate actions auspiciously, she augmented by that much her own competence, and laid the groundwork for her future progress. Self-responsibility engendered respect for elders. Thus there was no split between old and young over innovations. Experience gave grounds both for conservatism and for changing, but at different age levels.

178 184 556 Secondly, changes were adopted by the rich who, spending their money rather conspicuously, sought to maintain and enhance their social position. Their wealth and position were in themselves unquestioned as signs of merit earned in another incarnation.

178 554 The changes being introduced to Bang Chan were of two kinds: first the prestigeful, and second, those giving no increment of esteem, i.e. idiosyncratic changes of taste or convenience; or those reflecting individual circumstances. The prestigeful innovations were oriented towards the use of market novelties, modern medical care, urban standards of cleanliness and beauty, and other ways termed "progressive" associated with the city of Bangkok, cynosure of the eyes of the rich. These values were leading certain families away from their original occupation of farming, into the fields of teaching, trading, carpentering, cottage-industry, etc. Since these new occupations brought in steady cash and large land holders, too, had a good income, an association was found of wealth, prestige, urban interests, and innovation. Com- 372 846 178 ment on the hot ashes container (fai chut) indicated that it was a strong symbol of prestige and progress. To use it was "to get away from ignorance and the old way of doing things." It was "cleaner, not hot or ugly, and more convenient." One teacher took it up after reading an advertisement in the newspapers that described glowingly its more efficient healing effect. On the other hand, one woman abandoned the fai chut because "it was not hot enough to rid her of stiff muscles," so she went back to the use of the fire. "It is all right for rich Bangkok ladies who want to avoid a scar, but it does not give 177 178 278 854 enough strength for a farmer." She had no urban pretensions. Also in this prestigeful aggregate, observed here and there, were the market novelties mentioned above: bed, mat, and mosquito net instead of the plank-bed; kits of medicine from the Chinese pharmacist instead of the old

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home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

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To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Minburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 2 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccessibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grew up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

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In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Minburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

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are less eaten today because they are too expensive."

A slight trend towards depersonalization might be part of the aping of urban behavior, or idiosyncratic, or of more general significance.[76] The Minburi Health Center may have been used to avoid certain face-to-face situations. A woman whose labor was prolonged was taken there by her (male) midwife who had to get to a meeting. He preferred the impartiality of the Center to turning her over to another midwife. A woman took up the hot ashes container so "others would not have to wait on her." Another appeared to have obtained a midwife from outside the community rather than seek out someone inside and closer at hand. A very poor woman used no boiled water because of inadequate help in the household to prepare it. Whatever the circumstances of her social isolation, ordinarily kin or neighbors would have seen to it that this job was done. This episode too was watched by neighbors who commented that since her health remained good, boiling might be unnecessary. Finally, to advertise certain medicines, a firm handed out YAB, the magically inscribed cloth, to suspend on the holy cord that surrounded the mother. This was a long way from the personally inscribed "yan" of old.

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A final reason for the acceptance of change was the larger number of choices of behavior because of a broader horizon. Bang Chan had never been an isolated community, for pilgrimages and visiting through easy boat-travel had been for decades part of its life. Yet the growing number of literates, the establishment of bus and other transportation services to the city, the experience, for a few, of work in Bangkok or of military service in Korea, the continuous association with non-Thai, (Chinese, Muslims, a Cambodian, and now the Americans), and the now somewhat diversified economy of the community all led to the increased familiarity with other ways of doing things. Patterns of childbirth were already reflecting this awareness.

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Unchanging in the scene at childbirth was the necessity of supernatural assistance, and heat to ripen and restore the mother.

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76. I feel this evidence is slight, and set it down merely as a point for future observation.

1: Hanks E-5 (1953-1954) 1964 AOT Central Thai AQ7

Chapter IX

GUIDES FOR THE INTRODUCTION OF CHANGES

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The government of Thailand provides in Bangkok and in other centers of the country up-to-date facilities for training in modern midwifery. It has also created in some places special opportunities for the traditional midwives to upgrade their skills. One of the objectives of the Minburi Health Center was to carry on a certain amount of instruction in modern views. For reasons that have been explained, no one in Bang Chan ever had or even sought modern instruction. The midwives of whom we have spoken grew up entirely in the folk tradition.

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On the basis of the material presented at length in the previous pages, a few suggestions are here advanced which may be of help to these public programs in maternal and child health.

1. Build a program around the idea that it will help women in their age-old role of caring for, raising, and nourishing (lliang) children. Emphasize that through new techniques they may increase their strength and care better for themselves and the babies.

2. Change existing practices as little as possible.

3. When a change is offered, ask that the midwife, mother, or whoever observed it watch for certain results which allow them to judge it in relation to the old. The idea is strong that aspects of the natural world can be analyzed and considered pragmatically, then legitimately utilized as a basis for modifying customary behavior.

4. Pay special attention to the places where the old and the new come into conflict and seek ways to resolve these conflicts.

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As an example, let us consider these points in relation to cutting the umbilical cord. Modern instruction recommends the use of scissors--neat, sterilizable, handy--to avoid infection while cutting the cord. People in Bang Chan wish to avoid this infection, too, but for them scissors are unsatisfactory for several reasons: they are scarce, they rust--and

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this rust is believed to cause tetanus--and they are unsuitable for the ritual objective at the moment of cutting. It will be remembered that cutting the cord on a rhizome of phlai or soil with a bamboo sliver from the housepost guarantees that a child will not roam away from home. Could the bamboo sliver be dipped in "heating" alcohol, or passed over the flame of a holy fire? Could the old family kitchen-knife--long associated with the household--be substituted and dipped in the beneficial heat of boiling water? Such a knife once was substituted on the winnowing tray. Might the phlai or soil be covered with a boiled, clean, old cloth? If modern science succeeds in coming up with an acceptable substitute, one sees the possibility of a very small change making a big difference in the amount of tetanus poisoning observed (Hauck, 1956:41). One should then ask the midwives to watch as to whether the new method reduced the infection called "death because of a red or green face and clenched fists."

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In diet "the concept that a good choice of food is important to the health of both mother and child" (Hauck, 1959:2) was very much shared by modern science and by traditional ideas but the basis of choice was entirely different.[77] Modern science has ascertained that certain foods are beneficial because of certain nutrients, while old beliefs have set up certain foods as desirable because of properties of heating, cooling, compatibilities with the elements, etc. The nature of these properties should be collected and listed. If dietary deficiencies in Bang Chan are noted, the foods that combine the needed beneficial qualities in both systems should be stressed. A hot-tasting tonic (yā) with appropriate dietary supplements, to be taken daily during pregnancy, and another kind during the post-partum period, might be acceptable. The period of the fire-rest is the best place to initiate dietary changes for whatever is done by the fire becomes a habit beneficial to mother and child. The use of boiled water should be encouraged as "making for [illegible]th." Again, disturbance of customs is minimized, and the presence or absence of "increased strength" and healthiness can be observed experientially.

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77. Hauck felt the concept was lacking, but it appears only that the grounds of choice were different.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7
Bang Chan

SUMMARY

A general description is given of conditions in a 105 Siamese rice village, 1952-54, as they relate to food supply 26 and food habits. Activities at various seasons of the year [220] are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

105 262 433 Food was mostly home produced and an important factor in the standard of living was the number of productive hands available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods [230] were used. Nearly all of the families in Bang Chan raised [233] chickens, and some raised ducks, but about 3/5 of all eggs [244] produced were sold. Every family had some sort of kitchen [245] garden, including banana trees and other plants, but spices [227] and chili were much more commonly grown than vegetables and fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

[443] Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, cocomut, palm sugar and small amounts of vegetables.

[434] Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. [178] Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

105 264 Preparation of some typical dishes, meal service and techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds, 2) sweets and fruit were the

better nutrition for all family members or whether to concentrate on the feeding of children or other vulnerable groups, the values of the society should be considered. The importance of a suitable variety of food for health needs to be taught to adults as well as children in Bang Chan. The concept that good choice of food is important in pregnancy and lactation and for the health and growth of children seemed to be entirely absent. Since few believed certain foods to be harmful at these times, however, teaching how to choose foods for health should be easier in Bang Chan than it is in areas where positive taboos are common.

Behavior different from the traditional one may sometimes lead the way to changed practices among those who observe or hear about it. For this reason, in certain instances an informant who had ventured to deviate from the traditional practice has been identified in this record. Thus, we noted that in a number of ways the women school teachers and the wife of a man teacher deviated from the traditional behavior in Bang Chan. For example, a school teacher's wife used the hot ashes chamber after her fifth child rather than lying by the fire. She was one of two women informants who "ate all kinds of food" at this time when most women in the community restricted their diets very markedly. She did not consider taking the baby out into the sunshine harmful; indeed, she believed it would make the child stronger. This same mother was 1 of 4 in our series who had taken the baby to be vaccinated against smallpox. She and three women school teachers were among those who continued to give their babies boiled water to drink much longer than was customary in Bang Chan. The one person who suggested a specific food (eggs) as being good for a woman to eat during pregnancy was a school teacher. The two women who planned to go to the Minburi Health Center for delivery were school teachers. For lack of time after labor began they did not carry out their plans; but the fact that they intended to do, by choice, what was usually the last resort when labor proved long or difficult, may be significant.

Along with these departures from traditional ways and acceptance of some "modern" practices, the same persons might cling to other sorts of traditional behavior. The wife of a school teacher for example, though she thought that taking the baby into the sunshine might be favorable rather than harmful, said that if the baby were to be out very long she would cover its head with a beret to avoid bringing "cold" into the baby. This same mother took her child to the Minburi Health Center for treatment for a skin infection, but when the condition did not clear up immediately after modern therapy was begun, she took the child to a traditional doctor who prepared a decoction of herbs with which she treated the baby.

The behavior of respected persons, such as some of the school teachers, should be influential in helping to bring about

desirable changes in Bang Chan. An important point, however, is that leaders should understand, insofar as possible, the reasons behind the "modern" ways and not accept them merely because they are considered modern. Without adequate understanding traditional behavior which has served a useful purpose in protecting the people's health might be abandoned, or a half-understood "modern" way substituted to their hazard. For example, a popular traditional midwife said she knew that water was not boiled for mothers and babies in the hospitals in Bangkok, and the wife of a school teacher said she did not think use of boiled water was really necessary during (2)juu (1)faj. Traditionally, heat has been considered beneficial at this time. If this idea were extended to include an understanding of the value of boiling water to destroy harmful microorganisms and parasites, the traditional practice might be confirmed and even extended for the protection of other family members. If a sanitary water supply eventually becomes available in Bang Chan[1], precautions required to keep it so might be thought of as analogous to boiling of water; or chemical purification might be understood by the peasant as a modern way of conferring on water the virtues which boiling conferred when the "old way" was followed. Improvement in health and nutrition in Bang Chan must, of course, be seen as a long-time goal dependent on continuing education.

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[312] 1. In 1952-54 there were no wells in the area, and the problem of planning for a sanitary water supply when the plain is flooded for a part of each year is not an easy one.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad, national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.[4] As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

[4] It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

4:Phillips E-4,5 (1956-1957) 1966
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"extended families." The aim of all Bang Chan families even then was to attain a position in which they would be free from such obligations or would have other families dependent upon them.

In the intervening years the influx of new families into Bang Chan, the increased self-sufficiency of the individual nuclear families and, most important, the increased acceptance of commercial values, have served to break down kindred groups so that today few kinsmen work their fields together and even fewer share their food or equipment with one another, beyond what has been noted above. Perhaps the only remaining *universally* practiced function of the old kindred groups is the celebration of ceremonials involving members of the family, particularly cremations and ordinations, the cost and merit of which are shared among the participants, depending upon their wealth. Very often people do not want to borrow from or lend money or equipment to kinsmen precisely because the intrusion of the kinship tie makes the collection of such debts doubly awkward ("relatives take twice as long in repaying money; I do not want to lend anything to them"). However, the old forms have not been completely obliterated and when necessity requires or personal convenience moves an individual to look to others, the traditions of extended kinship, as indicated earlier, may be invoked.

For purposes of conceptual convenience, two types of kindred may be specified: the kind referred to above which involves kinsmen living in the village and to which Kaufman (1960) gives the name "spatially extended family"; and the type descriptive of relatives living outside Bang Chan, dispersed throughout other villages and provinces or in Bangkok, and called by Kaufman "the remotely extended family" and by L. M. Hanks (1959c) "the multi-local extended family." These terms are of course generic labels descriptive of actual or potential relationships between individuals, not of specifically delimited groups. Sometimes Bang Chaners attempt to extend the definition of the latter type of relationship to individuals who have never heard of them, but who may be in a position to help their son obtain a job in the city or get him admitted into a vocational school. Hanks has shown how the multi-local extended family has to a limited extent in recent years rejuvenated extended kinship ties by becoming the major institutional mechanism through which villagers leave Bang Chan to seek their fortunes elsewhere. (This last phrase is not merely a figure of speech; many young Bang Chan men have what could be called almost a Dick Whittington view about leaving Bang Chan for Bangkok.) A cousin who undertakes to serve as a villager's liaison to a city job or who offers him a place to stay usually does so willingly, for it creates obligations which may be called upon later if need be.

The above description of variations and extensions has been presented

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[For information on the acceptance of innovations by the people of Bang Chan, see Category 116, pp. iv, 6-37 and 43.]

235 was slightly higher than that of chickens, averaging 155 eggs per laying duck.

178 231 Hogs: In 1949, two families were raising hogs which according to our observation did not seem to be well fed. When we returned to the village in 1952, not a single hog remained in Bangchan.

Fish

262 443 434 After rice, fish (and other marine animals) are by far the most important ingredient in the diet of Bangchan. More fish are bought from the outside than the very small amount that is exported from the village mainly by one or two very poor families who have availed themselves of this means of augmenting their income.

221 226 The villagers' annual cycle for fish-taking varies somewhat with the particular method used, and with the annual rice and ceremonial cycles: yet the maturation cycle of the principal types of fish is also a factor, and one which tends to give an overall orderliness to the annual cycle for fish in general. There is no time in the year when at least some fish are not available, nor is there any time in the year, even the busiest, when the family does not want fresh fish for its menu. For this reason, there is fishing the year round, at least in the form of the housewives simply setting nets in the canal and then tending them according to some schedule or whenever the noise of caught fish sloshing about in the water is heard. When a lull from the pressure of

7: Janiekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

162 592 621 average size of family in 1953 is slightly larger than that calculated from the 1949 census.

Disappearance of Some Families from Bangchan

162 178 592 621 When the 1949 and 1953 censuses are paired hamlet by hamlet, appearance of new families and disappearance of some of the old families may be detected. Table 5 shows that during the four years between 1949 and 1953 forty-three families had disappeared from the lists of the seven hamlets constituting Bangchan. This loss was compensated by fifty-three new families, giving a net gain of ten families. In other words, of 288 families existing in 1949, 245 families remained throughout the period. When 53 new families were added to the continuing 245 families, a new total of 298 families was arrived at for 1953. A closer examination, however, will reveal that there were five families which disappeared from one hamlet only to appear in another hamlet of the same Bangchan village. If the seven hamlets are to be considered as one geographical unit, these five families should be deducted from both the disappeared and new families, giving a net disappearance of 38 families and a net appearance of 48 new families, while the number of continuing families becomes 250.

[166] Of 38 families which disappeared from Bangchan, 27 moved out to other villages nearby or afar, while 11 were disintegrated or simply annexed by other families in Bangchan itself.

[TEXT CONTINUED ON PAGE 68]

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TABLE 5

CHANGES IN NUMBER OF BANGCHAN FAMILIES FROM 1949 TO 1953

Hamlet	Number 1949	Number 1953	Continuing			Disappeared				New			
			Total	(1)	(2)	Total	(1)	(2)	(3)	Total	(1)	(2)	(3)
BC4	43	40	32	32	0	11	6	0	5	8	3	1	4
BC5	27	28	24	18	6	3	2	1	0	4	1	1	2
BC6	44	47	38	36	2	6	4	0	2	9	4	2	3
KY5	54	63	45	40	5	9	6	1	2	18	13	2	3
KY6	28	31	27	26	1	1	0	1	0	4	0	3	1
KY7	42	42	37	33	4	6	5	1	0	5	3	0	2
KY8	49	47	42	36	6	7	4	1	2	5	3	0	2
Total	288	298	245	221	24	43	27	5	11	53	27	5	21

Explanation

Continuing (1) . . same family head
Continuing (2) . . different family head

Disappeared (1). . moved out of the village
Disappeared (2). . moved to other hamlet in the village
Disappeared (3). . disintegrated or annexed by other family

New (1). . . . . moved into the village from other village
New (2). . . . . moved in from other hamlet of the village
New (3). . . . . separated from other family in the village.

592 178 621 Although disintegration and annexation of families have a common feature in that in either case the family loses its entity, they have different connotations as to how the family passes out of existence. In order to have a clear picture of the village economy it is necessary to make a distinction between these two dynamic processes. The best way, perhaps, is to study the eleven families individually.

592 178 621 511 Case 1: A poor laboring family of eleven lived in BC4. The family head was in 1949 an old man of 59, his wife an old woman of 64. The family also included a son, age 29, son's daughters, 16 and 10, son's son, 9, daughter, 35, daughter's son, 18, daughter's daughters, 11, 4 and 1. This was the situation when we were first acquainted with them. When we re-visited the village in 1952, however, we found that only two members remained -- A, the old woman now sick with malnutrition and almost immovable, and B, her granddaughter then age 14 and still in the primary school. Presumably the girl was taking care of her grandmother. Except for the clothes they were wearing and a small old shack which was about to collapse, they did not own anything. B said she worked on a three-fourth-rai parcel and did some fishing or vegetable gathering before and after school time. Actually, she did not get much out of that effort; for the rice crop, 30 tang of paddy or roughly 15 tang of clean rice, was barely enough for a few months' consumption, and fishing would not be productive unless she had several long uninterrupted hours. In tracing what had happened to the rest of

178 592 621

198 592 621 the family members we were informed that A's daughter and her four children had moved out of the village separately to different places which could not be traced, while B's brother and sister went to live with a relative in Lam-loogga, also a rice growing village some fifteen miles to the north. The two chief bread winners of the family, A's husband and B's father, managed successfully to get themselves ordained and are now residing in the village temple. Early in 1953 B went to live with her relatives in Lam-loogga, leaving the sick old grandmother alone in Bangchan. [792] [488] The arrangement was that the old woman was to quit the old shack and take refuge in the secular part of the temple where it would be possible for her ex-husband, now a priest, to have two meals delivered to her every day. Just before the 1953 census was taken, however, she was taken to Lam-loogga. The last member of the disintegrating family was thus left out of the 1953 census.

178 592 587 736 621 Case 2: After the death of his first wife, an old man in BC4 gave his two sons equal shares of his property. He then acquired a second wife and built a separate quarter apart from the main building, thus creating a new family of two. In 1952 he was fatally hit by a truck on the Minburi road. After a few months of unhappy stay with one of her step sons, the widow acquired a new husband and moved out to a neighboring village.

178 592 621 [166] Case 3: There was in BC4 a laboring family of three consisting of an old man, his daughter, and her son. After

178 592 62 [166] the death of her father, it was reported that the woman and her son moved to Bangplee, another rice growing village some fifteen miles to the south. After checking with some of the former Bangchan residents who are now living in that village, the first report was found to be inaccurate. In fact no one in Bangchan seemed to know where they were. The only hint available to us concerning the mother and son was "Family disintegrated. Mother went one direction, son another direction."

Case 4: A woman and her adopted son were operating [782] a 22-rai rice farm in 3C6. After the death of the mother, the man remained in the village alone for a short time and then was conscripted into the army.

Case 5: After the death of the head of a laboring family in 3C6, the wife and their four grownup children left the village separately. In the eyes of villagers this was [166] another case of "family disintegration." The wife's birth place was in KY8, but she could not go back to her old family because there was not enough land to work.

Case 6: An old woman, age 76, was reported in the [787] 1949 census to be living alone in KY5. Later she moved [792] into the secular compartment of the temple (she was an aunt of the headpriest) where she died before the 1953 census was made.

Case 7: A man, age 50, was living in KY8 with his older sister, age 60, and their nephew's son, age 6. When the man died, the older sister pursued her brother's farm

178 592 621 laboring profession, limiting the work to transplanting only. Apparently she did not earn enough. During this hard period the young boy left her. The woman continued to live alone for two years. After the collapse of her check in 1953 she went to live with a young couple in KYS who are not related to her. In exchange for room and board and a nominal allowance, the old woman agreed to take care of the couple's baby.

178 592 895 434 621 [416] Case 8: In 1949, a couple, both teachers in the Bangchan Primary School, were sharing the same dwelling with the wife's mother's family, but having a separate food arrangement for themselves and their two young daughters. Thus, they appeared in the 1949 census as a seperate family. In local standard, the combined income of these two teachers was quite high. The family lived well and was the only family in Bangchan that owned a camera. In the 1953 census this family became a part of the wife's mother's family because they had arranged to share the same food. The reason that was given for this new arrangement was that some time earlier the wife's brother, who had been living with his mother, got married and moved out to start an independent family, whereupon the old lady suggested that her daughter move in to fill the vacancy.

178 592 621 [573] Case 9: In 1949, a family of three, consisting of a young couple and their six years old daughter, worked as farm hands for the wife's mother for fixed pay on which they were able to live independently. Two or three years later, the wife's mother asked this family to move into her household

178 592 621 [592] because four members of her family had just left her to establish families of their own. The son-in-law accepted this invitation and had since taken over the management of his mother-in-law's large 60-rai rice farm.

Case 10: In 1949, an old woman was living with two boys, one distantly related to her, the other without any [427] [792] [431] blood relationship. She was operating a small rented rice farm. Some time in the past she had made a generous offer of her own house to the temple which was not acted upon by the receiving party. In 1953, the headpriest contemplated an expansion of one of the temple buildings and approached the woman for the gift. The woman complied with the request, had her house dismantled, saving only the kitchen, and sent all the building materials to the temple. Meanwhile, the two boys had left her; one went to live with his mother in [593] [431] the village, the other went to Bangkok. Later, the woman joined the household of her younger brother, who lived next door, with the understanding that the brother had free use of her buffalo in exchange for her room and board.

Case 11: In 1949, a woman was living in KY8 with her aged mother and her baby born of her separated husband [586] [587] who was a policeman. Two years later, the woman married a widower, who lived in the same hamlet, and brought along her mother and son to live with her new husband.

With the exception of Case 6, a lone aged woman who was survived by none after her death, these cases may be grouped according to the nature of acceptance of the families

7: Janiekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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178 592 621 to which surviving elements of the disappearing families were subsequently attached. It was noticed that in the last four cases -- Cases 8, 9, 10, and 11 -- merging with new families was arranged on the basis of mutual convenience, and the disappearing families moved en masse into the new ones (with the exception of Case 10 -- a lone woman when arrangement for merging was being made). It may even be said that the initiative came from the receiving families, although the new members may have been more anxious for the union. In the remaining six cases -- Cases 1, 2, 3, 4, 5, and 7 -- there was no element of mutual convenience, and the surviving elements of the disappearing families did not move into new families as a body but as an individual. It seemed in these latter cases that the force of circumstances -- death or extreme poverty -- had prompted either party, usually the disintegrating elements, to seek the union as a quick way out. Because of the purposive nature of the arrangement in the former cases, the process may be called 'annexation'; while for want of a proper term, the process seen among the latter cases will be called 'disintegration'.

[162] [423] [464] None of the eleven cases undergoing disintegration or annexation owned landed property. Table 6 shows that six of these were farm laboring families. The five others were distributed among the following occupational groups: farm operator, public servant, and no occupation.

[166] Among the 27 families that moved out of Bangchan, eleven families were known to be living in the bordering

[TEXT CONTINUED ON PAGE 75]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 6

DISINTEGRATION AND ANNEXATION OF FAMILIES
Bangchan, Thailand, 1949-53

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Case	Occupation	Landed Property	Immediate Cause	Number of Surviving Elements	Number of Attached Families
Disintegrations:					
1.	F. laborer	no	poverty	11	4
2.	Public servant	no	death	1	1
3.	F. laborer	no	death	2	2
4.	F. operator	no	death	1	1
5.	F. laborer	no	death	5	3
6.	no occupation	no	death	0	0
7.	F. laborer	no	death	2	2
Annexations:					
8.	Public servant	no	convenience	4	1
9.	F. laborer	no	convenience	3	1
10.	F. operator	no	convenience	1	1
11.	F. laborer	no	marriage	3	1

7: Janlekha X-4.5 (1948-1953)1956 AO7 Central Thai AO7 Bangchan

178 villages, and six in villages within a distance of from four
592 to fifteen miles from Bangchan. These seventeen families,
621 whose locations were known, were engaged at the time of the
166 study in the same occupations they had been when they were in Bangchan -- either farm operating or farm laboring. Our investigation, however, covered only the whole family as a unit -- that is, we cannot say that every single individual constituting these seventeen families when they moved out of [464] Bangchan was doing farm work in his new location. Only one case was known in which the family head got a permanent job as a janitor in Wat Pakasan Primary School in Bangkok. This man was nevertheless commuting regularly between his farm home in Bangplee and his office in the suburb of Bangkok. His taking up a new job was thus a question of an individual member, not of the family as a whole.

It is not likely that the ten families whose locations were not known to us would take up new occupations in Bangkok. If they did work in Bangkok, they should pay some visits to Bangchan at least during festival time or family re-union occasioned by ordination or cremation, and their presence in the village would certainly be known to us. Besides, we were in constant contact with the core of a group of young men who went to work in Bangkok and who knew one another's whereabouts fairly well, and no information about these ten families was available from this source either. Our impression was that they were doing farm work in some villages not too close to Bangchan.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Appearance of New Families in Bangchan

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In the pairing of the 1949 and 1953 censuses against each other the appearance of new families was detected as was the disappearance of some of the old families which has just been discussed. Table 5 shows that there were 53 new families, but five of these were merely cases of reappearance of existing families from other hamlets of the same village. Actually, therefore, there were only 48 families that were really new in Bangchan.

Of these 48 new families, 27 moved into the village from the outside and 21 evolved from existing families in Bangchan. Of the 27 immigrating families, 18 came from the bordering villages and 9 from distant villages in all directions ranging fro[illegible]ardprao and Samsen, some ten miles to the southwest, to [illegible]achin, over a hundred miles to the east. While the eighteen families from the bordering were accustomed, as expected, to rice growing, not all of the nine families from distant villages had been farmers. A family head of one of these nine families came from a family of fruit growers, while another family head, who apparently had a more spectacular record, had been engaged in international rice trading. This latter man, who knew some English, had worked in a large rice mill in Nonburi which was exporting ri[illegible]nder strict government control after the war. Discovery by the government agent of irregularities of the firm led to the man's flight abroad to Hongkong or Swatow some eight years ago. It is assumed with his

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178 appearance in the village that the case has been closed.
592 One reason he chose to take up residence in Bangchan after
621 business failure in Bangkok was that his wife owned through
166 inheritance a 17-rai parcel of rice land in the village. Another equally important reason was the relatively low cost of living in the village as compared to the city, which could not be overlooked especially when he had a large family of ten.

162 Of the 21 families evolving or separating from
178 existing families in Bangchan during the period from 1949
592 to 1953, sixteen were young married couples seeking inde-
591 pendent families of their own. Eight of these were married
621 before 1949, and the rest after that year. These sixteen young couples altogether contributed, in the 1953 census, 21 children of age-group 0-4 years or about ten percent of all children of that age-group in the whole village.

This process of separation of young married couples from the old families is normal, in fact a characteristic feature, in areas where the nuclear family system predominates. Although some newly wed couples were able to establish independent families immediately, the pattern was that they remained for a year or more with family of either side, during which time they accumulated capital necessary for future establishment. A separate section will be devoted to this important feature of the village economy.

178 In contrast to the above normal separation from old
592 families, the remaining five of the 21 families underwent
621

178 592 621 different types of separation which will be described individually as follows:

Case 1: This involved the two sons who inherited landed property from his father described in Case 2 for the disintegration of the family, and in fact this was the first Bangchan family we met in 1948. At that time the elder brother, then age 37, was a widower and was courting a woman in another village along the Minburi Road. His work in road construction and maintenance (the Minburi Road) gave him a good excuse for continued absence from home, leaving his two daughters and three sons under the care of his younger [587] brother who was the family head. Just before the 1949 census [464] was made, he married the woman and once again became settled down. Meanwhile the younger brother got a job in road construction. With regular monthly cash income, he took to drinking and established himself as one among the few notorious dipsomaniacs in the village. This was intolerable to the elder brother who finally moved his nuclear family out to their new home just across the road.

Case 2: In 1949, an unmarried woman was living in an 'extended' family headed by a son of her elder sister. The combined landed property of the family was 67 rai of rice land, 40 rai of which was a share of the woman and her aged mother who was also living in the family. Some time before the 1953 census was made the woman and her mother moved out to form a separate household. The reason for the separation was not quite clear. It was assumed, however,

178 592 621 [586] that these two women were happier living by themselves than with their junior relatives.

Case 3: A married couple were living in 1949 with the wife's parents. They were later separated, the husband leaving his former wife with her parents. In the 1953 census the man appeared in KY7 list as head of a one-person household.

Case 4: In 1949, a woman appeared in the census as wife of a family head in KY6. In that same year she left him and lived as wife with another man in KY8. A few years after, she left this second man again. She then appeared in the 1953 census as family head of a family of six including her three children and her aged parents.

Case 5: In 1949, a man of 47 was head of a laboring family of nine in KY, including his wife, three adult offspring and four young children. Later in that year he left [464] [586] the family and hired himself out as a regular laborer to a farm operator with whom he worked for two years. He then left the village for a year after which he returned to work as regular hired laborer for another operator for almost a year and a half. In the 1953 census he appeared as head of a one-person household in KY6. Our records show that he was a diligent worker, excellent fisherman, averse to sweet cookies, but very fond of liquor. When asked why he did not go back to his family in KY8, he replied "The larger the family you have, the more trouble you get. I have more fun living alone."

178 These five cases may be grouped as follows: two
592 cases of relatives of family heads separating from 'extended'
621 families, two cases of one spouse leaving the other, and one case of a family head deserting his wife and children.

Pattern of Establishment of New Families

593 Bangchan offspring customarily continued to live with
592 their parents as long as they were not married regardless of how old they might be. In the eyes of the parents, an offspring is always their child, immature and needing parental supervision, as long as he has not been able to acquire a spouse; and until then the parents-offspring mutual obligations, necessitating living together, must continue to exist. Thus, it was not uncommon to see several unmarried adults crowding in one family providing too large a labor force relative to a small parcel of land on which the family [581] worked. In this context, marriage serves an important economic function of giving impetus to the start of new producing units in the village. There is no corresponding service in areas where the extended family system predominates such as in China and India.

583 Two distinct kinds of marriage were conceived of in Bangchan: the conventional marriage with the sanction of parents or guardians of both parties which was usually preceded by formal arrangement and accompanied by marriage rites sponsored by the bride's family; and the p pular marriage by mutual understanding between the man and wife without

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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591 A probable explanation was that the poor had nothing to
184 gain from staying for a few years with parents after marriage. More important still was that with limited working land, presumably rented, the parents also did not get any economic benefit from the couple, whose stay with the family meant extra mouths to feed rather than extra hands to work.

Immediate establishment of new families was also observed in some couples originating from well-to-do families. This was nevertheless rare, because in the present economic condition it was rather difficult to find families rich enough to provide for the immediate establishment of a new family. The general pattern, then, was to let the couple accumulate for themselves while getting the benefit of free board and lodging from the parents. This period of stay with the parents with the intention for accumulation for future establishment may be called the 'nascent period'.

591
a 178 Table 7 shows that 30 out of 96 families of farm
184 operators covered by the study were able to establish their nuclear families immediately after marriage. When these 96 farm operators were grouped according to their dates of marriage to the present spouses or last spouses in cases of widowers and widows, the distribution was as follows: those married during the absolute monarchy regime (up to 1932), 54; those married during the democratic regime (after 1932), 37; never married, 4; date of marriage not available, 1. Since 20 out of the 30 families which were able to establish themselves immediately were in the first group, the

[TEXT CONTINUED ON PAGE 85]

7: Janiekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 7

FREQUENCY DISTRIBUTION OF LENGTH OF NASCENT PERIOD OF 96 SAMPLE-FAMILIES
Bangchan, Thailand, 1953

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Length in Years	Frequency
0	30
1	16
2	9
3	4
4	4
5	5
6	2
7	0
8	1
9	3
10	2
11-15	3
16-20	1
Not separate*	15
No information	1
Total	96

* These 15 families existed earlier as minor components of the old families. Headship of each family was later assumed by the present family head.

591 proportion for immediate establishment was 20 out of 54 or
184 37 per cent for those married before 1932, and 10 out of
178 37 or only 27 per cent for those married after 1932. A declining trend was thus observed of the ability to establish a new family immediately after marriage.

591 Table 7 also shows that the 'nascent' period of 50
592 families (that had ones) ranged from one to twenty years,
184 averaging four years, the mode being one year, and the median
178 two years. Among the fifteen non-separating families, eight headships were taken over by offspring while one or both of the parents were still alive (we shall call this 'type A'), four headships were taken over by offspring through the death of parents (we shall call this 'type B'), and three headships were taken over by spouses ('type C'). The last mentioned changing over of family headship (type C) occurred in three ways: through marriage of a man to a female head of a family whereby the husband automatically became the family head, death of the husband, and desertion of the husband.

591 The changing over of the family headship of the type
592 B in Table 7 was a natural process of inheritance. In type
184 A, it was found that senility accounted for seven out of
428 eight cases of the changing over, the one exception being
587 the case of a widower who wanted to have a second wife and who thought that the family assets originally belonged to his first wife's biological family and therefore an outside woman should not lay a hand on the 300,000 baht property.

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 9

OCCUPATIONAL DISTRIBUTION BY FAMILY
Bangchan, Thailand, 1949*

Occupation	BC4	BC5	BC6	KY5	KY6	KY7	KY8	Total
F. operators	25	25	38	37	25	37	42	229
F. laborers	7	1	2	10	1	-	6	27
Traders	1	-	2	1	-	2	1	7
Investors	3	-	1	-	-	-	-	4
Professional	2	-	-	1	-	-	-	3
Public servants	2	-	-	3	-	-	-	5
Home enterprisers	2	-	-	-	1	1	-	4
Priest or novice	-	-	-	1	-	-	-	1
Miscellaneous	1	1	1	1	1	3	-	8
Total	43	27	44	54	28	43	49	288

* Some figures in this table differ slightly from those reported on pages 114-5 of the preliminary study (Sharp, Hauck, Janlekha and Textor, Siamese Rice Village) because errors such as duplications and omissions in the original census have been detected and corrected.

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TABLE 10

OCCUPATIONAL DISTRIBUTION BY FAMILY
Bangchan, Thailand, 1953

Occupation	BC4	BC5	BC6	KY5	KY6	KY7	KY8	Total
F. operators	26	19	33	42	28	31	37	216
F. laborers	6	3	8	7	2	5	7	38
Traders	4	4	2	6	1	2	2	21
Investors	2	1	-	1	-	1	-	5
Professional	1	-	-	-	-	-	-	1
Public servants	-	-	2	4	-	1	-	7
Home enterprisers	-	-	1	-	-	-	-	1
Priest or novice	-	-	-	1	-	-	-	1
Miscellaneous	1	1	1	2	-	2	1	8
Total	40	28	47	63	31	42	47	298

T. Janlekha X-4.5 (1948-1953) 1956 AO7 Central Thai AO7
Bangchan

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 11

CHANGES IN OCCUPATIONAL STRUCTURE
Bangchan, Thailand, 1949-53

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Occupation	Distribution				
	Actual		Per Cent		
	1949	1953	1949	1953	Changes
Farm operators	229	216	80	72	-8
Farm laborers	27	38	9	13	+4
Traders	7	21	2	7	+5
Investors	4	5	1	2	+1
Professional	3	1	1	+	-1
Public servants	5	7	2	2	
Home enterprisers	4	1	1	+	-1
Priest or novice	1	1	+	+	
Miscellaneous	8	8	3	3	
Total	288	298	100	100	

434 463 7. Home enterpriser. Main income from food or handicraft articles produced at home.

434 792 463 8. Priest or novice. Though priests and novices do not receive salaries or wages, their maintenance, which comes from the temple and directly from the people in the form of contributions, is their main income. This category includes only permanent priests and novice personnel. Excluded here are all residents who enter the priesthood more or less perfunctorily for just a few months. Since sexual abstinence is demanded of all monastic personnel, no wives or offspring are found in this category.

434 9. Miscellaneous. The main income source for the eight families in this category is obscure. The heads of these families are not known to have any steady occupations.

178 463 621 Table 9 shows the occupational distribution of Bangchan families as of 1949. It may be observed that some of the figures in this table differ slightly from those reported in the preliminary study previously cited. This is because errors such as duplications and omissions in the original census have been detected and corrected.

Table 10 shows the same distribution as of 1953, and Table 11 the change in the occupational structure of the village that took place during the four intervening years. In 1949, 80 per cent of Bangchan families were farm operators. Four years later, the figure was reduced to 73 per cent. While there was no percentage change in the figures for public servants, miscellaneous, and priest or

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

178 463 621 novice; there were noticeable increases in those for farm laborers and traders, and a slight increase in that for investors, which were offset by a marked decrease in figures for farm operators and slight drops in those for the professional and home enterprisers. In order to understand these changes in the occupational structure of the village, more information on some of these occupation than that given in our operational definitions at the beginning of this chapter is necessary.

243 434 463 Farm operation is a traditional way of life in the village. The primary motive is to secure enough rice for consumption. A secondary motive is to have cash from sale of surplus rice to buy goods that are not produced locally.

243 464 554 621 463 Farm laboring as a profession is limited to the poor. Farm laborers, occupying the lowest status in the village, are the most unstable and socially disintegrated group. They are not fully employed even during the work seasons of the year because there are too many of them in the locality. Thus, they exist in the village not because of demand for their work but because they have no opportunity for other occupations.

621 463 443 There were twenty-one families that were classified as traders in 1953. Of these, nine were permanent storekeepers, and twelve were peddlers selling food stuffs from door to door. Stores were situated at strategic places in the village -- two at the crossing of Minburi Road and Bangchan Canal which is the natural entrance into the village,

427 the combined land of five leading farm operators of 693
434 rai, averaging 139 rai per operator and ranging from 83
454 to 235 rai. It must be remembered that our operational
621 definition of occupations was based on the main source of
463 income and that many of the villagers had more than one
426 source of income. Investors as an occupational class in Bangchan should not be pictured as large landlords and large money lenders, possessing financial influences over their tenants and debtors. Rather, they were humble fellow villagers whose incomes were mainly derived from rents of small parcels of land or interest on small loans. To cite an extreme case, one aged woman was classified as an investor. She had only 17 rai which she rented out to her own son. She was living alone in an old shack and was too old to do any kind of work. She received as rent about a hundred tang of paddy a year which is equivalent to an annual income of only 800 baht. Thus she was considered one among the poor in the village.

178 There were three families whose occupations were
463 classified as professional in 1949. The number was reduced
621 to one in 1953. The head of this family was a Chinese car-
322 penter who derived his income primarily from boat building. Again, it must be pointed out that reduction of the number of families primarily engaged in professional services does not mean that professional services had been declining.
[305] On the contrary, they had been increasing. There were three barbers in 1953 as against only one in 1949. More traditional

178 doctors were practicing in 1953 than in 1949, while there
463 was no change in the number of midwives. In most cases,
621 however, these professional services had ceased to be the main sources of income of the families engaging in them.

621
434 In 1953, occupation defined as public service in-
463 cluded the jobs of an educational supervisor, one teacher,
647 two school janitors, two workers in the government-owned
[875] Bangkok wharf, and one policeman. Actually, there were five Bangchan residents who were teaching in 1953. Only one of these, however, was a family head. Two of the other four teachers were husband and wife living with the wife's mother who was classified as an investor -- the most prosperous of the investors mentioned earlier in this section. Another teacher, a wife, was also living with her mother who was also an investor. The last teacher, also a wife, was living independently with her husband who was operating a rice farm, and the occupation of the family was thus classified as farm operating. With the possible exception of the policeman, all these public servants were well paid in the village standard, ranging from some four hundred baht a month for a janitor to eight hundred baht for the educational supervisor. After the 1953 census was taken, more regular jobs were opened to Bangchan residents by the Highways Department, and also more people took up regular jobs of a public service nature in Bangkok while retaining residence in Bangchan by commuting daily between the village and their offices. Thus,
[178] although the percentage figures remain constant during

178
434 1949-53, in actuality public service as an occupation is
463 increasing in Bangchan.
621
647 There were four home enterprisers in 1949, mostly
engaged in making cookies. As in case of the professional,
434 this activity still existed in Bangchan, but by 1953 it had
443
463 degenerated into a secondary income, leaving the lone case
621 of basket making in the home enterprise category.
285 Only one family head was classified in 1953 as a
home-enterpriser. The family was engaged in making takraw
--- cane utensil used in picking mangoes from the tree.
On January 27, 1953 we met A, the head of this family, who
was taking 103 takraws of various sizes to sell in Bangkok.
[435] A gave the amounts and prices of these takrawa as follows:
56 large size, @ 3.00 baht; 31 medium size, @ 2.50 baht;
16 small size, @ 2.00 baht. A said he and his wife worked
on these 103 takraws alone, and finished them in twelve
days, using 50 baht worth of materials including cane, wood,
and binders. Ordinarily, they started making takraws in
December and continued through May. They were able to make
about 3,000 baht within this period. They also made other
things like baskets, but takraws were their main source of
income. In rice growing season, they also did some piece
working. They did not operate a farm. Piece working and
basketry during rice growing season brought them a combined
income of about 2,000 baht. The amount of each kind of
621 basketry they made was not as constant as takraws. It de-
434 pended more on which paid best. Their total annual income
463

434 amounted to somewhere around 5,000 baht, which was about
463 four times as much as the labor earnings of an average rice
621 farm operator as we shall see later.

• 178 The present occupational situation and accounts of
463 the changes in the past few years alone may not be enough to give us a complete picture of occupational development since the beginning of the history of Bangchan. Fourtunately, however, since settlement in the village in a considerable scale took place only some eighty years ago, evidence from genealogical studies has provided us with ample materials on which a reconstruction of the past development may be made.

[175] When Bangchan was being settled in the 1870's, as a probable consequence of the increasing national and international demand for rice and the revolutionary change in Thai society, every family was naturally a farm operator family. As long as there was land available for clearing, opportunity would be open for every new family, either branching off from the old ones or moving in from the outside, to operate a rice farm.

(161] Eventually, population grew up to a size large enough
[194] to support a temple in 1895. Population growth and the
[176] emergence of a village center at the temple prompted occupational specialization. At the beginning, investing, trading, professional servicing, and home enterprising probably took the forms of secondary occupations, while farm operating remained the primary occupation throughout. In time, these secondary occupations became more and more specialized and

178 finally, for a few families, took precedence over rice
463 growing. The relative importance of these new occupations remained low, however, since only a few families were needed to meet the village requirements for such services.

434 The establishment of the primary school some thirty
647 years ago opened up new jobs as teachers and janitors for
875 some educated villagers who were given preference over out-
[872] siders. It should be noted, nevertheless, that at the beginning the primary school teachers were not considered as regular officials and their pay was as low as six baht a month during the prewar years. Even during the war, they did not get as proportionately large a cost-of-living raise as did other regular officials. It was only after the war that they were made regular officials and that their pay rose almost a hundred times to 450 to 550 baht a month with provision for a steady raise to more than one thousand baht
[48] a month. This new occupation in public service also increased with the extension of the central government employment into the rural areas and with improved transportation facilities which permitted an individual to commute daily between his office in Bangkok and his home in Bangchan. Thus, a Bangchan resident is now serving as an educational supervisor in the nearby Minburi District and a few others are on the regular payroll of the government-owned Bangkok Wharf.

243 With the background knowledge of the situation of
464 Bangchan farm laborers previously described in mind, we may
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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 hypothesize that the presence of farm laborer families in
464 a rice growing village indicates a condition of land scar-
621 city. This is to be distinguished from the presence of farm
463 laborer families in intensive farming areas such as the truck gardening villages along the Damnernsaduag Canal and plantation villages in Cholburi where the marginal product of labor, even with the same crude implement, is much higher than that in the non-intensive rice growing areas. Usually, there are farm laborers in any commercial rice growing region, but they consist of members of farm operator families with excess family workers who work for their own lampai. With low marginal product of labor, the demand for extra labor outside the family is not great and is highly seasonal in rice growing villages, resulting in extremely low total income for farm laborers. Piece-working is thus only good as a subsidiary income for an under-employed farm operator family, and certainly not as the main source of income for any family. Farm laborer families such as those existing in Bangchan are indigenous and are the outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent in any land. These people prefer to remain in the home village, willing to accept meager income from piece-work which is perhaps the only type of job they could get in the village, in the meantime trying to eke out as much as possible from what nature has to offer in the form of fish or uncultivated aquatic plants. The
[161] [178] abrupt rise of farm laborer families in Bangchan from nine

per cent in 1949 to thirteen per cent in 1953 suggests that the problem of population pressure on land has become more acute, although it may also indicate changes in the cost structure of rice production which will be discussed in Chapter VI.

Concluding the discussion of this section, we may say that rice growing is the core of the occupational structure of Bangchan around which other occupations rotate. It is not uncommon that one family has several occupations, and in addition to income from these most families get "free" food in the forms of fish and uncultivated aquatic plants. This is the principal reason why families with apparently no cash income still thrive.

It is conceivable that in years of poor rice crop the family put more effort in the secondary occupations; when such an attempt does not work out well -- for example, no work for manual labor and no capital for trivial trade -- an effort is made to obtain subsistence directly from nature.

In any event, every family in the village is engaged in fishing in varying degree. It is because of this fact coupled with the fact that the village fish supply is decreasing that the problem of fish conservation is very important.

Finally, the dynamic nature of rice farming, with varying efforts on getting extra jobs and securing free food outside the farm depending upon the increase and decrease of the rice crop, suggests that the economy of any rice

Rent of Rice Land

*128 • 178 427 Tables 24 and 25 show different rental methods in 1948 and 1952. Figures in Table 24 were obtained from our records of the sample of 104 farms in operation in 1948, and figures in Table 25 were obtained from the same sample reduced in 1952 to 96 farms which had been continuously in operation until then, the other eight farms having ceased to operate by 1952.[8]

427 *243 178 It is seen that with the exception of a single case of share-cropping there were two rental methods in 1948, in kind and in cash, the proportion of areas involved being fifteen rai of rent in kind to every rai of cash rent. In 1952 rental methods remained more or less the same, consisting principally of rent in kind and cash rent, the proportion of areas involved being slightly increased to nineteen rai of rent in kind to every rai of cash rent.

*243 178 427 435 There was, however, a rapid rise in rent rates within this period of four years. It is seen that the average rate of 6.2 tang per rai in 1948 has risen to 8.1 tang per rai in 1952, an increase of 31 per cent in four years.

[433] It is interesting to note that an increased rent rate was charged in spite of the decline in yield of 32.1 tang per rai in 1948 to 25.2 tang per rai in 1952, or from the record crop index of 111.4 in 1948 to 87.5 in 1952 (Table 14).

[434] Another equally interesting point is that the increase in rent rate was charged in spite of the increases in the

8. See Chapter IV of the sampling technique.

[TEXT CONTINUED ON PAGE 143]

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TABLE 24

DIFFERENT RENTAL METHODS
Bangchan, Thailand, 1948*

Rate Per Rai	Rate in Tang Equivalent	Number of Parcels Reported	Total Area	Total Rent**
Kind			rai	baht
3 tang	3.0	1	11	259.38
5 tang	5.0	29	623.75	24,513.53
5 1/2 tang	5.5	1	15	648.45
6 tang	6.0	22	390	18,392.40
7 tang	7.0	15	313.50	17,248.77
8 tang	8.0	28	495.50	31,157.04
Cash				
12.50 baht	1.6	1	8	100.00
30.00 baht	3.8	6	91.50	2,745.00
41.38 baht	5.3	1	14.50	600.00
50.00 baht	6.4	1	6	300.00
Share				
50% of crop	--	1	10	--
Unspecified	--	1	20	--
Total	--	105	1,998.75	95,964.57
Average	6.2	--	1	48.89

* From the preliminary study of Bangchan, page 149.
** The 1949 farm price of 7.86 baht per tang was used.
-- Not available.

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 25

DIFFERENT RENTAL METHODS
Bangchan, Thailand, 1952

Rate Per Rai	Rate in Tang Equivalent	Number of Parcels Reported	Total Area	Total Rent*
			rai	baht
Kind				
6 tang	6.0	5	75	4,050.00
7 tang	7.0	16	353.50	22,270.50
8 tang	8.0	39	876	63,072.00
9 tang	9.0	3	39	3,159.00
10 tang	10.0	6	113	10,170.00
Cash				
40 baht	4.4	1	46	1,840.00
50 baht	5.6	3	15.50	775.00
70 baht	7.8	1	16	1,120.00
Free	--	4	(84)	--
Total	--	78	1,534	106,456.50
Average	8.1	-	1	72.66

* The price of 9 baht per tang was used. It should be noted, however, that while the farm price of 7.86 baht per tang used in Table 24 was a result of a day by day record of actual sales during the first selling period (December-March) comprising about two-thirds of marketable paddy of 104 operators studied in 1948-49, this price of 9 baht per tang was not as systematically arrived at because we could not afford as much time in the 1952-53 study. This 9 baht was simply a rounded modal price during the first selling period of the 1952-53 rice year (December 1952-March 1953).

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243
178 other items of cost of producing paddy -- in other words,
427 in spite of a decline in profit (a great decline when a
434 reduced yield is also considered). In the preliminary study
435 in 1948-49, it was found that the average cost of producing a tang of paddy was 5.86 baht, all costs included except value of operators' labor.[9] When the value of the operators' labor of 1,000 baht for those operating ten rai or over and of 500 baht for those operating less than ten rai was included in the calculation, the cost of production was found to be 6.76 baht per tang, including 1.52 baht for rent, 3.46 baht for labor (values of operators' labor and family labor included), 0.38 baht for seeds and materials, 0.65 baht for depreciation, and 0.75 baht for interest on investment. As we shall see in the section on cost of producing paddy in Chapter VI, an estimate of cost using the 1952 prices, for time and opportunity did not permit a second cost of production study during our second period of field work in 1952-53, points toward an increase in every item of the cost of producing paddy in Bangchan.

An explanation for this abrupt rise in rental of rice land in Bangchan lies in the nature of the demand for and supply of rice land. Although rents may be surpluses

*[128]

9. Sharp et al, op. cit., p. 171. In this preliminary study, the cost of family labor was imputed (at going wage rate) from labor requirement based on acreage, the cost of the use of the operator's own land was imputed from going rent rate, and the depreciation cost was calculated by dividing the original cost of equipment by their respective expected length of service.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243
178 from certain points of view, or for certain purposes, or
427 subject to certain interpretations, they are to the indi-
434 vidual producer no different from any other money expense.
435 They do not arise as a surplus from his own operations;
they are a cost rigidly imposed upon him by the competition
of his rivals for the use of the rent-yielding property.
They figure in the same way as do wages of labor and the
interest of capital in his computations as to the most ad-
vantageous proportion between the factors and as to the most
*[128] advantageous scale of operations.[10] Naturally, we are now
dealing with contractual rent, which is the actual sum paid
by the tenant to the landlord for the use of the land, not
the hypothetical economic rent of the classical economists.

*243 The preliminary study revealed that there was in
464 1948 under-employment on some Bangchan farms in terms of
rai worked per worker. This was shown by compering the
number of rai worked per worker on 94 farms employing no
hired laborer with the number of rai worked per worker on
*[128] 10 farms employing one or more hired laborers. On the farms
where only family labor was used, the figure was 9.4 ad-
justed rai per worker; while on those farms which used
regularly hired laborers along with family labor, the figure
was 13.4 adjusted rai per worker. (Each rai of transplanted
rice was counted as one adjusted rai, while each rai planted
by the less-labor-requiring broadcast method was counted as
one-half of an adjusted rai.) An assumption was made that

10. Edward Chamberlin, The Theory of Monopolistic Competition (sixth edition; Cambridge: Harvard University Press, 1950), p. 22.

243 464 farm operators who hired regular laborers did so because full utilization of the effort of all the family workers was not adequate. This assumption would seem to be reasonable in view of the rather high cost of hiring such laborers. It was concluded, then, that some farms in the community were below optimum size for the number of workers in the family.[11]

243 464 161 178 This condition of farm under-employment is our basic assumption in discussing rent rates in Bangchan. With an increase in population in an area where farm operating is the core around which other less important occupations rotate, it may be reasoned that the aggregate demand for rice land in 1952 was at least as high as that in 1948 if not greater. As for the extent of under-employment of farm labor, it is interesting to note that the number of families directly engaged in rice farming, the farm operating and farm laboring families, was 256 in 1949 and 254 in 1953. With a constant supply of land (in the popular sense of the term), this more or less constant number of families directly engaged in rice farming indicated that the extent of farm under-employment in 1952 was just about the same as that in 1948. Although the average size of the family was found to be slightly smaller in 1953,[12] that slight decrease was certainly not large enough to materially affect the situation.

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11. Sharp et al., op. cit., p. 158.

[162] 12. The average size of the family was 5.7 in 1949, and 5.5 in 1953.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 As long as farm under-employment prevails and as
434 long as limited opportunity for an alternative occupation
464 is open to farm operators and farm laborers, we have reason to believe that the demand for rice land is rather inelastic. Another important factor contributing to this belief is the operator's concept of cost of producing paddy which seemed to include only explicit rent (actual amount paid to the
[435] landlord) and cash operating expenses. Thus, while our calculation shows that the cost was 6.76 baht per tang or 215 baht per rai in 1948, the figure would be only 1.71 baht per tang or about 55 baht per rai according to the operator's concept of the cost.

*243 Under the conditions of farm under-employment, a
427 tenant, part-owner, or even owner-operator is willing to
464 pay high rent for an additional parcel because a larger
• 178 worked area would cost him only the additional explicit
435 rent and a small increase in seeds and materials. Unless the extra rented parcel is so large that extra labor must be sought outside the family, he does not have to pay any explicit wage at all for rice production in this additional parcel. Landlord-operators, on the other hand, are under a different situation, for they may rightly be considered land saturated and fully employed. Hence, the individual demand for working land on the part of a landlord-operator is relatively more elastic than those of the other farm oper-
*243 ators. As rent rose from 6.2 tang per rai in 1948 to 8.1
427 tang per rai in 1952, it was observed in Table 26 below that
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[TEXT CONTINUED ON PAGE 148]

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 26

RELATIVE SENSITIVITY TO CHANGE IN RENT RATES OF LANDLORD-OPERATORS AND OTHER GROUPS

Category	Area Operated					Decrease, 1948-52	
	1948	1949	1950	1951	1952	Actual	Per Cent
	rai	rai	rai	rai	rai	rai	
Landlord-operator							
Farmer A	110	100	80	70	65	45	41
Farmer B	80	80	50	8	8	72	90
Farmer C	75	75	75	75	75	0	0
Farmer D	65	70	60	70	60	5	8
Farmer E	47	47	47	47	47	0	0
Farmer F	26	26	26	5	5	21	80
Farmer G	24	0	0	0	0	24	100
Sub-total	427	398	338	275	260	167	39
Other groups of farm operators	2,981	2,732	2,764	2,764	2,786	195	7
All 104* operators	3,408	3,130	3,102	3,039	3,046	362	11

* The sample consists of 104 operators in 1948, 103 in 1949, 98 in 1950, 96 in 1951, and 96 in 1952.

7: Janlekha X-4,5/(1948-1953)1956 AO7 Central Thai AO7
Bangchan

landlord-operators were more sensitive to the change in rent rates than were the other groups of farm operators.

Limited opportunity for an alternative occupation was mentioned in the preceding paragraph as one of the factors contributing to the inelastic nature of demand for working land. It was also mentioned in the section on the occupational structure of Bangchan that farm laboring families as existing in the village were indigenous and were an outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent in any land. Limited opportunity for an alternative occupation in the village was also suggested in the same section when it was mentioned that the only possible alternative -- petty trading which was actually taken up by some former farm operators -- was limited by the fact that villagers bypassed local traders and went to the nearby market town of Sinburi for major purchases and variety goods.

Limited opportunity for an alternative occupation outside the village, however, needs elaboration. It cannot be denied that wages in Bangkok, only twenty miles away and easily accessible through good road and bus services, were higher on the average than corresponding returns for labor in the village. It is important to note, however, that what will attract a villager to seek a job in Bangkok is not a higher average wage level in the city but a higher marginal wage there. Regarding the marginal wage, it is highly doubtful that a better condition exists in Bangkok.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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In discussing the forces of demand for and supply of land in the few preceding pages, it is not the purpose of the author to quantify these forces and attempt to predict rent or the price paid by the tenant for the control of net income deriving from the use of the productive powers of the soil. Rather, the purpose is to confirm in this specific case Chamberlin's general notion that "the equilibrium of economic forces has been wrongly identified with an equilibrium between demand and supply. The latter is merely a special case of the former. Curves of demand and supply tell nothing, either by themselves or by their intersection, as to what price will be established, until other conditions are known."[14]

Prices of Land

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One of the most significant phenomena during the period covered by this study, from 1948 to 1953, is the rise of prices of land in Bangchan.

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*[123]

Records of major receipts and expenses of 96 farm operators who have been continuously working on an average area of 3,140 rai, or 47 per cent of the total area worked by Bangchan residents, show that during this six-year period two operators sold two parcels of land and ten operators bought eleven parcels of land. Since none of these involved transaction between one and the other in our sample of 96 operators, it can be said that there was a total of thirteen

14. Chamberlin, op. cit., p. 15.

423 purchases (or sales) of land involving operators in our
432 sample as either sellers or buyers. The price and size as well as the time of sale of each parcel is shown in
• 178 Table 27. Using the highest of each year as the basis,
435 it is observed that land price in Bangchan has been rising
423 steadily from 350 baht per rai in 1948 to 700 baht in 1949, to 1,100 baht in 1950 and 1951, and then rose skyhigh to 11,000 per rai in 1953. To be sure, this spectacular rise, especially from 1951 to 1953, was largely due to the changing over of former agricultural to residential land. Nevertheless, when residential land is excluded from consideration, it is seen that the average rise in agricultural land prices was 560 per cent during the period from 1948 to 1953 (Table 28).

Perhaps a case of one large parcel in "Thung Nai Sab" in KY5 may serve to illustrate the way land prices rose in Bangchan during these past few years. The area of this parcel, which was owned by Lady Phung of Bangkok, was 100 rai. Our informant's father, Hajji Sa-ard of Bangchan Mosque, was interested in this parcel of land because it was adjacent to his land which was not far away from his home. In 1946, Lady Phung was willing to sell it at 300 baht per rai, but Sa-ard was reluctant or not quick enough to accept this offer for sale. In 1947, the lady raised her price to 350 baht and Sa-ard was ready to buy. This time it was hesitancy on Phung's part that prevented the proposed purchase from being consumated. In 1948, our

[TEXT CONTINUED ON PAGE 160]

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TABLE 27

PRICES OF RICE LAND ACTUALLY SOLD OR PURCHASED
Bangchan, Thailand, 1948-53

Year	Parcel Size	Price Per Rai	Highest Price of the Year	Average Price of the Year
	rai	baht	baht	baht
1948	11	350	350	223
	12	180		
	16	138		
1949	10	700	700	700
	10	700		
	10	700		
	10	700		
1950	1	1,100	1,100	850
	10	600		
1951	19 1/2	1,100	1,100	721
	10 1/2	1,000		
	19 1/2	250		
1952	--	--	--	--
1953	1	11,000	11,000	11,000

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TABLE 28

ESTIMATED PRICES OF BANGCHAN LAND BY ZONE
SHOWING PRICE CHANGES FROM 1948 TO 1953
Bangchan, Thailand, 1948-53

Zone*	Location	1948-Price baht/rai	1953-Price baht/rai	Increase baht/rai	Increase Per cent
Residential:					
1	Roadside** (200 m. depth)	300	12,000	11,700	3,900
Agricultural:					
2	"Thung Nai Sab"-	270	1,500	1,230	456
3	"Thung Nai Pho"	280	1,800	1,520	543
4	"Thung Kl. Kred"	250	2,000	1,750	700
5	Kl. Kred - Kl. Bangchan	230	1,500	1,270	552
6	Kl. Krached-Kl. Bangchan	210	1,500	1,290	614
7	Kl. Bangchan-Kl. Kralog	200	1,200	1,000	500
	Av. for ag. land	240	1,583	1,343	560

* See Map I.
** In 1948, this zone was still considered agricultural land -- not residential land as it was in 1953.

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423 informant said that some of the lady's tenants who had been
435 renting the parcel told her that she should not let it go under 500 baht per rai. Our informant thought that these tenants did not want to see any transfer of the ownership of the parcel for fear that it might adversely affect their prospective tenure. Lady Phung therefore raised her price to 550 baht. At this price Sa-ard gave up his intention of buying the land. In 1949, four tenants (all are included in our sample of 96 farm operators, hence the purchases are shown in Table 27) jointly purchased 40 rai of this parcel, and one Nai Ma of Klong 13 bought the remaining 60 rai of the 100-rai parcel at 700 baht per rai. The four tenants divided the land equally among themselves (10 rai each) and paid 7,000 baht each with borrowed money. In 1952 an offer to buy at 1,000 baht per rai was made for the same parcel but none of the new owners wanted to sell any of his land. In 1953 the price rose to 1,500-2,000 baht per rai and again none of the owners contemplated selling his land. Of the four tenants, Farmer A was luckiest because his share was attached to the Minburi Road and the price of this specific portion has risen to somewhere around 12,000 baht per rai.

The case just mentioned shows one significant point regarding the price of land in Bangchan other than the steady rise -- that nearness to the road was not a factor of price distinction until after 1949, for if it was, there would certainly have been some difficulty in dividing the 40-rai piece among the four tenants.

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Table 28 shows estimated prices of land in Bangchan in 1948 and in 1953. These prices are estimates made by our informant who is a son of Hajji Sa-ard mentioned in an earlier paragraph. He is one of the best informed persons in the village, has visited Mecca, and has received a higher education than any other person in Bangchan with the possible exception of one store-keeper who had spent a few years in the Military Academy in the 1910's.

Our informant, who will henceforth be called by his real name -- Hajji Direg, based his estimates of land prices in Bangchan on what he was willing to pay. He was aware of locational variation in prices of land in the village. Strictly speaking, this is not contradictory to our assumption of homogeneous nature of soils in Bangchan, for slight variation in Direg's estimated prices was due, according to him, to differences in the land levels which affected the cost of irrigation and drainage. Direg divided Bangchan into seven land-price zones (Table 28 and Map I). It is seen in this table that the 1948 price ranged from 200 baht per rai in Zone 7 to 300 baht per rai in Zone 1, averaging 249 baht per rai.

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Table 28 shows that the average price of agricultural land in Bangchan rose from 240 baht per rai in 1948 to 1,583 baht in 1953, an increase of more than five times in six years. Most remarkable was the increase of the price of land in Zone 1 from 300 baht per rai to 12,000 baht per rai. The increase in the price of land in Zone 1 shows that land

[TEXT CONTINUED ON PAGE 163]

178 in this zone has since been considered as residential land
423 although there has not been any apparent change in land
435 utilization.

178 It should be noted in this connection that during
423 the same period of 1948-53 there has been a steady rise in
435 the price of residential land in Bangkok at a highly varying rate depending upon location. For the purpose of our discussion, we may consider only the price of land in the northern suburb of Bangkok, on each side of Paholyctin Road (the popular Bangkok-Donmuang Road) which branches off at Kilometer 20 into Minburi Road which cuts across Bangchan Canal at Kilometer 13 (Crossing of Paholyotin and Minburi Roads as Km.0). It has been observed that the price of land on each side of Paholyotin Road has been increasing rapidly: a parcel at Km. 11 which was valued at 50,000 baht per rai in 1952, for example, was sold at 150,000 baht per rai in 1954. It has also been observed that price of land in this section of the Bangkok suburb declines with the distance from Bangkok proper: the 1954 price was 150,000 per rai at Km. 11, and 50,000 baht per rai at Km. 20 where the Minburi Road begins. If the Minburi Road is considered as a continuation of Paholyotin Road, it is only natural that the price of land would gradually decline to 12,000 baht per rai at Km. 13.

182 It is conceivable that the recent increase in Bangkok
423 population is one among several factors causing the rapid
435 rise of residential land prices. When the rapidity of the
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182 423 435 369 rate of increase in land price is considered, however, it is reasonable to believe that population increase is certainly not the only factor.

[121] It is not the purpose of this study to deal with the price of urban land. Neither the problem of land utilization nor the whole economy of Bangchan can be clearly understood, however, without some account of the rapid building up of urban land prices in recent years. It is thus necessary to digress at this point into some factors accountable for this rapid rise.

369 454 423 435 178 182 It has been observed that the volume of domestic saving in Thailand is small because of the low level of income, and that such saving as does take place tends to be put into real estate and gold and jewelry. Concentration of income resulting from the postwar phenomenon of shifting of political and economic power into the hands of few people, however, has somewhat increased the proportion of saving; but this is again used largely to purchase real estate. The natural result is the boosting up of urban land prices especially in the suburban sections where there has been a relatively high degree of improvement in road construction since the war.

423 45 178 369 182 This investment in land purchase has more than ever before assumed a speculative nature. This is largely due to the experience of inflation initiated by World War II whereby huge and easy profits could be made from buying and selling of land. Corruption in the sale and purchase

423 of government real estates has no doubt increased these
45 speculative activities. The process has also been greatly
178 accelerated by an enormous increase since the war of banking
369 facilities, which traditionally extend loans on mortgage of
182 real estate. It should be noted in this connection that the demand for loans in Bangkok has been so great as to allow most commercial banks to adopt a highly discriminating policy of extending loans only to their favored customers who are often willing to give as much as five per cent of the loan sought to bank officials as a customary "tea-money".

182 A third factor is that some organized financial
423 institutions have actively been engaged in deliberate at-
435 tempts to boost up land prices for their own speculative
455 gains. This was the immediate cause of the rise of land
178 price in Zone 1 from 300 baht per rai in 1948 to 12,000 baht
369 per rai in 1953. According to several informants in Bangchan, a representative of an insurance company in Bangkok came to the village in 1952 and offered to buy land on each side of Minburi Road at 10,000 baht per rai. This man was able to buy 20 rai of land at Km. 8, Minburi Road, which is in the immediate neighborhood of our arbitrary Bangchan Village, at his offered price of 10,000 baht per rai. At the time of the signing of the purchase contract, he made a 10 per cent down payment of 20,000 baht. Although the balance of 180,000 baht was not paid and the contract was later forfeited, the proposed purchase immediately pushed land prices in Zone 1 up to 10,000 baht per rai or over. According to

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our informants, the insurance company owned hundreds of rai of land in the vicinity. By spending only 20,000 baht in boosting up land prices, the company thus set the stage for making a large profit through sale of their own land at inflated prices.

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While the increase in land prices in Zone 1 was attributable to the sudden assumption of residential land prices, this explanation does not apply to the increases in land prices in the other zones which have remained agricultural throughout. Although less spectacular than the case of Zone 1, the rise in land prices in these six zones was also quite abrupt, averaging 560 per cent for the five-year period from 1948 to 1953 (Table 28).

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Capitalized valuation of these farm lands (Zones 2-7) may shed some light on the situation, although there is limitation especially to the cost concept. There are two ways by which a capitalized value of farm lands may be obtained: (1) by capitalizing income from the farm operation left after payment of all factor costs except land, and (2) by capitalizing income deriving from explicit rent of the land.

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Receipt from one rai of rice land in 1948 may be calculated from the crop of 32.1 tang at 252 baht, using that year's average farm price of 7.86 baht per tang of paddy. When the cost, including an imputed return to all labor but excluding rent, of 166 baht per rai is deducted, a residual return to land of 86 baht per rai is obtained for the year.[15]

15. For want of sufficient data, it is assumed that the cost items other than rent remain the same.

243 In 1953, figure for the size of the crop was not
423 available, but we may use the 1948-52 average of 28.8 tang
434 per rai. With the year's farm price of 9.00 baht per tang,
435 receipt may be calculated at 259 baht per rai. Using the
427 same cost, again excluding rent, of 166 baht as in 1948, a residual return to land may be estimated at 93 baht per rai.

Capitalized value of land may be calculated from the formula $v = \frac{a}{r}$ where 'v' stands for capitalized value of land, 'a' for income from the land, 'r' for the rate of interest prevailing in the locality.[16]

When the calculated residual return to land is used, the capitalized value of farm land in Bangchan (Zones 2-7) is found to be 573 baht per rai in 1948, and 620 baht per rai in 1953. When income deriving from explicit rent is used in the calculation, however, the capitalized values become 327 baht per rai in 1948 and 487 baht per rai in 1953.

178 It is interesting to note that capitalized values of
423 land computed from these two different types of income were
434 closer to each other in 1953 (487 baht computed from income
427 deriving from explicit rent as against 620 baht computed
435 from the calculated residual return to land) than in 1948 (327 baht computed from income deriving from explicit rent as against 573 baht computed from the calculated residual return to land). In other words, landlords are now receiving a larger proportion of the residual after payment of all

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[426] 16. The rate of interest of 15 per cent per year is used. This is the minimum going rate with security. Without security, the rate may be as high as 30 to 50 per cent per year.

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factors, except land, at the going rate of return. A more interesting point to note is that the capitalized value of land in 1948 (327-573 baht per rai) was substantially higher by either method of calculation that the average price of farm land in that same year (240 baht per rai), while the capitalized value of land in 1953 by either method of calculation (487-620 baht per rai) was far below the average price of farm land in that same year (1,583 baht per rai).

The situation in 1953 indicates that the price of farm land in Bangchan has been bid up too high. The stickiness of rent rates in the locality mentioned earlier together with the fact that landlords are now receiving a larger proportion of the residual after payment of all factors, except land, at the going rate of return have led us to the belief that the proportionate share of the landlords will be increasing in the near future.

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Table 30 shows that the size of the sample has continuously decreased from 104 in 1948 to 103 in 1949, 98 in 1950, 96 in 1951, 96 in 1952, and finally 87 in 1953.[1] It should be noted, however, that we re-visited the village in 1952 and that most of our materials on business and living aspects of the farms were gathered from the sample-farms existing in that year; hence we occasionally referred to the sample of 96 continuing farms.

One way of minimizing the problem of declining size of the sample is to include in the sample new farm operating families which have branched out from the original sample-families. It was found that there were ten such families when we re-visited the village to continue the study in 1952. If this method were adopted, it would mean that the size of our sample would then be 106 farms, a figure which does not differ very much from the original size of 104 farms in 1948.

Another way of solving the problem is to abolish the continuing operator approach entirely in favor of the re-sampling approach -- that is, a fixed sample size is chosen and new sampling is done every time a new survey is to be conducted. This approach, however, has the drawback that

[243] [178] [433] [463] [182]

1. According to Table 14, crop indices were as low as 86.8 for 1949, and 87.5 for 1952; while those for 1948, 1950 and 1951 were 111.4, 111.1 and 102.7 respectively. It is worth noting that a relatively large number of farm operators changed their occupation (or moved out of the village) in 1950 and 1953. When Table 14 is studied together with Table 30, it is seen that there is a close correlation between change in occupation (or change of farming place) and crop failure in the preceding year.

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TABLE 30

CHANGES IN OCCUPATION OF 104 SELECTED OPERATORS*
Sangchan, Thailand, 1948-53

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Occupation	1948	1949	1950	1951	1952	1953
Farm operator	104	103	98	96	96	87
Farm laborer	-	-	-	-	1	3
Trader	-	-	-	-	-	2
Investor	-	1	1	1	1	3
Professional	-	-	-	-	-	-
Public servant	-	-	-	-	-	-
Home enterpriser	-	-	-	-	-	-
Priest or novice	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	1
Disappeared	-	-	5	7	6	8
Total	104	104	104	104	104	104

* Explanation for those changing occupation:

1949 A became an investor.

1950 B moved out to unknown locality.
C moved out to Lam Kralog.
D moved out to Sai Kong Din.
E moved out to Bang Plee.
F moved out to Bang Plee.

1951 G died, and family moved out to unknown locality.
H moved to Bangkok.

1952 H moved back from Bangkok into the village, became farm laborer.

1953 I moved to Lard Krabang.
J stopped farming, became an investor.
K stopped farming, became an investor.
L stopped farming, became a trader.
M stopped farming, became a farm laborer.
N stopped farming, became a farm laborer.
O's occupation became obscure (under miscellaneous).
P stopped farming, became a trader.
Q's family lost its identity, was annexed by a farm operating family not in the sample.

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125 it would deny any benefit that would arise out of continuous observation of each farm and farm operator through a series of years. With a view to retaining this benefit of continuity, we decided to adopt the first method -- that,is, we included in the sample the ten new families branching out from the original sample-families. Thus, in our subsequent study in 1952 the size of our sample became 106 farm operating families.

There were, however, some types of data which involved records in the past four or five years, such as harvested crop during 1948-52, accumulation of wealth, major receipts and expenses during the same period. In these cases we naturally used the continuing sample of 96 families.

*243 162 592 Composition of Farm Operating Families

Table 31 shows that the size of the farm operating family decreased from 6.3 in 1948 to 5.7 in 1952. It also shows that, while the number of adults remained more or less constant, the decrease in the size of the family was due almost entirely to the decrease in the number of the young from 2.5 in 1948 to 2.0 in 1952.

*243 162 592 182 178 [582] A possible explanation for this lies in the economic consequence of the war. Strict government control of the price of rice and of the internal movement of paddy during the war and also in the immediate postwar period has so adversely affected the economic condition of rice farmers that marriage has often been postponed. In cases where

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243 marriage did take place, the couple were usually obliged
162 to stay with the parents of either the husband or the wife
178 It is reasonable to believe that the nascent period was
592 prolonged during this period of hard times. Thus, the
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[582] family size tended to be larger than it normally is. This is especially true for rice farming families where there always is some work for members able to work. It is not surprising, then, that the average size of farm operating families in Bangchan was 6.3 in 1948 while the average siz of all families was 5.7 according to the 1949 census. A steady rise in the price of paddy after the war has improv the economic condition of rice farmers. The increased income, however, had to be spent first on replacement of equ ment and housing facilities which had been long overdue.
[792] Finally, the bumper crop of 1948 with an ever-increasing price put an end to farm misery, and the following dry season saw a record number of newly ordained priests and
[591] merit making activities. From then on proportionately mor marriages took place and there were fewer economic obstacl to keep newly wed couples from starting out independently. The combined effect of termination of prolonged nascent period and freer establishment of new families was that the size of the farm operating family was considerably reduced.

16 It may seem strange that more marriages should brin about a drop in the number of the young from 2.5 per family in 1948 to 2.0 in 1952. By the young is meant, however,

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16 all children up to the age of 14 years. So it is only a fraction of these children, probably those in the age group of 0-3 years, that was contributed by marriages after 1948. While it is true that this contribution was quite considerable, since the proportion of children in the age group of 0-4 years rose from 10 per cent of total population in 1949 to 13 per cent in 1953, yet it was not enough to offset the effect of the decline in birth rate resulting from the war. Another factor to be considered is that children born during 1935-38, who were included as the young in the 1949 census, became adults in the 1953 census. Since these children were born before the war which did not affect their proportionate percentage in the total population, their removal from the young category in 1953 was not compensated by the entry into that category of children born during 1950-53. Finally, it was observed that among people who emigrated during 1949-53 small nuclear families consisting of young husband and wife and two or three children in the age group of 0-14 years predominated. Since the proportion of the young in these families, which had existed in Bangchan independently or more likely as a part of the extended families, is larger than the village figure, emigration must also be considered a factor responsible for the decline in the proportion of the young from 2.5 per family in 1948 to 2.0 in 1952.

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*128 It was found in the preliminary survey in 1948 that of 398 adults in the 104 sample-families 319 or 80 per cent were working members of the family. Unfortunately, we did

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*243 592 • 178 *128 not obtain comparable figure for our 106 sample-families in 1952. The question is whether or not we might assume that 80 per cent of the adult members of the 106 sample-families in 1952 were working members. It should be understood that working members of the family were those who participated in the family farm work, but they did not have to be fully employed. If the family farm is rather small, say only 10 rai, and there are as many as four able members of the family, naturally the four members will take turns in the farm work although the whole job can be easily done by two family workers or even one. In this case, we still consider that there are four working members of that family, for it is inconceivable that two able members of the family without help from the other two, would do all the farm work for the whole season.

What about the other 20 per cent of adult members? It was observed in 1948 that these adult members of farm operating families did not participate in the family farm work because they were too old to work, they were nursing mothers, sick (including pregnant), still incompetent in farm work (especially young people at the age of 15-16 years), or they were tied up with other jobs. All these factors except the last one may be considered natural factors which occur in a somewhat constant proportion regardless of time. It would seem, then, that we might reasonably assume that 80 per cent of adult members of our sample-families in 1952, or 313 out of the total of 391 persons, were working members,

243 178 592 128 except for the question of some of these adults being tied up with other jobs. Nevertheless, when limited job opportunity was considered, it was unlikely that this last factor would appreciably affect the estimate. It was assumed, therefore, that 313 out of the total of 391 adults in our 106 sample-families, or an average of 3.0 persons per family, were working members in 1952.

[162] Table 32 shows that the size of farm operating families in 1952 ranged from one to thirteen, averaging 5.7, the median being 6. Eighty-six of these 106 families, or 81 per cent, had a size between three and eight.

Training for Farm Work

243 462 Every adult in the village of both sexes is expected to be able to do farm work. This includes the ability to perform the following jobs.

Minimum standard: Every step of rice production except uprooting of rice seedlings which is performed only by adult males (for various steps of rice production, see the chapter on farm technology); digging and mounding; paddling and rowing; hauling except a heavy load like gas engines; tending the buffaloes and livestock; gardening; pounding of cargo rice for consumption during the work season; fishing by line-and-hook, dipping net, and trap; food preparation.

In addition to the minimum standard listed above for both male and female adults, male adults are expected to be able to perform the following jobs: Uprooting of rice

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434 300 baht for clothing, 500 baht which they spent mostly
465 on a pilgrimage to the Temple of Buddha's Footprint, and
593 670 baht for two gold necklaces. That's a total of 1470 baht for the two of them. My wife alone took 1,100 baht received from the sale of the early variety, and I don't want to take the trouble to ask where the money went."

It has been observed that farm income varies greatly from farm to farm as well as from year to year. Farm household expense, on the other hand, has been observed to be less variable. Although the remunerations for farm operators and family workers are directly related to farm income, it would seem unwise to discuss farm income without bringing in first the discussion on farm technology and farm organization and management. We propose, therefore, to limit at the time being our discussion of the remunerations of farm operators and family workers to indicating their respective sources only. We shall have occasion to deal with their patterns and magnitudes in Chapter VII, which will be exclusively devoted to income and consumption of farm operators.

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• 178 The hired laborer receives his remuneration for the farm work in the form of annual wage which is paid by his employer, the farm operator, according to the provision of the oral contract made before each working season. It was found in 1948 that this annual wage was paid in either cash or kind, and in addition the laborer received free board and lodging and one or two working suits. Of 13 hired laborers covered by the 1948 survey, five were paid a cash wage

465 ranging from 250 baht to 800 baht annually, and eight were
• 178 paid in kind. There were two types of wages in kind, the fixed and the variable types. In the fixed type, which involved two laborers, each laborer was paid a fixed amount of 100 tang of paddy. In the variable type, which involved six laborers, one laborer received the product (paddy) from 3 rai specified at the beginning of the season, four received the product from 5 rai, and one from 6 rai.[3]

#128 In 1953, a farm hired laborer survey was made to
464 include people in Bangchan who were known to have been hired
178 laborers and who could be located at that time. The survey was intended to serve as a benchmark for a subsequent study of farm laborers in 1956-57. The work done in 1953 was therefore only preliminary and was concentrated in locating the hired laborers and recording such basic informations as age, sex, and their jobs and remunerations during the previous five years from 1949 to 1953. Materials on life history were also gathered, but they were still incomplete. Nevertheless, information thus received about their jobs and remunerations have shed much light on wage rates of hired laborers in the village, and these are shown in Table 33.

A few points must be made clear, however, before any generalization can be made from the figures in Table 33. First, the survey included 34 persons who were known to have been hired laborers in Bangchan during the period from 1949 to 1953. Second, the survey covered only the people who were living and could be located in Bangchan in 1953; thus

3. Sharp et al., op. cit., p. 157.

[TEXT CONTINUED ON PAGE 196]

TABLE 33

ANNUAL WAGES OF HIRED LABORERS IN BANGCHAN AND ITS IMMEDIATE NEIGHBORHOOD
Thailand, 1949-53

Year	Type of Wages*	Number of Laborers Reporting	Total Wage	Range	Average
1949	Cash wage	2	1600 baht	600-1000 bt	800 bt
	Kind, fixed	3	300 tang	100-100 tg	100 tg
	Kind, variable	2	9 rai	4-5 rai	4.5 rai
1950	Cash wage	4	3350 baht	400-1350 bt	838 bt
	Kind, fixed	7	600 tang	60-100 tg	86 tg
	Kind, variable	3	12 rai	3-5 rai	4.0 rai
1951	Cash wage	6	4400 baht	300-1200 bt	733 bt
	Kind, fixed	8	660 tang	50-110 tg	83 tg
	Kind, variable	3	12 rai	3-5 rai	4.0 rai
1952	Cash wage	10	8400 baht	600-1300 bt	840 bt
	Kind, fixed	7	630 tang	50-120 tg	90 tg
	Kind, variable	3	13 rai	3-5 rai	4.3 rai
1953	Cash wage	14	12000 baht	250-1150 bt	857 bt
	Kind, fixed	2	250 tang	100-150 tg	125 tg
	Kind, variable	2	6 rai	3-3 rai	3 rai

*MCash wage -- wage was paid in cash.
Kind, fixed -- wage was paid in fixed amount of paddy agreed upon at the beginning of the season.
Kind, variable -- wage was paid in paddy harvested from a specified area agreed upon at the beginning of the season.
In all these cases, laborers received in addition free board and lodging and two working suits, one at the beginning of the period of breaking the soil and another at the beginning of the harvesting season.

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178 some hired laborers who had left the village before the survey was started were not included, and so were some former hired laborers, especially those working as such in the earlier years, who might be living in the village but were not identified as former hired laborers. Third, of the 34 cases covered by the survey nine were persons of 20 years old or younger as of 1953. Naturally, these persons would not be considered as hired laborers in 1949 or even in 1950, for they would be too young then for the job. Besides, it was not necessary that all hired laborers should begin their job as soon as they had attained the proper age of say 18 years, for there were many factors militating against taking up the job at an early age, one of which was obligation to the family. As a matter of fact, two among our 34 laborers were obliged to quit their jobs because their parents wanted them to go back to the family and help in the farm work. One of these two laborers remained with the family for a yearin 1951, went back to work with his former employer in 1952, then emerged as a farm operator in 1953. The other quitted the job in 1952 and had since remained a family worker on the family's rented farm. Fourth, these 34 laborers varied in sex, age, farming experience,
464 and working ability. Fifth, the employers of these hired
466 laborers also varied in the degree of generosity exemplified by the amount of wage they agreed to give their employees and their relative willingness to observe the oral contract. This last point was important in Bangchan where the supply

464 for labor exceeded the demand for it. Some employers were
466 known to have been in the habit of cheating their employees. To cite an example, in March 1953 A, a young man of 16 who was known to be one of the best transplanters in the village, was hired by Operator B at 50 baht a month. After working for B for three months, A quit the job because his employer had paid him only his wage for the first month and there was indication that he would not receive any more for his labor from his employer. The author was informed about this whole business by A's father, Laborer C, who complained bitterly against B. That happened just before the beginning of the 1953 rice growing season. It was rather surprising that the author discovered that a month later Laborer C was hired by his son's former employer -- Operator B. Three months later, the author saw Laborer C working not on B's field but on some body else's farm on August 19. Upon inquiry, it was found that history had again repeated itself -- Operator B had just fired Laborer C and refused to pay him for his three months' work. "He ate more, but worked less, and always found asleep," complained Operator B, "Besides, he was in the habit of criticizing me behind my back."

*128 These five points were brought up in connection with
464 Table 33 in order to caution against two generalizations
• 178 that might be made from a glance at the table. First, the number of laborers which appears to increase progressively from 1949 does not in any way indicate that more and more hired laborers have been employed in Bangchan. The figures

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*128 464 • 178 of the number of hired laborers represent only the case study of hired laborers who were located in 1953 and were interviewed on their past records. Statistically, therefore, it would be misleading to infer the actual employment of hired laborers in each year from those figures. Second, since the same population of hired laborers was used throughout, the effect of increasing age on individual wages must be considered. This does not mean, however, that there was a tendency for the average wage in our sample to rise with the years in relation to the standard wage; because not all of the 34 hired laborers started to work in the same year, rather some started before 1949, some started in 1949, and a good many started in each of the following year. There was also the effect of the generosity of the employer which is to be considered in relation to the wage level.

It would appear, nevertheless, that employment of hired laborers in any specified year can be measured by actual counting or simple random study done in each specified year. Although this is possible now that we have fairly well established our universe, there is still the problem of the hired laborers quitting their jobs before the end of the rice season *128 464 465 which had occurred not infrequently. The problem of varying wage rates due to working ability of the laborer on the one hand and to the scrupulousness of the employer on the other may, however, be partially solved by using the maximum wage of each year as the basis for generalization. It is with such cautions that the figures as presented in Table 33 might

463 we finally settled on an arbitrary definition: a profes-
464 sional piece-worker was one who was ready most of the time to be called upon to perform piecework. This automatically eliminated the school children who were able to work only during the school recesses, the poor aged people who had to make a living in one form or another but who were able to perform only the lightest kind of piecework -- transplanting, and members of the well-to-do families who did some piecework for a small amount of pocket money only.

Adopting this arbitrary operational devinition, it may be assumed that professional pieceworkers include all members of the laboring families, small farm operating families, and other families of various occupations not financially well off, who are old enough yetnot too old to work and who are not currently engaged in some other kinds of work.

178 Table 34 shows work records of the 34 farm laborers
463 earlier mentioned. It is seen that of these 34 laborers,
465 only six had remained hired laborers throughout the periods of their farm work. These were Laborers 8, 9, 11, 22, 27, and 28. The other laborers were observed to have assumed various other statutes in the course of the five-year period from 1949 to 1953, namely, farm operator, pieceworker, family worker, and transient family worker. When these laborers were interviewed, they also gave estimates of their earnings from pieceworking as far as they could remember. In 1949, for example, piecework earning figures were available from

[TEXT CONTINUED ON PAGE 203]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 34

WORK RECORDS OF 34 SELECTED FARM LABORERS IN BANGCHAN AND ITS IMMEDIATE NEIGHBORHOOD Thailand, 1949-53

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Laborer Number	Age in 1953	Working Status 1949	1950	1951	1952	1953
1	23	HL	HL	FW	HL	FO
2	39	PW	PW	PW	HL	HL
3	42	...	...	PW	PW	HL
4	27	HL	HL	PW	PW	PW
5	28	HL	HL	PW	PW	PW
6	23	PW	PW	HL	HL	...
7	25	PW	...	HL	HL	HL
8	22	HL	HL	HL	HL	HL
9	23	HL	HL	HL	HL	HL
10	52	HL	HL	X	HL	HL
11	19	...	HL	HL	HL	HL
12	32	FO	FO	FO	FO	HL
13	33	PW	PW	PW	HL	HL
14	30	TFW	HL	HL	PW	PW
15	35	PW	HL	HL	HL	PW
16	20	...	TFW	TFW	HL	...
17	45	PW	PW	HL	PW	PW
18	50	PW	PW	HL	HL	HL
19	31	X	PW	HL	...	HL
20	20	TFW	TFW	TFW	FW	FW
21	19	TFW	TFW	HL	HL	HL
22	17	...	...	HL	HL	...
23	21	TFW	TFW	TFW	TFW	HL
24	23	TFW	HL	HL	...	HL
25	17	...	...	TFW	...	HL
26	40	...	...	TFW	TFW	HL
27	26	...	...	...	HL	HL
28	18	...	HL	HL	HL	HL
29	63	PW	PW	X	PW	HL
30	30	PW	X	X	PW	HL
31	36	HL	HL	HL	FW	FW
32	16	...	...	...	PW	HL
33	23	PW	HL	HL	HL	HL
34	20	...	HL	TFW	HL	HL

Key to abbreviations:
FO -- farm operator
HL -- hired laborer
PW -- pieceworker
FW -- family worker
TFW -- transient family worker
X -- farm laborer elsewhere
(...)-- not engaged in farm work

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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465 two laborers -- 1,000 baht for Laborer 7 and 900 baht for Laborer 30, averaging 950 baht for the year. In 1950, earnings of 500, 850, and 1,000 baht were reported respectively by Laborers 18, 19, and 29, averaging 783 baht for the year. In 1951, only one case of 600 baht earning was reported by Laborer 5. In 1952, earnings of 600, 1,000, 1,000, 1,000, and 350 baht were reported respectively by Laborers 5, 14, 29, 30, and 32, averaging 790 baht for the year. In 1953, earnings of 2,000, 600, 1,000, and 300 baht were reported respectively by Laborers 4, 5, 14, and 15, averaging 975 baht for the year.[4]

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464 In the preceding paragraph, the term "transient family worker" was introduced. This refers to a person distantly or not at all related to the family in question who has been accepted as a family member with a dual status of half relative and half laborer. Since there is actually no genuine family tie, such member has been observed to come in and go out of the family rather freely as the occasion [465] may arise, and hence the term "transient". While staying with the family, the transient member is expected to participate in the family work that is appropriate to him in exchange for good, shelter, clothing, and occasional monetary gifts.

In 1948, we came across a case where an old man of 80 was living with one of the seven headmen of Bangchan as

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4. Table 53 gives an idea of the meaning in real terms of these incomes.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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182 464 592 Nevertheless, the advantages of transient member arrangements to both parties should not be overlooked. It has at least provided the poor with a kind of economic security, since they might arrange to join some families in the village in time of crises. This is perhaps the principal reason why the village, not the living quarter, is considered by most Bangchan people to be their home. By sending some offspring to live with a more affluent family, the poor villagers had been able to reduce the size of their families and thus had managed to prevent their level of living from falling far below the minimum level of subsistence. As for the accepting families, it has already been shown that they had enjoyed the benefit of cheap labor provided by transient family workers.

*243 178 463 621 [592] Changes in Farming Population in Bangchan

Table 11 shows that the number of farm operators in Bangchan had decreased from 229 in 1949 to 216 in 1953, while the number of the family heads whose main incomes were derived from farm labor had increased from 27 to 38 within the same period.

When the farm operating families were studied individually, it was found that 181 families had been operating their rice farms in Bangchan throughout the period. There were 48 farm operators whose names disappeared from the list of operators in 1953. These were compensated by 35 new operators. Thus, there was a net loss of 13 farm operating families during the period from 1949 to 1953.

*243 16 • 178 463 Of the 48 families disappearing from the 1953 list of farm operators in the village, 21 moved out, 2 were annexed, and 25 were dropped from the list because they had changed their occupations to some other kinds. Among these last mentioned, four had become investors, three traders, thirteen laborers, one public servant, and four had obscure occupations.

Of the 35 new farm operating families, 17 were immigrants moving into the village during the period between 1949 and 1953, 14 had evolved from pre-existing families, and four were families already existing in the village in 1949 but were then having some occupations other than farm operating. Among the four families last mentioned, three were formerly farm laboring families, and one was formerly an investor family.

*243 178 463 The fact that there were as many as twenty-five families leaving farm operating occupation as against only four families entering it within the same period seemed to indicate that farm operation as an occupation had become less attractive in Bangchan during recent years.

It may be argued that former farm operators who had given up farming did so because of the force of special circumstances beyond their control, and that the change to other occupations was not due to the relative unattractiveness of farm operation. A tenant operator, for example, might have to leave the farm because his landlord no longer wanted him to work on the parcel. In fact one such case was

[427]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 • 178 463 [427] reported where the tenant had to leave the farm in the beginning of 1953 and had since become a hired laborer. This was Laborer 12 shown in Table 34. In most cases of farm operators who had become farm laborers, however, they were marginal operators working on areas too small to provide decent incomes. It was found that the total working area in 1948 of thirteen farm operators who had become farm laborers was 94 rai, averaging only 7 rai per farm. It is possible to speculate, then, that low farm income was a major factor in the occupational shift among these thirteen families. To the extent that this speculation is acceptable, it may be inferred that the shift to the farm laboring profession among these thirteen cases was voluntary rather than a result of special circumstances beyond their control.

The relative unattractiveness of farm operation stands out clearly when the cases where former farm operators taking up new occupations other than farm laboring were considered. As mentioned earlier, there were twelve of these of which four had become investors, three traders, one a public servant, and four had obscure occupations. Among those having obscure occupations, two were families of old people apparently without any income, one family head was allegedly engaged in no occupation except gambling if this could be considered an occupation at all, and one family head -- the sole member of a one-man household -- was also a person of no known occupation. For obvious reason, these four cases should be left out of consideration, leaving only those who had

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

*243 • 178 463 [311] become investors, traders, and public servant. In 1948, these eight families were operating farms of a combined area of 286 rai, ranging from 20 rai to 80 rai, averaging 36 rai per farm. Seven of these eight families owned rice fields totalling 201 rai, ranging from 5 rai to 80 rai, averaging 29 rai per family owning land. Evidently, it may be said that these seven families deliberately had given up farming in favor of new occupations from which they expected higher remunerations. As for the one family owning no land, the same generalization still holds. This family was operating a 22-rai farm in 1948, a farm of optimum size which could be expected to yield a higher income than any of those operated by the thirteen former [464] operators who had turned farm laborers. The head of this [465] family, nevertheless, got a permanent job in the Bangkok Harbor, a government owned concern, with a salary of more than 7,000 baht annually which is much higher than his former net income from operating a rented farm.

A case has thus been built for the relative unattractiveness of farm operating occupation among a certain sector of farm operators who had shifted to other occupations. This was responsible for the decline of farm operating occupation from 80 per cent of the occupational structure of the village in 1949 to 72 per cent in 1953 (Table 11). If it had not been for the 14 new families branching out from existing families who had taken up farming during the period between 1949 and 1953, the decline would have been more abrupt.

*128
*243 annual depreciation of the equipment in question. In cases
435 where the equipment still had some market values at the end of their servicable lives, these residual values were first deducted from the original costs before they were divided by the length of service. The most complicated cases were those of chala and mard boats and the noria, which involved annual maintenance and minor repair as well as periodical major repair in say every four or five years before they were finally and totally worn out at the end of their rather long services of from twenty to fifty years. In each of these cases, all items of such expenses -- annual maintenance and minor repairs as well as periodical major repairs -- were added to the original cost and the total was divided by the entire length of service in order to arrive at the annual depreciation figure.

*243 With few exceptions, all farm equipment enumerated
178 above have been used by Thai farmers for centuries. Thus, since the establishment of the village there has been no change in the use of such basic agricultural tools as the plow, harrow, hoe, weeding knife and sickle. Moreover, it may be said also that there have been only slight modifications, if any at all, in these equipment during the long course of their usage. The plow, harrow, or sickle which is now being used in Bangchan is perhaps of the same type and appearance as would have been seen centuries ago.

*243 Standing in contrast to these basic agricultural tools,
177 the first known propeller windmill in Thailand, according to
178 testimonies by Bangchan informants, was invented by Nai Yong
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243 177 178 402

Manichaem of KY8 in 1940. An official report to the Director of the Department of Agriculture in 1940,[2] however, gives the credit to Nai San of Lard Buakhao, Minburi, who lived only four miles to the south of Manichaem's home. The buying up of gasoline engines by the Japanese during the occupation period served to facilitate the spread of this device. Gasoline engines probably came to the village about 1930 or slightly later. In 1948, there were five engines owned by Bangchan residents. Because of the exceptionally good water condition of that year, these engines were not used in rice production. They were not, therefore, included in our calculation of the cost of producing paddy in 1948. It was observed that their use was limited to fishing by the draining method. The winnowing machine, which utilizes a hand-operated fan arrangement, is relatively new. It is rather expensive, costing an average of 498 baht. Only 21 out of the 104 farmers in our 1948-sample could afford to own it, the rest being obliged to use the traditional winnowing method of simply tossing the grains into the air by wooden spatula and letting the wind carry away the chaffs.

According to historical improvement, farm equipment may thus be categorized as follow:

A. Old simple tools without any modification:

Shovel, spade, hoe, plow, harrow, roller, yoke, weeding knife, sickle, boat, pitchfork, rake, broom, wooden spatula, basket, mat bin, box bin.

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2. Submitted by Yingsakdi Israsena and Kamol Janlekha.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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B. Old equipment with slight modifications:

Noria (larger ones are now used because they are more adapted to windmills than smaller ones to which human energy was applied in the old days).

C. Recently employed equipment, mostly labor saving devices:

Gasoline engine, first used in Bangchan in 1930 or slightly later.
Winnowing machine, relatively new, date of introduction into the village not certain.
Propeller windmill, allegedly invented in the village, first used in 1940.

On the whole, it may be said that very few improvements have been made in farm equipment. For this, two opposing explanations may be advanced: (1) Little attention has been paid in the past to farm equipment, resulting in continual using of primitive implements which are inefficient and could be improved if enough attention and effort along the line were given; (2) These basic farm equipment are functionally efficient although they may be simple in form -- the fact that there has been no structurally change in the past few hundred years means that they have successfully stood the test of time rather than that the effort to improve these equipment has been lacking.

The author reserves his judgment on the validity of either of these two explanations, for scientific study of rice farm equipment in Thailand on which proper judgment may be based is not known to him.

Draft Animals

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In Bangchan, as in most of the rice producing areas of the country, only one kind of draft animal is used -- the buffalo. This subject has already been dealt with in the

*243 would detach themselves from the ground and be seen afloat on the surface water. To remedy this, the farmer usually inspecte his newly transplanted parcel and simply pressed the floating seedlings back into the ground. Sometimes, transplanting was poorly done or the seedlings were roughly handled during uproot ing, resulting in "dead stands." These dead stands could not be distinguished from the live ones in the first few days after transplanting, for both would appear greenish yellow in color. In four days after transplanting, however, the root system of the live rice plant resumed its normal function and most stands assumed their true green color. The dead stands could then be easily detected for they remained greenish yellow. These dead stands were removed and new seedlings were transplanted in their places.

Weeding was another care given to the rice plants. Again, it was difficult to apportion the time spent on each of these separate activities -- pressing the floating seedlings back into their original position on the ground, replacement of the dead stand stands with the live seedlings, and weeding -- for at certain periods (within a few days after transplanting) they were all done in the same trip and almost concurrently.

[476] Weeding was also done cooperatively, although recently cooperative weeding has become less popular and involved only [592] few families. It may be said, therefore, that care of the [178] plants as of 1953-54 was largely a family undertaking. Our records show that care of the plants in our sense of the term [476] started on July 24 and ended on September 29. Of this, the [592]

243 433 461 423 labor cost. Most farmers must go by foot or boat to work at places ranging from a hundred meters to two kilometers from home. This waste is the more serious during the period of preparation of the fields at the beginning of the season when the water level in the canals is not high enough to permit the effective use of a boat.

243 178 423 Table 40 shows the frequency distribution of areas worked by Bangchan operators in 1948 and 1952. It is seen that in both years work areas concentrate in the size groups between 10 to 40 rai, averaging 34.2 rai for 1948 and 31.7 rai for 1952. It is seen also that the work areas of 1948 have a wider range than that of 1952. There were 30 farms in 1948 whose areas were 40 rai and over, while the number of such farms was 28 in 1952.

Table 41 shows that of 96 continuing farms, 20 have increased their size during the five years period, 40 have decreased their size, while 35 farms have the same size throughout.

243 433 46 2. Labor: This element represents 51 per cent of the total cost of producing paddy (Table 38). Of this, only a small fraction is actually paid for -- 3.3 per cent to hired laborers and 3.4 per cent to pieceworkers. The bulk of labor is supplied by family workers (including the operator himself) whose labor value is assessed at 44.6 per cent of the total cost of producing paddy.

It is seen in Table 42 that the number of adjusted rai per worker is only 9.4 for farms which used only family

[TEXT CONTINUED ON PAGE 286]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 40

FREQUENCY DISTRIBUTION OF AREAS WORKED BY 96 OPERATORS
Bangchan, Thailand, 1948 and 1952

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Class in Rai	Number of Farms 1948	1952
110 to under 120	1	0
100 to under 110	0	0
90 to under 100	1	0
80 to under 90	4	2
70 to under 80	3	3
60 to under 70	5	7
50 to under 60	6	7
40 to under 50	10	9
30 to under 40	18	22
20 to under 30	22	19
10 to under 20	16	18
Under 10	10	9
Total	96	96
Mean	34.2 rai for 1948 31.7 rai for 1952	
Median	30.3 rai for 1948 31.1 rai for 1952	

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 41

CHANGES IN AREAS WORKED BY 96 OPERATORS
Bangchan, Thailand, 1948-52

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Description of Farms	Number of Farms
Same size*	35
Increased size	20
Decreased size	41
Total	96

* To take care for reporting errors and errors due to confusion over planted areas and harvested areas, a margin of 2 rai is allowed. Hence, farms reporting size changes of two rai and under are considered to have no change in size.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

Writing
*243 on economic change in Thailand since 1850, Ingram points
17 out that soon after the Bowring Treaty (1854) the popula-
43 tion of Thailand tended to specialize more and more in the production of one major crop (rice) and a small number of other primary products, selling these products for money, and using the money to buy various articles of consumption. "Money thus came to play an increasingly important role in an economy in which it had formerly been of but minor significance. When Western traders were freed by the Bowring Treaty to put such products as cheap cotton prints on the Thai market, the people bought these products and, if they could not buy they sought a source of money income. Money could most easily be acquired by producing some commodity for the export market. As villages and households turned to the production of money crops, and as they began to purchase bright-colored garments from the traders, the household crafts declined. Cotton fields were perhaps used for rice or abandoned in favor of land suitable for rice. With the money income earned through the export market, the farmer bought the goods he had formerly made for himself."[9] The
*243 money economy had brought along its inevitable companion --
• 178 credit, which had become accentuated by the fact that Thai
426 rice farmers received their principal incomes only once a
43 year. There has been a tendency to trace the perpetuation of farm indebtedness to farm poverty which is in turn traced to low productivity in underdeveloped areas. While this is

9. Ingram, op. cit., p. 36.

*243 • 178 426 43 perfectly true especially among the under-sized farms in Bangchan, there is still to be explained why more affluent farm operators are also continually in debt. It has been observed that when people come into contact with superior goods or superior patterns of consumption, with new articles or new ways of meeting old wants, they are apt to feel after a while a certain restlessness and dissatisfaction. Their knowledge is extended, their imagination stimulated; new desires are aroused, the propensity to consume is shifted upward. This principle according to which individual consumption functions are interrelated was propounded by Duesenberry, who calls it the "demonstration effect."[10] When the list of new items of consumption is checked, it appears that this principle of demonstration effect has demonstrated itself very clearly in Bangchan.

426 432 *[128] Table 63 shows that in the majority of cases credit purchases bear an interest of 50 per cent per season, ranging from 0 to 67 per cent. Information from sources other than our sample farm operators reveals that two methods of interest charging were practiced by Bangchan storekeepers and peddlers. One method was to charge 40 per cent interest on credit purchasesmade during March - May, 30 per cent during June - the first half of November, and no interest on purchases made in the second half of November and after; all these rates were charged on the assumption that accounts would

10. This is about the receipt from 8.4 rai in 1953.

[TEXT CONTINUED ON PAGE 352]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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464 The lean time from the middle of February to the end of May is devoted by some villagers, mostly young men, to wage earning outside the village. The size of this temporary labor migration depends on the job opportunities, and these job opportunities depend largely on personal contact. Seasonal off farm jobs are: (a) crude carpentry work usually on nonpermanent construction where cheap temporary labor is preferred; and (b) plantation work in the sugar cane region of Cholburi some eighty miles east of Bangkok.

Inherent Excess of Expenses over Incomes

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426 The prevalence of debts in the form of credit purchases among Bangchan farmers indicates an excess of expenses over incomes. It has been shown that most cash loans were sought to clear high interest bearing credit purchase accounts, although some were for productive purposes. Even in this latter case, it has been observed that farmers usually borrowed no more than an amount that was immediately needed together with cash on hand to pay for the capital investment. This means that after such capital purchases there was less cash for the household and operating expenses, and so there would be a higher credit account to be settled in the following harvest.

Low incomes coupled with relatively high expenses leave little or no room for internal savings.

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433 The situation is aggravated by an increasing rate of consumption relative to the ability to produce. While

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production method and farm organization remained the same throughout, there had arisen in the course of the past four or five years new items of consumption including wrist watches, fountain pens, hair do, Coco-cola, invitation cards, admission to Miss Thailand contest, etc., which demonstrate the operation of the principle of demonstration effect par excellence. It is not difficult to see, then, that any chance increase in cash incomes due to favorable weather and economic conditions tends to be absorbed in consumption.

While consumption correspondingly expands with an increase in income, it does not decline with a contraction of income -- at least not in the same proportion. This is the principal reason for farm poverty in rice growing areas where only a single-crop system is practiced and where fluctuation of crop yield is a normal phenomenon.

As a result, the excess of expenses over incomes
[426] tends to persist. High rates of interest also have made this excess greater and greater among those who fail to make proper adjustment in their credit situation. Thus, the less affluent farmers are not only poor but are actually getting poorer and poorer.

Population Pressure

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While low incomes and inherent excess of expenses over incomes are basic problems of Bangchan, discussions in the early chapters reveals that there are some factors contributing to the acuteness of the basic problems. One

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434 among these contributing factors is population pressure.

Disguised unemployment in the case of farm operators
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161 and their family workers and actual unemployment in case of
434 farm laborers indicates a condition of over-population in
464 Bangchan in the sense that a certain part of its population can be removed without materially reducing total production in the area.

178 In view of a continually decreasing supply of fish,
226 it may be said that the situation has reached the point where
433 it not only affects the per capita income of Bangchan resi-
262 dents but actually exerts pressure on means of subsistence. There are several indications of decreasing supply of fish and other marine animals in the village. First, it is the consensus of opinion gathered by our daily informal talk with villagers non of whom was found to hold a contrary view. Second, a passage in our 1948 log, "X is very lazy. Everybody here in Bangchan catches shrimps and makes his own shrimp paste. He alone does not catch shrimps even though he is among the poorest," indicates that purchase of shrimp paste was in 1948 an exception rather than a rule. In 1952, however, it was found that a total of 22.7 kilograms of shrimp paste consumed in a year by an average family, 6 kilograms, or more than a quarter, was purchased. In this latter year, 83 baht worth of fish and 54 baht of fish sauce were purchased by an average family in addition to shrimp paste as against negligible amounts for the same items in 1948 (we did not conduct a systematic consumption

178 226 433 [262] survey in 1948, the "negligible amounts" comes from daily talk with Bangchan residents). Third, several informants testified that the amount of fish caught from the same pool by the draining method had been decreasing each year. One of these gave the following comparative figures for fish caught from the same pool on April 8 - 10, 1953 and on approximately the same time of the year in 1952 as follows:

Kind of Fish	Number Caught in 1953	Number Caught in 1952
Pla Salid	400	800
Pla Salad	100	200
Pla Kasong	50	120
Pla Chado	6	15
Pla Krai	1	--
Pla Doog	50	50
Pla Mor	20	25
Pla Chorn	150	300
Large turtle	5	3
Small turtle	7	3
Eel	5	5

Others also gave the 1953 figures, but could not itemize the 1952 figures; they only said that they "got much more than this year."

226 654 There had been until 1952 no positive program for fish conservation; only negative measures have been taken, such as the Ministry of Agriculture's ordinance against fishing by certain methods at certain times of the year. In 1952, however, the Government began an extensive program of introducing a new variety of fish, Pla Mor Thed, into rural areas of Thailand. This new variety has been claimed to grow faster than the native varieties. While this program cannot as yet be appraised, a point of observation may be

*243 161 • 178 464 Finally, it has been pointed out that the kind of training and the type of financial preparation given to young married couples have served only to confirm Bangchan people to their preference for rice cultivation. This together with limited job opportunities open to them elsewhere have tended to keep the villagers on the farms, and thus have tended to regenerate the condition of population pressure in Bangchan.

Lack of Effective Control and Regulationof Water Supply

*243 458 Another contributing factor is the lack of effective control and regulation of water supply, which has caused annual fluctuation of rice crop. On the whole, this crop fluctuation is not as high as is the case in most of rice [731] growing areas elsewhere. Famine certainly has not been known in Bangchan. Nevertheless, it is a certain sector of rice growers -- the marginal farmers with limited ability to adjust or with relatively little command over capital -- who are seriously affected by annual fluctuation of rice crop.

*243 426 When affluent farmers have a poor crop, their credit purchase accounts may go up beyond the normal level, but they are usually in a position to clear this type of high interest bearing debts at the end of the business year by their net cash incomes or at least by securing loans with lower rates of interest to pay the accounts. On the other hand, marginal farmers are not in a position to seek low interest bearing loans. In case of crop failure, therefore,

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

whole, depends in large part on one's frame of reference.[2] In the most general terms, the people of Bang Chan are like almost all ethnic Thai peasants (excepting on some counts Thai Moslems and some of the economically disenfranchised people of the Northeast) in that they have a keen sense of membership in the nation-state with a deep loyalty to the Crown, speak the Thai language, are Therevada Buddhists, are outwardly highly deferential to the authority of the Central government, and have a conception of the good life that stresses fun, physical comfort and security, intellectual simplicity and practicality, and a moral (as contrasted with a natural) ordering of the universe. Too, like the vast majority of their rural compatriots,[3] they are engaged in the production of rice, an activity which to them is not only an economic operation (Ingram 1955, Janlekha 1955) but almost a way of life, being bound up with their social structure, dietary habits, religious practices, and even their philosophical (J. R. Hanks 1961) and aesthetic conceptions.

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[2] For readers unfamiliar with Thailand, the nation-state, it should be noted that the country is predominantly rural; 84 percent of the total national labor force is in agriculture and there are only ten towns with populations of 20,000 people or more, in which 6 percent of the national population (1947 census) live. Although Bangkok has a population of approximately 1,200,000, the second largest city, Chiengmai, has only 60,000 (1957 estimate).

The nation also has a high degree of ethnic homogeneity, 82 percent of the population considering themselves native Thai (1957 estimate). The largest ethnic minority group is the overseas Chinese, comprising 11.3 percent of the population (1953 estimate, from Skinner 1957), the balance being Malays, Cambodians, and Indians; the so-called tribal groups number in toto only about 150,000 people.

The religious composition of the country is 94.1 percent Buddhist, 3.9 percent Moslem, 0.5 percent Christian, and 1.5 percent "others," many of whom are tribal animists. Thai Buddhism is of the Southern (Therevada, Hinayana, or "Lesser Vehicle") variety and as practiced by most Thai, has syncretized within it many Brahmanic and traditional Southeast Asian animistic elements (see the chapter on "Religion" in Sharp *et al.* 1956, and Textor 1960). The largest minority religion, Islam, is practiced by ethnic Malay living in the four southernmost provinces of Thailand, as well as by some ethnic Thai—many of them descendants of former Malay slaves or war prisoners—scattered through the areas north and east of Bangkok, including Bang Chan, where they comprise 9.8 percent of the local population. Relationships between Buddhists and Moslems, at least in Bang Chan, are quite amicable and except for ideal prohibitions against intermarriage and occasional offhand remarks such as "Moslem women are loose" or "Moslems kill animals," there is little overt hostility between the two groups. Certainly few Bang Chaners ever distinguish between their Buddhist and Moslem neighbors when arranging a work group, selecting a drinking partner, or even compiling a guest list for a son's ordination.

[3] Janlekha (in Sharp *et al.* 1953: 110) indicates that 55 percent of the total national labor force is involved *solely* in the cultivation of rice—which occupies approximately 90 percent of the total cultivated land area—and as many as 92 percent of all agricultural households are rice households. The 55 percent figure excludes all those people who are involved in the transportation, milling, storing, and distribution of rice. Eighty-five percent of the population of Bang Chan (1953) are rice farmers.

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from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise of regular wages, lighter work, and the bright lights of the city, leave Bang Chan with the hope that they will never have to return, although of course many do. The Goldsen-Ralis survey reveals that 26 percent of their respondents had lived in Bangkok for a year or more, although for most this was in fulfillment of military service.

Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

The frequent transit between Bang Chan and Bangkok,[8] however,

[8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

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continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959*b*: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family;

home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

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596 *156 As the reader might by now suspect, it is not easy to determine the basis of the unity of the family. However, of all the factors that keep people living together in amity and affection, two come to the fore: a sense of love, obligation, and respect that is derived from the simple fact of kinship, but which must be continuously confirmed by mutual benefits; and economic considerations.

596 476 The economic foundation of the family is significant not only because the family is in fact the sole economic and occupational unit in the community (with the exception of the monkhood and school) but because the villagers themselves think of the family in terms of its economic functions. People say that they marry for wealth or because of the productive capacities of their spouses;[13] spouses stay together because the economic costs of a split are too great; most important of all, people are keenly *aware* of their economic interdependence. Fathers say that they need children to work in the fields and care for the buffalos, that a family needs a mother so that its members will be fed, that siblings are useful because it is easy to borrow from them (although, as noted earlier, some are unhappy about the intrusion of the kinship tie into what they regard to be a commercial transaction). Many villagers extend this economic, transactional type of thinking to other aspects of the kinship relationship. Thus they say that "the purpose of marriage is to have a companion who will take care of you when you get sick," or very frequently that "my parents went to the trouble of bringing me up so they would have a person to make merit for them when they die." The emphasis here is on independent agents serving each other because it is mutually beneficial.

[581] [593] [581] [593]

*156 • 181 171 571 The love and affection that people feel for each other is of course grounded in the close associations that one finds in most nuclear families. However, the attitudes of respect that one sees are perhaps more distinctively Thai. Almost all the literature on Thailand refers, at one point or another, to the patterns of respect (*khwaamnabthyy*) existing between people, both within and without the family. These patterns are based, in the first instance, on the status inequalities that exist in almost all social

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[125] [13] In responding to the unstructured Sentence Completion Test item, *"He (she) wants to get a wife (husband) who. . . ,"* for example, thirty-one of sixty informants indicated that they wanted a mate who "was a good worker," "earned a living," "was rich," or otherwise had high socio-economic status. Only two persons said that they wanted a spouse for reasons that could be reasonably defined as sentimental: one woman wanted a husband who "would be a good friend with whom she could discuss things," and a man said he wanted a wife whom "he loved." Other informants gave completions distributed among a variety of categories: "polite, well-mannered, handsome, kind, strong, and good" spouses; and six women wanted husbands who would be faithful.

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relationships: within the family, usually in terms of the relative ages of people; elsewhere, in terms of age, wealth, power, knowledge, religious or governmental role. Secondly, they are based on the assumption that every individual, regardless of his position in the hierarchy, deserves respect. The first is a respect associated with the proper performance of one's role; the second, a recognition of the essential dignity of every human being.

The role of these respect patterns cannot be emphasized enough. Benedict, in her study (1946) of Thai culture at a distance, referred to the learning of the *waj*, or gesture of obeisance, as "the first teaching the child receives." Although the *waj* is perhaps not the very first social act the child learns, I have seen infants no more than two weeks old being guided by the mother in raising the palms of their little hands to the forehead in expression of deference to superiors. The older infant who can do this on his own almost always receives acknowledgments of approval and delight from the adults in attendance. An older sibling really means it when he says of his relationship with his younger brothers, "when I ask them to do some kind of work, they go and do it. They never disobey, and when there is no disobedience, there is no hatred. . . . Formerly, whenever there was entertainment somewhere I took them with me. My younger siblings love me a lot. . . ." His position in the authority structure assumes the respect of those younger than he, and they willingly grant it for, among other things, he plays his role well as the kindly superior who takes them with him whenever there is entertainment. All the polite little linguistic forms (honorifics, expletives suggesting status and, most important, ordinary kinship terminology with its specification of relative age) as well as kinesthetic forms (lowering the body while passing a seated older person, holding the younger between one's legs and with arms around him in a position of protection) also serve to emphasize the respect that people grant one another because of their differential status. Perhaps the most revealing illustration of the strength of these patterns, at least the authority pattern, was provided by a two-year-old toddler who pointed to the stomach of his pregnant mother and said with pride, "My younger sibling is in there. When he is born he will be *my* responsibility." Little doubt that when the child is born he will give his older brother his due.

With regard to the other respect form, recognizing the dignity of every human being, more than once I have heard parents say that they disliked giving their child a certain medicine "because it offends the baby; he does not like it. It is better not to give it to him than to hurt his feelings." Although I do not doubt that in some instances the parents were annoyed more by the screams of the child than anything else, I am also convinced that for the most part they were respecting his basic individuality and right

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various kinds of ants living in Thailand and the United States. (Such are the topics that interest villagers.) The villagers wanted to know the English names for small red ants, normal black ones, and the large, rusty colored variety that are indigenous to the tropics. I named the first two with no difficulty. For the third, I said simply, "a giant ant." The assistant, turning to one of the informants, first gave the literal Thai equivalent of "giant," and then, as if this were the funniest thing he had heard that week, began to repeat, "giant, gi-ant, gi-ant." In a few seconds, they were all bursting with laughter.

Different, yet part of the same psychological constellation, is the whole complex of behaviors associated with the term, *sanug*. *Sanug* is usually translated into English simply as "fun." However, this translation conveys little of the motivational significance of the term. Essentially, *sanug* is a quality inherent in all situations which are not only fun but also emotionally worthwhile. In fact, these two states are often thought of as reciprocals of one another. An activity that is novel, diverting, or that can be done comfortably, is *sanug dii* (good fun); one that is tedious, overdemanding, that lacks the opportunity for frivolity, is not *sanug* and should be avoided. Harvesting rice in coöperative work groups, attending a ceremonial, participating in an election (see Phillips 1958: 45–46), or even taking something as outlandish as a Sentence Completion Test are all *sanug*. (The unifying elements of these diverse activities are either their novelty or the fact that they involve the presence of relatively large numbers of people but require no genuine interchange with them.) On the other hand, going into the army or working for a demanding superior are not *sanug*.

The importance of *sanug* is that it provides the villagers with a standard of value, a measure of how much they wish to commit themselves to a particular activity. The role of this standard should not be underestimated. Villagers who have taken a job in the city, often involving a time-bound daily routine or continuous, sustained attention to a task (work in a small factory, for example) frequently return to the village explaining that they quit "because it wasn't *sanug*. How can you work on a job if there is never any time for fun?" Foreign employers, with their greater concern for the job than with the person who does it and with their annoying tendency to be *cuu cii* (compulsive, fussy, exacting) are a particular target for this indictment, although this is usually based on hearsay rather than personal experience. On the other hand, villagers will often take on free of charge a major job (for example, helping a neighbor build a house) precisely because it is *sanug*. Although there are other considerations operating here—creating or repaying a personal obligation, doing a *bunkhun* ("a goodness") for a neighbor—the "sanug-ful" aspects of the task are always

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181 461 476 salient: the free food, drink, and chitchat at the end of a hard day's work; the fun of working together with several other individuals. Notice that in this kind of situation there is no overseer demanding the person's effort. His labor is freely given and may be freely withdrawn.

181 *156 571 In describing *sanug* as a measure of how much villagers wish to commit themselves to a particular activity, I mean to communicate a point and not merely to turn a phrase. The word "commit," which appears often in this book, is used to convey the idea that coöperative, mutually expectable interaction as we know it in the West does not "simply take place" in Bang Chan. Rather, there is always the intervening factor of whether individuals want it to take place. Siamese are, first and foremost, free and independent souls. Much of the time they fulfill each other's expectations, but this is only because they want to, not because others expect it of them or because the situation demands it. It is the individual that is primary, not the social relationship. The strength of this principle is demonstrated by the fact that one is almost never surprised when one's expectations about another are not fulfilled. The assumption is: "If he did not do it, he must have had his own good reason."

181 154 *156 571 The potentialities for interpersonal frustration that are inherent in such a system are minimized largely by the hesitation on the part of individuals to build up strong expectations about people or events. In general, the Thai are a people who do not live at, and rarely reach, a high emotional pitch. Witness, for example, the specifications of "sanug-ful activities," those which afford the greatest pleasure: they are novel, diverting, comfortable, and frivolous, but there is no Faustian intensity about these joys. They are all rather muted emotional experiences. The point here is simply that in this kind of psychological environment, people rarely permit themselves to become *so* committed to an activity or to another person that the frustration of that commitment will be overly disturbing to them. They proceed from a premise which says in effect: "Well, it is really not that important that he did not do what I expected of him. I will simply have to make do."

181 154 *156 There are a few aspects of the villagers' concern with *sanug* that warrant underscoring. First, from an analytic point of view, *sanug* seems to reflect an attempt on the part of the villagers to lead a psychologically integrated life, wherein the time and energy one gives to an activity is rewarded immediately and directly with pleasure. This low-keyed pleasure should be an inextricable part of the total situation in which one finds oneself (or more accurately, into which one places oneself), not something to be deferred until a later, "more appropriate" time when it becomes an isolated segment of experience. Essentially, *sanug* should be—it not always is—a concurrent aspect of almost everything that one does. At the same time, however, these conditions are also the source of an inevitable paradox. Since "sanug-ful" activities are, by definition, novel and diverting, and

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since even the most novel activities eventually become routine or stale, it is obviously impossible for all one's hours to be animated with *sanug*. From a total time perspective, many of the villagers' activities are of course either "sanug-fully" fallow or "sanug-fully" short-lived. To a large extent, this paradox is resolved *subjectively* by the short-term time perspective of the villagers. This is the second major point to be noted about *sanug*, that is, *sanug* reflects a more generalized tendency on the part of the villagers to concern themselves with activities that require only brief time commitments or whose effects are immediately forthcoming. Bang Chaners are not an impatient people in an active, negative sense, but they do have difficulty in attending to tasks that demand from them a sense of compulsiveness or staying power. They will often drop demanding tasks right in the middle once they have recognized that the work is taking longer than originally expected. What is striking is that they will do this with apparently no sense of frustration over not having fulfilled their aims and with no regret over having wasted their time. It is as if their original purposes had simply become irrelevant, and they had gone on to other things. This is precisely the attitude, for example, surrounding the construction of the unusable road referred to earlier leading from the Minburi Highway to the Bang Chan school. After devoting considerable labor to building the high mound that would form the foundation of the road, villagers lost interest when they were unable to obtain funds for its surfacing. Since no one was ever interested in maintaining it, the road now lies in the middle of a rice field, rutted and pitted; much of the foundation has sunk back to the level of the adjacent fields. However, no villager has ever considered the road a fiasco or "folly"; it was just something done in the past and has since been forgotten. The road project might be revived in the future, but from the villagers' point of view that too is irrelevant. The point is that *sanug*, with its emphasis on novelty and diversion, is expressive of this same underlying time orientation. In the villagers' way of thinking, no activity is really worth doing unless it has the potentiality for fun.

Another expression of the villagers' concern with play, related in some respects to what will be discussed in the next section, is their preoccupation with humorous *topics* of conversation. For the most part, they enjoy hearing and telling stories with a "banana peel" twist: of a husband who is caught by his wife sleeping with another woman; of an individual who, through his failure to take heed, is cheated out of his money. Such stories of course always concern other people, not those immediately present. Too, stories that combine whimsy and the supernatural—for example, of a "super-dog" that can find buried treasure or foretell the future—elicit laughter, although often with a tinge of apprehension that the stories may be true. However, what is most impressive about these and similar stories is the amount of time given to them.

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("Who knows what he was in earlier lives and what powers he brought with him into this one?"), there is enough reality about the tale to make people want to listen. Moreover, it is wish-fulfilling fantasy; people laugh because reality has been outraged, but with a lingering desire that it really could be.

The kinds of stories outlined above do not exhaust the villagers' stock of conversational humor. There are also tall stories without the supernatural touch, broad burlesques, "dirty" jokes,[18] and the countless epigrams that work their way into almost any conversation; the last are not so much topics of conversation as they are means of punctuating a point. However, enough has been said to indicate that in its cognitive stylization and social psychological purposes, Bang Chan humor is not too different from Western humor. It is rather the content, frequency, and evaluation of the humor that is so distinctive. That the content should be distinctive is of course self-evident, since all humor is rooted in the implicit and familiar premises of workaday, cultural life. In fact the very essence of a joke is seeing the culturally familiar in an entirely new light. This may help to explain, incidentally, why it is always so painfully self-defeating to try "to explain" the content of a joke: its entire effect is dependent on the listener's implicit

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[18] Sexual and scatological humor in Bang Chan pose some special problems. On the one hand, because villagers take such a matter-of-fact approach to sex, there are actually few jokes and stories that aim explicitly at being titillating or risqué. For most Bang Chaners, sex is something to be experienced and enjoyed in private, not snickered about barracks-style; there is no saving in talking about sex (although there may be in playing with tabooed words, especially if cleverly done). Also, villagers seem to lack any interest in lewdness for its own sake. Not only Bang Chan, but Thai culture in general, is striking for its relative absence of attempts to edify sex: there is nothing in Thai literature or art, for example, approximating the exaggerated bawdiness of Rabelais or the graphic sensuality of the kind of sculpture found at Khajuraho and Konarak in India.

On the other hand, sexual situations are very often used as vehicles for portraying the foibles and stupidities of people. Villagers particularly enjoy stories of individuals of either sex who devise ways for seducing the unsuspecting, or of individuals who manage to outwit their spouses while philandering with their lovers; the more complex their machinations, the more amusing the stories. However, it is the social psychological, not the sexual, dimensions of these tales that form the major bases of their appeal.

Finally, it should be noted that villagers tend to distinguish between what could be called "genital" and "anal" modes of humor. The latter type has considerably fewer taboos associated with it. Thus, whereas most villagers would avoid going into descriptive detail in reporting the physical aspects of a tale of sexual conquest, they would have few qualms about discussing (and often with acoustical detail) such things as people who pass air in public or who otherwise get themselves into compromising anal situations. (Interestingly, J. Marvin Brown in his linguistic work with Thai informants, often including female university students, reports in a personal communication that he encountered difficulty in obtaining the various Thai terms for sexual organs and acts, but that the terms for anal and excretory behavior were given with little hesitation.)

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are social peers, the Bang Chaners would easily turn the conversation to a discussion of the technical aspects of rice farming or even gambling. The latter would likely be discussed with a social superior only after some acquaintance. On the other hand, if one were clearly the other's superior, the superior would probably talk not about the methods of rice farming but, more generally and benignly, inquire, "Is all going well with you? Is there any way I might help you?" He might even proffer some unsolicited advice or aid. The tone and theme of the conversation would be expressive largely of the superior's concern with the welfare of his new-found friend, which the latter would typically accept.

All this is usually accompanied by gentle laughter and careful attention to appropriate pronominal forms. The good host will also serve his guest rain water, and if possible, scented rain water. If opportunity and finances permit, he may even offer him a warm Coca-Cola. The youngster who will actually serve the refreshment will make sure that it is on a coaster and that his hands are in the proper ritual position when he offers the drink to the guest. Such are the ingredients from which potential friendships are made.

Although the particulars of the kind of politeness found among family and friends are different from the above, the forms are essentially the same. Villagers do not talk about the funny accents of the people who live next door to them, nor do they rush to serve scented water when a brother comes to call. But they do take pains to express respect for each other by using proper honorific and pronominal forms, by looking to the oldest competent family member for advice, by talking of subjects that are pleasant and amusing, but never threatening or embarrassing.

The avoidance of embarrassing topics—even when the airing of such topics may be crucially important or beneficial to one of the parties concerned—is one of the most pronounced facets of village social life. To a Westerner accustomed to outspokenness, the types of situations that villagers define as embarrassing and the lengths to which they will go to avoid them sometimes appear to border on the sado-masochistic. Detailed interviews with two women whose husbands had taken second wives, for example, indicate that although at the time they were deeply disturbed by their husbands' actions (primarily for economic reasons; secondarily for emotional-sexual ones) they never once even brought the subject up with their husbands. They explained that they were too *ʔaaj* (embarrassed) to do so. In neither case was this embarrassment expressive of any feeling of inadequacy on their parts (the fear of hearing their husbands say, "I took a second wife because you are not adequate"). It was prompted rather by the desire to avoid an awkward and potentially rancorous confrontation. They did not want to put anybody on the spot. (Whether such a confrontation would *actually* lead to overt rancor is almost impossible to ascertain because

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181 it in fact so rarely takes place. In fact, the "hypotheses" of these women are
152 perfect manifestations of what, in the technical sense, is *anxiety* rather than
57 *fear* about what might occur.) The marital situations of both these women
156 have since been routinized so that they have come to accept the second wives as part of their normal domestic lives. However, the vehemence with which they report these incidents indicates that at the time they paid for their wish to avoid embarrassment with considerable psychic distress. In terms of the basic attitudes involved, these situations were not too unlike that which obtained for Dang: to avoid a potentially sticky social situation, politeness and complete silence were maintained.

Somewhat different order from the above are the numerous instances where "good friends" will avoid reporting to each other unhappy or distressing information although it is clearly to the other's advantage to have such information in order better to cope with the difficulty. In one case, a villager had been working for weeks on a land sale deal which would have netted him a brokerage fee of two thousand *baht* (approximately one hundred dollars, a considerable sum in a community where the average annual family income is, before expenses, only eighty-five hundred *baht*). A friend had meanwhile learned that another villager, with whom he was not at all close, had sweet-talked the customer into permitting him to handle the sale, much to the detriment of his own friend, the original broker. However, rather than warn the friend of what was happening, he simply said nothing. When asked to explain why he kept his silence, he said that he was just too *?aaj* to speak up. Although the consequences of "*?aaj*-ness" were in this case more extreme than usual, the situation itself was not. In another, less dramatic instance a villager mentioned to us that in coming across the rice fields that afternoon he had noticed that his neighbor's windmill had broken down. The belt connecting the windmill to the irrigating machine used in raising water into the fields had slipped from the drive shaft. However, despite the obvious importance of this fact to his neighbor—the planting of his rice seedlings was completely dependent on the noria raising a sufficient amount of water into the field at the right time—the friend failed to tell his neighbor what had happened. When asked why, he said that he was *?aaj* about making his friend unhappy.

181 What is important about the above illustrations is not so much their
152 typicality—one can cite instances where friends are considerably more
156 realistic and helpful—but rather the legitimacy of the rationalizations of the
[592] inactive friends. All Bang Chaners can understand and accept the reluctance of a villager to be the person who actually triggers off another individual's discomfort. There is a genuine (albeit misplaced) sense of responsibility about not making another unhappy. What is important is the immediate, face-to-face situation. If a person must ultimately suffer, that is his own problem; but at least the friend can say, "I did not 'cause' it."

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Villagers also recognize the reluctance of an individual to become involved in another person's problems on the grounds of avoiding the accusation of *actually* having caused them. They say (but again, empirical instances of this type are very hard to find) that frequently the person with good intentions is turned on by the very friend he is trying to help, for example, "Since you know so much about the broken windmill perhaps you were the one who broke it!" Both these attitudes result from a rather overinflated view of one's importance to the friend, as if the friend would be more concerned with the agent of information than with the information itself. This is not so much a confusion of means and ends as a re-identification of them. Finally, some of the villagers' reluctance is probably also due to simple indifference or laziness regarding the plight of the friend.

Other expressions of the "ʔaaj-ness" complex are more clearly altruistic than the above. Villagers explain, for example, that the reason there is never any more than one candidate for the post of hamlet or commune headman, on the rare occasions when such elections are held, is to avoid embarrassing the individuals involved. The eventual headman would be embarrassed because the presence of a competitor would suggest doubt about his competence; the candidate who lost would be embarrassed by the very fact that he lost. To avoid hurt feelings, only one candidate is presented, voted on, and elected.

We have been talking above about politeness primarily in a negative sense, that is, about the lengths to which villagers will go to *avoid* discomforting others or upsetting peaceful relationships. This aspect was stressed because its expressions represent a somewhat unique form of patterned social interaction. However, the many positive forms of the villagers' politeness to friends and kin should not be minimized: their concern with choosing topics of conversation they think will interest or entertain others; their search for opportunities to flatter them, sometimes in pseudo-mocking fashion, but more often to make them feel good; their attention to providing others with a pleasing audience—being silent, attentive, and eager when others are declaiming on a favorite subject. Of course, many times the villagers are not listening, but they try to behave as if they were. The aim here is to make others feel that what they are saying is worthwhile. An important part of this is that one almost never directly challenges the veracity or logic of the speaker's statements. If disbelief is the only appropriate response, it should be done silently. Nothing except personal pain and interpersonal tension would be gained from a direct challenge. If one feels strongly enough about the issue, which is very rare,[16] the presentation of an *alternative* view would not be inappropriate. But one

[16] The rarity of strong feelings is due to the fact that so often the very purpose of such conversations is to convey politeness and nothing more. The actual topic of conversation is simply a medium of contact, not a matter to be seriously discussed.

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Chan. However, there remains the crucial question of how villagers manage to develop the long-term relationships that they do have, for despite the inevitable unpredictability of all human contacts, most Bang Chaners do live together in family units for more or less sustained periods of time, fathers do save for years in order to give their sons respectable ordinations into the monkhood, relatives and friends who have not seen each other since childhood do assemble for the cremation of a late kinsman or mutual friend, and mature adults do continue to feel a profound sense of respect and obligation to individuals who were their teachers when they were youngsters. What are the bases and rewards for these enduring interpersonal commitments?

The immediate rewards for these commitments are, on the one hand, quite apparent. They involve such things as the simple, unrationalized kind of love found among any group of kin or close friends. In the case of the ordination and cremation, there is the reward of making merit, not only for the son and the departed soul, but for all those who sponsor and participate in the ceremonials. The satisfactions gained from increasing one's social prestige by putting on an ostentatious ceremonial are not to be overlooked either. At a more subtle level in the case of the respectful student, the reward is gained from knowing that one is behaving in a proper and courteous way toward one's *aacaan* (in its social psychological connotations, similar to the Indian term *guru*) and is thus upholding established normative patterns. The rewards of maintaining the rituals of the moral order are not to be glossed over for Bang Chaners, like most Siamese, are a deeply ethical people. This is not meant as an evaluation of their behavior or as a statement of their capacity to conform to their ethical prescriptions, but simply as a statement of their preoccupation with ethical concerns. The rewards of *feeling* (genuinely or self-deceptively) that one has behaved in an ethically and ritualistically prescribed way are among the most satisfying of sentiments, although as indicated in the discussion of "social cosmetics," villagers often use the rituals of ethical behavior as substitutes for more demanding interpersonal involvements. Indeed, the great emphasis given to the performance of ethical rituals (speaking in soft and gentle words, honoring one's mentors) helps perpetuate the loosely structured relationships found in the community in that conformity to these rituals is perceived by many as comprising the fulfillment of their interpersonal obligations. Beyond this they are free to pursue their own interests. To a large extent the ritualistic forms serve as a comforting psychological justification for the pursuit of individualistic concerns, *i.e.*, "But I otherwise treat others so nicely." [30] This is not the result of conscious

[30] In one of his more recent and typically penetrating works, Goffman (1963) coins the terms "Involvement Shields," "Main Involvements," and "Subordinate

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*156 psychological manipulation. The frequency with which villagers evaluate themselves and others in terms of the performance of these rituals and the high frequency of rituals in actual behavior attests to the seriousness which Bang Chaners attach to them. Their compensatory nature in no way detracts from their importance to the individual. In fact, the precise opposite seems to be the case. Bang Chaners are a highly ethical people irrespective of the social psychological functions such ethics may serve.

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Less apparent than the above immediate rewards for fulfilling interpersonal commitments but perhaps the very factor that is common to most of them is the sense of reciprocity that is at the basis of all enduring relationships in Bang Chan. Reference was made to the *quid pro quo* nature of Thai social relationships at several points in the text. However, the importance of this consideration cannot be fully appreciated without realizing that the functioning of the entire Thai social system is ultimately dependent on it. Individuals become involved with others and do things for them because they consciously expect others to respond in kind. This applies to the relationships existing between family members who live together *because* such an arrangement is most advantageous to each; to the father who gives his son an ordination *in order that* the latter will make merit for him and feel obligated to care for him when he becomes old; to the friends and relatives who make merit for the departed soul *because* of the good things he had done for them during his lifetime; to the adults who feel obligated to their childhood teacher *because* of the knowledge, and thus power, he imparted to them. It might well be, as Mauss (1954 [originally

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[114] [121] Involvements" to describe in theoretical terms what has been analyzed here empirically. The major point of Goffman's concepts, and of his entire book, is that human behavior is typically polyphasic (people act one way and simultaneously think or feel another); that there are types and degrees of involvement with people, situations, and self; that situational behavior typically entails patterns of "deception" as ways of implementing disinvolvement (or, as he says, as ways "to conceal improper involvement and to affect appropriate involvement"); and most important that such patterns of "deception" are culturally—and not as heretofore assumed, idiosyncratically—phrased. His definition of "Involvement Shields" (p. 41) is particularly apposite to the discussion above: ". . . we think of involvement shields as one means by which the individual can maintain the impression of proper involvement while he is actually delinquent in his situational obligations."

Dealing mostly with American culture, Goffman does not of course analyze ethical rituals as a particular kind of "Involvement Shield." Americans favor other, more culturally distinctive patterns of deception. Also, he uses the term "involvement" in the same way that I have been using the term "commitment." Unfortunately, neither Goffman nor I say very much about the conditions, cultural or psychological, which determine whether a person is fully ("properly and appropriately") involved or committed in any particular situation or is simply shielding himself. However, I would argue on theoretical grounds that the *decision* is almost always idiosyncratic, the *actual behavior* almost always cultural.

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*125 [121] bility that lies at the heart of the SCT analysis. As Kluckhohn has said (1959: 247; see also 1951: 421–422):

> The most specific quality of anthropological research arises from its preoccupation with culture. This concept (in the technical, anthropological sense) refers to those *selective* ways of feeling, thinking, and reacting that distinguish one group from another. . . . In the strict sense, we can speak of culture only when there are two or more objectively possible and functionally effective means or modes of meeting the same need, . . . and a given group exhibits a consistent and stylized preference for one path to the goal among a number of alternatives that are—from the observer's point of view—all open.

121 *125 • 181 In this light, what is most significant about the responses is not that they are in themselves descriptively unusual, nor even that other cultural groups could not share some of them (the principle of "limited possibilities," supported by linguistic constraints, undoubtedly operates here), but rather that of all the objectively potential ways in which to deal with the SCT situations, the villagers select a few distinctive ways to the exclusion of others. In the example above, "the most important thing in his life" is *not* "his family" (the need for close social affiliation; being a source or recipient of succorance), his "love affair" (emotional-sexual need), "knowing himself" (realistic assessment of one's capacity for specific achievement), "passing his examination" (the need for status and accomplishment), or any other equally feasible response. Rather the response is "having or not having something to eat" (elemental subsistence). At bottom, it is the selective aspect of the SCT responses—in contrast to their strangeness or familiarity, which are secondary descriptive characteristics—that defines their essential "Thai-ness."

121 *125 For readers who may be surprised by the interpretive labels given the above responses, it should be noted that we have touched here upon what is probably *the* crucial anthropological problem. I have tried briefly to suggest what these responses, if they were given, might mean—but in Thai, not American, terms. This compounds our interpretive problem considerably. The fact that such alternative responses are not typical is in itself, as we have just indicated, of extreme importance. However, if they were given, their meanings would not necessarily be the same to the villagers as they are to us. By way of illustration: it is hard to imagine any Bang Chaner completing the statement *"The most important thing in his life is . . ."* with the words "knowing himself." Few villagers are that introspective or self-objectifying. However, if by chance an informant did offer this completion, it would certainly not mean, as it does among some American subcultural groups, "the need for self-acceptance, personal identity, freedom from intra-psychic tensions," etc. (See Erikson 1950, 1954, 1959; Riesman

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*125 15 should conform. (For example: *"The best way to treat a subordinate is . . . to speak to him with kind and agreeable words"; "When he thinks of his father, he thinks of . . .* the goodness and kindness his father has done for him.") This is not a universal pattern since definitions of the ideal are ambiguous, lacking, or inappropriate for many of the items; also, such definitions seem not to be applied to items which imply immediate action. However, they do appear with sufficient frequency to be noticeable.

156 None of this should be surprising, inasmuch as viewing behavior in terms of "the good" and "the proper" is a central characteristic of the villagers' thought and idiom. They tend, *considerably* more than Americans, to evaluate (in an ethical sense) people and events rather than describe them, and even to describe by evaluating. Ask most villagers: "What kind of a person is so-and-so?" and their replies will consistently be in terms of whether he is "bad" or "good," rather than in terms of non-evaluative description, *e.g.*, he is "funny," "passive," "interesting." The words, *khon maj dii* and *khon dii* ("a bad person" and "a good person") are two of the most frequently occurring items in the Thai lexicon. One might epigrammatically characterize much of the villagers' thought as "super-ego-dominated." That this mode of thought should be applied to many of the SCT situations is hardly unexpectable.[9]

121 15 Having recognized this tendency, however, there is the problem of assessing its psychocultural meaning. Do such appeals to the ideal, especially as applied to the self, in any way weaken our definition of the responses as "predispositions to action?" Are many of the responses mere verbalisms that have little to do with real behavior?

121 114 15 A number of theorists, notably Murdock (1940 and 1954) and Kluckhohn (1943*b* and 1951) have taken the position that cultural behavior should be distinguished into two fundamentally different forms: ideal patterns and real patterns. The former are "those norms which are verbalized as the ideals to which behavior should conform" (Murdock 1954: 22); and the latter, patterns of actual, overt behavior. Opler has taken issue with the necessity for this distinction, and has argued (1948: 116):

> My own feeling is that the concern over precepts or ideal patterns which contrast with or stand apart from behavior is a pleasant distraction which will not get us very far. In my opinion the disparity between rule and behavior in society has been greatly exaggerated. Actually, behavior remains remarkably close to rules or precepts which are

[9] This same characteristic has been described in other contexts (Wilson and Phillips 1958, Phillips 1958, L. M. Hanks 1959*a* and 1959*b*) as the essentially moral nature of the villagers' universe: the tendency, largely implicit, for Bang Chaners to perceive events of the most diverse kinds within an ethical frame of reference. It might well be, as Redfield had argued for many years (1941, 1953, and 1956) that such a cognitive orientation is characteristic of all peasant peoples.

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averages out to 40 percent.) There are no widely shared notions about the nature of a "close friend," an individual who, although a social equal, might be expected to be a source of dependence. When the quality of the friend's fellowship is challenged or placed in serious doubt, the majority of informants accept this as a reasonable possibility and exhibit little effort to reintegrate the social rupture that is thus created. In situations where the reasons for, and parties of, rejection are unknown, villagers respond with genuine self-confidence and equanimity. Excepting the "conception of friendship" item, predispositions in this area tend toward "unimodality," although not to the degree that we encountered in the area of authority.

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Orienting Toward Others

The materials to be covered in this section aim mainly at the villagers' perceptions of the way human relations should be conducted and their notions of desirable and undesirable human qualities. To a certain extent, my purpose is to check how typical and representative many of the statements on interpersonal contact are that were made earlier in the text. However, two important points about the nature of this "check" are in order. First, it must be remembered that we are dealing here with the villagers' perceptions of desirable human qualities, not those that an outside observer identifies. Inevitably, there are certain areas that an outsider may consider primary, but which the villagers may simply take for granted, or vice versa. The complete absence of references to the desirability of *sanug* or being an "amusing talker" in the responses below is a case in point. Villagers, of course, are aware of the desirability of *sanug* and probably could not get along well without it. But the capacity to be "sanug-ful" is, in their environment, such a familiar and undistinguished human attribute that to them it does not merit being singled out for special regard. As a "check," therefore, these data serve mainly to identify any inconsistencies that may appear between our own perceptions and those of the villagers, rather than to provide full confirmation of the earlier observations. Likewise, it is possible that this material may reveal concerns not previously noted. Second, it should be clear that when there is confirmation, it will obviously be expressed in the villagers' idiom, not our own. Few informants below explicitly say that what they most like about others is their cordiality and affability. However, several (irrespective of sex) do say that they like the fact that others "talk sweetly," "are not coarse," or have "a soft and gentle way." This is their way of communicating the desirability of being polite and nonimposing toward others. Similarly, their indication that *"In their relations with people, the thing they are most careful of is . . .* talking to them correctly and properly"; ". . . manners and etiquette"; or

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774 is recognized to be capricious; and (4) his departure from the body is both cause and effect of the loss of one's wits, steadiness, and equilibrium. If the *khwaan* stays away too long, the individual may become deranged and may die.

*125 *128 152 • 181 828 In these terms, the seven individuals who say that when they are frightened they would call back their "soul-stuff" seem to be expressing two related needs: a recognition of their ultimate dependence on supernatural forces and, very much like the majority group of informants, a preoccupation with psychological stability. There is in fact implicit to these responses almost an assumption that one of the marks of an adult, civilized "human being" (in its basic ontological sense) is the achievement of stability, orderliness, and stoicism in a universe—both inner and outer—that at any time may regress to a more primitive, chaotic state. The great attention that villagers give to being *riab-rɔɔj* (neat, clean, well-organized in appearance, demeanor, and speech); the fact that they often distinguish between adults and children in terms of the disorganization and randomness of the latter's behavior; the very fact that an individual's *khwaan* is most wayward during childhood; the high value that is placed upon being *chɔɔj* and the negative value that is placed on having a "hot heart" (*caj rɔɔn*) are all expressive of this assumption.

*125 *128 152 There are a few other categories of response to the above item that should be mentioned, although none is held by more than 8 percent of the sample. Four villagers say that the best thing to do when frightened is to run away; three villagers assert that they are never frightened; three do say that they would investigate the cause of the fright, indicating that this response is not completely lacking in Bang Chan; two say that they would comfort themselves; two are simply afraid; and two more have no idea of what to do under the circumstances.

To the item, *"When something worried him, he usually . . ."* 45 percent of the sample responds by saying that they would feel anxious, uneasy, uncomfortable, or unhappy. In essence, they seek no solution to their hypothetical problem, but simply accept the state of anxiety that has been created. For a few of them, the anxiety is extreme: they say they "could not eat, could not sleep, could not work," a response that I have heard several times in Bang Chan from villagers who were actually worrying through a problem. The other major response, held by 40 percent of the sample, is to perseverate over the problem: to keep thinking about it, to think about it constantly, or, as one villager expresses it, *"When something worried him, he usually . . .* thought about it. Sometimes he dreamt of it too."

The major theme of both the above responses is, of course, that although villagers handle their worries in an emotionally meaningful way,

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psychologically stressful situations. Finally, 20 percent of the sample responds simply by leaving the field: they go away or run away from those who annoy them. Although an "active" response in the sense that energy is expended in overt behavior, the reaction is a patent evasion of the annoyance and its perpetrators.

The total of these various categories is 86 percent, indicating that the villagers' tendency to avoid dealing directly with people who annoy them is highly unimodal indeed.

The distribution of responses to *"When he insulted me, I . . ."* is strikingly similar to the above. Because it is a more extreme expression of hurt, some of the responses are a bit more dramatic; also, the internal frequencies of a few of the categories are a bit different. However, the overriding tendency is to deal with the insult by avoiding the insulter and simply feeling internally—angrily, "indifferently," or unhappily. Here, 40 percent of the sample responds with anger or dislike; 16 percent indicate that they have no feelings about the insult or are *chɔɔj-chɔɔj;* and 13 percent are depressed, sorry, or unhappy. Only a single individual, however, reacts by leaving the field.

There are two categories of response for which there are no equivalents on the earlier item. Fourteen percent of the informants indicate that the insult has provoked them into improving themselves or behaving better. However, they are explicit in indicating that this is principally a means of ridding themselves of their antagonists. Another 14 percent present what are essentially "avoidance of the stimulus" responses. They say that they have never been insulted or they discuss the immorality of insults. Not surprisingly, all but two of the Buddhist monks in the sample react in this manner.

In summary, the SCT data strongly confirm the villagers' behavioral tendencies to control, deny, and inhibit their aggressive impulses. The data indicate that they do not lack such impulses, but rather that they are unable to act them out in an overt, social manner. Instead, they respond internally and live with the hostility (in an angry, "indifferent," or unhappy fashion) or work it out in the privacy of their own minds. The data also indicate that this tendency is culturally unimodal.

Dominant Drives and Wishes

The materials covered in this section are to the author the most interesting of all the SCT data, not so much from the point of view of what they reveal about the villagers' psychic life as from that of providing answers to questions about an area that is virtually unknown. There are numerous things that the villagers do—make merit, grow rice, tell funny stories, treat

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• 181 others politely, and the like—which, on the basis of the time and effort given to them, an observer might point to as representing the villagers' *128 major concerns. To a certain extent, I did this myself in the earlier, 181 "naturalistic observation" chapter. However, there are no available data on what villagers *themselves* perceive as the most important things in life or what *they* identify as their hopes and aspirations. Although few of the responses below are in themselves startling, what is revealing is the relative weight given to the considerations that are mentioned.

*125 It must be emphasized that the first two items here permit villagers to *128 move in almost any direction and, if they wish, to indulge their fondest *156 fancies. The fact that only a few take advantage of the latter is testament to 181 the deeply ingrained sense of self-constraint and personal limitation ("I know my place: not too high and not too low") that they impose upon themselves.

To the item, *"He wishes he were . . ."* (in Thai, *"Raw wants to be . . ."*) all but five villagers respond in terms of what is essentially their public role or public image. Of the five who do not, two are individuals who do not want to suffer or do not want to have anything to worry about; one wishes he were intelligent and clever; and the other two phrase their wishes in such abstract terms ("a person who behaves well") that they simply resist further explication. In any event, these are the individuals whose responses most closely approximate what could be called "responses of psychic introspection," an area which villagers for the most part ignore.

The majority of the responses fall into three major categories. Forty percent of the villagers respond in terms of either specifying a particular status they might achieve ("an army officer"; "a big shot"; "a government official who is comfortable and has honor"; "the mother of a doctor, district officer, or governor"); saying that they would like to be rich; or simply by saying that they would like to be good and diligent workers "growing a lot of paddy" or "having good jobs." Within this majority category, nine individuals specify the first type of wish, the examples cited being the most self-indulgent replies; seven respond in terms of becoming wealthy; and six want to be competent workers. This last response is essentially a more optimistic or assertive phrasing of the one to follow—villagers want to be a better version of what they are already—and could just as readily be included there.

The second major response, held by 25 percent of the sample, is to be just what they are now. This is a description of their responses rather than a deduction from them. They explicitly say that they "do not want to change"; "my status compels me to be what I am"; "only want to be a rice farmer, to earn my living by raising rice, as I do now." Although a minority group, the fact that so many villagers should go so far as to deny the

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premise of the item in order to express their satisfaction over their present and traditional state is not without significance. It is important to note that were we to deduct the six "competent worker" responses from the previous category, this category would then represent the majority.

The third major response, given by 20 percent of the sample, describes being a "good," "respected," and "non-trouble-making" individual as the principal wish of the informant. A few of these villagers want to be "good

TABLE 26

He wishes he were . . .
Raw *wants to be . . .*

STATUS:	40%	a rich man. Then he could do anything he wanted.
		a teacher, in order to teach children so that they will have knowledge and be good children.
		an army officer.
		a person who has a lot of money and paddy fields, because I have many children. I have ten *raj* (four acres) of land now. What will the children do when they grow up? It worries me.
		a good worker, growing a lot of paddy.
STASIS:	25%	he does not want to be anything.
		he never wishes anything, because his status compels him to be what he is.
		he is quite content to remain a farmer.
GOOD PERSON:	20%	a man who behaves well and has goodness, virture, and honesty.
		a good person, not a *nagkleeng;* one who does not *thiawtree* (go out, enjoy oneself, leave the family).

citizens," a response which, although small in number, reflects the importance that villagers attach to being members of the nation-state. (Considering all the different things that they might wish to be, how many Americans would complete the item, *"He wishes he were . . ."* with the statement: ". . . a good American"?) More than half these informants, however, build an interpersonal dimension explicitly into their replies by saying that they either want to be persons who "do not lie or incite people, do not have trouble with others" or are persons "whom others trust and respect."

What is most revealing about the above responses are the unexpected omissions. There are no references at all to religious considerations, even on

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*125 *128 781 [782] *125 *128 571 *156 • 181 [593] the part of older people.[12] Particularly obvious is the absence of any reference to accumulating Buddhist merit. Neither is there any reference to the pleasures derived from dealing happily or enjoyably with other people. The closest we get to this is with the responses of two informants who are concerned mainly with the welfare of their children, and who speak in terms of "inspiring respect" in their children or assuming the role of "doctor" who, either by his knowledge (in case the children are ill) or wealth, could take care of them. Given all the conceivable things that villagers might wish to be—fanciful, real, personal, social, of this world, and of any world—the dominant wish is to have status, wealth, and respectability within their prevailing peasant context.

*125 *128 181 556 The next item, *"Most of all he wants to . . ."* is essentially a confirmation of the above findings. However, perhaps because of the syntax of the Thai version of the item and the inclusion of the word, "most" (*"The thing which raw wants the most is (namely) . . ."*) the responses assume a considerably more extreme and "unimodal" form. The overwhelming majority of the informants, 77 percent, want only one thing: money. A few of them say that they want what are essentially cultural variations of money: property, rice fields, land, cattle, and jewelry. Several of them almost wax purple about the significance of money in their lives: *"The thing which raw wants the most is (namely) . . .* have money and gold, because money can help us all the time. Whatever one wishes to have, one can use money to buy it all. Even when one wants a wife, if one has a lot of money one can have anyone's daughter"; ". . . have money. Money is better than anything else. It is only the moon and stars that money cannot buy"; ". . . to have money. She wants money very much because when she lacks other things she can find something to take their place, but when she lacks money she is most unhappy"; ". . . have wealth because everything else comes after that." These responses, of course, explicate the major function of money. They indicate that money is not an end in itself, but a means by which to achieve some of the other life goals appearing here.

*125 *128 181 593 556 The minority responses to this item are in no case held by more than four individuals. Four villagers do give religious responses, saying that what they want most is to accumulate merit (one mentions both merit and money); three refer to maintaining the welfare of their families (one of them merging money and succorance by saying that he wants enough money to provide for his family); and four say that they want happiness (again, two of them linking money and happiness together).

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[196] [193] [12] There is nothing in the grammatical-semantic structure of the Thai version of this item inhibiting a religiously oriented response. The Thai cognate for the verb "to be" here is *"pen,"* which could easily result in a response such as *". . . pen khon thii mii bun,"* or ". . . a person who has merit." This would be the most obvious "religious" completion under the circumstances.

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TABLE 27

Most of all, he wants to . . .
The thing which raw *wants the most is (namely) . . .*

MONEY:	77%	have wealth, because everything else comes after that.
		have money.
		have money. Only one thing.
		have money.
		have money, clothes, and ornaments.
		have money so that he can buy things.
		have money.
		get money.
MERIT:	8%	get some merit. *Raw* want only to make merit.
FAMILY:	6%	to have knowledge; have a happy and prosperous family.
HAPPINESS:	8%	have happiness of body and mind.

The next two items differ from the preceding primarily in being more realistic and constraining. The items, *"The most important thing in his life is . . ."* and *"His greatest ambition is . . ."* ask the villagers to specify their real life goals rather than to indulge themselves (if they wish) and express their dreams and fancies. This difference in stimulus value seems to have charged their responses with a greater sense of seriousness and personal involvement than was the case on the earlier items, although from a substantive point of view the differences are not very divergent. The concerns expressed are obviously cut from the same cloth.

TABLE 28

The most important thing in life is . . .
The most important thing in raw *life is (namely) . . .*

SUBSISTENCE AND WEALTH:	57%	earning a living is the most important thing.
		to earn a living. What he should do to get a good job.
		food.
		having enough money to spend.
		a good career; a lot of money.
RELIGION:	10%	that one must make merit, so that in the future and in his next life he will have something to depend on.
FAMILY:	10%	her father and mother.
OTHERS (LESS THAN 10% EACH):		his father and mother, who have done *raw* good. He must repay the *bunkhun* (good deeds which assume reciprocation).
		how to be happy.
		death. Death is final. Beyond death is nothing.
		things concerning the heart.

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*125 *128 • 181 To the item, *"The most important thing in life is . . ."* 57 percent of the sample responds in terms of earning a living or food and money. Most of the "earning a living" responses are expressed quite flatly, but some of the food responses are presented almost with a note of urgency: ". . . rice. Very important. If there's no rice to eat, then life is very bad"; ". . . having or not having something to eat. If you have something to eat: good. If you have nothing: trouble. We people are born in order to find things to fill our mouths and stomachs. . . ." As noted earlier, the concern with elemental subsistence is primary here. The minority responses, although encompassing several categories, which thus reduces the representation in each one, are by no means insignificant. (Taken as a whole, they represent almost half the informants.) Five villagers here do stress the importance of

TABLE 29

His greatest ambition is . . .
Raw *greatest ambition is (namely)* . . .

SUBSISTENCE AND WEALTH:	44%	to be rich.
		to have a place to live and food to eat all the time, so that nobody will look down on him.
		to have money.
		in regard to his daily living. How can one count on stealing things?
MERIT:	12%	to have happiness in the present and in the future. Must try to build up goodness and to avoid different kinds of badness which will bring punishment in the next life.
HAPPINESS:	10%	to have happiness in life, because her own life has met mostly with failures.
STATUS:	10%	to have a better status than *raw* now have.

religion and making merit; and five others point to their parents or their families as the most important things in life, responses which are slightly suggestive of a concern with fulfilling interpersonal obligations or with succorance. Three others explicitly mention the fulfillment of interpersonal obligations as important. One of these individuals is concerned with others paying a debt of kindness to him; one with doing good things for others; and one makes the relationship perfectly reciprocal. Three villagers also speak of happiness as important; two, with perfect realism, mention death. Finally, two villagers mention the importance of human feelings; this is the only reference that is made to an inner psychological state in all the responses presented to the items in this section.

The responses to the item, *"His greatest ambition is . . ."* are very similar to the above. The "earning a living" reply is replaced in frequency by the more assertive desire to be wealthy, but the food reply is just as

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common. Together, they encompass the responses of 44 percent of the informants. A third type of reply comes into evidence here, and while it is substantively not at all different from the foregoing responses, it is stylistically interesting because it represents such an excellent summation of the ambitions of the villagers: ". . . to have a place to live and food to eat; to have clothes to wear to protect himself from the sun and the wind. That's enough." The minority responses to the item again encompass several categories: six villagers wish to make merit; five want happiness, five want higher status than they presently have; two want their families to be happy; three want to behave well; and two are simply concerned about their daily living. One of the latter raises the rhetorical question: "How can one count on stealing things?"

Analysis of the villagers' definitions of the most desirable things in life reveal an overriding concern with practical matters: money, earning a living, achieving status, and having sufficient food. Some, but relatively little, attention is given to religious concerns or to satisfactions of an interpersonal nature, including even family. Psychological satisfactions that are specified relate to abstract states of happiness or to satisfactions derived from knowing that one is "behaving well," although in both cases the number of villagers who actually point to such satisfactions is relatively low. Immanent to the responses of other villagers, but again, in relatively small number, are the satisfactions to be had from being a competent farmer who, through hard work, achieves a good harvest and "a place to live and food to eat; . . . clothes to wear to protect himself from the sun and the wind. That's enough." This careful and constrained conception of the good life extends even to situations where when given license to indulge their most extravagant desires, villagers will go no further than to admit that they might wish to be "a government official who is comfortable and has honor" or "the *mother* of a doctor, district officer, or governor." (Italics added.) Excepting this area of psychological license, the villagers descriptions of their dominant drives and wishes tend toward psychological unimodality, although the minority responses *in toto* are not at all insubstantial.

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situation. It might be added that since the Oedipal situation is very much of a moral crisis, Parsons' arguments go far in supporting Kaplan's earlier contentions. Parsons, however, says little about the *different* ways in which parents respond to the child's helplessness and little about *variations* in the intensity and types of identifications, cathexes, and internalizations that the individual may implement—factors which would obviously lead to different kinds of conformative tendencies. Our earlier materials on Bang Chan socialization are particularly instructive on this point. In fact, if Parsons' formulation were linked to those data, it would go a long way to explain precisely why Bang Chaners have such a weakly developed sense of conformity. In the same way, the contrast helps to underscore the profound sense of interpersonal involvement, dependence, and concern inculcated in members of our own culture during the developmental process. To Parsons, the quintessence of these interpersonal investments is, of course, the Oedipal situation: the prototypic encounter with the power of external authority and all that such power implies for the individual's need to conform and to deny and control his own impulses. If this interpretation is correct, it would further suggest that the Oedipal situation must be based, *in the first instance*, on the developmental experience of close interpersonal involvement—an experience which, as our Thai data demonstrate, is subject to broad cross-cultural variation.

The problem of "conformity" raises an additional question, one that has been implicit to many of our earlier remarks, but which merits explicit consideration in these final pages. At several points in the text, it was suggested that the villagers, with their profound sense of self-concern and freedom of choice, often choose to ignore or to isolate themselves from the effects and influences of others. This kind of behavior is a major dimension of their loosely structured relationships; it appears as well in their handling of dependency, anxiety, and aggression. From a psychological point of view, the behavior can be interpreted in one of two ways. On the one hand, it can be interpreted to mean that the villagers have difficulty in relating themselves to others, and use isolation as a means of defense. Implicit here is the notion of emotional deprivation, for who but a deprived person should wish to withdraw from contact with others? On the other hand, the behavior can be read to mean that the villagers are emotionally tough, and simply do not need other people very much. Here isolation is seen as self-reliance and mature emotional security. Throughout this study, I have chosen to stress the latter interpretation.

This kind of interpretation is not an easy one to justify in contemporary Western social science. Implicit to almost all of our thinking is the Judaeo-Christian assumption (more recently codified by Durkheim and Freud) that the greatest psychological pleasures an individual experiences are

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derived from his interpersonal contacts, commitments, and interdependencies. In fact, I would suggest that perhaps the major reason that Freud (although correct) placed so much emphasis on sex is because the sexual experience is the most absolute expression of interdependency. My materials from this little community in Thailand, where psychological isolation is the norm and where this norm is so impressed upon the Western observer, have stimulated me into wondering if perhaps our past assumption has represented only *half* the story. What we have failed to see (or if we have seen, ignored) is that there is immense psychological satisfaction to be gained through psychological isolation, or from experiences that require or presuppose isolation. Such satisfactions are found in the pleasures of lonely creativity. (Has a committee, family, tribe, or neighborhood ever written a symphony or a poem, or even a fable?) Additional examples are sleep ("sweet sleep"); directing oneself toward the extremities of human experience in matters of faith and religious belief (by definition, a lonely, isolated experience); inducing mind-body alterations, as in hallucinatory states. These are all pleasurable experiences that can be talked *about*, but never shared. My point is of course that for historical and other reasons we have come to assume that loneliness is maladaptive, something which at best is to be avoided, at worst dreaded. And this is clearly not the case: no more than is the experience of dealing with a spouse, a brother, a child, a friend, or a teacher maladaptive.

What is perhaps most surprising is that the evidence for the need for isolation and privacy has been so readily available, and yet until recently so easily ignored. All of us who have observed children—in whom the elemental psychological needs of our species are most clearly and unashamedly expressed—have been impressed by the child's need for contact, love, response, and stimulation. But equally apparent is the child's need for privacy and lack of stimulation. Thus, we are just now beginning to become aware that the child's use of his thumb (in Bang Chan, his forefinger), his trips into quiet fantasy, his recurrent assertion, "Leave me alone!" are not simply amusing infantile epiphenomena, nor even defenses against an oppressive external world, but are expressions of a fundamental human need to be with oneself.

The villagers of Bang Chan, of course, are not children. They are people who for their own distinctive psychocultural reasons—their Buddhist ethos, their child-rearing practices, their loose and simple social system—have heightened this essential human need to be left alone, and express it in a mature, adult way. Unless one assumes that the only universe is the social universe, theirs is not a case of emotional deprivation. It is rather an honest and unabashed expression of another kind of psychological need, one which we in the Western world, for our own peculiar

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156 (riak khwan). Theirs was an augmented personal potency[55] in nurture not unlike the mana so widespread in the Asian-Pacific area.[56] The best midwives were liang di, though not all liang
[159] di were midwives. This societal peak was not an unattainable ideal. In the community, certain women were pointed out as liang di and some of them recognized in themselves the validity of this title.

562 The association of rice, motherhood, and khwan now stands
774 clear. Rice made suk by cooking over a fire, was the essential
776 food not only for the body but for the khwan. Growth and life
262 depended on the nourished khwan. Rice came from a maternal figure, the Rice Goddess, Mae Phosop (cf. J.R. Hanks, 1963). Human mothers, too, when made suk, gave suk nourishment: the milk of the breast was merely transformed rice. Whenever rice was eaten throughout human adulthood, the Rice Mother continued her nourishment, for in each grain was a bit of her khwan, nourishing to the human khwan. The rice-bowl and ladle, used in many a ceremony, stood for the maternal care given a human
[782] khwan, and by extension, personal care throughout life. Whenever the rice bowl with offerings (khwan khao: soul-[of]-rice) was presented by a parturient or by a sick person, loving care comparable to maternal care was being requested.

182 The idea of re-birth, of a fresh start within the pure
885 area encircled by the holy cord, with auspicious words and
846 consecrated fire, was deep in every life-cycle rite. The
562 particular circumstance of the fire of parturition was a
372 forthright cooking to bring out and increase a woman's essential femaleness, to transform her from a youthful, partial giver into a complete, mature donor of nourishment. Such was the satisfaction of women in this female role that many said they would like to be reborn as women. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:375) for a quick run-down on a definition of mana.

182 885 846 562 372

to be reborn as men. All women were eager to undergo the post-partum fire at least once. After that modifications might be entertained.[87] Whether the baby lived or died was not pertinent, for the benefits of the fire were for the mother.

Comparison of Male and Female Maturation Rites

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The parallel ritual that fitted men to perform their masculine role was ordination into the Buddhist priesthood. The well-documented Buddhist ends should not be permitted to eclipse this other personal goal. Just as the fire prepared a woman for motherhood, so ordination changed an immature youth into a man ready for marriage and fatherhood. He too was transformed from raw (dib) to ripe (suk). Men gained compassion through denial and suffering. Since their natures were seen as hard (khaeng), strong, bent on gain, influence, and power, possibly destructive and concupiscent, the severest deprivations were invoked: the renouncement of the gratifications of sex and food. Of the 2, the deprivation of food involved the greatest break with previous habits, for since babyhood, food had been a symbol of maternal care. Hence, a man was cast on his own. His only refuge and support was the Buddha, the law, and the Brotherhood. This self-denial induced the suffering that, coupled with knowledge gained from study of the scriptures, led to compassion. The suffering in no way

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87. The fire-rest though desirable was not obligatory. In 1865, Bradley said it could be "dispensed with in times of civil commotion, for fear of the enemy" and "no damages whatever were suffered whatever to mother or child" (p.79). Like other life cycle rites it was postponed if not convenient (nadwk). Also in times of peace, "a few mothers here and there cannot lie by the fire," and a few say, "they will not" (ibid:p.79). Bang Chan would accept this viewpoint freely as reflecting an individual, constitutional set of elements, or as an autonomous decision of an individual. The woman would never feel herself as competent as a ritually mature person though.

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The medium's powers as a mǭ appeared to be entirely equivalent to a man's.

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To summarize, the fire-rest enabled a woman to acquire fruitful habits, new status, and the right to handle magic. The implications of the ritual clarified the role of women and the associated symbolism of rice, and by contrast the role of men. The nature of the magical resources available to each sex laid the groundwork for a career in midwifery for women, and for men, a career as a mǭ.

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Comparison of the respective rites of maturation points up certain contrasts and parallels between men and women. Women achieved compassion and maturity through their sexual role, while men achieved these qualities by denying their masculinity. Even a bounty of merit, which a man achieved directly by ordination, came to a woman through procreation, by the ordination of a son, or as a wife if her husband were ordained. Many activities were done by either sex, but each had certain exclusive proprietary areas. If women were donors of nourishment, men too had their donor roles, sexual, economic, religious, etc. Each paralleled the other in the formal steps to maturity, building the way for a complementary social and marital partnership for which both were ritually and psychologically well prepared.[62]

62. In contrast, note the psychological ill-preparedness, leading to severe tensions in Ceylon (Oberesekere, passim).

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the village to find dependent relatives—siblings, cousins, nephews, nieces— 596
who, unable to make a go of it elsewhere, are accepted into a relative's
family, sometimes to the extent of eventually taking over the headship of
the family. Sometimes, on the initiative and invitation of an elderly or
lonely relative, an entire nuclear family will be asked to take over or share a
household. Children of poor or "inconvenienced" families (where a new 596
child is born before the first is weaned, where there are too many children 597
for the mother to handle comfortably, where a youngster is simply being
"troublesome") are adopted or "borrowed" by other villagers for varying
periods of time. This is done preferably by relatives, sometimes by neigh-
bors, and often, in the case of boys, by the monastery, where the children
become hand-servants to the monks and are supposed to absorb, by a kind
of osmotic process, righteous ways of behaving. (Of my three male life
history informants, two were given over to relatives at the ages of two, the
third at the age of eight; one spent his childhood with four different
families, another with five families; one describes his adolescence as "wan-
dering from place to place." The psychological implications of such dis-
placement should not be underestimated.) On occasion, two independent 596
nuclear families—almost always connected by some kinship tie—will join [594]
together for convenience to share cooking facilities, in which case they
effectively become a single extended family. And in some cases, although
rare, one will encounter adult children living in independent households
but handing over their income to a parent, living in still another home, who
disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a 596
husband to be away for four or five months at a time earning money in 591
Bangkok, or during the dry season on a vegetable farm, returning home to [464]
visit his wife and children whenever opportunity permits, with or without
funds. The wife may still maintain their household, but often returns to 596
live with her own parents.[7] In a similar vein, although obviously more 586
extreme, it is not unusual to find families in Bang Chan which have simply 182
"disintegrated," as the villagers say. Much depends here on the circum-
stances of family members. Bang Chaners usually reserve the term "dis-
integrated" for families that no longer have the economic wherewithal or
justification for staying together as functioning units. In these instances,
family members simply go their separate ways, if possible back to their
families of orientation or to other relatives, husbands perhaps into the
monkhood, and the children to whomever will take them. Most frequently, [578]
"disintegration" is characteristic of very poor families, and in the minds of

[7] This pattern may be related to the old *corvée* labor pattern when able-bodied [466]
village men were away from their families for extended periods of time. [651]
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the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

Precise figures on the divorce or separation rate in Bang Chan are unknown, primarily because many marriages as well as divorces are never registered on the government rolls; also, many separations seem to follow an on-again-off-again pattern; the sanctioned occurrence of polygyny (only eight known cases out of the 296 families) and even polyandry (two known cases) complicates the problem even further. However, the fact that *four* months after I had designated a sample of thirty families from which to select informants, six of those families, or 20 percent of the sample population, had dissolved would strongly suggest that Bang Chan families are not particularly stable.

The causes of family fission in these specific cases are unknown, but what is impressive is the apparent ease with which it takes place and the equanimity with which people seem to accept it. Other informants, reporting their own experiences or observations, discuss family breakups as if they were among the more normal events of the workaday world and completely understandable. They seem to be of no greater emotional import—in the sense of eliciting recognizable feelings of distress—than losing a good price on the sale of a piece of land or on the sale of some rice. In fact, the latter kinds of situations are considerably more likely to evoke expressions of hurt or exasperation. One repeatedly encounters in Bang Chan instances on the following order: a family breaks up simply because the husband has an inclination to work for a particular person whom he likes; a wife ("she is a touchy woman") runs away every time she has a minor disagreement with her husband (minor even by village standards, for example, "Should I buy my lottery tickets from Mr. X or Mr. Y?"; "Should we invite seven monks or ten monks to officiate at this ceremony?"). The point here is that these explanations—and the low tolerance for discord, the importance to a person of a boss or job over a spouse, the desire to be footloose, which they imply—are to the villagers completely reasonable justifications for the dissolution of family units.

Many of the family relationships referred to above as "centripetal" in nature are clearly related to or derived from patterns of social organization characteristic of an earlier Bang Chan. Although most evidence indicates that even in the years immediately following the settlement of the village in

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recognition of the incongruity being portrayed; to have to explicate the way the familiar has been violated is to miss the whole point. Yet the very problem with which the anthropological investigator is characteristically faced is his unfamiliarity with the culturally implicit. His major intellectual task in fact is to make explicit that which is implicitly held by his informants. The only way to deal with this paradox is either to consider humor a special case of anthropological investigation, leave the content alone, and focus principally on forms and functions, or do a humorless exegesis and be prepared for disappointments. As indicated earlier, this writer greatly prefers the former alternative.

Why the frequency and value of the humor should be so different is difficult to say. That the villagers devote considerably more time to this mode of play and place considerably higher value on it than do most Occidentals is clear, especially from the pejorative comments of Westerners who are so disturbed by it. One possible reason may be the simple lack (compared to Occidentals) of time-consuming, functional tasks in the village; that is, given the villagers' definitions of things that have to be done during the cycle of daily activity, there is just more time available to them to be "frittered away" in amusing conversation. However, this negative explanation is at best only a partial solution since many people who have "little to do" manage to make busy work for themselves (in a diagnostic, not deprecating, sense); also, granted the fact that Bang Chaners have time to talk of many things, it does not explain why such a large portion of this time should be given over to humor. Another possible reason was indicated earlier: comedy provides an outlet for certain feelings that otherwise are denied direct expression or are a source of anxiety in the culture. The higher frequency of humor is a function of the degree of prohibition or anxiety, which in the case of some feelings—aggression, for example—is very high indeed. Since, as has probably been detected, much of the villagers' humor does revolve around aggressive situations, there is clearly some cogency to this approach. There is a third possible reason for the villagers' greater concern with humor. Humor, with its emphasis on the exaggerated, the incongruous, and unpredictable is, from a psychological point of view, essentially a form of new experience. In fact, it, and the real life situations to which it refers, are "invention" in the purest meaning of the terms: the breaking through of tried and established patterns of expectation. But people in different cultures look for their new experience, or express their inventiveness, in different ways. There is no inherent necessity (a consideration often overlooked by scholars concerned with culture change) for inventiveness to be expressed primarily through technological, economic, or sociological forms. It might well be, as Keesing has suggested (1960), that in many cultures the favoured modes for expressing the

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521 522 • 182 innovative impulses are recreative or aesthetic, either in content or form. Simply stated, the reason Bang Chaners may spend more time than Westerners in telling amusing stories to each other is because they feel they are gaining something new and worthwhile from the experience.

Politeness: A Social Cosmetic

57 It has been previously noted that the villagers' ubiquitous politeness appears in several different forms: sometimes it is associated with a genial interest in others or a concern over their welfare and comfort; at other times it is used as a means of handling one's anxiety over the intentions of others or one's uncertainty over the nature and purpose of the relationship; and at other times, it is used as a means of impressing others or getting in their good graces. The term "social cosmetic" is used here because it embraces at one time all these varying usages. A cosmetic not only makes one appear more attractive and conceals one's blemishes, real or imagined, but permits one to deal with others more easily and comfortably. The last consideration is in part a direct consequence of the first two, that is, a person who feels he is attractive to others will in all likelihood be more relaxed in his relationships with them. However, it is probably also a product of the conventionalized, relatively explicit interactional "frame" [13] that the very wearing of the cosmetic creates. The cosmetic indicates that regardless of his basic intentions, the person will conduct himself properly and agreeably; it defines the presence of and prompts conformity to certain behavioral rituals which simplify for the participants the kinds of behavior they may express. In a sense, the cosmetic of politeness represents one of the most "civilized" modes of social interaction: it is based on a fundamental concern with structuring one's behavior (again, irrespective of intentions) so as least to disturb others and thus permit them to act in socially easy, uncomplicated ways. Further, it stresses respect for the dignity and psychological integrity of others. The actual topic of conversation or non-verbal ritual that links the participating individuals together may be either meaningful or inconsequential, but that is essentially irrelevant when compared to the fact that the respect the participants feel for each other is being communicated. In

[13] This term is somewhat akin to what Goffman (1959: 22–24), in his attempt to analyze behavior in a dramaturgical framework, calls the "setting" or the "scenic aspects" of the interactional situation. However, Goffman's terms refer explicitly to the physical layout—the furniture, decor, and the like—of the behavioral situation rather than to the psychological "setting" that is created by the behavior of the participating individuals. On the other hand, his term, "personal front," refers exclusively to the attributes of individuals, rather than to the situational definitions that they create. The term "frame" used here refers to the psychological setting which is created by the behavior of individuals and which defines for all participants the nature of the situation.

121 I recall seeing portable motors stored in some Bang Chan houses and
[243] can still picture many threshing floors with neatly layered heaps
[244] of rice straw where the mushrooms grew. A few of these apparently "progressive" farmers had special ponds to which they proudly invited me to watch the feeding of the tilapia fish. Occasionally one of them seized the opportunity of my visit to inquire about sending a sick kinsman to a Bangkok hospital. Without Dr. Goldsen's analysis I might easily have been lured to generalise that certain farmers were "innovation minded."

*177 The survey's evidence against a general "innovation mindedness"
*178 cautioned me to reconsider my impressions. I realised that it would
121 be an oversimplification of the social network in Bang Chan to
621 think of it as containing a group of "progressives" who sought avidly each new agricultural wrinkle and who pitted themselves against another group of "conservatives" who resisted change. Instead I was led to see some farmers interested in certain new things, others indifferent to these but interested in other things. Bang Chan looked more like a mosaic of small groups, each fitting or rejecting the new according to its circumstance.

*177 Instead of thinking simply of a group of highly motivated,
*178 wealthy farmers who assumed the responsibility of trying out the
243 new for the benefit of their less affluent neighbors, I was
244 alerted to recognise a variety of kinds of innovation. Innovation in growing rice, where one might employ a motor or fertilisor, differed considerably from earning extra cash during the dry season by growing mushrooms. The analysis of the survey evidence made me sensitive to the realisation that mushroom culture was clearly a seasonal activity requiring little investment and open to any family, rich or poor, that needed cash. Certainly no genuine rice farmer would permit this extra work to interfere when the rains called time for ploughing. The finding that no correlation existed between acceptance of motors and growing mushrooms seemed in retrospect clear, almost self-evident.

*177 The survey analysis indicating that owning a motor, despite
*182 my initial impressions, bears no relation to use of modern medical
244 facilities, made me reexamine my initial impressions. My own
757 studies had made me aware that making a living is a positive action among Bang Chan farmers: it requires forethought and will. Health, however, for Bang Chan is a kind of negative entity to be taken for granted until sickness arrives. Bang Chan has no vitamin pills nor tonics to maintain health, though all work actively to relieve sickness. Growing mushrooms and using modern medical facilities are phenomenally different undertakings. Certainly the survey analysis in this regard bore out and corroborated this "thematic" analysis.

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TABLE 1. THOSE WHO OWN OR USE SMALL MOTOR ARE MORE LIKELY THAN OTHERS TO TRY OTHER AGRICULTURAL INNOVATIONS (FARMERS ONLY)

	Owns motor	Does not own motor but uses it	Neither owns nor has used motor
(Total cases)*	(70)	(150)	(106)
Have you ever used fertilizer?**			
Yes	18%	16%	3%
No	82	84	97
Have you ever raised tilapia?			
Yes	53%	29%	22%
No	47	71	78
Have you ever grown mushrooms?			
Yes	40%	49%	37%
No	52	51	66

* The bases on which per cents are computed appear in parenthesis at the head of each column in this and subsequent tables. Actually the bases vary by a few cases, table to table, since there were always a few respondents who did not answer a given question or whose answers were unclassifiable.

[125]

** Asked of farmers only. The bases are:

Owns motor	65
Does not own motor but uses it	141
Neither owns nor has used motor	82
NA	5

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There is some evidence, then, that if a person is willing to try out one agricultural device, such as the motor, he is more likely to try out other agricultural innovations. However, this "clustering" cannot support the hypothesis that there is something like "innovation mindedness" in general, or that acceptance of any innovation in a series is predictive of acceptance of all other innovations in the same series.

Evidence may be cited to substantiate this contention. In the first place, if such a clustering indeed prevailed, one would expect users of any of these agricultural innovations to be more disposed than others to use, as well, certain non-agricultural innovations, such as hospital or clinic facilities, for example.

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228 And no such tendency may be discerned in the present data. (See Table 2.)
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244 TABLE 2. USERS OF HOSPITAL AND CLINIC FACILITIES SHOW NO SIGNIFI-
743 CANT DIFFERENCES IN RATES OF ACCEPTANCE OF AGRICULTURAL
• 182 INNOVATIONS

Agricultural Innovations	Percentage who have ever gone to hospital or clinic for treatment	Total cases
Mushrooms		
Tried them out	36%	(143)
Never did	38	(108)
Tilapia		
Tried it out	44%	(104)
Never did	34.	(225)
Motor		
Tried it out	37%	(215)
Never did	36	(104)
Fertiliser*		
Tried it out	37%	(32)
Never did	34	(232)

* Farmers only

228 In the second place: use of the motor is much less strongly
241 linked to use of mushrooms than the use of fertiliser or tilapia.
244 It may well be that there may be some common factor strongly underlying the decision to use the motor on the one hand, fertiliser and tilapia on the other, while the decision to try mushroom-growing is relatively more "autonomous". A possible explanation for the
402 greater "autonomy" may be sought in the differential requirements
*197 for growing mushrooms compared with the requirements for adopting
*178 the other innovations.

Both tilapia and sulphates demand extra heavy work, care, an essential initial investment, and willingness to wait for a delayed return. An additional requirement for a successful and continuous pay-off from both these innovations may be an aptitude to follow rather complicated instructions. In the case of mushroom growing, however, the initial investment is relatively small, the labor may be tedious but is not heavy, no protracted or complicated care is involved, and the results of the effort are relatively quickly realizable.

*243 parcels by siblings who failed to include their share in
423 those parcels in the reporting of areas owned. For want
427 of a proper basis for adjustment, we chose to let the figures
*128 stand as they were reported.

Table 19 shows that the combined area in rice of all the 216 farms in Bangchan was 6,638 rai, or almost 99 per cent of total area planted to rice by the residents, the balance of 84 rai being worked on by residents whose occupations were those other than farm operating. Of these 216 farms, 48 were classified as all owned, 88 part owned, and 80 all rented.

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184 The conventional system of classifying farms accord-
423 ing to land tenure into all owned (owner-operator), part-
554 owned (part-owner), and all rented (tenant) should not be
427 used without modification as a classification of economic
*128 or social status in population pressure areas where an efficient size farm is usually an exception rather than a rule. In these areas, it does not hold, as it seems to imply, that an owner-operator has a superior economic status than a part-owner and that a part-owner is still in a better eco-
[434] nomic position than a tenant. There is a wide range in size of farm operation and hence of incomes within these categories.

Within the category of owner-operator, there are major differences in size of operation and hence economic and social status. If a farmer -- to cite a specific case, Farmer A in BC4 -- owns the large area of rice of 235 rai,

[TEXT CONTINUED ON PAGE 133a]

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he may rent out some and retain only the part he can operate well. In this case he chose to operate 65 rai in 1953, renting out the balance of 170 rai. On the other hand, another farmer -- Farmer B, also in BC4 -- who owns only a small parcel of nine rai may not be able to rent in additional land to make an efficient size farm. In this case, B was not able to rent in any land and had to work on only nine rai of his own in 1953. In an area of relatively low population pressure, the probability of failure to rent in some more land may be small, but it is not so small in the relatively high population pressure areas such as Bangchan. The difference between farmers owning a small area of land and a large area is so great from the standpoint of economics and social position as to warrant having two sub-divisions of the conventional "owner-operators".

Small "owner-operators" may increase their size of operation by renting in some more land and thus becoming part-owners. These farmers actually improve their socio-economic status if they are able to move from the group of owner-operators into the group of part-owners. To use another concrete example, Farmer B, mentioned in the preceding paragraph, who worked on the nine-rai parcel of his own, does not earn more farm income than Farmer C, also in BC4, who owned 20 rai and still rented in 30 more rai in order that his four family workers including himself might be fully employed with a 50-rai farm.

178 in this zone has since been considered as residential land
423 although there has not been any apparent change in land
435 utilization.

178 It should be noted in this connection that during
423 the same period of 1948-53 there has been a steady rise in
435 the price of residential land in Bangkok at a highly varying rate depending upon location. For the purpose of our discussion, we may consider only the price of land in the northern suburb of Bangkok, on each side of Paholyotin Road (the popular Bangkok-Donmuang Road) which branches off at Kilometer 20 into Minburi Road which cuts across Bangchan Canal at Kilometer 13 (Crossing of Paholyotin and Minburi Roads as Km.0). It has been observed that the price of land on each side of Paholyotin Road has been increasing rapidly: a parcel at Km. 11 which was valued at 50,000 baht per rai in 1952, for example, was sold at 150,000 baht per rai in 1954. It has also been observed that price of land in this section of the Bangkok suburb declines with the distance from Bangkok proper: the 1954 price was 150,000 per rai at Km. 11, and 50,000 baht per rai at Km. 20 where the Minburi Road begins. If the Minburi Road is considered as a continuation of Paholyotin Road, it is only natural that the price of land would gradually decline to 12,000 baht per rai at Km. 13.

182 It is conceivable that the recent increase in Bangkok
423 population is one among several factors causing the rapid
435 rise of residential land prices. When the rapidity of the
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182 423 435 369 rate of increase in land price is considered, however, it is reasonable to believe that population increase is certainly not the only factor.

[121] It is not the purpose of this study to deal with the price of urban land. Neither the problem of land utilization nor the whole economy of Bangchan can be clearly understood, however, without some account of the rapid building up of urban land prices in recent years. It is thus necessary to digress at this point into some factors accountable for this rapid rise.

369 454 423 435 178 182 It has been observed that the volume of domestic saving in Thailand is small because of the low level of income, and that such saving as does take place tends to be put into real estate and gold and jewelry. Concentration of income resulting from the postwar phenomenon of shifting of political and economic power into the hands of few people, however, has somewhat increased the proportion of saving; but this is again used largely to purchase real estate. The natural result is the boosting up of urban land prices especially in the suburban sections where there has been a relatively high degree of improvement in road construction since the war.

423 45 178 369 182 This investment in land purchase has more than ever before assumed a speculative nature. This is largely due to the experience of inflation initiated by World War II whereby huge and easy profits could be made from buying and selling of land. Corruption in the sale and purchase

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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423 of government real estates has no doubt increased these
45 speculative activities. The process has also been greatly
178 accelerated by an enormous increase since the war of banking
369 facilities, which traditionally extend loans on mortgage of
182 real estate. It should be noted in this connection that the demand for loans in Bangkok has been so great as to allow most commercial banks to adopt a highly discriminating policy of extending loans only to their favored customers who are often willing to give as much as five per cent of the loan sought to bank officials as a customary "tea-money".

182 A third factor is that some organized financial
423 institutions have actively been engaged in deliberate at-
435 tempts to boost up land prices for their own speculative
455 gains. This was the immediate cause of the rise of land
178 price in Zone 1 from 300 baht per rai in 1948 to 12,000 baht
369 per rai in 1953. According to several informants in Bangchan, a representative of an insurance company in Bangkok came to the village in 1952 and offered to buy land on each side of Minburi Road at 10,000 baht per rai. This man was able to buy 20 rai of land at Km. 8, Minburi Road, which is in the immediate neighborhood of our arbitrary Bangchan Village, at his offered price of 10,000 baht per rai. At the time of the signing of the purchase contract, he made a 10 per cent down payment of 20,000 baht. Although the balance of 180,000 baht was not paid and the contract was later forfeited, the proposed purchase immediately pushed land prices in Zone 1 up to 10,000 baht per rai or over. According to

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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423 our informants, the insurance company owned hundreds of
435 rai of land in the vicinity. By spending only 20,000 baht
456 in boosting up land prices, the company thus set the stage
178 for making a large profit through sale of their own land
369 at inflated prices.

178 While the increase in land prices in Zone 1 was
423 attributable to the sudden assumption of residential land
435 prices, this explanation does not apply to the increases in land prices in the other zones which have remained agricultural throughout. Although less spectacular than the case of Zone 1, the rise in land prices in these six zones was also quite abrupt, averaging 560 per cent for the five-year period from 1948 to 1953 (Table 28).

423 Capitalized valuation of these farm lands (Zones
434 2-7) may shed some light on the situation, although there
427 is limitation especially to the cost concept. There are two ways by which a capitalized value of farm lands may be obtai (1) by capitalizing income from the farm operation left afte payment of all factor costs except land, and (2) by capitalizing income deriving from explicit rent of the land.

243 Receipt from one rai of rice land in 1948 may be cal-
435 culated from the crop of 32.1 tang at 252 baht, using that
434 year's average farm price of 7.86 baht per tang of paddy.
423 When the cost, including an imputed return to all labor but
427 excluding rent, of 166 baht per rai is deducted, a residual return to land of 86 baht per rai is obtained for the year.[15]

15. For want of sufficient data, it is assumed that the cost items other than rent remain the same.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Table 30 shows that the size of the sample has continuously decreased from 104 in 1948 to 103 in 1949, 98 in 1950, 96 in 1951, 96 in 1952, and finally 87 in 1953.[1] It should be noted, however, that we re-visited the village in 1952 and that most of our materials on business and living aspects of the farms were gathered from the sample-farms existing in that year; hence we occasionally referred to the sample of 96 continuing farms.

One way of minimizing the problem of declining size of the sample is to include in the sample new farm operating families which have branched out from the original sample-families. It was found that there were ten such families when we re-visited the village to continue the study in 1952. If this method were adopted, it would mean that the size of our sample would then be 106 farms, a figure which does not differ very much from the original size of 104 farms in 1948.

Another way of solving the problem is to abolish the continuing operator approach entirely in favor of the re-sampling approach -- that is, a fixed sample size is chosen and new sampling is done every time a new survey is to be conducted. This approach, however, has the drawback that

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[243] [178] [433] [463] [182] 1. According to Table 14, crop indices were as low as 86.8 for 1949, and 87.5 for 1952; while those for 1948, 1950 and 1951 were 111.4, 111.1 and 102.7 respectively. It is worth noting that a relatively large number of farm operators changed their occupation (or moved out of the village) in 1950 and 1953. When Table 14 is studied together with Table 30, it is seen that there is a close correlation between change in occupation (or change of farming place) and crop failure in the preceding year.

[TEXT CONTINUED ON PAGE 180]

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125 it would deny any benefit that would arise out of continuous observation of each farm and farm operator through a series of years. With a view to retaining this benefit of continuity, we decided to adopt the first method -- that,is, we included in the sample the ten new families branching out from the original sample-families. Thus, in our subsequent study in 1952 the size of our sample became 106 farm operating families.

There were, however, some types of data which involved records in the past four or five years, such as harvested crop during 1948-52, accumulation of wealth, major receipts and expenses during the same period. In these cases we naturally used the continuing sample of 96 families.

*243 Composition of Farm Operating Families

162 Table 31 shows that the size of the farm operating
592 family decreased from 6.3 in 1948 to 5.7 in 1952. It also shows that, while the number of adults remained more or less constant, the decrease in the size of the family was due almost entirely to the decrease in the number of the young from 2.5 in 1948 to 2.0 in 1952.

*243 A possible explanation for this lies in the economic
162 consequence of the war. Strict government control of the
592 price of rice and of the internal movement of paddy during
• 182 the war and also in the immediate postwar period has so
178 adversely affected the economic condition of rice farmers
[582] that marriage has often been postponed. In cases where

[TEXT CONTINUED ON PAGE 182]

243 marriage did take place, the couple were usually obliged
162 to stay with the parents of either the husband or the wife.
178 It is reasonable to believe that the nascent period was
592 prolonged during this period of hard times. Thus, the
182 family size tended to be larger than it normally is. This
[582] is especially true for rice farming families where there always is some work for members able to work. It is not surprising, then, that the average size of farm operating families in Bangchan was 6.3 in 1948 while the average size of all families was 5.7 according to the 1949 census. A steady rise in the price of paddy after the war has improved the economic condition of rice farmers. The increased income, however, had to be spent first on replacement of equipment and housing facilities which had been long overdue.
[792] Finally, the bumper crop of 1948 with an ever-increasing price put an end to farm misery, and the following dry season saw a record number of newly ordained priests and
[591] merit making activities. From then on proportionately more marriages took place and there were fewer economic obstacles to keep newly wed couples from starting out independently. The combined effect of termination of prolonged nascent period and freer establishment of new families was that the size of the farm operating family was considerably reduced.

16 It may seem strange that more marriages should bring about a drop in the number of the young from 2.5 per family in 1948 to 2.0 in 1952. By the young is meant, however,

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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182 464 592 Nevertheless, the advantages of transient member arrangements to both parties should not be overlooked. It has at least provided the poor with a kind of economic security, since they might arrange to join some families in the village in time of crises. This is perhaps the principal reason why the village, not the living quarter, is considered by most Bangchan people to be their home. By sending some offspring to live with a more affluent family, the poor villagers had been able to reduce the size of their families and thus had managed to prevent their level of living from falling far below the minimum level of subsistence. As for the accepting families, it has already been shown that they had enjoyed the benefit of cheap labor provided by transient family workers.

243 178 463 621 [592] Changes in Farming Population in Bangchan

Table 11 shows that the number of farm operators in Bangchan had decreased from 229 in 1949 to 216 in 1953, while the number of the family heads whose main incomes were derived from farm labor had increased from 27 to 38 within the same period.

When the farm operating families were studied individually, it was found that 181 families had been operating their rice farms in Bangchan throughout the period. There were 48 farm operators whose names disappeared from the list of operators in 1953. These were compensated by 35 new operators. Thus, there was a net loss of 13 farm operating families during the period from 1949 to 1953.

262 family sit at the table while "with-rice" are placed at
264 the center and each person must partake of a small bit of these, just enough to properly go with a spoonful of rice taken each time. This table etiquette is generally observed throughout the country by all classes of people. A story had it that a Thai student of an aristocrat family wrote home objecting to the proposed marriage between his sister and one of his Thai friends in America. One count against the man was that he had been observed to have taken too much "with-rice" while dining out at a Chinese restaurant in New York!

511 Among the factors affecting variability of the rate
• 182 of consumption of various items of goods, the following may be mentioned:

261 a. Relative price of the food in relation to its
511 ability to mollify hunger when taken with rice. When Bangchan
182 farmers were questioned why they did not consume eggs produced at home but instead sold them and bought the inferior platoo fish (Rastrelliger chrysozonus), the answer was that an egg barely induced them to take a plate of rice whereas one platoo fish bought with half the money obtained from the sale of an egg could induce them to take three or four plates of rice and thus satisfying a hearty meal.

511 b. Homogeneity of quantitative need for certain
182 products like rice, fish, clothing, tobacco, and garlic. Consumption per consuming unit of these goods has been observed to be more or less constant regardless of the prices and the family's purchasing power.

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511 c. The family's purchasing power. Certain goods considered as luxuries -- medicine, eggs, pork and beef, and white sugar -- were not consumed by poor families.

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511 d. Individual taste and preference. The Moslems would not consume any pork although they had enough money to buy it. Some poor farmers spent more money on curry essence than their more affluent neighbors because they preferred highly flavored dishes, and some tobacco smokers did not spend a cent on tobacco binder because they preferred the home-grown banana leaf binder to the thatch leaf binder which had to be purchased.

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[184] e. Producing ability of the family. It was observed that those who caught more fish tended to consume more fish regardless of their financial conditions.

f. Health affected the consumption of medicine.

[431]
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[554] g. Prestige affected the amount of cash contributions to neighbors.

h. Personal habits -- thrift, fun loving, indulgence, like or dislike of liquor -- affected the amount of personal expense.

i. Presence or absence of children of school age in the family affected the consumption of cookies.

Special Expenses

511 By special expenses we mean major items of expenses which do not occur regularly but which may arise in one time or another. Examples: purchases of land, gold and

Chapter VIII

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CHANGES

In studying change in the customs surrounding childbirth in Bang Chan, we have D.B. Bradley's description of birth in Bankok in 1865 as a base-line on which to project our findings. Since most of the population of Bang Chan (Thai, with a few Laotians, Mon, Muslims, and Chinese) stems from Bangkok, we may reasonably assume that the parallels derive from a true historical connection. Bradley's description fitted Bang Chan as if written today:

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> "Siamese theory in regard to the part which external and internal fire plays in the functions of life and health is made to work powerfully...There is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which, if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child...[Thus a woman lies by the fire]... exposing all parts of her body, and more particularly her abdomen, to that drying process, so that the uterus shall be forced to shrink up quickly to its normal dimensions, and the sanguineous streams which had been diverted to support the child before birth, shall, by fire, be driven backward to their more usual limitations, all which is...a sine qua non to a sound constitution and good health in the future..." (Bangkok Calendar, 1865:78-84).

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Bradley showed that some behavior one might call "change" today was a recognized alternative in 1865. For instance, in Bang Chan a few women "are made too unhappy (klum) by the fire so cannot use it. They should take extra amounts of pickled medicine" (nâ dông). Bradley wrote, "a few delicate females...who cannot endure [this] usual treatment, are compelled, against all their ...fears of the consequences, and all the importunities of their

178 846 183 372 759

friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of ...medicines" (p. 81).[74]

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The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: *fai-chut*) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Minburi Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered net-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

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Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (*suk*) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a *mɔ̄* did the same (with the possible exception of the sponging with tepid water), that as a *mɔ̄*-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorization, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calender, 1871:187-189).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1920's.

better nutrition for all family members or whether to concentrate on the feeding of children or other vulnerable groups, the values of the society should be considered. The importance of a suitable variety of food for health needs to be taught to adults as well as children in Bang Chan. The concept that good choice of food is important in pregnancy and lactation and for the health and growth of children seemed to be entirely absent. Since few believed certain foods to be harmful at these times, however, teaching how to choose foods for health should be easier in Bang Chan than it is in areas where positive taboos are common.

Behavior different from the traditional one may sometimes lead the way to changed practices among those who observe or hear about it. For this reason, in certain instances an informant who had ventured to deviate from the traditional practice has been identified in this record. Thus, we noted that in a number of ways the women school teachers and the wife of a man teacher deviated from the traditional behavior in Bang Chan. For example, a school teacher's wife used the hot ashes chamber after her fifth child rather than lying by the fire. She was one of two women informants who "ate all kinds of food" at this time when most women in the community restricted their diets very markedly. She did not consider taking the baby out into the sunshine harmful; indeed, she believed it would make the child stronger. This same mother was 1 of 4 in our series who had taken the baby to be vaccinated against smallpox. She and three women school teachers were among those who continued to give their babies boiled water to drink much longer than was customary in Bang Chan. The one person who suggested a specific food (eggs) as being good for a woman to eat during pregnancy was a school teacher. The two women who planned to go to the Nimburi Health Center for delivery were school teachers. For lack of time after labor began they did not carry out their plans; but the fact that they intended to do, by choice, what was usually the last resort when labor proved long or difficult, may be significant.

Along with these departures from traditional ways and acceptance of some "modern" practices, the same persons might cling to other sorts of traditional behavior. The wife of a school teacher for example, though she thought that taking the baby into the sunshine might be favorable rather than harmful, said that if the baby were to be out very long she would cover its head with a beret to avoid bringing "cold" into the baby. This same mother took her child to the Nimburi Health Center for treatment for a skin infection, but when the condition did not clear up immediately after modern therapy was begun, she took the child to a traditional doctor who prepared a decoction of herbs with which she treated the baby.

The behavior of respected persons, such as some of the school teachers, should be influential in helping to bring about

desirable changes in Bang Chan. An important point, however, is that leaders should understand, insofar as possible, the reasons behind the "modern" ways and not accept them merely because they are considered modern. Without adequate understanding traditional behavior which has served a useful purpose in protecting the people's health might be abandoned, or a half-understood "modern" way substituted to their hazard. For example, a popular traditional midwife said she knew that water was not boiled for mothers and babies in the hospitals in Bangkok, and the wife of a school teacher said she did not think use of boiled water was really necessary during (2)juu (1)faj. Traditionally, heat has been considered beneficial at this time. If this idea were extended to include an understanding of the value of boiling water to destroy harmful microorganisms and parasites, the traditional practice might be confirmed and even extended for the protection of other family members. If a sanitary water supply eventually becomes available in Bang Chan[1], precautions required to keep it so might be thought of as analogous to boiling of water; or chemical purification might be understood by the peasant as a modern way of conferring on water the virtues which boiling conferred when the "old way" was followed. Improvement in health and nutrition in Bang Chan must, of course, be seen as a long-time goal dependent on continuing education.

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[32] 1. In 1952-54 there were no wells in the area, and the problem of planning for a sanitary water supply when the plain is flooded for a part of each year is not an easy one.

4:Phillips E-4,5 (1956-1957) 1966
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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

4:Phillips E-4,5 (1956-1957) 1966
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the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

Precise figures on the divorce or separation rate in Bang Chan are unknown, primarily because many marriages as well as divorces are never registered on the government rolls; also, many separations seem to follow an on-again-off-again pattern; the sanctioned occurrence of polygyny (only eight known cases out of the 296 families) and even polyandry (two known cases) complicates the problem even further. However, the fact that *four months* after I had designated a sample of thirty families from which to select informants, six of those families, or 20 percent of the sample population, had dissolved would strongly suggest that Bang Chan families are not particularly stable.

The causes of family fission in these specific cases are unknown, but what is impressive is the apparent ease with which it takes place and the equanimity with which people seem to accept it. Other informants, reporting their own experiences or observations, discuss family breakups as if they were among the more normal events of the workaday world and completely understandable. They seem to be of no greater emotional import—in the sense of eliciting recognizable feelings of distress—than losing a good price on the sale of a piece of land or on the sale of some rice. In fact, the latter kinds of situations are considerably more likely to evoke expressions of hurt or exasperation. One repeatedly encounters in Bang Chan instances on the following order: a family breaks up simply because the husband has an inclination to work for a particular person whom he likes; a wife ("she is a touchy woman") runs away every time she has a minor disagreement with her husband (minor even by village standards, for example, "Should I buy my lottery tickets from Mr. X or Mr. Y?"; "Should we invite seven monks or ten monks to officiate at this ceremony?"). The point here is that these explanations—and the low tolerance for discord, the importance to a person of a boss or job over a spouse, the desire to be footloose, which they imply—are to the villagers completely reasonable justifications for the dissolution of family units.

Many of the family relationships referred to above as "centripetal" in nature are clearly related to or derived from patterns of social organization characteristic of an earlier Bang Chan. Although most evidence indicates that even in the years immediately following the settlement of the village in

4:Phillips E-4,5 (1956-1957) 1966
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Giggling is very often used in the marketplace when an item must be bargained over. Similarly, a villager who wants to quit working for another will usually preface his request with some giggling, although equally often he will just leave—saying absolutely nothing—and will later send a middleman to collect his wages and make the severance official. The latter alternative is prompted by the desire to avoid *all* awkwardness.

The third major form of the villagers' politeness—that associated with making a good impression on others—has to a certain extent been covered by the materials already presented. Thus, in terms of the actual manifestations, there is really little difference between flattering another person, for example, because it will make him feel good, because it will make getting something out of him much easier, or because it will make one appear much more attractive in his eyes. However, it is clear that the motivations in these three cases are all quite different. It is for this reason that this last category has been introduced. When villagers meet another person whom they regard as significant (and this by no means includes all their contacts) they do put forth considerable effort to make a good impression on him. And being polite—courteous, helpful, flattering—is one of the most suitable means for achieving this effect.

Discussion of this interactive mode would perhaps not be necessary were villagers themselves not so keenly aware of it. Village children are continually and consciously taught, by word and deed, the necessity always to put their best foot forward (cf. the earlier illustrations in *Characteristics of a Good Person*). Bang Chaners assess themselves and others in terms of their capacity to make themselves appealing: both the "good" and the "competent" person is one who can make himself attractive by speaking softly, gently, and if possible, beautifully and cleverly. Often villagers take offense at an individual who refuses to do this because his very refusal suggests that he does not feel respect for others. Again, it should be emphasized that we are talking here about the form of behavior, not the substance or commitment behind it.

What the ultimate psychological roots of this behavior are is unclear. It is apparent—largely because of the great attention given to formal considerations such as manners, proper speech, and the like—that this concern is not prompted primarily by the desire to be loved by others. Love would require a more substantial medium. Gaining the respect and approval of others is clearly an important component of the attitude, but one wonders why a people otherwise so self-loving and self-accepting should need their self-esteem repeatedly validated by others. Perhaps the most important reason behind the villagers' concern with impressing others really has little to do with the others themselves, although obviously at the behavioral level it implicates them—that is, I would suggest that the major factor behind the

4:Phillips E-4,5 (1956-1957) 1966
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considered of moment by the group. I think that it can be demonstrated that when precept and activity draw too far apart, a modification of one or the other is likely to take place to close up the gap.

In assessing my psychological test materials, I take the following position with regard to this issue. The distinction between the ideal and the real is an analytic requirement because obviously there are some instances where the two patterns are not congruent. However, once such distinction has been made there is no inherent necessity to assume that there *must* be a gap between the two patterns or if there is a gap, to assume that it must be especially wide. One will inevitably encounter in Bang Chan cases where subordinates are not spoken to "with kind and agreeable words." But on the whole, the extent to which real behavior does accord with this precept is impressive. For the most part, it is not a mere verbalism but rather a viable guide to action: a subordinate who is not treated with kind and agreeable words will not (depending of course on other situational factors as well) long maintain his ties to his superior. This same reasoning applies to the majority of the cases in which informants couch their responses in terms of cultural ideals.

A third aspect of the responses concerns the psychological "level" at which they will be interpreted. Because of the highly realistic nature of the completions, the necessity to interpret them in Thai terms (which precludes "blind analyses"—see DuBois 1944) and the necessity to work with the pooled responses of many individuals, our interpretations will not go psychodynamically very "deep." On the other hand, neither will we remain at the level of the manifest meanings of the responses. Although an informant's completion may represent a precise description of the way he would behave in real life, and in many cases does, it is more sensible from an analytic standpoint to view the response as a symptom of an underlying, more generalized, psychological orientation. The reasons for this are twofold: first, many of the responses which are superficially different seem to express simply alternate facets of a single, underlying predisposition; second, and more important, we must remember that on theoretical grounds personality characteristics are not, as Inkeles and Levinson point out (1954: 981) "phenotypic, behavior-descriptive terms, but rather are higher level abstractions that refer to stable, generalized dispositions or modes of functioning and may take a great variety of concrete behavioral forms."

In these terms, a statement such as *"When he saw that others avoided him, he . . .* also avoids them" indicates not only a person's desire not to associate with those who avoid him but, more important, an underlying, more general disposition *to accept and maintain a breakdown in social relations.* Moreover, the latter interpretation also encompasses such varying responses as: ". . . must not speak to them because they are bad. They

Housing

342 The type of house, whether big or lowly, made a difference in the comfort and care of women. The big houses were teak-paneled and floored with a good roof of thatch, tile or corrugated iron. Their high piles insured dryness during flood season. The sleeping and living space was a single airy open room, often with one or two sides balustraded rather than solid, and protected from the weather by the roof's overhang. The kitchen was sometimes a separate room. There was always one small enclosed room, perhaps ten feet square, or larger, with a door and a window. This room was used for keeping valuables under lock, and whenever privacy was desired: as a marriage chamber for bride and groom, or as a quiet room for a senile parent. Because of its almost solid walls, it was poorly ventilated and hot. Childbirth took place in this little room, if convenient, or out in the main part of the house. The fire-rest was in this room so that the dreaded wind could be kept out.

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342 The poor lived in modest earth-floored cottages of bamboo
184 frame, thatch sides and roof, with one or two raised wood plat-
352 forms for sleeping and sitting. In the rainy season, these
844 cottages could be damp. In fact, one October the water was observed ankle deep inside a house, and the wife splashed around at her chores. Under the latter conditions, a woman in childbirth would be moved to some kinsmen's house. Delivery took place on one of the sleeping platforms, and post-partum rest was on a plank raised off the earth floor, unless space permitted that the plank and temporary fire-floor be placed on the platform. On one observed occasion reed mats as protection from drafts were temporarily set up, making an enclosure about three feet high within which a mother lay in her post-partum rest period.

Cash

434 Cash was short to everyone. The poor felt very poor and
426 the rich did not feel rich. This was because the rice-money,
[556] which came in a lump sum once or twice a year, was at once turned over to clear debts, to make large purchases of agricultural equipment, to repair the house, or to perform elaborate ceremonies. What was left over was not kept around the house for day-to-day expenses for fear of robbery, but was immediately loaned out. Thus cash was not available for emergencies
434 which in childbirth might mean taxis or hospital care. Being
844 rich or poor made little difference in Bang Chan, however, as
556 to the quality of the obstetrical help given.

597 Adoption was fairly common, though not always of lasting satisfaction. On the other hand, in this watery domain, the
842 trouble (lambāk) in raising children, mostly involving
855 ceaseless tending, was such that a childless woman was accorded a little surface envy as one who had missed or avoided a lot of trouble. The attitude towards twins was
845 ambivalent. "Twins are unlucky because there are more mouths to feed, more labour, trouble, and not enough milk. With twins, a poor family will never rise again." "No one will marry a twin for fear of begetting twins." "If twins are of a different sex, one must die." Yet others considered twins lucky "because they could be nursed at the same time, and given the same things."

855 Wealth differences also affected these attitudes,
842 especially if babies came in close succession. Comments heard were: "Why do poor people have more children than the rich?" "Many visitors come bringing gifts to a rich parturient
• 184 because she is respected. No one likes to talk to a poor person." "Those who have a baby oftener than every 3 years will never be rich. Fortunately, 4 of my 7 children died." The increasing cost of raising children was a concern. In one of the few families that had plans for their children's education, the father underwent a vasectomy after his 9 fine children were born, because he "feared he would not be able to feed them all." His wife, reassured that the operation had not "hurt" her husband, "was glad he had done so."

847 Abortifacients and Contraceptives

Episodes concerning abortifacients were whispered about
[779] both Muslims and Buddhists. A Buddhist who induced abortion was seen as impeding an individual's rebirth and disobeying a religious prohibition on taking life, tenets which did not obtain among the Muslims. Abortifacient medicines to be used with abdomen-pressing were quietly sold by Muslims.[6] "Unmarried Muslim girls use them mostly," reported one Buddhist, "and they almost die in the process." A Buddhist curer had similar expensive medicine, but "unlike the Muslims, he will
842 not destroy the baby." Chinese boat-vendors also carried contraceptive medicines (yā) which were secretly discussed by wives. A husband reported his wife as saying, "Old ways

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6. Fraser (193) reports that in the Muslim village of Rusembilan, abortions were openly practiced, (as if part of a Muslim cultural heritage).

Chapter II

MAN AND WORLD

771 Bang Chan had for years heard preaching from Buddhist scriptures. Co-existing with these teachings were Hindu elements referring to Brahma, Shiva, and others. People [192] also believed in an animistic lore concerning frightening ghosts and spirits (phī), protecting deities (thēwadā), maternal goddesses, princely spirit-lords, and other supernatural guardians of a more or less benevolent nature. To these beliefs were added special bodies of knowledge, such as sacred literature from India and traditions of astrology from both China[8] and India. Other elements might be traced to Muslim influence, just as Muslims shared some of the foregoing references with their Buddhist neighbors. Bang Chan shaped its views of nature and man from all these sources. However, we shall not try in what follows to specify the sources of its beliefs.

826 774 • 184 192 The Human Body

The body of flesh, blood, bones, and other materials, harbored the noncorporeal aspects, in particular a person's merit store (kam; Skr: karma) and his several souls, viz., the khwan, the winyan, and the four chēttephūt (cf. J.R. Hanks, 1959). Views of the human body formed no unitary system, but were as varied as their origins. Thus, sometimes villagers distinguished the material from the non-material: "a human being is composed of two aspects: rūp (body) and arūp (non-body)." Sometimes learned persons referred to the Hindu-Buddhist concept of 32 parts of the body, one of which, the winyān-soul, was the "organizer" of the others.

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8. No trace was discovered of the Chinese concept of Yin as female, dark, cold, and evil, etc., and Yang as its opposite.

[115] 9. Ming (Mc.F. 880) was once given as a term for "soul" by a Muslim informant, but without further information.

843 262 [184] sin for the sake of nourishing the child. Some Thai village women followed a local Chinese belief that eating a female chicken gave strength during pregnancy. Eating a rooster, though, caused miscarriage through "estopic gestation." Thai Muslims recommended chicken whole-heartedly.

843 278 Medicines

Beginning early in pregnancy, one or more kinds of medicine (yā) were taken. These hot-tasting medicines of ginger, galanga, pepper, and such in 28 per cent alcohol were either bought from the big selection at a Chinese drugstore, or were made up at home from alcohol or water and an envelope of ingredients. A woman made the choice herself with the advice of experienced persons. Even the Muslims who ordinarily frowned on alcohol permitted their women to take it at this time. A few women, though, said they "did not like to get drunk," so took their medicines in hot water. The quantity varied from two to six spoonfuls per day, with big increases as delivery approached, e.g. "two big cups a day of it during the ninth month."

The primary purpose of medicine was to increase the appetite, but there were other reasons. Fragrant Medicine (yā hausum) cured wind. One Muslim midwife's mixture "stimulated the amniotic fluid." Other preparations had more general objectives. One label advertised "strength and good blood to men and beauty to women;" another promised to "maintain the mother's body and make the inner organs do their work properly" (H.M.H.).

In the last months, the reason for the medicines was to build up the body's heat. This purpose was not affected by hot tastes, which burned but did not necessarily raise the heat, but rather by alcohol, cobra, and specific decoctions. A label cautioned, though, "Not to be used by pregnant women with fever," lest the increment of heat be excessive. Snake Brand medicine, an exceedingly hot concoction used primarily post-partum, was occasionally taken in mild dosage during pregnancy. (Used full strength it caused miscarriage, so was rumored to induce abortion). The heat raised the body's temperature far above the ordinarily desired coolness so as to implement birth.

844 826 The Physiology of Birth

At parturition the body's usual needs were reversed. The child could not be ejected under the normal, cool condition of the body. The pushing and pulling winds inside the body that ordinarily circulated slowly had to be

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greater, for relatives were at hand. Some of these ordinary persons developed skills of considerable consequence.

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If difficulties developed, then a more experienced person, perferably a midwife, was needed. But many a midwife assisted at normal births. Because difficulties might arise from a deficiency of merit either in the mother or the child (one could never know which), many women preferred to have in attendance, for peace of mind, either a midwife or an experienced person to insure the presence of expert help. Sometimes they were engaged in advance, more often just sent for "as pain is increasing," it being not always certain whether the case was normal or not.

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A few women were delivered at the Mīnburī Health Center. These were rarely normal cases. The Center was turned to as a last resort in dire circumstances, with the result that sometimes the woman died in the boat on the way. A few persons of rather more modern outlook, such as wealthy farmers, teachers, and traders, had been delivered there and recognized its usefulness.

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The midwives lived in all parts of the community, with 3 in the populous central temple area. No one was more than a half-hour's paddle, or an hour's walk from the home of some midwife. What was desired, however, was a particular person, even though he might not be the most accessible one.

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Since midwives were all heads of large families their clientele was mostly their kinsmen. They also took care of non-kin who lived in their locality. A daughter or other close relative who had married out would be attended wherever she was, if she did not return home for confinement.

In choosing a midwife, a parturient sought out not only skill but favored a kinsman over a non-kinsman, a close relative over a distant one, a near person over a far.[63] Occasionally, to sustain an image of progressiveness, social superiority or of wealth display, a midwife from outside Bang Chan was imported. Sometimes proximity, convenience, and

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63. A male and 2 female kinsmen-midwives were called by the man's sister to deliver her, and all came. He did not deliver her because she was "too close a relative," but he said a brother "could deliver a sister."

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affection overrode kinship.[64] Thus affinal relatives and non-kin neighbors were also requested to assist. Buddhists attended Muslims and vice-versa, (though Muslim women preferred female assistance).

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In emergencies the professional midwives' area was the whole community. They travelled long distances to attend women who were not close kin. No parturient, however, even in an emergency, was ever attended by a complete stranger. In all likelihood, every adult in the community knew the midwives at least by sight.

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As to the size of the practices, reported activities ranged from the Muslim midwife's estimate of 10 per year, down to 2 or 3 per year.[65] The 2 men and the most competent female midwife reported about 4 per year, a figure probably weighted on the side of the difficult cases per year. It is noteworthy that the men, in spite of being as we shall see both mǒ and midwife, did not have larger [462] practices than the women. It was considered basically a woman's skill.

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None of the midwives derived much income from their practices, nor did they expect it to be significant. Their main income came from rice-growing from which, however, the women and one of the males had largely retired because of age. The other male midwife was exceptionally busy as a labor contractor, builder of houses, land-owner, and headman as well. The midwives found the 5 to 30 baht offered

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64. Two teachers who were in the kinship category of granddaughter (lăn) to the 3 best midwives, and lived only a few hundred yards from them, were delivered by a woman who was mother-in-law to one and husband's older sister to the other and who was "not a midwife but knows how." Since labor was quick and normal, no higher help was necessary. On the other hand, all 3 of these midwives turned up to help at the confinement of another cherished "granddaughter." Only one of them actually delivered the infant but other functions were diplomatically divided up by the young mother.

65. Hauck studied 86 babies, aged up to 3 and so not all born in one year. Thirty-one were delivered by 4 of the professional female midwives (12,9,7,3 respectively); a male midwife and an "experienced" person had done 2 each; 11 [R02] women, one each (Hauck, 1959:61). A few of the latter 11 [571] were ordinary kin, not midwives.

Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

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Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire. For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

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Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous magical protective needle.

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"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments, modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1955:155-195). It was sometimes better not to claim competence outside these customary lines. One mō said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease.

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Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "woman are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

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to make use of modern facilities one suffered confusing and unhappy experiences. Bangkok traffic was dizzying, even if one knew just where to go. Hospitals had beds, not mats, and the personnel were strangers. Foods were often unfamiliar or violated traditional injunctions concerning heating and cooling. People were brusque, impersonal, and overbearing to country people. One woman complained, "I am afraid of the doctor there. She scolds me and does not treat me like city people. She will not explain what the sickness is." Minburī's clinic was small, set up in more familiar terms, and the staff known personally to many villagers.

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Finally, there was the problem of finding an experienced escort, i.e. someone who "knew the way." More was involved than just convenience. In all walks of Bang Chan's life, no one ever presented himself to a school, to a household, anywhere, without a personal introduction from someone who had been there before, and so was accustomed (khoei) to it. It was not hard to find someone who had been to the Minburī Health Center, but it was difficult to find one who had been to a hospital in Bangkok, knew what to do, and had the time, money, and inclination to act as escort. The latter was always a relative by blood or marriage or the sick person's mō himself (Hanks and Hanks, 1955: 160). Actually, five or ten persons might accompany an ill person, only one of which was acting as the recognized go-between. Many of those who had been to a hospital or clinic as patients had previously accompanied others merely as escort, or to visit (Goldsen and Ralis 1955:31).

758 743 184 178 [369] [844] [554]

Who had actually tried modern medicine for one reason or another? About a third of the household heads had used some modern clinic or hospital for treatment or hospitalization (Goldsen and Ralis 1955:31). Use was more frequent among (1) the literate, (2) those exposed to the mass media of radio and movies, (3) those accepting certain urban ways, and (4) those having greater contacts with the city in the way of visits, but users were not of a noticeably higher economic level (ibid:37). Women went no more frequently than men (ibid:32). No figures indicated how many of these occasions were for childbirth, but our interviews point to a small number. Taking the will for the deed, two women teachers who appeared to be the first to plan ahead to be delivered at the Minburī Health Center--but who did not get there because labor was too quick--seemed to be viewing the use of modern methods as a means to higher status.

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Why was modern obstetrics so largely eschewed? What had been Bang Chan's experience, unfavorable or favorable, that colored their attitudes? First, home was the most convenient place for care. Bangkok was ruled out categorically as too far. In fact, Minburī might be too far if labor manifested its normal celerity as the case of the two teachers showed, or if complications had developed. Furthermore, a Chinese resident of Bang

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friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of ...medicines" (p. 81).[74]

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The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: *fai chut*) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Minburi Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered net-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

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Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (*suk*) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a mo did the same (with the possible exception of the sponging with tepid water), that as a mo-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorization, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calendar, 1871:197-199).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1920's.

178 a new way was a woman bearing her first child because she
184 was not yet ritually matured. This she wanted to be.
312 Moreover, her self-interest led her to try to profit as
846 much as possible from the experience of elders by first
885 following the old way. By incorporating the experience of successful child-bearers into her own and the baby's life and by asking them to initiate actions suspiciously, she augmented by that much her own competence, and laid the groundwork for her future progress. Self-responsibility engendered respect for elders. Thus there was no split between old and young over innovations. Experience gave grounds both for conservatism and for changing, but at different age levels.

178 Secondly, changes were adopted by the rich who,
184 spending their money rather conspicuously, sought to main-
556 tain and enhance their social position. Their wealth and position were in themselves unquestioned as signs of merit earned in another incarnation.

178 The changes being introduced to Bang Chan were of two
554 kinds: first the prestigeful, and second, those giving no increment of esteem, i.e. idiosyncratic changes of taste or convenience; or those reflecting individual circumstances. The prestigeful innovations were oriented towards the use of market novelties, modern medical care, urban standards of cleanliness and beauty, and other ways termed "progressive" associated with the city of Bangkok, cynosure of the eyes of the rich. These values were leading certain families away from their original occupation of farming, into the fields of teaching, trading, carpentering, cottage-industry, etc. Since these new occupations brought in steady cash and large land holders, too, had a good income, an association was found of
372 wealth, prestige, urban interests, and innovation. Com-
846 ment on the hot ashes container (fai chut) indicated that
178 it was a strong symbol of prestige and progress. To use it was "to get away from ignorance and the old way of doing things." It was "cleaner, not hot or ugly, and more convenient." One teacher took it up after reading an advertisement in the newspapers that described glowingly its more efficient healing effect. On the other hand, one woman abandoned the fai chut because "it was not hot enough to rid her of stiff muscles," so she went back to the use of the fire. "It is all right for rich Bangkok ladies who want to avoid a scar, but it does not give
177 enough strength for a farmer." She had no urban preten-
178 sions. Also in this prestigeful aggregate, observed here
278 and there, were the market novelties mentioned above:
854 bed, mat, and mosquito net instead of the plank-bed; kits of medicine from the Chinese pharmacist instead of the old

25| which did not attract them could be left anywhere out of reach of dogs. Raw rice was stored in a large jar or oil can while salt, fermented fish, shrimp paste[1] and fishsoy[1] were kept in smaller jars or bottles. Such containers were customarily covered. Dried food materials such as onions, garlic, chili peppers and other seasonings were often kept in a basket hung from the roof. Paddy, i.e. unhusked rice, was kept in a large bin of matting or wood, the excess sometimes simply piled on an uncovered mat on the floor.

125 Descriptions of two kitchens, one in a relatively prosperous household and one in a poorer home in Bang Chan, are included in excerpts from field notes, Appendix A, p. 93.

312 In a few homes, a clay water jar was kept in the kitchen or nearby, but more frequently foods were washed, and cooking water obtained at the canal or fish pond.

The water level varied between heavy flood and threatened drought. There were no deep wells in the whole area. Rainwater was collected from the roofs and stored in jars, but during the dry season, the canal or fishpond, although low, must supply the needs of the household. In some, drinking water drawn from the fishpond was preferred, and an effort might be made to keep buffalo from wallowing in it, and to avoid contaminating it with fecal or food wastes or by bathing. Others considered the moving water of the canal preferable to pond water.

General Social Factors Affecting Nutritional Level

462 In Bang Chan, most farm and household tasks were shared by men and women. Both sexes plowed, planted, harvested and dealt with rice buyers; managed buffaloes, boats, and children; cooked, fished and cut wood for fuel; hired out as labor hands, "living in" if desired.

554 Though there were clear differences in socio-economic
● 184 status, the daily life of the people was much alike: whether owners of land or renters, whether farming large or small acreages, the rich and the poor worked in the fields at the same tasks, produced or gathered much of their sustenance, and ran out of cash periodically. Socio-economic status was roughly defined in terms of food: a poor man "had one meal only to forego another;" a rich man "had or could get what he wanted to eat." (Sharp et al. 1953, p. 264.)

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1. Description of these products will be found on pp. 17-18.

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canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Malis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldson and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chanaum), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

contaminated drinking water, but the traditional use of boiled water for newborn infants and their mothers, and its occasional use for sick persons, might provide the starting point for a desirable change.

Meal Preparation and Service

Processes and Equipment

The principal processes involved in food preparation for which equipment was required are: cutting solid food into bite-size pieces, pounding spices and flavoring materials, grating coconut, straining, boiling, sauteing in a small amount of fat, steaming, and roasting on a stick or metal support over the fire. Although foods were steamed or roasted only occasionally, the processes were familiar to all.

The Thai kitchen had no oven. When the term "baked" was used, it might mean cooking with dry heat on a rack over the fire (as banana baked in the skin) or without fat in the frying pan (as small dried fish toasted in this way).

Equipment used during meal preparation by the 11 families observed on 44 survey days is listed in Appendix A, p. 96, that used in serving and eating food, on p. 96.

The type of food preparation and service was much the same in the relatively well-to-do and the poorer households in Bang Chan. The chief difference in equipment for food preparation and service in families of different economic status was in the number of items of one kind which were owned. Thus a poor family might own one knife and one clay water jar, whereas an affluent family would probably own several knives and a number of water jars. Equipment used on special occasions, as in preparation of food for large numbers of people, was owned by well-to-do families only. Some had enough equipment for large cooperative work parties.

Persons Responsible for Food Preparation

Food was usually prepared by the homemaker and/or older daughter, if one were at home, but all members of the family who were old enough to help, had some knowledge of food preparation and did prepare food as the occasion demanded. While preparing, cooking and serving food were more frequently carried out by women than by men, adults and school-age children of both sexes had some competence in this area. While certain activities are normally assigned to men and others to women, the Thai maintain no rigid compartmentalization and are unembarrassed when a woman does a man's job or a man does

Attitudes Toward Food

To older Bang Chan residents, to lack rice was to starve even though fish or vegetable fare were at hand. Since rice was the staff of life, many important customs clustered about it. Ceremonies to the Rice Goddess accompanied the raising, selling, and storing of rice. When the unhusked rice was in the bin, it could not be withdrawn at any time as needed, but astrological charts had to be consulted to make sure the day was auspicious. Paddy could never be withdrawn on Friday, a day sacred to the Rice Goddess. After cooking, the best rice was said to be at the mouth of the pot, so this was offered on ceremonial occasions. Important rules were that when cooking rice, the cover of the pot must never be laid in a mortar and it must be inverted, never laid down flat; otherwise one would be short of rice. One must never scrape the top of the rice with the cover, or the "soul" of the rice would be scraped out of the pot. Moslem residents murmured an Arabic prayer every time the rice was put into the pot, and every time the pot was put onto the fire, as well as before eating.

Rice has been generally regarded as the strength-giving food par excellence. A portion of Chutima's (1939) description of the "old system" follows:

> Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal. Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply.

The quotation indicates first that in the past, rice was considered much more important as food than the "with-rice" dishes. Since the Food and Drug Division of the Ministry of Public Health has been attempting to encourage the eating of more "with-rice," the attitudes found in Bang Chan are of interest. One informant stated that only rice can make children fat, and that the "hot taste" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish, and was weak; he refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk (evaporated or dried milk, diluted with boiled water) expressed the opinion that the ancient belief was based on thrift. He said that thrifty

435 Some information as to the cost in baht of the larger
736 ceremonies held in 1954, and their scale, was obtained from
[124] the school teacher's diary. Examples follow:

[742] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[744] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000. Guests gave 2300.
[583] B: Rite of forgiveness after elopement: a meal, with 5 bottles of liquor.
[184] C: Moslem: 2 buffalo slaughtered. 400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-
[583] four "pairs" of specified foods, i.e. two bearers each of sugar cane, fruits, sweetmeats and other things. At more modest weddings and the rite of forgiveness for a couple who had eloped, food might differ from the usual fare only by including the three essentials of a wedding: pork, chicken and alcohol.

273 Increased consumption of alcoholic beverages during the
796 ceremonial season was indicated by the sales of one local
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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[574] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

storekeeper: about 800-900 liter bottles per month during the 3 months dry season as compared to about 350 bottles per month during the 9 months of the rice season.

Moslems never served liquor at their weddings, cremations, and other auspicious events. Moslem residents occasionally attended Buddhist (l)ngaan in spite of dietary proscriptions that Buddhists did not observe.[1] A medium (spiritualist) commented however that because pig's head was essential for her homage-to-the-teacher rites, some Moslem sick persons preferred to go to the Buddhist temple for treatment. There the priest-practitioner could afford to set up a separate kitchen for his Moslem patients, and so spare them the distress of confronting pork. To one big ordination Moslem guests brought their own food. Buddhists came somewhat more often to Moslem ceremonies.

We do not have enough information to appraise the nutritional significance of food eaten at ceremonies. Some individuals got a great deal of it, others very little. One must remember that the (l)ngaan was not a public but a private event at home, to which guests came on invitation. Although cremations and the teacher-rites of priest-practitioners were held at the temple, and so had a semi-public character, no one who was not invited presented himself for food. Of the participants, the working group undoubtedly received the most food; they were there the longest time, had regular meals, tastings and snacks throughout the (l)ngaan meal itself. This group comprised the host, co-sponsors and their immediate kin; other relatives and friends who were asked or who volunteered to help. The feeling was, if one were "very fond" of the host, one volunteered to cook. If less close, one was invited as a guest, but made the usual cash donation. Sociable persons combining skill and energy were invited often and volunteered often, hence spent many days at ceremonies. Young unmarried men and women were asked and liked to be asked to work, for such occasions offered a great chance for fun and flirting.

Different degrees of participation may be estimated from Janlekha's (1955) figures for reported contributions ranging from 30 to 1000 baht in a year. Since a contribution of 5 to 10 baht per (l)ngaan was customary, the villager with the lowest reported contribution probably attended from 3 to 6 ceremonial occasions. Attendance at 100 or more (l)ngaan is unlikely, hence the villager who gave as much as 1000 baht probably made larger contributions per (l)ngaan.

What sort of persons or groups in the village were invited as guests? Every host's list included his older

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1. Moslems were said to resist army service because they were afraid they would have to eat pork.

per day were calculated for Groups A and B by Round and for all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

Although our sample was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

From the viewpoint of parents, the "peak of life" was the time when children were no longer dependent, but productive, unmarried workers whose earnings stayed within the family. Household 16 was such a family, forward looking, progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analyst]

Equipment Used For Food Preparation

252 Equipment used for food preparation by 11 families par-
4| ticipating in the dietary study: clay stove; pots and covers
[251] of clay, light weight aluminum, and enameled iron; frying pans, curved, of sheet iron, with home-made wooden handle on one side, or metal handles on opposite sides (shallow clay pans were also used for frying); basins, pails, chopping boards; grater for coconut: a metal, toothed instrument mounted on one end of a low wooden stool (often called a "wooden rabbit" because the seat of the stool might be shaped like a rabbit); mortar of pottery or stone; wooden pestle; fiber strainers usually with rigid handles, to hold them in place on top of a pot; a large-bladed all-purpose knife; in some households, one or more smaller knives; metal turner, with home-made wooden handle; spoons, with bowls of coconut shell, gourd or wood; tin cans for dipping, measuring rice, etc.; fiber trays used for winnowing rice, for drying food, storing dried chilies, onions, etc.; metal tray for serving food to priests, and for household use; baskets for storing food; (5)faa-(1)chii, or fiber cover, to keep flies and insects off cooked food; large earthenware water jars.

[194] Other items less often used, and owned by relatively few families in Bang Chan, included: steamer; a perforated clay pot or metal pan with cover, designed to fit tightly into another pot in which water was boiled; large wooden mortar, made of a hollowed tree trunk; spring-type egg beater (a strong spiral spring attached to a stick); scale; glass water jars.

Equipment Used in Serving Food and Eating

249 The equipment for serving and eating food might include:
417 flat bottomed bowls with a deep edge, similar to Western-
415 style soup plates, used as individual rice bowls; plates; small bowls for "with-rice" dishes; sauce dishes with stand, for chili sauce; enameled iron or china spoons (Chinese type) used for serving moist foods; forks, used by some families on special occasions;[1] teapot and cups; large rice bowl for ceremonial use (silver or aluminum); large brass spoon with serpent-tail handle, for serving rice; drinking glasses; tiered lunch pail; canteen; thermos bottle.

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1. A relatively poor family (Sharp et al. 1953, p. 223) had one pair of fork and spoon for eating.

Food for Homage-to-the-Teacher Rite (cont.)

Item	Amount	Cost in Baht
Fruit:		
Bananas ((3)kluaj (4)nam-(4)waa)	5 bun.	from father
Chico[2]		5.
Coconut	150	180.
Coconut (young, to make dessert)	30	30.
Job's tears	1 lit.	3.
Plums, yellow[2]		5.
Pomeloe[2]		6.
Rose apples[2]		2.
Tamarind	–	7.50
Tomato sauce		8.
Young palm fruit[4]	7 bu.	3.
Vegetables (non leafy):		
Bamboo shoots, cooked	1 pa.	28.
Cucumber		--.3
Egg plants		--.3
Garlic	5 kg.	26.50
Gourd, white		1.
Onion, fragrant[5]		6.
Onion[5]	4 kg.	4.
Onion, welsh[5]		--.3
Mushrooms		3.
Radish, white		--.3
Vegetables (leafy green and yellow):		
Cabbages		--.3
Chinese kale		--.3
Chili, green		7.50
Vegetables (leafy green & yellow) cont.:		
Lettuce		--.3
Parsley		--.3
Pumpkin	3 fruits	12.
Sweet basil leaves		1.
Sweet potatoes	6 kg.	6.
(3)Tang-(5)oo		--.3
Seasonings etc.:		
Vinegar	1 bottle	1.
Fishsoy	1 jar	10.
(2)Ka-(1)chaaj	2½ kg.	12.50
Sodium glutamate		5.
Pepper		14.
Agar	400 gms.	36.
Miscellaneous:		
Cola beverage	72 bottles	72.
Liquor	16 bottles	80.[6]
Ice		30.
Cigarettes	2 pkgs.	--.6
Tobacco	1 heap	--.6
Betel pepper		9.
Fresh areca nut		10.
Dried areca nut		8.
Dried palm leaves	1 big bundle	2.
Firewood		50.
	Total	1577.75

1. For Moslem guests.
2. Food items placed on a tray and used in the ceremony proper.
3. Items so marked cost a total of 140 baht.
4. Not identified.
5. Several kinds of onions, both fresh and dried, are commonly used.
6. Prices not stated; estimate for liquor.

NOTES ON THE PREPARATION AND NUTRITIVE VALUE OF COCONUT MILK AND COCONUT CREAM

252 The term coconut cream ((5)hua (2)ka-(4)thi), as it
262 was used in Thailand, referred to the product which was made by squeezing grated coconut with little or no addition of water. Coconut milk ((4)naam (2)ka-(4)thi) was made by squeezing grated coconut repeatedly with water. Coconut cream might be made first, and the residue extracted one or more additional times to obtain coconut milk. The terms coconut milk and coconut cream apparently are not used consistently. Losee (1952) commented on this when he described the preparation of coconut cream in Samoa, and said that it was sometimes called coconut milk. Miller et al. (1936), in describing the preparation of coconut milk said "If a thick coconut milk to serve over puddings, taro leaves, etc. is desired, 1/2 to 3/4 cup of coconut water or boiling water should be poured over 3 cups of grated coconut. . . . If the milk is to be used in curry sauce for chicken, eggs, shrimps, or in cornstarch pudding, a larger quantity of water (1 to 2 cups of water to 3 cups of grated coconut) may be used."

126 In carrying out the dietary study, the observer weighed the grated coconut meat, the residue and the final products, coconut milk or cream, or both. She did not weigh the water as it was added in successive portions, but the amount of added water could be calculated.

194 The ratio of coconut milk to meat varied considerably,
262 but on the average, households in Group A obtained coconut milk which weighed more than eight times as much as the coconut meat from which it was made. Households in Group B obtained less than 2½ times as much milk by weight as coconut meat. The number of extractions made varied from 2 to 6,
146 with a mode of 3. Obviously, the products made by Groups A
171 and B, although both called coconut milk, had markably differ-
262 ent percentage composition, and neither was similar to "coconut milk" for which values could be found. These values were as follows:

Authors	Location	Coconut milk grams per 100 gm. E. P. Pro.	Fat	Carbo.
Bocobo et al.	Philippine Islands	3.6	33.2	38.4
Food and Drug Division	Thailand	3.52	34.75	1.52
Miller et al.	Hawaii	4.0	27.0	18.91

1. Personal communication

Breast Feeding.

853 a.184 As previously noted breast feeding was the rule. One child in this series, whose mother died when he was 5 days old, was never breast fed but was given canned or dried milk[1] diluted with boiled water. Another infant, whose mother died of tuberculosis when the child was a year old, was weaned at 5 months because of the mother's illness. A few breast fed infants were given cow's milk preparations at times. A child whose mother was a vender had cow's milk daily during the mother's absence; in another instance, cow's milk was given a baby when the mother was at work in a distant field. Whenever practicable, however, mothers apparently returned to the house to nurse the baby or had it brought to the field to be fed. One woman teacher who had a baby during the school year returned to her nearby home at recess to nurse the infant. Two mothers said they gave their infants some cow's milk because they thought their own milk supply was not adequate. One of these was the vender previously mentioned.

Supplementary Feeding of Infants.

853 Infant feeding during the mother's postpartum rest period has already been described (p. 12). After (2)juu (1)faj no mention was made of giving honey in water to babies, but up to about one month of age the only other change in practice which occurred was that two or three mothers started to mix a little rice with the crushed or baked banana which had been started previously. As during the mother's rest period, however, a minority of infants were being given banana, i.e. most of them had nothing except water in addition to mother's milk.

By 3 months of age about half of the infants were being given banana, (3)kluaj (4)nam-(4)waa, and mixing rice with it was more common. A few infants were being given rice as such. In most instances, for infants up to 6 months of age, rice was cooked with extra water and mashed, (3)khaaw (2)piag, a preparation which was considered baby food. Rice water with sugar was added to the soupy rice for one infant less than 3 months old

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[234] 1. No fresh milk of any kind was available in Bang Chan. Water buffaloes were ordinarily not bred in the village and use of buffalo milk was unheard of. Among the light refreshments which could be bought at village stores, however, were coffee with condensed milk and diluted canned milk. Storekeepers stocked imported canned and dried milk including some brands designed for infant feeding. Directions for use were not in Thai, however, and the preparations actually fed to infants were often diluted more than recommended.

4:Phillips E-4,5 (1956-1957) 1966
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Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

4:Phillips E-4,5 (1956-1957) 1966
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essentials not atypical of the region. Instead of villages being organized administratively on the basis of natural social groupings and demarcations—that is, social centers and groups with which people feel a primary identification, in Bang Chan's case the local Buddhist monastery and government primary school—so that governmental and social units are isomorphic, they are gerrymandered into highly arbitrary administrative units. Thus the village of Bang Chan is comprised of seven *muubaan* or hamlets, at the head of which are seven hamlet headmen; these hamlets are located in two different *tambon*, or communes (four in one commune, three in the other) headed by two commune headmen, neither of whom lives in Bang Chan; the two communes are located in two different districts headed by two different district officers and their staffs; the two districts fortunately are in a single province, Phranakhoon, the same administrative unit in which the metropolis of Bangkok is located. Yet the people who reside in these varying hamlets located in different communes and districts all perceive themselves as living in the single village of Bang Chan. The fundamental organizational problem here is that since the sources and lines of governmental authority do not follow the lines of the natural Bang Chan community, jurisdictional conflicts and confusions arise to threaten the effectiveness of those community-wide programs that occasionally may be initiated. For example, during a diphtheria immunization campaign in the village (Hanks and Hanks 1955), the public health officer from one of the district offices was reluctant to immunize all the children of Bang Chan on the grounds that some of them came from hamlets outside his district's jurisdiction; he yielded, as the Hankses note, only when a perceptive villager pointed out that if germs knew no boundaries why should he?

Not all villages of the Central region have such real or potential administrative difficulties. (And Bang Chan does not have them too frequently either, principally because the government does not initiate too many community service programs.) However, the basic organizational principle which admits them—that houses are grouped together as administrative "villages" on the basis of conceptual neatness rather than socially functional criteria—is a common feature of the administrative structure of the Central Plain.

The foregoing account describes some basic culture patterns which Bang Chan shares with other villages of either the region or the nation. In addition to these broader patterns, Bang Chan has certain traits which inevitably refer to local village conditions and contingencies. For example, the most active and viable social unit in Bang Chan beyond the familial level is the order of Buddhist monks associated with the monastery. It is the only organization within the village that has been successful in mobilizing community activity (Sharp *et al.* 1953), although much of this activity has

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
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been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad, national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.[4] As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

[4] It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

4:Phillips E-4,5 (1956-1957) 1966
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from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise of regular wages, lighter work, and the bright lights of the city, leave Bang Chan with the hope that they will never have to return, although of course many do. The Goldsen-Ralis survey reveals that 26 percent of their respondents had lived in Bangkok for a year or more, although for most this was in fulfillment of military service.

Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

The frequent transit between Bang Chan and Bangkok,[8] however,

[8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

121 experience outside the community, from persons who had
621 never before seen any foreigner to others familiar with Bangkok or smaller centers of modernizing influence; (11) prospects of a fair degree of physical security from robbery or other violence during the study; and (12) the promise of excellent cooperation on the part of both peasants and officials of the region.[2]

121 A majority of the sites visited or heard about during the preliminary survey proved unsatisfactory for one or more of the following reasons: (1) they were too specialized (fruit or truck gardening, brick or pottery making, proximity of a naval establishment, preponderance of non-Thai or non-Buddhist groups); (2) they consisted of amorphous groups of sub-marginal tenant farmers exhibiting marked signs of social disorganization; or, most commonly, (3) they were decentralized and the dispersal of homesteads along canals would have required an inordinate amount of research time spent in moving about in order to communicate with the people.[3]

121 Although caution has been exercised to select a com-
• 184 munity most closely approximating a representative village
*243 of the Central Plain, we do not purport that economic conditions described in Bangchan are identical with those of other villages in the region. Bangchan's representativeness

2. Lauriston Sharp, "First Progress Report on Cornell Thailand Project, August 1-November 1, 1948", p. 2. (Mimeographed.)

3. Ibid., p.2.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

121 can later be checked through studies in a nearby control
184 village and by comparison with results of the 1953 agri-
243 cultural census. Nevertheless most of the problems of rural rice growing communities in central Thailand undergoing technological changes are expected to be found in Bangchan. We are confident, therefore, that the community is an appropriate model for locating agrarian problems and is a good site for a pilot study which is to serve as a base-line for further researches in agricultural economics and other social sciences.

Techniques for Establishing Rapport

123 Our first contact with Bangchan residents was made on September 1, 1948, when Professor Lauriston Sharp and the author were driving home from Minburi. We stopped over at a farm house on the side of Minburi Road two miles from the market town and introduced ourselves to a small gathering of farmers. We told them that we were both teachers, Sharp teaching in the United States and Janlekha in the nearby Kasetsat University, and that we were looking for a typical village where "Professor Sharp might study the real life of Thai farmers so that he could tell his American students how we live and work."

The place where the conversation was taking place was on the periphery of Bangchan village -- the western tip of Hamlet 4, Bangchan Commune. While one of the farmers was explaining the general condition to us, he was interrupted

The Family

592 Although the family is the smallest of social institutions, it occupies first rank in importance. For the purpose of this study family is defined as a group of persons who form a household under one head including parents, children, servants and other dependents. It is a social unit for both consumption and production. In Bangchan, members [264] [464] [463] of the same family, with the possible exception of piece-workers who have the privilege of eating with their employers only during periods of certain kinds of work, usually share the same meal although not necessarily at the same time. Physically able members are expected to contribute to family work although some may also do extra jobs for their own pocket money. In all cases family work has priority over the extra job, and in most cases members turn over all or part of the [354] earning thus realized to the family head. Although most [184] families have seperate dwellings, there are instances of two families sharing the same dwelling but having seperate cooking arrangement. Such cases are rare, however. According [464] [463] to our operational definition, then, a member of a biological family who has hired himself out as regularly hired laborer ceases to be a member of his own biological family and becomes a member of his employer's family. Piece workers, on the other hand, although they may occasionally eat with their employers, still retain membership of their biological family if they still live with them. Finally, people who live in the same dwelling may not belong to the same family if they

583 of their adopted daughter, of which some 300 baht went to
535 bedding materials and 5,000 baht to the wedding feast which
435 the bride's parents alone were supposed to give. It should be noted, however, that in the last case the bride's parents received as dowry from the bridegroom's parents 4,000 baht in cash and two baht[9] weight of gold worth about a thousand baht, and they also received from the guests an aggregate customary contribution of 2,360 baht. Thus, the bride's parents came out with a net gain of 1,060 baht plus the gold which was to be given to the bride.

583 While the conventional marriage was somewhat costly especially for the bridegroom's party, the popular marriage by elopement was much less expensive. Our records show that in addition to nominal ceremonial materials of white cloth, candles and incense, the bridegroom had to pay a fine of only a few hundred baht to his wife's parents when the couple came to receive formal forgiveness from them.

We do not have comparative figures for the occurrence of conventional marriage and elopement, but the latter appeared very frequently in our daily field notes as against very few cases of the former.

581 There are two types of establishment of new families
184 after marriage: (a) immediately after marriage, and (b) some years after staying with parents of either party.

It was observed that immediate establishment of new families after marriage was common among couples originating from farm laboring families and families of poor farm operators.

[304] 9. One baht weight is equivalent to fifteen grams.

7: Janiekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

591 A probable explanation was that the poor had nothing to
• 184 gain from staying for a few years with parents after marriage. More important still was that with limited working land, presumably rented, the parents also did not get any economic benefit from the couple, whose stay with the family meant extra mouths to feed rather than extra hands to work.

Immediate establishment of new families was also observed in some couples originating from well-to-do families. This was nevertheless rare, because in the present economic condition it was rather difficult to find families rich enough to provide for the immediate establishment of a new family. The general pattern, then, was to let the couple accumulate for themselves while getting the benefit of free board and lodging from the parents. This period of stay with the parents with the intention for accumulation for future establishment may be called the 'nascent period'.

591
178 Table 7 shows that 30 out of 96 families of farm
184 operators covered by the study were able to establish their nuclear families immediately after marriage. When these 96 farm operators were grouped according to their dates of marriage to the present spouses or last spouses in cases of widowers and widows, the distribution was as follows: those married during the absolute monarchy regime (up to 1932), 54; those married during the democratic regime (after 1932), 37; never married, 4; date of marriage not available, 1. Since 20 out of the 30 families which were able to establish themselves immediately were in the first group, the

[TEXT CONTINUED ON PAGE 85]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 7

FREQUENCY DISTRIBUTION OF LENGTH OF NASCENT PERIOD OF 96 SAMPLE-FAMILIES
Bangchan, Thailand, 1953

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• 184
178

Length in Years	Frequency
0	30
1	16
2	9
3	4
4	4
5	5
6	2
7	0
8	1
9	3
10	2
11-15	3
16-20	1
Not separate*	15
No information	1
Total	96

* These 15 families existed earlier as minor components of the old families. Headship of each family was later assumed by the present family head.

591 proportion for immediate establishment was 20 out of 54 or
184 37 per cent for those married before 1932, and 10 out of
178 37 or only 27 per cent for those married after 1932. A declining trend was thus observed of the ability to establish a new family immediately after marriage.

591 Table 7 also shows that the 'nascent' period of 50
592 families (that had ones) ranged from one to twenty years,
184 averaging four years, the mode being one year, and the median
178 two years. Among the fifteen non-separating families, eight headships were taken over by offspring while one or both of the parents were still alive (we shall call this 'type A'), four headships were taken over by offspring through the death of parents (we shall call this 'type B'), and three headships were taken over by spouses ('type C'). The last mentioned changing over of family headship (type C) occurred in three ways: through marriage of a man to a female head of a family whereby the husband automatically became the family head, death of the husband, and desertion of the husband.

591 The changing over of the family headship of the type
592 B in Table 7 was a natural process of inheritance. In type
184 A, it was found that senility accounted for seven out of
428 eight cases of the changing over, the one exception being
587 the case of a widower who wanted to have a second wife and who thought that the family assets originally belonged to his first wife's biological family and therefore an outside woman should not lay a hand on the 300,000 baht property.

243 parcels by siblings who failed to include their share in those parcels in the reporting of areas owned. For want of a proper basis for adjustment, we chose to let the figures stand as they were reported.

Table 19 shows that the combined area in rice of all the 216 farms in Bangchan was 6,638 rai, or almost 99 per cent of total area planted to rice by the residents, the balance of 84 rai being worked on by residents whose occupations were those other than farm operating. Of these 216 farms, 48 were classified as all owned, 88 part owned, and 80 all rented.

The conventional system of classifying farms according to land tenure into all owned (owner-operator), part-owned (part-owner), and all rented (tenant) should not be used without modification as a classification of economic or social status in population pressure areas where an efficient size farm is usually an exception rather than a rule. In these areas, it does not hold, as it seems to imply, that an owner-operator has a superior economic status than a part-owner and that a part-owner is still in a better economic position than a tenant. There is a wide range in size of farm operation and hence of incomes within these categories.

Within the category of owner-operator, there are major differences in size of operation and hence economic and social status. If a farmer -- to cite a specific case, Farmer A in BC4 -- owns the large area of rice of 235 rai,

[TEXT CONTINUED ON PAGE 133a]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

182
• 184 he may rent out some and retain only the part he can operate
423 well. In this case he chose to operate 65 rai in 1953,
427 renting out the balance of 170 rai. On the other hand,
554 another farmer -- Farmer B, also in BC4 -- who owns only
*128 a small parcel of nine rai may not be able to rent in additional land to make an efficient size farm. In this case, B was not able to rent in any land and had to work on only nine rai of his own in 1953. In an area of relatively low population pressure, the probability of failure to rent in some more land may be small, but it is not so small in the relatively high population pressure areas such as Bangchan. The difference between farmers owning a small area of land and a large area is so great from the standpoint of economics and social position as to warrant having two sub-divisions of the conventional "owner-operators".

Small "owner-operators" may increase their size of operation by renting in some more land and thus becoming part-owners. These farmers actually improve their socio-economic status if they are able to move from the group of owner-operators into the group of part-owners. To use another concrete example, Farmer B, mentioned in the preceding paragraph, who worked on the nine-rai parcel of his own, does not earn more farm income than Farmer C, also in BC4, who owned 20 rai and still rented in 30 more rai in order that his four family workers including himself might be fully employed with a 50-rai farm.

182
184 c. The family's purchasing power. Certain goods
511 considered as luxuries -- medicine, eggs, pork and beef, and white sugar -- were not consumed by poor families.

184 d. Individual taste and preference. The Moslems
276 would not consume any pork although they had enough money
261 to buy it. Some poor farmers spent more money on curry
182 essence than their more affluent neighbors because they
511 preferred highly flavored dishes, and some tobacco smokers did not spend a cent on tobacco binder because they preferred the home-grown banana leaf binder to the thatch leaf binder which had to be purchased.

182 e. Producing ability of the family. It was observed
511 that those who caught more fish tended to consume more fish
[184] regardless of their financial conditions.

f. Health affected the consumption of medicine.

[431] g. Prestige affected the amount of cash contributions
[476] to neighbors.
[554]

h. Personal habits -- thrift, fun loving, indulgence, like or dislike of liquor -- affected the amount of personal expense.

i. Presence or absence of children of school age in the family affected the consumption of cookies.

Special Expenses

511 By special expenses we mean major items of expenses which do not occur regularly but which may arise in one time or another. Examples: purchases of land, gold and

426 two tang of rice are required to pay at harvest time for one tang of rice borrowed during the cash-scarce work season; and (b) Toq raeng wherein an advanced payment of say 10 - 15 baht is made for a promise to harvest one rai of paddy which normally brings in a cash wage of 25 - 30 baht payable on the day the work is done.

Scarcity of credit and the consequent high interest rates naturally discourage productive investment, for those who need operating capital certainly cannot afford to pay for these high rates of interest and those who have cash at all would do much better by straight lending.

426
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• 184 Scarcity of cash and credit in the village is a blow especially to the marginal farmers who comprise the majority of Bangchan operators. These are farmers with a low index of capital formation potential who are often found among the land-thirsty category of operators. It has been pointed out that farmers with a high index of capital formation potential could more easily adjust their credit situation and thus are able to avoid high interest bearing debts. The marginal farmers, on the other hand, cannot do likewise. Scarcity of cash and credit and its consequences -- high interest rates and discounts and premiums of various forms -- have certainly put these marginal farmers at a most disadvantageous spot of receiving less for the same unit of labor and product and of having to pay more for the same unit of goods. Under this circumstance, the gap between the affluent and the less affluent farmers is ever increasing.

4:Phillips E-4,5 (1956-1957) 1966
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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion; free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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Relative to the enormous problem created by export and exchange control, the internal marketing problem now appears to be small at least in its relative effect on rice growers. It is true that the Chinese combines in the forms of Rice Dealers' Association and Rice Mills' Association have consolidated economic influence in favor of the Chinese middlemen in Bangkok. But it is equally true that competition among the Chinese rice dealers and millers in the countryside also has worked to the advantage of growers.

It has been observed that the Chinese dealers in Bangchan offer prices to farmers that scarcely differ from prices that the farmers could get from the millers if they were to break the existing pattern and deal directly with the millers themselves. This would often be possible because most of the local farmers possess the large chala boats needed to convey paddy to the mills which are only a few miles away. Actually, the Chinese rice dealers and Bangchan farmers have been observed to be in a rather efficient state of economic symbiosis that compares favorably [186] with most inter-ethnic divisions of labor. Further attestation is found in that there appears to be extremely little anti-Chinese sentiment among the villagers, and this is despite the fact that the national government has from time to time taken somewhat spirited measures against the [426] Chinese. The favors, non-interest bearing loans, and good will gestures accorded the Thai farmers by local Chinese dealers should also be taken into consideration.

759 In these 2 qualifications of skill and success, some of the explicitly non-professional old ladies were recognized as easily matching the professionals. What then was the definition of a professional midwife?

759 789 What the professional midwives alone did was to deliver non-kin, for which they had to have magical formulae and reliable celestial knowledge. The incantations gave a midwife the right to be called a mɔ̄ tamyae, for he or she was using to a greater or lesser extent the sacred wisdom of occultism (saivasāt). Here midwifery was like any other craft or endeavor. One could cure, sing, and build a boat without magic, but with it, the chances of success and effectiveness were increased. The incantations could "ease delivery," "get a baby out that had died inside"(for this baby could no longer do his part), "prevent the poison of the fire from burning the mother," and give other special help. That this magic was the crucial difference between the professional and non-professional was illustrated by the old lady who had delivered 30 babies, but vehemently[67] denied being a midwife. "I am not a professional. I have no magic. I only pray to the Lord Buddha and think of sacred things each time."

759 787 A professional also had more detailed astrological knowledge of the orientations of relevant celestial beings so that delivery would be "helped and not obstructed." This knowledge was in no way a professional secret, but if complications during childbirth were evident, it was necessary to have accuracy, and convenient that the midwife had it.

759 562 212 191 778 To certain villagers the designation "professional" could not be applied to women because, never having been ordained, they had not learned to read, as men supposedly had, not only Thai but Pali and Cambodian, the languages of medical and magical lore. "A professional midwife has a book. No woman can become professional because she cannot read." The idea was that incantations were correct only if taken from the sacred texts at the temple, though in fact the formulae were taught orally. One male midwife had a sacred book in his private possession, which was proper, for

sacred books were inherited by males.

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67. Her vehemence may reflect either pride in being so successful without magic--a true liang dī--fear of being reported as unlicensed (see below, p. 145); or consternation lest she be accused of using magic to which she was not entitled.

by instruction from a ritually[71] approached teacher. "One cannot accidentally learn. One has to ask to be taught." As a practitioner in this field, the title "mɔ̄" signalized expertise; where teaching was involved, the title was khrū (teacher [McF. 183]) or ācān (professor [McF.990]). Speech was the key to this tradition, in spite of sacred books and wall-carvings in the temples.[72] Modern education, being book-and-teacher based, shared in this aura. There, even today, listening is more comfortable than reading.

Techniques of the practical, natural world were learned not by teaching but pragmatically by observation, example and experience. Eyes were the key. "I know because I saw," said a midwife. At the highest level of achievement in the natural world one was expert (nak), e.g. convict (nak thōt, an expert in being punished) a tourist (nak thīeo, an expert in roaming around).[73] Within the natural world, an intense pragmatism reigned always emphasizing visual phenomena. People were keenly

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71. To speak ritually one held in the hand the trio of incense, flowers, and a candle. This was the way to cross over from the profane to the sacred world, to inform (bɔ̄k) or make a request of, a sacred being (a teacher, priest, king, or deity). The tiny flame of the offering invoked holy fire, and so had the effect of making one's words compelling, for no one could gainsay a request under such circumstances. A husband about to deliver his wife held incense, flower, and candle in hand as he requested the help of ancestors and spirits. (Bishop Pallegoix saved the existence of his mission by thus approaching the King [Pallegoix, Vol. 2:201]). The trio of offerings, whether at the 4 corners of the lying-in fire-floor, or in "hat phlī krathong" at a "than khwan" rite, or even in an ordinary khwan khao made all actions and words compelling.

72. Because words, immaterial and invisable, lay at the base of occultism, words as continuous agents of power permeated Bang Chan's ordinary daily life. This was why words, verbal play, and punning initiated action: pregnant women attended the monks' "coming out of retreat" (ɔ̄k phansā) so that the child would "come out" (ɔ̄k) easily.

73. It should not be forgotten that most activities in the supernatural world had their technical sides, and the term "nak" was used there too. A curer had to learn his herbs; a dancer, his steps; and a master of ceremonies, the words of the chants.

4:Phillips E-4,5 (1956-1957) 1966
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determined. So frequently the provocative, interesting, or delightfully human life histories found in the anthropological literature (Dyk 1938 and Tirabutana 1958 come immediately to mind) are so simply because they are the products of the more imaginative, articulate, and introspective members of the culture in question. The issue of course is not that a biography elicited from an articulate individual is to be considered ultimately any more or less valuable than one obtained from a more "typical" member of the culture—Kluckhohn's "Mr. Moustache" (1945) is ample evidence of what an articulate interpreter can do with the life history of a relatively inarticulate informant—but rather that it be accurately seen against a background of the psychological responses of the members of the community as a whole.[4]

The final stage of the research program is perhaps the most complex. Following the outlines of a recommendation originally made by Inkeles and Levinson (1954) and Inkeles (1959), it aims at presenting a systematic analysis of the *relationship* between the personality tendencies of the villagers, as determined through the foregoing materials on the one hand, and the functional requirements of Thai peasant society, as determined through ethnographic data, on the other.

An analysis of this type rests on at least three premises: (1) that there is just as likely to be a lack of congruence between the psychological capacities and proclivities of a group of people and the psychological demands that are made upon them by their own social institutions (demands that must be met if the institutions are to be maintained effectively) as there is likely to be a close fit, and that a crucial, empirical task of any culture-personality study is to detail the specific areas of congruence and noncongruence; (2) that human beings can bear considerable psychological strain—precisely how much we really do not know—and still function effectively, maintaining both their prevailing personality patterns and

Mandelbaum 1953, among others). The issue is the extent to which the psychological tendencies of life history informants—their readiness to respond and modes of response in various situations, their assumptions and unconscious premises—are typical of other villagers.

[4] I am reminded here of my own ambivalent reaction to a comment once made by a villager who, intrigued by the fact that I was collecting life histories, said: "I have heard about those people who are telling you their life stories. You're smart—getting interesting ones like them. Some of those people can really *phuud keŋ*." To *phuud keŋ* means to "speak well," but more particularly to speak cleverly, fluently, deceptively, convincingly, or beautifully (in an aesthetic sense). Actually, there were numerous individuals in Bang Chan who, in local terms, could speak considerably more *keŋ* than the life history informants. However, as the villager's remark suggests, the ability to be "keŋ-ful" in one's speech is something to which Bang Chaners give considerable attention, often to the extenf of seriously modifying the intellectual content of their speech, and is one more factor that must be dealt with in assessing the content of a biographical document.

4:Phillips E-4,5 (1956-1957) 1966
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syntax is in our culture—and except for certain ritual occasions, perhaps in all cultures—one of the basic symptoms of psychopathy. Witness the "word salads" of hebephrenic schizophrenics and the "mental lapses" of aphasics. (See White 1948: 527; Brown 1958: 293; Goldstein 1948; and Jakobson 1957.)

On occasion some of our Bang Chan informants would ignore syntactic considerations and use the sentence cues as triggering devices for their own unanchored thoughts and preoccupations: *"When I realize other people do not like me, I feel . . .* that's happened to me sometimes. When you see that other people don't like you, you should avoid them. The Lord Buddha says. . . ." And then the completion might develop into a brief lecture on morality. At other times, the cue would trigger off an autistic explosion: *"His most unattractive quality is . . .* don't have anything to do with him! He is a wicked person. I do not want to speak to him. He doesn't talk sense. One day while I was fishing, he came along and asked me to have intercourse with him. I cursed him!" (Other data on this informant indicate that she was referring to her estranged husband.) These types of "ungrammatical" responses seem to derive from the social aspects of the interviewing situation—the informant has a friendly listener with a willing ear and thus occasionally ignores the original definition of the SCT task to declaim on his favorite subject[2]—and also from the fact that in social discourse our Thai villagers seem to indulge more in, and have considerably greater tolerance for, autistic thought than do most Americans. That is, the villagers are more accustomed to making and hearing statements that have little apparent "objective" meaning (or in the language of psycholinguistics, "referential" meaning: Brown 1958: 315) but which are symptoms of inner states and preoccupations. The crucial point here is that a listener often does not know—or care—precisely what a speaker is talking about, but simply accepts the other person's utterances as expressions of inner, unknown concerns. Such expressions involve the leaping over of connective thought and syntactic constraints (as in the above example of the lecherous husband) or indifference to the logical currents of the discussion.[3]

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[2] Sometimes his discussions are simply expressions of phatic communion—the desire to indulge in chitchat for its own sake. (See Malinowski 1923: 315; and Hockett 1958: 585.)

[3] It should be remembered that speech is not only a device for carrying on social interaction but also a mechanism for articulating one's inner preoccupations, whether or not other people understand. It is this latter use (which, incidentally, is ontogenetically the more basic: Piaget 1932; and Langer 1942: 35) about which Bang Chaners seem particularly tolerant. In general, a speaker in Bang Chan is not held very responsible for what he says. One rarely hears in the village—except from prying anthropologists—such charges as "I do not know what you are talking about. Explain yourself." For one thing, such a query would not be particularly polite; and in the villagers' scheme of things, what a person says is really his own business, re-

4:Phillips E-4,5 (1956-1957) 1966
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These various considerations are mentioned simply to note that our Thai informants, like all human beings, occasionally do break through the syntactic constraints of their own language, a condition which is probably aggravated here by the necessity for the SCT testing situation to be a dialogue. Nonetheless, as will be seen in examining the actual SCT responses, these lapses occur relatively infrequently. That they do occur so rarely undoubtedly attests to the power of grammatical patterns to bind human thought processes. By and large our informants are like most people in that they are habituated to think and speak in complete sentences.

The unconscious incentive to complete a sentence and the relatively unpremediated nature of the completion both help to mitigate the potentially sensitive nature of the SCT "questions" and thus the tendency to resist answering them. However, the third and most important factor is our informants' familiarity with these sentences as declarative statements rather than as direct interrogations. All the items included in the SCT touch on experiences which although perhaps personally threatening, are quite commonplace. Certainly statements like "When I realize other people do not like me, I feel such and such," portray experiences which most informants have imagined if not actually encountered in daily life; they at least have certain expectations about how they would feel under such circumstances.

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gardless of how unclear or irrelevant it might sound to others. A related factor may be the sense of the untrustworthiness of other people's statements that Textor (1959) has described as characteristic of Bang Chan discourse. However, untrustworthiness immediately implies a serious interpretation of the speaker's intent, an assumption that his statement is perceived primarily in terms of its truth or falsehood. Although this interpretation is undoubtedly appropriate for many situations, the point here is that the villagers have a considerably broader awareness and appreciation of the various uses of language: much of what people say is also viewed as a verbalization of unexplained fantasy, an articulation of a personal compulsion, or in some contexts, simply as a form of play or "nonsense."

Interpretations of fantasy or "nonsense" always depend of course upon the semantic and structural conventions of a particular language. And a common source of error is the foreign researcher who mistakes his own inability to understand the native language, especially implied meanings and assumptions, for autistic thought. The problem then reduces itself not to whether the anthropologist understands the native speaker but to whether other members of the culture do, and the matter should be checked and settled by the researcher's native assistant or interpreter.

This type of problem arose on occasion in my experience, and although I can recall instances when at my prodding the assistant could tease out into culturally meaningful terms the logic underlying an informant's statement, I can also remember cases when the assistant would concede: "I don't understand him either. A lot of people are like that. They say anything that comes into their minds, even if it doesn't make sense." From the assistant's Thai point of view, however, the latter state of affairs was quite normal and expectable.

It is this easy tolerance for the inexplicable in social discourse—or alternatively, a basic respect for the privacy of another person's thoughts—that seems to distinguish the Thai approach from our own, although we appear to share their attitude in our reaction to the autisms of children.

Chapter II

MAN AND WORLD

771 Bang Chan had for years heard preaching from Buddhist scriptures. Co-existing with these teachings were Hindu elements referring to Brahma, Shiva, and others. People also believed in an animistic lore concerning frightening [192] ghosts and spirits (phī), protecting deities (thewadā), maternal goddesses, princely spirit-lords, and other supernatural guardians of a more or less benevolent nature. To these beliefs were added special bodies of knowledge, such as sacred literature from India and traditions of astrology from both China[8] and India. Other elements might be traced to Muslim influence, just as Muslims shared some of the foregoing references with their Buddhist neighbors. Bang Chan shaped its views of nature and man from all these sources. However, we shall not try in what follows to specify the sources of its beliefs.

826 774 184 192 The Human Body

The body of flesh, blood, bones, and other materials, harbored the noncorporeal aspects, in particular a person's merit store (kam; Skr: karma) and his several souls, viz., the khwan, the winyan, and the four chetthaphūt (cf. J.R. Hanks, 1958). Views of the human body formed no unitary system, but were as varied as their origins. Thus, sometimes villagers distinguished the material from the non-material: "a human being is composed of two aspects: rūp (body) and arūp (non-body)." Sometimes learned persons referred to the Hindu-Buddhist concept of 32 parts of the body, one of which, the winyān-soul, was the "organizer" of the others.

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8. No trace was discovered of the Chinese concept of Yin as female, dark, cold, and evil, etc., and Yang as its opposite.

[115] 9. Ming (Mc.F. 880) was once given as a term for "soul" by a Muslim informant, but without further information.

826 [964] [963] [954] [952] [845]

As to the gross structure of the body, some persons learned about the skeleton when, in preparing corpses for cremation, the undertaker stripped the decaying flesh from the bones, usually in the presence of relatives and spectators of all ages. Occasional autopsies because of suspected sorcery, and surgical removal of a fetus from a deceased mother by caesarian section led to some knowledge of organs and blood vessels. Male and female masseurs of considerable competence were trained in the Chinese neuro-muscular system. A system of "origins," e.g. that the elbow-origin was in the arm pit, and the chest originated at the spine, might relate to the Chinese concept of linkage points on the body, in particular, acupuncture. In Bang Chan's popular conceptualization, the protecting skin which enclosed the body was thin at the top of the head and especially so at the stomach area. An old image also persisted that the body cavity itself was a relatively undivided space extending from neck to pelvis. Inside the cavity, food dropped from the top, faeces packed down at the bottom. Through the body curculated slowly the blood; several kinds of water (nām) (McF. 453) e.g., the nām khraam (refuse-water) (ibid. 453) in the abdomen; and several winds (lom) (ibid. 728) e.g., the pushing lom bêng (ibid. 487), and the pulling lom chawat (ibid. 287). The small hair-whorls noted on the head, hip, or shoulder were construed as minor vortices of these currents, or as souls (khwan).

827 [192]

826

Foremost in people's minds were the elemental constituents of the body. The human body, along with every animal, plant, or mineral in the world, was made up of 4 elements (thāt): earth, fire, water, and wind (air).[10] This ancient four-fold view, also familiar to the Greeks, had mixed in Bang Chan with the traditional five-element Chinese system (metal, earth, fire, water, wood) because gold, iron, and wood were also spoken of as constitutional elements, and there may have been others. Some persons said that the proportions of the 4 major elements were the same for everyone; others, that they varied for different temperaments, which were also affected by the presence or absence of elements other than the basic 4.

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10. "The body, comprising about a bushel of powdery earth-element, is held together by half a bushel of juicy water-element, and propped up by the windy-element. The fiery element digests what is eaten or drunk and preserves the body". (Visuddhi-Magga. [Warren.157-158]).

The Role of the หมอ

756 844 A หมอ never delivered the baby and never even touched a woman in labor, for this was not part of his specialty. If labor were slow, or weakness were setting in, he came to give a decoction to raise the fire element within the body, speed up the winds and so strengthen the contractions. He also gave holy water for general strength and to clear out, if such there were, any obstructing spirit or magical disease object like khun. Because of his experience, though, he might stand beside the midwife or other woman instructing; for instance, "Pull now!" "Watch out for the eyes!" His advice was more often sought after childbirth if fever or swollen body were in evidence, for these were the results of "inadequate outflow of blood and fishy-water." Because they were called in case of debility, the หมอ were the ones who suggested when it was advisable to send a parturient to the Minburi Health Center.

756 84 No priest-หมอ was ever called for childbirth because of the contact with a woman's genital area, though they were consulted on menstrual and pre-natal irregularities.

759 ## The Specialty of the Midwife

Midwives were called หมอ ตำแย (doctor-expert-in-occultism; pounding, as in a mortar [McF. 365] crouching, [McF. 682]). There were 4 or 6 women, both Buddhist and Muslim, and 2 or 3 Buddhist men, who had delivered 100 or so babies apiece. They ranged in age from 50 to 70. Dozens of women had delivered babies one or more times but were not accorded the title of midwife.

759 845 The foundation of their specialty was a greater than usual manual skill, developed over long experience. "We have only our hands," said one woman. The more expert could handle certain mal-positions, and did not hesitate, but only with permission, to put the hand into the vagina to turn the baby or "unstop the blood." They were better judges of the progress of labor, whether normal or slow, and of the symptoms of debility. They were more likely to keep calm in the face of extreme suffering where the parturient's relatives, over-eager in their desire to help, sometimes inflicted

262 understood that her merit helped her not to be hungry. Once
888 she asked an eminent layman about eating at night. He said, "If you are not hungry, do not eat. If you feel hungry, it is better to eat. If someone invites you to eat, it is sinful to refuse."

261 Even young adults had a strong revulsion against gluttony. One of the symptoms of a man who went mad and had to be committed to an institution was that "he ate too much." A woman was despised because "she ate in secret. She stole eggs from her husband, sold them in the market, and then spent the cash on food which she ate there, instead of bringing it home." Definitions of a glutton were, "A 'with-rice' eater," or simply as "one who eats alone." These comments highlight the counsels of eating in moderation and in company. On the other hand, a full stomach was valued for "home is where one eats one's fill."

262 At maturity, when farm and other tasks were shared as
562 equals, men and women ate almost the same food. The old pros-
262 cription against animal food for women was somewhat relaxed,
220 but not entirely. To sustain farmers during the seasons of hard work, however, extra quantities of rice and rice alone, were considered essential. "With-rice" was pleasant but not so necessary. Any shift away from a diet of rice as ordinarily cooked in Bang Chan was construed as a shift either in occupation or in health. For example an eminent citizen who gave
[95] up farming took to eating (3)khaaw (3)tom often. This soupy rice, a staple dish for infant feeding, had interesting socio-economic connotations. It was served as a light lunch to cooperative farm-workers to be followed at the day's end by a real meal. It was also "delicate" food, suitable for the sick, for city-people, for those who did not toil with their hands and backs. Consequently, when this man ate this "delicate food" more often, he was consciously or unconsciously serving notice on the community that he was not going to do farm work any more, for (3)khaaw (3)tom could not possibly have sustained a farmer's strength. Caustic villagers hinted that he was putting on airs.

262 Among conditions in which some change from the usual
843 diet was found were pregnancy, post parturition and lactation.
846 Relatively few foods were generally considered to be tabooed under any of these conditions, but many women preferred to limit intake to "safe" foods if there were any possibility that certain foods might cause harm.

[124] Information was obtained from 42 mothers about the food they ate during the post-partum rest period. Two said they ate as usual, but for the remainder, the diet was considerably

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[192] 1. Literally "beautiful rice." For method of cooking, see p. 33.

Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply." 262

Note that not only has rice been considered much more important as food than "with-rice"[1], but that the diet was more limited for children and young women than for men. The Food and Drug Division of the Ministry of Public Health in Thailand has been trying to encourage people to eat more "with-rice" and less rice. The few comments we heard in relation to rice versus "with-rice" illustrate both the old and the new ideas. One informant stated that only rice can make children fat and that the "hot tasting" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish and was weak. He refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk[2], expressed the opinion that the ancient belief was based on thrift. He said that thrifty people did not want to spend much on a baby, therefore, they said that if a child ate too much "with-rice" he would be potbellied but thin in the upper part of the body and that eating eggs would cause dental caries. This grandfather said that he believed the truth to be just the opposite, but that good things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice", one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (a fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

Summary of Infant Feeding Practices in Bang Chan with Some Suggestions for Improvement.

To sum up the information obtained on baby feeding in Bang Chan, breast feeding was the rule. Some babies were nursed for two years or longer although about two-thirds of those we observed through the weaning period had been weaned by 18 or 19 months of age. Aside from honey which was given with medicine or hot water to newborn babies for a few days only, crushed banana of the (4)nam-(4)wa variety was usually the earliest dietary supplement. By 3 months of age about half the infants were being given banana, sometimes crushed with rice. Between 853 [862]

1. In Thai the general term meaning "to eat" is translated literally "to eat rice." Food items are divided into two classes: rice and "with-rice." [892]

2. See Footnote, page 25.

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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

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various kinds of ants living in Thailand and the United States. (Such are the topics that interest villagers.) The villagers wanted to know the English names for small red ants, normal black ones, and the large, rusty colored variety that are indigenous to the tropics. I named the first two with no difficulty. For the third, I said simply, "a giant ant." The assistant, turning to one of the informants, first gave the literal Thai equivalent of "giant," and then, as if this were the funniest thing he had heard that week, began to repeat, "giant, gi-ant, gi-ant." In a few seconds, they were all bursting with laughter.

Different, yet part of the same psychological constellation, is the whole complex of behaviors associated with the term, *sanug*. *Sanug* is usually translated into English simply as "fun." However, this translation conveys little of the motivational significance of the term. Essentially, *sanug* is a quality inherent in all situations which are not only fun but also emotionally worthwhile. In fact, these two states are often thought of as reciprocals of one another. An activity that is novel, diverting, or that can be done comfortably, is *sanug dii* (good fun); one that is tedious, overdemanding, that lacks the opportunity for frivolity, is not *sanug* and should be avoided. Harvesting rice in coöperative work groups, attending a ceremonial, participating in an election (see Phillips 1958: 45–46), or even taking something as outlandish as a Sentence Completion Test are all *sanug*. (The unifying elements of these diverse activities are either their novelty or the fact that they involve the presence of relatively large numbers of people but require no genuine interchange with them.) On the other hand, going into the army or working for a demanding superior are not *sanug*.

The importance of *sanug* is that it provides the villagers with a standard of value, a measure of how much they wish to commit themselves to a particular activity. The role of this standard should not be underestimated. Villagers who have taken a job in the city, often involving a time-bound daily routine or continuous, sustained attention to a task (work in a small factory, for example) frequently return to the village explaining that they quit "because it wasn't *sanug*. How can you work on a job if there is never any time for fun?" Foreign employers, with their greater concern for the job than with the person who does it and with their annoying tendency to be *cuu cii* (compulsive, fussy, exacting) are a particular target for this indictment, although this is usually based on hearsay rather than personal experience. On the other hand, villagers will often take on free of charge a major job (for example, helping a neighbor build a house) precisely because it is *sanug*. Although there are other considerations operating here—creating or repaying a personal obligation, doing a *bunkhun* ("a goodness") for a neighbor—the "sanug-ful" aspects of the task are always

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Analysis: The SCT's Exploration of Thai Personality[1]

Attitudes Toward Authority

The first area to be dealt with is in a sense the easiest. Thai attitudes toward authority represent what is perhaps the most explicitly expressed and highly ramified area of their social psychological life. The notion of authority—a sense of superordination and subordination—is an intrinsic part of their linguistic structure, it being impossible to address or refer to a person without indicating his social status relative to the self; two-week-old infants are taught to *waj*, or offer the gesture of obeisance to superiors; during elections, villagers say that they are going to vote for the prime minister because "he is our Master. He has been very good and kind to us. He is like our father, and we are like his children"; the entire structure of the family is predicated on a system of superordination and subordination, even to the extent of considering a twin born a few minutes ahead of his sibling the latter's social superior. Examples expressive of this emphasis in the workaday life of the villagers could be cited endlessly.

What is impressive in the data to follow is not only the near unanimity of villagers in responding positively to what are essentially neutral authority situations, but the tendency on the part of a large number to respond positively to the authority situation even when the authority figure is avowedly wrong. Many of their responses also make quite explicit the underlying ethical justifications for the authority system.

The first item, *"When the phuujinjaj told him to do it, he . . . ,"* is a

[1] Words and phrases appearing in parentheses in the responses on the following pages are for purposes of clarification. The few Thai words appearing in the responses are either "complex concepts" or "difficult to translate" terms, and have been retained mainly for those readers familiar with Thai. At the top of the table, the English language item that was originally prepared for the villagers appears first; it is followed by the best English translation of the actual Thai item given to informants, including the Thai pronouns that were used. Intra-sample differences (age, sex, religion, economic position), where important, are indicated in the text, not the tables.

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*125 simple statement of a common experience. A *phuujiŋjaj* generally means a
• 192 "big person" or "big man," although in many contexts it has the same connotations as the American slang term, "big shot." (Occasionally when I used the term with Bangkokians I was laughingly told that it was not a "nice" word; however, Bang Chaners used it and responded to it in an entirely matter-of-fact way.) As it appeared in the SCT interviews, the item was clearly an abstract phrasing of a generic kind of authority situation, and could have referred to any individual the informant deemed to be a *phuujiŋjaj*.

TABLE 1

*125 *When the* phuujiŋjaj *told him to do it, he . . .*
*128 *When the* phuujiŋjaj *tells* raw *to work,* raw . . .

DIRECT, POSITIVE RESPONSE:	86%	had to do it. had to do it well, to be worthy of the *phuujiŋjaj*'s trust. had to hurry and do it. ought to do it *riab-rɔɔj* (in the neatest way). did as he was ordered. did it in accordance with the *phuujiŋjaj*'s wishes. did what he had been told to do. had to do it, so he would get credit (praise and goodness for doing it).
CONDITIONAL (PROPRIETY):	7%	ought to do only work which is proper work. If the work were not proper, he would avoid doing it.
CONDITIONAL (ABILITY):	5%	if we cannot do it, tell him we cannot. If we can do it, do it.
"RECONCILIATION":	—	if he knew the order was right, he was glad to carry it out; if it was a wrong order, according to the regulations, but if it was necessary, he had to carry it out. And when he had an opportunity, he would point out what was wrong with the order.

*125 Examination of the responses indicates a single, overwhelming disposi-
*128 tion on the part of villagers to accept and act upon the superior's authority.
*156 Four informants condition their response on the necessity, propriety, or reasonableness of the superior's order, but even in these cases the initial tendency is to respond positively; three others condition their response on their own capacity to fulfill the authority's expectations; and one villager does not reply. But all others, 86 percent, respond directly and positively to the authority demands made upon them.

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152 losing their *khwaam*, as it were—if they release their anger. This is the fear of "letting go" and of regressing to a primitive psychological state. Every impulse of an adult villager is to fight this tendency. Second, by controlling their aggressions, they are not imposing their own problems on others and are maintaining the attitudes of "respect" and tolerance—as well as emotional indifference—that are otherwise so important to them. This consideration obviously does not account for the absence of aggression; it simply points up the fact that the aggression that does exist is dealt with internally, rather than socially. Finally, their aggression control seems to be based upon fear of reprisal. Although in a few instances this may be a realistic fear, it is principally a straightforward projection: they know only too well how painful the reprisals would be of people who hold the feelings of hostility that they themselves hold. This consideration is not inconsistent with my earlier remarks on the difficulty villagers have in investing hostility in others. Rather, it follows directly: the villagers' difficulty is not based upon lack of hostility, but upon the lack of social relationships which are sufficiently meaningful to merit that hostility. Rather than work out their aggressions behaviorally—in and with other human beings—they work them out in the isolation of their own inner psychodynamics.

*125 *128 152 *156 I have gone into considerable detail here because "aggression" is the one area of the villagers' lives where the meaning of behavior is not at all apparent from its manifestations. Without such background material, the following SCT results would probably also have little significance.

The first item, *"He most often gets angry when . . . ,"* reveals some of those patterns with unexpected clarity. Ostensibly, the item asks informants simply to identify the various sources of aggression. However, the term for "angry" (*krood*) in this sentence explicitly means "angry toward other people." [11] Thus, one would expect villagers to focus on the activities or characteristics of others—or, at minimum, on some dimension of a social relationship—which elicits their ire. However, their most frequent response is to ignore the semantic pressure to refer to others and to dwell on characteristics within themselves that cause their anger. Thirty percent of

[192] [828] [11] The importance of this point becomes apparent when *krood* is contrasted with some of the other "angrys" in the Thai lexicon: *moohoo*, angry at the situation in which one is entangled rather than toward another person; *chun*, angry at the action of another person, but not the person himself, with a suggestion of helplessness (the blast of a radio as one is falling asleep); *chiw*, to *feel* angry at another person, but to conceal its expression; *moohoochunchiaw*, angry all the time, at anything, because one has a character trait to be angry; *khunkheen*, revengeful. That the villagers should have such a rich set of lexical contrasts in this area—and I have excluded terms which are simply variations on the intensity of "angry" ("irritated" *vs.* "enraged")—is not without significance. "Anger" obviously is an emotion to which villagers attend.

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*125 first person singular—*e.g.*, "When he insulted *me*, I . . ."—the informant will realize that he is describing himself, and the projective advantage of the item will be lost. On the other hand, if the individual described in the item is referred to as "John," "him," "people," or some other hypothetical soul, the informant will be less aware that he is describing himself, and the projectability of the item will be maintained.

In my own work, I never became convinced that the SCT would operate as a "projective technique" in the terms just outlined. I would argue that the data elicited by the technique is indeed less guarded and less censored than data obtained by more direct investigative methods, but this is a result of the linguistic structure of the SCT, not of its projective capacity, if what is meant by "projective" is that informants are unaware that they are talking about themselves. This conclusion about the SCT is based primarily on theoretical considerations, but it is also heavily influenced by the distinctive nature of my own research medium, the Thai language.

*125 • 193 196 In fact, the "special" nature of Thai almost precluded the SCT operating projectively in the terms described above. That is, in ordinary Thai usage, pronouns and proper nouns are often not used. In linguistic terms, they represent "optional" rather than "obligatory" grammatical categories, with the semantic context accounting for any seeming confusion. When they are used, however, they function as specifying and explicating devices: to single out the person or persons referred to from a larger, ambiguous social "field," and thus *distinguish* him or them semantically. This specification function is further enhanced by the fact that all Thai pronouns have associated with them an attribute of social status, and some are associated with an attribute of group membership, *e.g.*, *khon raw*, which may mean either its literal English translation, "we people" or "I who am a member of an unspecified group as distinguished from you, who are a member of another unspecified group." The significance of all this is that when pronouns and proper nouns are used, Thai are considerably more attentive to their referents than are English speakers to theirs, and they tend to take them more literally.

Because of this Siamese sensitivity to "active" pronoun usage, I decided not to use the Thai equivalent of the hypothetical "John" or "Mary" (villagers would wonder precisely which "John" or "Mary"), or the first person singular forms, *phom* (used by males) and *chan* (used primarily by females, but often by males). These last two would not only reduce the supposed projective quality of the item to nothing, but would appear excessively awkward in an SCT item; using them would be akin to saying in English, "When he insulted me myself, I myself. . . ." Of the remaining Thai pronouns, those most frequently used in the SCT items were *raw*

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("we" or "generalized I")[9] and *khon raw* ("we people"). However, I used two other terms, *khon* ("people") and *khaw* ("he," "she," or "they") in those items most descriptive of the expression of ego-alien sentiments: that is, those sentiments which, on the basis of my knowledge of the villagers, I expected to be most readily denied as being self-referring. Thus, an aggression item read: "*Khon most often get angry when . . .*," instead of "*Raw most often get angry when. . . .*" To simplify matters for the reader, later SCT materials which list both the original English language item and the English translation of the Thai translation will also include the Thai pronouns that were used in the various items.

The third stage of the SCT construction involved the pre-testing of the SCT schedule with ten villagers. A major aim of these trial interviews was to examine the quality of all the items. I was particularly concerned with how well informants understood the items and with identifying those items which interested them, those which required revision, those which brought forth revealing material, and those which elicited useless information.

The second purpose of the pre-test was to train my assistant in how to conduct the SCT interviews. Of principal concern was to try to minimize the effects of the interpersonal situation on the informant. Such effects can never be fully cancelled out, but they can be controlled to the extent of insuring that the data obtained represent the informant's product, not the product of ideas the interviewer might introduce into the situation. The major task of the training period, therefore, was instructing of the assistant in elementary interviewing techniques.[10]

The instructions also included such considerations as seating arrangements: try to locate the informant so that the canal—where people paddle by and can be waved to—is in our line of sight, not his. Ideally, he should be able to observe only the interviewers. If interviews are to be conducted in boats (later, eight of them were) the boat should be pulled off into one of the canal tributaries to minimize the disturbance from canal traffic. In general, privacy can be obtained by telling informants that since we wanted

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[9] *Raw* as a "generalized I" is not as ear-catching in Thai as it is in English. Thus, although *raw* can always mean "we," it is a perfect synonym, not a substitute, for "I" when the speaker wishes to indicate less self-reference. Another way of putting it is that when it is used to mean "I," the ordinary "we"-"I" contrast is psychologically inoperative; *raw* simply becomes an attenuated form of "I."

[10] The techniques which I had the most difficulty impressing on my assistants concerned such seemingly simple matters as the following: never afford the informant any hint of a response; if his first few responses are wild, repeat the instructions, and pick up the interview where it was left off, adding the items with the strange responses at the end; do not hesitate to encourage the informant with comments such as "that is fine"; if the informant gives funny responses, smile but do not laugh; if he is hesitating too long on an item, simply repeat the item as a prod; if he does not respond after three repeats, go on to the next item, and the like.

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the part of older people.[12] Particularly obvious is the absence of any reference to accumulating Buddhist merit. Neither is there any reference to the pleasures derived from dealing happily or enjoyably with other people. The closest we get to this is with the responses of two informants who are concerned mainly with the welfare of their children, and who speak in terms of "inspiring respect" in their children or assuming the role of "doctor" who, either by his knowledge (in case the children are ill) or wealth, could take care of them. Given all the conceivable things that villagers might wish to be—fanciful, real, personal, social, of this world, and of any world—the dominant wish is to have status, wealth, and respectability within their prevailing peasant context.

The next item, *"Most of all he wants to . . ."* is essentially a confirmation of the above findings. However, perhaps because of the syntax of the Thai version of the item and the inclusion of the word, "most" (*"The thing which raw wants the most is* (*namely*) . . .") the responses assume a considerably more extreme and "unimodal" form. The overwhelming majority of the informants, 77 percent, want only one thing: money. A few of them say that they want what are essentially cultural variations of money: property, rice fields, land, cattle, and jewelry. Several of them almost wax purple about the significance of money in their lives: *"The thing which raw wants the most is* (*namely*) . . . have money and gold, because money can help us all the time. Whatever one wishes to have, one can use money to buy it all. Even when one wants a wife, if one has a lot of money one can have anyone's daughter"; ". . . have money. Money is better than anything else. It is only the moon and stars that money cannot buy"; ". . . to have money. She wants money very much because when she lacks other things she can find something to take their place, but when she lacks money she is most unhappy"; ". . . have wealth because everything else comes after that." These responses, of course, explicate the major function of money. They indicate that money is not an end in itself, but a means by which to achieve some of the other life goals appearing here.

The minority responses to this item are in no case held by more than four individuals. Four villagers do give religious responses, saying that what they want most is to accumulate merit (one mentions both merit and money); three refer to maintaining the welfare of their families (one of them merging money and succorance by saying that he wants enough money to provide for his family); and four say that they want happiness (again, two of them linking money and happiness together).

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[12] There is nothing in the grammatical-semantic structure of the Thai version of this item inhibiting a religiously oriented response. The Thai cognate for the verb "to be" here is *"pen,"* which could easily result in a response such as ". . . *pen khon thii mii bun,*" or ". . . a person who has merit." This would be the most obvious "religious" completion under the circumstances.

retreat (ōk phannā) in order that her child would come out (ōk) more easily. Here none sought to divide the worlds of the natural and the supernatural, or to mark off "imitative magic" from the "learning by example of the natural world." A stronger influence came from more powerful agents, so that the effects of the Buddhist temple carried greater effect than the actions of a mere neighbor. Yet any like influence was of aid, especially in a verbal similarity. Thus, an event occurring on a Friday was apt to be auspicious because the Thai name for Friday contains an element identical in sound (though etymologically different) to the word for happiness (wansuk=Friday; suk=happiness), and for the fortunate status of true adulthood (suk=mature, ripe).

Stability in a Floating World

In explaining why some children were "born easily and were easy to raise" (liang ngāi) certain persons simply said, "They were born into the right family. Those born to the wrong family usually die." In defining the "right" family, merit, habituation, and helpfulness converge.

Most families were thought to live together as a group in life after life. In view of the separateness of souls, how was this brought about? The key lay in the conviction that people who made merit together met in future lives. Since most merit-making was undertaken as an enterprise of the nuclear family, sometimes with close kinsmen and friends, they would find each other. Some of the eagerness of friends to help (chuai ngān) with cash or labor was in order to meet in later lives. These persons were used to each other, used to helping each other, and so might marry. Thus, if they lived rightly, the nuclear family, maybe with an infusion of beloved old friends, expected to carry on in the next existence. Although a family's prosperity proved its merit, and its wealth facilitated making more merit, continuity in time was not limited to the wealthy. Proof that a couple had been married in a previous life lay in the birth of a boy as first born. Such a couple was known as a "khū" (pair), and divorce was held to be highly unlikely.

How did a child find its "right" family? After whatever necessary stay in purgatory, the khwan soul of a deceased member roosted in a tree near to its old home, then flew into an accustomed womb. One recalls the start of the blessing (p.48), "Come, khwan! Come my own child!" A woman hoped that the khwan was one previously born to her. "A couple lost its first child. Later the wife was fearing for the life of their sickly second-born." The husband said, "It is according to your sin and merit. If the child is your own child, he will live with you. If not, he cannot."

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

262 796 A discussion of food habits in Bang Chan would be incomplete without some description of ceremonies ((l)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

796 The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-
527 teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion
264 of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

[782] Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could
[554] afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and
527 at festivities. Thus, there was reason to make a (l)ngaan
796 as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

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[192] [461] 1. Significantly the same Thai word is used for work and for ceremony.

[302] [881] [355] 2. Topknots, formerly worn by all Thai children, used to be cut ritually at the time of puberty. In Bang Chan, the growing of a topknot had become primarily an attempt to improve a child's health. Few school age children wore topknots. They were usually cut earlier than puberty.

[577] 3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

4:Phillips E-4,5 (1956-1957) 1966
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*125 first person singular—e.g., "When he insulted *me*, I . . ."—the informant will realize that he is describing himself, and the projective advantage of the item will be lost. On the other hand, if the individual described in the item is referred to as "John," "him," "people," or some other hypothetical soul, the informant will be less aware that he is describing himself, and the projectability of the item will be maintained.

In my own work, I never became convinced that the SCT would operate as a "projective technique" in the terms just outlined. I would argue that the data elicited by the technique is indeed less guarded and less censored than data obtained by more direct investigative methods, but this is a result of the linguistic structure of the SCT, not of its projective capacity, if what is meant by "projective" is that informants are unaware that they are talking about themselves. This conclusion about the SCT is based primarily on theoretical considerations, but it is also heavily influenced by the distinctive nature of my own research medium, the Thai language.

*125 193 • 196 In fact, the "special" nature of Thai almost precluded the SCT operating projectively in the terms described above. That is, in ordinary Thai usage, pronouns and proper nouns are often not used. In linguistic terms, they represent "optional" rather than "obligatory" grammatical categories, with the semantic context accounting for any seeming confusion. When they are used, however, they function as specifying and explicating devices: to single out the person or persons referred to from a larger, ambiguous social "field," and thus *distinguish* him or them semantically. This specification function is further enhanced by the fact that all Thai pronouns have associated with them an attribute of social status, and some are associated with an attribute of group membership, *e.g.*, *khon raw*, which may mean either its literal English translation, "we people" or "I who am a member of an unspecified group as distinguished from you, who are a member of another unspecified group." The significance of all this is that when pronouns and proper nouns are used, Thai are considerably more attentive to their referents than are English speakers to theirs, and they tend to take them more literally.

Because of this Siamese sensitivity to "active" pronoun usage, I decided not to use the Thai equivalent of the hypothetical "John" or "Mary" (villagers would wonder precisely which "John" or "Mary"), or the first person singular forms, *phom* (used by males) and *chan* (used primarily by females, but often by males). These last two would not only reduce the supposed projective quality of the item to nothing, but would appear excessively awkward in an SCT item; using them would be akin to saying in English, "When he insulted me myself, I myself. . . ." Of the remaining Thai pronouns, those most frequently used in the SCT items were *raw*

4:Phillips E-4,5 (1956-1957) 1966
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("we" or "generalized I")[9] and *khon raw* ("we people"). However, I used two other terms, *khon* ("people") and *khaw* ("he," "she," or "they") in those items most descriptive of the expression of ego-alien sentiments: that is, those sentiments which, on the basis of my knowledge of the villagers, I expected to be most readily denied as being self-referring. Thus, an aggression item read: "*Khon most often get angry when . . .*," instead of "*Raw most often get angry when. . . .*" To simplify matters for the reader, later SCT materials which list both the original English language item and the English translation of the Thai translation will also include the Thai pronouns that were used in the various items.

The third stage of the SCT construction involved the pre-testing of the SCT schedule with ten villagers. A major aim of these trial interviews was to examine the quality of all the items. I was particularly concerned with how well informants understood the items and with identifying those items which interested them, those which required revision, those which brought forth revealing material, and those which elicited useless information.

The second purpose of the pre-test was to train my assistant in how to conduct the SCT interviews. Of principal concern was to try to minimize the effects of the interpersonal situation on the informant. Such effects can never be fully cancelled out, but they can be controlled to the extent of insuring that the data obtained represent the informant's product, not the product of ideas the interviewer might introduce into the situation. The major task of the training period, therefore, was instructing of the assistant in elementary interviewing techniques.[10]

The instructions also included such considerations as seating arrangements: try to locate the informant so that the canal—where people paddle by and can be waved to—is in our line of sight, not his. Ideally, he should be able to observe only the interviewers. If interviews are to be conducted in boats (later, eight of them were) the boat should be pulled off into one of the canal tributaries to minimize the disturbance from canal traffic. In general, privacy can be obtained by telling informants that since we wanted

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[9] *Raw* as a "generalized I" is not as ear-catching in Thai as it is in English. Thus, although *raw* can always mean "we," it is a perfect synonym, not a substitute, for "I" when the speaker wishes to indicate less self-reference. Another way of putting it is that when it is used to mean "I," the ordinary "we"-"I" contrast is psychologically inoperative; *raw* simply becomes an attenuated form of "I."

[10] The techniques which I had the most difficulty impressing on my assistants concerned such seemingly simple matters as the following: never afford the informant any hint of a response; if his first few responses are wild, repeat the instructions, and pick up the interview where it was left off, adding the items with the strange responses at the end; do not hesitate to encourage the informant with comments such as "that is fine"; if the informant gives funny responses, smile but do not laugh; if he is hesitating too long on an item, simply repeat the item as a prod; if he does not respond after three repeats, go on to the next item, and the like.

4:Phillips E-4,5 (1956-1957) 1966
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the part of older people.[12] Particularly obvious is the absence of any reference to accumulating Buddhist merit. Neither is there any reference to the pleasures derived from dealing happily or enjoyably with other people. The closest we get to this is with the responses of two informants who are concerned mainly with the welfare of their children, and who speak in terms of "inspiring respect" in their children or assuming the role of "doctor" who, either by his knowledge (in case the children are ill) or wealth, could take care of them. Given all the conceivable things that villagers might wish to be—fanciful, real, personal, social, of this world, and of any world—the dominant wish is to have status, wealth, and respectability within their prevailing peasant context.

The next item, "*Most of all he wants to . . .*" is essentially a confirmation of the above findings. However, perhaps because of the syntax of the Thai version of the item and the inclusion of the word, "most" (*"The thing which raw wants the most is (namely) . . ."*) the responses assume a considerably more extreme and "unimodal" form. The overwhelming majority of the informants, 77 percent, want only one thing: money. A few of them say that they want what are essentially cultural variations of money: property, rice fields, land, cattle, and jewelry. Several of them almost wax purple about the significance of money in their lives: *"The thing which raw wants the most is (namely) . . .* have money and gold, because money can help us all the time. Whatever one wishes to have, one can use money to buy it all. Even when one wants a wife, if one has a lot of money one can have anyone's daughter"; ". . . have money. Money is better than anything else. It is only the moon and stars that money cannot buy"; ". . . to have money. She wants money very much because when she lacks other things she can find something to take their place, but when she lacks money she is most unhappy"; ". . . have wealth because everything else comes after that." These responses, of course, explicate the major function of money. They indicate that money is not an end in itself, but a means by which to achieve some of the other life goals appearing here.

The minority responses to this item are in no case held by more than four individuals. Four villagers do give religious responses, saying that what they want most is to accumulate merit (one mentions both merit and money); three refer to maintaining the welfare of their families (one of them merging money and succorance by saying that he wants enough money to provide for his family); and four say that they want happiness (again, two of them linking money and happiness together).

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[12] There is nothing in the grammatical-semantic structure of the Thai version of this item inhibiting a religiously oriented response. The Thai cognate for the verb "to be" here is "*pen*," which could easily result in a response such as ". . . *pen khon thii mii bun*," or ". . . a person who has merit." This would be the most obvious "religious" completion under the circumstances.

4:Phillips E-4,5 (1956-1957) 1966
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whole, depends in large part on one's frame of reference.[1] In the most general terms, the people of Bang Chan are like almost all ethnic Thai peasants (excepting on some counts Thai Moslems and some of the economically disenfranchised people of the Northeast) in that they have a keen sense of membership in the nation-state with a deep loyalty to the Crown, speak the Thai language, are Therevada Buddhists, are outwardly highly deferential to the authority of the Central government, and have a conception of the good life that stresses fun, physical comfort and security, intellectual simplicity and practicality, and a moral (as contrasted with a natural) ordering of the universe. Too, like the vast majority of their rural compatriots,[2] they are engaged in the production of rice, an activity which to them is not only an economic operation (Ingram 1955, Janlekha 1955) but almost a way of life, being bound up with their social structure, dietary habits, religious practices, and even their philosophical (J. R. Hanks 1961) and aesthetic conceptions.

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[1] For readers unfamiliar with Thailand, the nation-state, it should be noted that the country is predominantly rural; 84 percent of the total national labor force is in agriculture and there are only ten towns with populations of 20,000 people or more, in which 6 percent of the national population (1947 census) live. Although Bangkok has a population of approximately 1,200,000, the second largest city, Chiengmai, has only 60,000 (1957 estimate).

The nation also has a high degree of ethnic homogeneity, 82 percent of the population considering themselves native Thai (1957 estimate). The largest ethnic minority group is the overseas Chinese, comprising 11.3 percent of the population (1953 estimate, from Skinner 1957), the balance being Malays, Cambodians, and Indians; the so-called tribal groups number in toto only about 150,000 people.

The religious composition of the country is 94.1 percent Buddhist, 3.9 percent Moslem, 0.5 percent Christian, and 1.5 percent "others," many of whom are tribal animists. Thai Buddhism is of the Southern (Therevada, Hinayana, or "Lesser Vehicle") variety and as practiced by most Thai, has syncretized within it many Brahmanic and traditional Southeast Asian animistic elements (see the chapter on "Religion" in Sharp *et al.* 1956, and Textor 1960). The largest minority religion, Islam, is practiced by ethnic Malay living in the four southernmost provinces of Thailand, as well as by some ethnic Thai—many of them descendants of former Malay slaves or war prisoners—scattered through the areas north and east of Bangkok, including Bang Chan, where they comprise 9.8 percent of the local population. Relationships between Buddhists and Moslems, at least in Bang Chan, are quite amicable and except for ideal prohibitions against intermarriage and occasional offhand remarks such as "Moslem women are loose" or "Moslems kill animals," there is little overt hostility between the two groups. Certainly few Bang Chaners ever distinguish between their Buddhist and Moslem neighbors when arranging a work group, selecting a drinking partner, or even compiling a guest list for a son's ordination.

[2] Janlekha (in Sharp *et al.* 1953: 110) indicates that 55 percent of the total national labor force is involved solely in the cultivation of rice—which occupies approximately 90 percent of the total cultivated land area—and as many as 92 percent of all agricultural households are rice households. The 55 percent figure excludes all those people who are involved in the transportation, milling, storing, and distribution of rice. Eighty-five percent of the population of Bang Chan (1953) are rice farmers.

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front, know that it actually elicits and betrays his anxiety, but have such implicit trust in his own resources that he feels no need to alter his behavior. Simply stated: uneasiness when it occurs is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality.

The actual expressions of nervousness and inconsequential conversation vary considerably. Perhaps their most obvious (and justifiable) expression is when a villager, who wants to get something from another person, for example, a job, a loan, higher rent on land, is uncertain about the other's reaction and approaches him by hedging around the issue with giggles and light, irrelevant comments. This mode of behavior typically occurs when there is no history of reciprocal benefits between the parties or when a middleman cannot be used.[17] Although villagers themselves do not consider such comments "irrelevant" (probably because from a ritualistic point of view they are not), it is hard to define a detailed discussion of a person's buttons or belt buckle as anything but a kind of phatic communion. Sometimes conversations of this type will go on for twenty and thirty minutes, often branching off to include more topical interests such as the size of eggs or the calls of birds, before reaching the point. Frequently they never reach the point, since somewhere along the line the individual recognizes from the tone of the conversation that the other person is not in the proper mood to entertain his request; in this case, the individual will explain that he came simply "to chat." Sometimes the friend will begin to giggle uneasily (particularly if the protagonist's references to him contain an excess of flattery) as he becomes aware of the purpose of the conversation and wishes to evade facing the ultimate issue. Very often, even when the final request comes out, he can avoid it simply by giggling. Under such circumstances a giggle is crucially communicative: it is the person's polite substitute for "No," or "Let us bring this particular topic of conversation to an end." Giggling is a wonderfully effective way of carrying on a "conversation" (for those who can read its "vocabulary") because one can so readily convey his refusal, wariness, and even hostility while at all times maintaining the illusion of friendliness. It is precisely because the villagers' giggling frequently rests on such devious attitudes that it appears

[17] The *quid pro quo* basis of the former would permit a considerably more direct approach. It is not difficult to be frank with a person when both you and he realize that you are asking for an earlier obligation to be repaid or that you are creating a new one which may be called upon later when needed. Villagers are highly responsive to such obligations, often going to considerable effort and personal discomfort to meet them. A middleman, on the other hand, is used precisely to avoid the kind of delicate encounter described here. As a disinterested third party, he can be completely candid in his requests. However, for reasons of secrecy (usually when the request involves some potential competition or envy of other villagers, or perhaps some sharp-dealing) the use of a middleman may be inappropriate.

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to be somewhat nervous. Like the conversational topics mentioned above, its purpose is to maintain social contact, but at a minimal substantive level.

Other uses of giggling are less consciously purposeful than the above. Perhaps the most frequent instance of this is when villagers are talking about or responding directly to an unfortunate situation: a flood destroying the rice crop, a friend or relative dying or being beaten up, a person committing suicide. Giggling under these circumstances seems to represent several related sentiments. On the one hand, it indicates a slight feeling of embarrassment over having discovered something or talked about something which would have been better left undiscovered and undiscussed. At the same time, it is an attempt to make light of the misfortune by suggesting that the speaker and those present should not be overly pained by what they are encountering. Giggling here serves very much the same kind of function as the phrase *maj pen raj* ("it is nothing") referred to earlier; it is a means of shrugging off and denying a feeling of distress. Finally, giggling often is also a kind of ironic commentary on the human situation—not in any abstract philosophical way, but in the sense that a tragedy is so often actually felt to be a comic exposure of human hopes and intentions. A little exchange between the writer and an elderly villager perhaps best illustrates this. During one of the two rainy seasons I spent in Thailand, the rains were especially heavy in the Central Plain and destroyed the rice crop of many Bang Chan farms. As might be expected, it was a topic of considerable discussion. Paddling down the canal one morning, we met a villager who was returning from inspecting his fields, and we stopped to chat. The discussion inevitably turned to the flood, and he told us, in a completely matter-of-fact way, that he had already lost about 50 percent of his crop. He then giggled nervously over what he had said, and followed it up with, "But that person over there has lost everything." His giggles then turned into laughter as he nodded his head in an attitude of pain. Months later, when things were considerably more comfortable for the villager (as it turned out, he had lost only about 5 percent of his crop) I recalled our meeting and asked him what he thought was so funny about the flood. He did not remember, but volunteered in a nice, didactic way: "When something like a flood happens, all you can do is laugh."

Giggling is also a favored mode of dealing with the countless situations that arise in daily life that are perceived by the villagers as potentially, or imminently, embarrassing. Here giggling is a substitute for an explanation of one's actions, particularly those that are considered annoying to others. Villagers who have missed an *important* appointment (lesser ones are missed with few qualms) will tend to giggle when they finally meet the person and there is the slightest indication of the latter's displeasure.

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from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise of regular wages, lighter work, and the bright lights of the city, leave Bang Chan with the hope that they will never have to return, although of course many do. The Goldsen-Ralis survey reveals that 26 percent of their respondents had lived in Bangkok for a year or more, although for most this was in fulfillment of military service.

Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

The frequent transit between Bang Chan and Bangkok,[8] however,

[8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

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continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959*b*: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family;

home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

278 [563] The Chinese druggists, many of whom stocked among their traditional pharmacopeia a few modern medications, gave out occasionally to their customers information derived from the manufacturer's instructions for use. People with minor indispositions sometimes sought a druggist's advice. He suggested traditional or modern remedies, depending on the wishes of the customer. Thus, the druggists also acted as a bridge to the use of modern remedies.

484 Facets of Social Life Pertinent to Childbearing:

Communication and Transportation

People went to Minburī, and less often to Bangkok, to buy, sell, work, or visit relatives. A few adults had never been outside Bang Chan.

494 [484] [206] [493] Along the road buses passed Bang Chan every two or three hours during the daytime only. Minburī was a ten minute ride, Bangkok, an hour. Minburī had no taxis, and no telephone existed to call a taxi from Bangkok. Two or three persons owned bicycles.

505 484 Within Bang Chan, transportation varied with the season. From June to February travel was entirely by boat, even to a neighbor. A message to a local midwife, for instance, could be carried quickly by a speedy paddler in his skiff. If an emergency trip to the Minburī Health Center appeared necessary, a person could be rowed fairly comfortably along the canal that bordered the road. Going by boat to Bangkok, a whole day's row away, or four hours by the motor boat from Minburī, was not considered convenient even for passenger traffic, much less for a sick person or a woman in labor.

484 844 [494] The inconvenient time of year was the three month dry season. Boats then could hardly go on the canal that ran through the middle of Bang Chan, while the smaller canals became muddy or even dry. Walking barefoot over sharp stubble in tropical sun was hard. To transport a woman in labor, assuming she could stand it, an improvised stretcher could be made, but to subject her to the jolting bus was usually foolhardy. It was not customary to flag down passing cars. If things went wrong for a woman in labor during the hot, dry season, there was practically no chance of getting her to a hospital, and none of getting modern help to her.

243 433 Work Habits in the Economy

Because of the annual flood the land was admirably suited to growing a single bounteous crop of rice. After all needs for

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[209] [204] [871]

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continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959*b*: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family;

home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

Communications Media

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With the increasing use of mass communications, the community member is exposed to sources of information other than the printed word. Ownership of radios has nearly tripled in about five years (in the 1955 survey radios were reported in 14 per cent of the households, whereas in 1949* only 5 per cent of the households reported owning a radio). Quite apart from ownership, radio listening is widespread; less than one-fifth of the people in Bang Chan claim they never listen to the radio (18 per cent). Motion pictures are also popular. Only one-tenth claim to having never attended a movie, while half (49 per cent) say they have seen motion pictures more than ten times.

There is, of course, a strong relationship between exposure to one of these media and exposure to the other. Table 13 below indicates that the majority (64 per cent) of respondents who listen to the radio likewise report frequent movie attendance. Similarly, the majority (67 per cent) of those who say they never listen to the radio, reported that they go to movies rarely or never.

TABLE 13. EXPOSURE TO RADIO AND MOVIES SHOWS HIGH INTERRELATION

	Radio Listening		
Movie Attendance	High Exposure (regular or occasional listeners) (111)	Low Exposure (listen seldom) (148)	No Exposure (60)
High exposure (10 times or more)	64%	32%	12%
Medium exposure (4 to 9 times)	19	17	21
Low Exposure (0 to 3 times)	16	31	67

[402]
[241]
[228]
[244]

Exposure to the communications media is strongly linked to acceptance of a basic innovation such as the motor. It is not directly linked to acceptance of the other agricultural innovations (fertilizer, tilapia, mushrooms). Respondents who report frequent exposure to radio listening and motion picture attendance are significantly more likely than others to say they own or have used the motor. (Among daily radio listeners 88 per cent report use of the motor; and this proportion declines steadily until among those who never listen, only 46 per cent use the motor; for movies, the corresponding proportion of users ranges from 76 to 36 per cent.)

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* Siamese Rice Villages, op. cit.

TABLE 14. HIGH EXPOSURE TO COMMUNICATIONS MEDIA IS LINKED TO ACCEPTANCE OF THE MOTOR

	Exposure to Radio			
	High			Low
	Listens Daily (45)	Listens Occasionally (66)	Listens Seldom (148)	Never Listens (60)
Small Engine Motor				
Used it	89%	78%	64%	46%
Didn't use it	12	22	36	54

	Exposure to Movies			
	High			Low
	Ten times or more (161)	4-9 times (60)	1-3 times (75)	None (33)
Used it	76%	69%	59%	36%
Didn't use it	24	31	31	64

Of course it is important to check whether these relationships hold true when people on different economic levels are examined separately; for literates as well as for illiterates. We infer that the basic link between use of the motor and exposure to the media of communication holds for literate as well as illiterates; for poorer as well as for richer farmers. More specifically, the relationship between exposure to the communications media and decision to use the motor is even more marked for less well-to-do and for the illiterate farmers, in contrast to the better-off farmers and those who can read and write.

TABLE 15. EXPOSURE TO MOTION PICTURES IS LINKED TO ACCEPTANCE OF MOTOR ESPECIALLY FOR THE ILLITERATES AND FOR THE ECONOMICALLY LESS WELL-OFF*

	Exposure to Motion Pictures			
	High		Low	
	(Percentage Using Motor)			
Economic Level				
Low	76%	(47)	46%	(52)
High	83	(66)	75	(45)
Literacy				
Illiterate	63%	(36)	44%	(33)
Literate	88	(77)	82	(61)

* Male Farmers Only

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* 207 Exposure to the media of mass communication seems to act, in
a sense, as a substitute for literacy. It may be that through
212 these means either an illiterate farmer can obtain information
about the more complex agricultural tools and methods or motivation
546 to try improvements, or both, even though he may not know how to
read and write. One may infer that he tends to act on the infor-
mation thus obtained, since he is more likely than his unexposed
opposite number to try out these innovations.
*178
*177 Acceptance of Urban Patterns
369 The printed word and the mass media are, of course, not solely
channels for the communication of knowledge. They are, at the
same time a means whereby the farmers may establish some sort of
contact with the more sophisticated world outside the community
even with highly urban Bangkok.

The survey indicates in a general way the extent to which
[291] the people of Bang Chan have accepted urban patterns. Their grow-
[416] ing acceptance of urban modes is readily apparent even to a casual
[207] visitor: many own shoes, flashlights, wrist watches, radios,
bicycles, fountain pens, modern furniture.* Other urban behavior
[493] is likewise beginning to be noticeable.

One very simple indication of the degree to which urban in-
[413] fluences have penetrated is the change in manners of taking
[352] food. The farmers traditionally eat with their hands rather than
using a fork or spoon. In Bangkok, however, eating utensils are
customarily served with the meals in restaurants and are widely
adopted as well by the city population. Some Bang Chan inhabi-
* 177 tants have picked up this simple urban custom and have substituted
*178 it for eating mainly with their hands. In Bang Chan of 1955, for
example, a sizeable minority (26 per cent) report that they use a
264 spoon, fork or both for the evening meal.
369 That such a simple question can roughly measure exposure
[207] to urban influences, is indicated in the following table, which
[546] shows that respondents who report customarily eating with "urban
utensils" are more likely to be exposed frequently to radio and
motion pictures and are more likely to have visited in Bangkok.

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[412] * Survey respondents report that their households possess a
flashlight (81 per cent); scissors (66 per cent); kerosene lamp
(27 per cent); radio (14 per cent). About 41 per cent say they
own at least one pair of shoes.

TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Pattern	
	With hands (242)	With fork and/or spoon (84)
Listens to radio		
Regularly (daily)	10%	25%
Occasionally	17	28
Seldom	51	35
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	13
2 - 4 times	29	23
5 or more times	28	55

When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive to urban influence are twice as likely as others to use fertiliser (21 per cent versus 9 per cent), one and a half times as likely to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per cent versus 61 per cent). There is no noticeable relationship, however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for those on high as well as low economic levels and also for the literate as well as illiterate farmers.

6: Goldsen and Rallis Z-4.5 (1955) 1957
AO7 Central Thai AO7

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 16.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the [illegible] Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)	Twice or more (Proportion who own or use the motor)
Illiterate	44% (40)	58% (51)
Literate	83 (36)	88 (83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

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TABLE 28. INCIDENCE OF HOSPITAL AND CLINIC USE IS HIGHER AMONG LITERATE VILLAGERS

Have you ever been to a clinic or a hospital?	Literate (163)	Illiterate (169)
No, never	27%	44%
Yes, for treatment	42	33
Yes, for other reasons	31	23

Apparently here, too, exposure to sources of information predisposes the inhabitants to greater acceptance of modern health practices.

Exposure to Mass Media

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Again, as with agricultural innovations, exposure to the media of mass communication is linked to acceptance of modern health practices.

TABLE 29. INCIDENCE OF HOSPITAL AND CLINIC USE IS HIGHER AMONG VILLAGERS EXPOSED TO MASS MEDIA

	Movie Attendance		
Have you ever been to a clinic or hospital?	Ten or more times (161)	4-9 times (60)	Three times or less (108)
No, never	25%	32%	55%
Yes, for treatment	48	33	22
Yes, for other reasons	27	35	23

	Radio Listening		
	Daily or occasionally (111)	Seldom (148)	Never (60)
No, never	20%	39%	58%
Yes, for treatment	52	33	18
Yes, for other reasons	28	28	23

Mass Media as a Substitute for Literacy

It will be recalled (see p. 21) that the mass media seem to act as a substitute for literacy. The same relationship reappears here. The table following indicates that literacy links with use of hospitals or clinics only when exposure to mass media is rare. [212]

*178 With more frequent exposure to these media, the link between literacy and use of hospitals or clinics decreases.
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TABLE 30. EXPOSURE TO MASS MEDIA IS LINKED TO HOSPITAL USE, ESPECIALLY AMONG ILLITERATES

	Literate (Proportion reporting use of hospital or clinic)		Illiterate (Proportion reporting use of hospital or clinic)	
Movie Attendance				
High (ten or more times)	78%	(103)	71%	(38)
Low (nine times or less)	64	(36)	48	(111)
Radio Listening				
High (listen "frequently")	81%	(68)	79%	(42)
Low (listen "seldom or never")	66	(88)	48	(122)

*178 Acceptance of Urban Practices
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Table 17 showed that acceptance of certain urban practices was linked to acceptance of the major agricultural innovations. Acceptance of urban practices is also associated with use of clinics and hospitals. Use of modern medicine is significantly higher among those who no longer eat with their hands than among those who do.

TABLE 31. ACCEPTANCE OF URBAN PRACTICES IS LINKED TO USE OF CLINIC AND HOSPITAL FACILITIES

	Customarily Eat With Fork or spoon (84)	Hands (243)
Have you ever been to a clinic or a hospital?		
No, never	28%	39%
Yes, for treatment	48	33
Yes, for other reasons	24	28

*178 Contact Outside Bang Chan
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It has already been reported (see Table 23) that hospital and clinic use is higher for those who, during the past year, have paid more frequent visits to Bangkok. This correlation may seem, at first, spurious, since the main centers of medical care are situated in Bangkok. But the questions asked about contact with Bangkok for the one-year period preceding the survey, and visits to the hospital or clinic over an unspecified time period shows

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and acceptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike acceptors of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

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[412]
50.d. (In your household) is there a pair of scissors of any kind or not?
7. Yes, scissors 219
8. No 114

[207]
e. (In your household) is there a radio or not?
9. Yes, radio 47
0. No 286

[402]
f. (In your household) is there a winnowing machine, or not?
X. Yes, winnowing machine 102
Y. No 231

[243]
[402]
g. (In your household) is there a windmill, or not?
1. Yes, windmill 161
2. No 172

[805]
[405]
51. Do you have a wrist watch, or not?
3. Yes 79
4. No 252
— No Answer 2

[231]
a. Here in your household, how many buffaloes do you own?
5. None 81
6. One 27
7. Two 67
8. Three 61
9. Four or more 97

b. (Here in your household) how many pigs do you have?
0. None 321
1. One 2
2. Two 2
3. 3 or more 1
— No Answer 7

[235]
c. (Here in your household) how many chickens do you have?
4. None 35
5. 1 to 2 7
6. 3 to 4 17
7. 5 to 9 31
8. 10 or more 243

d. (Here in your household) how many ducks do you have?
0. None 308
1. 1 to 2 9
2. 3 to 4 16
3. 5 to 9 58
4. 10 or more 42

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125 64.a. IF YES: At what age did he leave BC?
[166] 1. Below 15 years 8
[592] 2. 15 to 19 years 28
3. 20 to 29 years 50
4. 30 years or more 5
5. Unascertainable 4

d. IF YES: For how long has he (she, they) been gone from BC?
6. Less than one year 12
7. 1 to 4 42
8. 5 to 9 19
9. 10 years or more 19
X. Unascertainable

[464] e. IF YES: What various duties or jobs does he (she, they) do in
[463] Bangkok?
1. Housewife 17
2. Unskilled laborer 19
3. Skilled laborer 33
Armed forces 17
Service 9
Employee 5
4. Other (retired, selling things) 2
5. Unascertainable 4

[166] f. IF YES: During the last year, have you seen this person(s)
[593] several times, once, or not at all?
[602] 9. Several times 65
X. Once 16
Y. Not at all 8
O. Unascertainable 3

g. IF YES: Does he (she, they) make regular remittances to this house?
X. Yes 31
Y. No 56
O. Unascertainable 5

• [207] 65. Do you listen to the radio regularly, daily, occasionally, seldom, or never?
6. Regularly-daily 45
7. Occasionally 66
8. Seldom 148
9. Never 60
— Unascertainable 14

[525] 66.a. Do you play the lottery regularly, occasionally, seldom, or never?
1. Regularly 20
2. Occasionally 54
3. Seldom 220
4. Never 36
5. Unascertainable —
— No Answer 1

b. IF REGULARLY, OCCASIONALLY, OR SELDOM: Suppose you were to win the second prize of 10,000 baht. What various things would you do with this money?
(See code)

759 In these 2 qualifications of skill and success, some of the explicitly non-professional old ladies were recognized as easily matching the professionals. What then was the definition of a professional midwife?

759 789 What the professional midwives alone did was to deliver non-kin, for which they had to have magical formulas and reliable celestial knowledge. The incantations gave a midwife the right to be called a mɔ̄ tamyaa, for he or she was using to a greater or lesser extent the sacred wisdom of occultism (saiyasāt). Here midwifery was like any other craft or endeavor. One could cure, sing, and build a boat without magic, but with it, the chances of success and effectiveness were increased. The incantations could "ease delivery," "get a baby out that had died inside"(for this baby could no longer do his part), "prevent the poison of the fire from burning the mother," and give other special help. That this magic was the crucial difference between the professional and non-professional was illustrated by the old lady who had delivered 30 babies, but vehemently[67] denied being a midwife. "I am not a professional. I have no magic. I only pray to the Lord Buddha and think of sacred things each time."

759 787 A professional also had more detailed astrological knowledge of the orientations of relevant celestial beings so that delivery would be "helped and not obstructed." This knowledge was in no way a professional secret, but if complications during childbirth were evident, it was necessary to have accuracy, and convenient that the midwife had it.

759 562 • 212 191 778 To certain villagers the designation "professional" could not be applied to women because, never having been ordained, they had not learned to read, as men supposedly had, not only Thai but Pali and Cambodian, the languages of medical and magical lore. "A professional midwife has a book. No woman can become professional because she cannot read." The idea was that incantations were correct only if taken from the sacred texts at the temple, though in fact the formulas were taught orally. One male midwife had a sacred book in his private possession, which was proper, for sacred books were inherited by males.

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67. Her vehemence may reflect either pride in being so successful without magic--a true liang di--fear of being reported as unlicensed (see below, p. 145); or consternation lest she be accused of using magic to which she was not entitled.

759 [465] Although as to fees, they said, "It is as you please," these women received as a rule the higher honoraria of 10, 20, and 30 baht. They did not have a separate teacher-rite but paid their respects during regular temple events, such as offering a pig's head and the other items during someone's ordination, though the Muslim midwife had her modified teacher-rite in a separate home ceremony, not at the mosque (cf. Appendix:Muslim Customs). It was even said of the best female midwife that "she had a book." She was literate in Thai. Even if her book were a popular astrological guide, it carried the reverance accorded all books. Whatever it was, its possession increased her aura of reliability. [212] [214] [789] Though the women did not receive their magic at the temple but rather from a kinsman in the maternal line, their incantations, which appeared to be in the Pali-Thai tradition, were no less effective.

759 The professional midwives, both men and women, saw themselves as individual custodians of sacred knowledge and competent in a technique. They were not only interested and ready, but obligated to give expert care to anyone, anywhere it was needed.

The non-professional midwives always thought of themselves as voluntary helpers of kinsmen, acting "out of pity" and carrying on their female responsibility for new life as older women helping their younger relatives. [562] The idea of giving nurture and assistance was so deeply ingrained in the female office that the professional midwives saw themselves fundamentally as volunteers.

Learning Midwifery

The decision to deliver a daughter or a wife was not momentous. One did not have to be "guk" to deliver a baby. The same practical and compassionate motives that led a mother or husband to do this led some of these people to seek out professional techniques so that they might "help more." One woman, bearing her own child at 25 with intense suffering, became angry (khap thai) because "the midwife did nothing to help, but just sat and chewed betel while others did all the work." In desperation she called in her own mother to deliver her. She also "felt she had many relatives who would need her help." Another was asked by her mother's brother, a midwife, to accompany him as he was getting too old. He then gave her his magic. A man took up the specialty after his first child, a son, died at birth from ineptness, he thought, of the midwife. Another man, though, took it up as a "minor extra" to his career as a [illegible]. All learned the skill by accompanying and helping an

000improvement, (1)ngaan sponsored by them might serve to acquaint a large group with a new practice. Suppose, for example, that addition of premix to rice, and cooking rice without excess water were being promoted. If one of the respected priest-practitioners could be persuaded to introduce these practices at his homage-to-the-teacher rite and give them some publicity, this might help to create a favorable attitude toward the suggested change.

Every change will require continuing education, and a variety of approaches should be used, some of which have been [871]mentioned. If the elementary school teachers were persuaded of the importance of a good diet and improvement in sanitation, and had a sound understanding of the desired changes in practice, they could influence both the oncoming generation, and their neighbors through teaching and example. Continued practical health education for school children should ultimately bear fruit. The value of eating more green leafy vegetables should be taught, and the children could learn about leafy greens available in the village, but not widely used at present. Good foods to bring to school for lunch might be stressed. Hard cooked eggs have already been mentioned. If convenience as well as health value were stressed, this might lead in time to increased consumption of eggs by growing children, and ultimately by adults as well. If a simple school lunch program were organized, either on a cooperative basis or subsidized, the inclusion of peanuts would help to increase both the protein and the thiamine content of the children's diets. Though unfamiliar to many of the children, lightly roasted peanuts were enjoyed as a treat offered at the end of the medical inspection. If teachers could influence vendors to prepare and sell more of the snacks which would be desirable additions to the children's food, this would be a gain. Fruit could be stressed for school lunch. At any time of year, a banana a day for each child would probably be possible, and bananas should be emphasized even though their nutritive value is not so outstanding as that of many other fruits. Values of other fruit in season should be taught. The school garden could be used to demonstrate how to grow some of the more nutritious vegetables. Awards for those with the best home gardens could be used to stimulate improvement. Similarly, recognition for improvement in home sanitation might be useful.

In adult discussion groups, both men and women should learn about good food and health practices. The slack period between transplanting and harvest, when people can get about easily by boat, would be the best time for such meet- [872]ings. Since many adults in Bang Chan were illiterate or did not read with ease, very simple teaching material is needed. Association between good food and health must be built up gradually. Appeal to economic and other motives may be used [873]where such motives reinforce the desired ends. The extension method of adult education, just in its beginnings in Thailand,

4:Phillips E-4,5 (1956-1957) 1966
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continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959*b*: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family;

home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

* 125 different facets and dimensions of the *same* problem areas, they do serve as useful checks on one another at a more general level of interpretation. The assigning of specific items to Form A or Form B was largely arbitrary.

One of the most important and, as it turned out, intriguing tasks of the SCT construction involved the arrangement of the various items into an interview schedule.[7] I wanted the interview to be an interesting, non-threatening, and not overly difficult experience for informants. Thus, it was necessary to motivate them to "take" the interview, in the sense of

this procedure too has its disadvantages. I tried to implement such a check in Bang Chan, but was unable to carry it out because of suspicion on the part of informants. That is, I selected a dozen items from each form, and approached informants who had responded to the same items when they took the complete form at least two months earlier. Three of the first four informants we spoke to replied: "Didn't you like the answers I gave you the first time?"; "I gave you true answers before. Now I can only lie"; "The answers I gave you the first time were right; do you want me to give you wrong answers now?" Since these informants all but told us that they would aim for qualitatively different responses, the reliability value that such a retest might have seemed minimal. When we tried a different tack and explained to an informant that we had "lost" the responses on these twelve items from his first test, and wanted to be sure we had a complete record of that interview, he guffawed and commented: "But that was three months ago. I cannot remember what I told you then. The answers I give you now will have to be different." This individual did acquiesce to our request for a retest, and in perfect fulfillment of his own prophecy gave responses that were strikingly different from his earlier version.

On the other hand, a genuine error on our part did reveal something of the stability of informant responses over time. During the final weeks of field work I was checking all my protocols and discovered that the protocol of a particularly interesting villager was missing from the SCT file. This was approximately thirteen months after he had first taken the SCT. The informant was especially friendly with us and unlike the individual above, acquiesced to our request for a retest with obvious pleasure. Later, when I was packing my field notes, I discovered his original SCT; it had been mistakenly filed with some other materials. Considering that more than a year had gone by, his responses on the two protocols were amazingly similar. Following, for example, are the "before" and "after" responses to the first three sentence fragments, all "aggression" items:

"He is most annoyed when . . .": his peace of mind is disturbed and when distasteful feelings pass across his mind, *versus,* he wants to concentrate, but some other feelings disturb him and don't let him concentrate.

"When he gets angry, he wants to . . .": let off his anger in a suitable way; maybe it is bad or maybe it isn't bad to let off one's anger, *versus,* do something to let off his anger.

"When he insulted me, I . . .": felt displeased, as it was natural, and wondered why he insulted me, *versus,* I was displeased and annoyed with the person who had insulted me.

[212] [7] All the SCT's were administered orally, rather than in written form. This was necessary not only because 40 percent of our potential informants were illiterate, but because among the 60 percent who could "write," the very process of writing creates additional psychological obligations: the necessity to write in a beautiful hand; to phrase one's thoughts in an appealing, and even poetic, manner; to be sure that one's spelling is correct and that one does not smudge the paper. Many villagers perceive written messages as having a reality and value of their own, as contrasted with speech, which dissipates itself almost immediately after it is articulated. (See Sjoberg 1960: 285–293 for an excellent discussion of the social psychological significance of writing in peasant societies in general.)

This table shows that in tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertiliser holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic Level			
	High*		Low**	
Owns or used motor (Proportion who have raised tilapia)				
Yes	45%	(89)	33%	(57)
No	25	(21)	17	(40)
Owns or used motor (Proportion who have tried fertiliser)				
Yes	20%	(89)	18%	(57)
No	5	(21)	*	(40)
Owns or used motor (Proportion who have tried mushroom growing)				
Yes	60%	(89)	36%	(57)
No	57	(21)	23	(40)

* Three buffaloes or more
** Two buffaloes or fewer

[231]

Literacy

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

125 he could write, could only sign his name, or could do neither.* Those who said they could write a letter are considered here to be
• 212 literate. All others are grouped together as illiterates or on a low level of literacy.

212 The literacy rating was tested for validity as follows: in
872 Bang Chan literacy is known to be related to age. Ever since
125 1935** there has been a school in the community. Since that date school attendance has been compulsory. Attendance has been fairly full for the last twenty years, but most older residents have never had the opportunity for formal schooling.

212 The survey data reflect this correlation between literacy and age. Among farmers under 40 years of age, only 16 per cent were
*177 rated as illiterate or barely literate by the survey criterion;
*178 while 59 per cent of those of 40 years or older are rated as illiterate. Thus one can have reasonable confidence in the survey
561 response as a rating of literacy.

TABLE 10. LITERACY OF FARMERS DECREASES WITH AGE

	Age	
	Under 40 yrs.	40 yrs. or more
Literacy		
Illiterate	16%	59%
Literate	84	41
Total cases	(79)	(131)

*177 Literacy is linked discernibly to acceptance of the motor and mushroom growing. The proportion of literate farmers who have
*178 tried the motor is twice as high as the corresponding proportion among those who are illiterate. It is less strongly linked to the
228 decision to grow mushrooms, and is, at best, weakly linked to the
241 decision to raise tilapia or to use fertilizer.
244

212 * In addition, interviewers asked respondents who said they could write to demonstrate it by writing something on the ques-
402 tionnaire.

[125] ** See Siamese Rice Village, op. cit.

TABLE 11. LITERATE FARMERS* ARE MORE LIKELY TO HAVE USED THE MOTOR AND TO HAVE TRIED MUSHROOM GROWING

	Illiterate (Cannot write a letter) (92)	Literate (Can write a letter) (118)
Motor		
Own	16%	26%
Use	35	60
Neither	48	14
Mushrooms		
Have tried	38%	53%
Have not	62	47
Fertilizer		
Have used	12%	17%
Have not	88	83
Tilapia		
Have tried	29%	39%
Have not	71	61

* Male farmers only

If Bang Chan were like certain areas of the United States and Europe, it might be objected that such a relationship between acceptance of innovations and literacy reflects a spurious link with economic level: that illiterates tend to come from the economically deprived strata of the population; hence an observed relationship with literacy may actually reflect the initial correlation with economic level. In Bang Chan, however, this is not the case. A Bang Chan farmer who is well-to-do is as likely to be illiterate as literate, as is illustrated by the table below.

TABLE 12. LITERACY AND ECONOMIC LEVELS ARE UNRELATED IN BANG CHAN*

	Literacy	
	Low (91)	High (119)
Economic Level		
Low	48%	56%
High	52	44

* Male farmers only

Hence the correlation between use of innovations and literacy may be taken at face value and does not reflect a spurious link with economic level.

TABLE 14. HIGH EXPOSURE TO COMMUNICATIONS MEDIA IS LINKED TO ACCEPTANCE OF THE MOTOR

	Exposure to Radio			
	High			Low
	Listens Daily (45)	Listens Occasionally (66)	Listens Seldom (148)	Never Listens (80)
Small Engine Motor				
Used it	88%	78%	64%	46%
Didn't use it	12	22	36	54

	Exposure to Movies			
	High			Low
	Ten times or more (161)	4-9 times (60)	1-3 times (75)	None (33)
Used it	76%	69%	59%	36%
Didn't use it	24	31	31	64

Of course it is important to check whether these relationships hold true when people on different economic levels are examined separately; for literates as well as for illiterates. We infer that the basic link between use of the motor and exposure to the media of communication holds for literate as well as illiterates; for poorer as well as for richer farmers. More specifically, the relationship between exposure to the communications media and decision to use the motor is even more marked for less well-to-do and for the illiterate farmers, in contrast to the better-off farmers and those who can read and write.

TABLE 15. EXPOSURE TO MOTION PICTURES IS LINKED TO ACCEPTANCE OF MOTOR ESPECIALLY FOR THE ILLITERATES AND FOR THE ECONOMICALLY LESS WELL-OFF*

	Exposure to Motion Pictures			
	High		Low	
	(Percentage Using Motor)			
Economic Level				
Low	76%	(47)	46%	(32)
High	85	(66)	75	(45)
Literacy				
Illiterate	63%	(36)	44%	(55)
Literate	80	(77)	82	(41)

* Male Farmers Only

*177 22
*178
207 Exposure to the media of mass communication seems to act, in
a sense, as a substitute for literacy. It may be that through
• 212 these means either an illiterate farmer can obtain information
about the more complex agricultural tools and methods or motivation
546 to try improvements, or both, even though he may not know how to
read and write. One may infer that he tends to act on the infor-
mation thus obtained, since he is more likely than his unexposed
opposite number to try out these innovations.
*178
*177 Acceptance of Urban Patterns
369 The printed word and the mass media are, of course, not solely
channels for the communication of knowledge. They are, at the
same time a means whereby the farmers may establish some sort of
contact with the more sophisticated world outside the community
even with highly urban Bangkok.

The survey indicates in a general way the extent to which
[291] the people of Bang Chan have accepted urban patterns. Their grow-
[416] ing acceptance of urban modes is readily apparent even to a casual
[207] visitor: many own shoes, flashlights, wrist watches, radios,
bicycles, fountain pens, modern furniture.* Other urban behavior
[493] is likewise beginning to be noticeable.
[413]
[352] One very simple indication of the degree to which urban in-
fluences have penetrated is the change in manners of taking
food. The farmers traditionally eat with their hands rather than
using a fork or spoon. In Bangkok, however, eating utensils are
customarily served with the meals in restaurants and are widely
*177 adopted as well by the city population. Some Bang Chan inhabi-
*178 tants have picked up this simple urban custom and have substituted
it for eating mainly with their hands. In Bang Chan of 1955, for
example, a sizeable minority (26 per cent) report that they use a
264 spoon, fork or both for the evening meal.
369 That such a simple question can roughly measure exposure
[207] to urban influences, is indicated in the following table, which
[546] shows that respondents who report customarily eating with "urban
utensils" are more likely to be exposed frequently to radio and
motion pictures and are more likely to have visited in Bangkok.

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[412] * Survey respondents report that their households possess a
flashlight (81 per cent); scissors (66 per cent); kerosene lamp
(27 per cent); radio (14 per cent). About 41 per cent say they
own at least one pair of shoes.

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TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Pattern	
	With hands (241)	With fork and/or spoon (84)
Listens to radio		
Regularly (daily)	10%	25%
Occasionally	17	28
Seldom	31	35
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	15
2 - 4 times	29	23
5 or more times	28	55

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[228]

When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive to urban influence are twice as likely as others to use fertiliser (21 per cent versus 9 per cent), one and a half times as likely to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per cent versus 61 per cent). There is no noticeable relationship, however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for those on high as well as low economic levels and also for the literate as well as illiterate farmers.

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[434]

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TABLE 17. VILLAGERS RESPONSIVE TO URBAN PATTERNS ARE MORE LIKELY THAN OTHERS TO USE AGRICULTURAL INNOVATIONS

Agricultural Innovations	Eat with fork and/or spoon	Eat with hands
Artificial fertiliser		
Tried it	21%	9%
Never did	79	91
Total cases*	(69)	(218)
Mushrooms		
Tried growing	57%	39%
Never did	43	61
Total cases	(84)	(242)
Small engine motor		
Own one or have used it	82%	61%
Never did	18	39
Total cases	(84)	(242)

* For farmers only; excludes all non-farmers

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TABLE 18. ACCEPTANCE OF URBAN PATTERNS IS LINKED TO ACCEPTANCE OF MOTOR AND MUSHROOM GROWING, IRRESPECTIVE OF ECONOMIC AND LITERACY LEVELS

	Economic Level				Literacy Level			
	Low		High		Illiterate		Literate	
Acceptance of urban patterns	(Proportion who used motor)							
Eat with hands	55%	(77)	76%	(73)	47%	(73)	83%	(76)
Fork or spoon	75	(20)	89	(34)	69%	(16)	90	(38)
	(Proportion who tried mushroom growing)							
Eat with hands	28%	(77)	58%	(73)	38%	(73)	47%	(76)
Fork or spoon	45	(20)	65	(34)	44	(16)	66	(40)
	(Proportion who used fertiliser)							
Eat with hands	11%	(77)	13%	(73)	10%	(73)	14%	(76)
Fork or spoon	19	(20)	26	(34)	3	(16)	23	(40)

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 16.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)		Twice or more (Proportion who own or use the motor)	
Illiterate	44%	(40)	58%	(31)
Literate	83	(36)	88	(83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

as apt to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	38%	(40)	86%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	50%	(67)	85%	(76)
One or more	57	(24)	88	(43)

*Male farmers only

However, no such relationship was discerned between these culture contacts and trying out either fertilizer, tilapia, or mushrooms.

Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out, is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertilizer or mushrooms.

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TABLE 21. INCIDENCE OF MOTOR USE IS HIGHER AMONG VILLAGERS WHO REPORT WIDER SOCIAL CONTACTS

	Social Contacts ("...Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?")	
	"More" or "the same" (143)	"Fewer" (55)
Motor		
Has used it	77%	55%
Never did	23	45
Tilapia		
Has tried it	39%	21%
Never did	61	79
Fertilizer		
Has used it	16%	11%
Never did	84	89
Mushrooms		
Has tried them	49%	40%
Never did	51	60

Once again, however, when this link between breadth of social contacts and use of the innovations is examined separately for the literate, compared with the illiterate farmers, we find further substantiation of the previous finding that under certain circumstances contact may act as a substitute for literacy in acceptance of complex innovations. For, although the link between social contacts and use of tilapia remains constant for literate as well as illiterate farmers, it is mainly for those who are illiterate that exposure to wider local social contacts is associated with greater incidence of motor use.

[212]

6: Goldsen and Ralis Z-4.5 (1955) 1957
AO7 Central Thai AO7

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TABLE 22. AMONG ILLITERATE FARMERS USE OF MOTOR IS LINKED TO WIDER SOCIAL CONTACTS

	Exposure to Influence of Others	
	Have more friends or about the same	Have fewer friends
	(Proportion who tried small motor)	
Literacy		
Illiterate	64% (56)	26% (27)
Literate	87 (86)	86 (78)
	(Proportion who tried tilapia)	
Illiterate	34% (56)	15% (28)
Literate	43% (86)	26 (27)

[369] This finding corroborates and expands the previous discussion of the culture contact and acceptance of innovations. Exposure to influence of others from outside the community (through contact with the city, with the airport, with the agricultural fair, for example), as well as exposure to the influence of others from within (through friends and associates) clearly relates to the decision to use an innovation such as the motor. Its effectiveness is not felt equally by the whole population, mainly instead, by those who are illiterate.

The significance of these internal and external contacts to illiterates may be that through such contacts they are likely to gain needed information and motivation which, if one can read and write, is available through other sources. If one cannot read and write, however, it is the outside world which provides this kind of needed information.

Capital Investment and Debt

426 Bang Chan's economy is largely a money economy and many farmers avail themselves of credit facilities through professional money lenders. Most loans are sought for the purpose of replacing capital equipment and purchasing land and buffalo.*

The present survey secures a rough measure of the extent of such borrowing in Bang Chan. The majority of farmers (39 per cent)

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[113] * See Janlekha, Kamol O. A Preliminary Study of the Economic Conditions of Siamese Rice Farmers in Bang Chan, Thailand. M.S. Thesis Cornell University, 1951, p. 73.

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TABLE 26. INCIDENCE OF HOSPITAL AND CLINIC VISITS IS SIMILAR FOR ALL AGE GROUPS

Have you ever been to a clinic or a hospital?	20-29 (41)	30-39 (80)	40-49 (85)	50-59 (60)	60 or over (57)
No, never	31%	31%	36%	37%	41%
Yes, for treatment	39	44	39	31	31
Yes, for other reasons	29	25	25	32	28

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If the responses reflect primarily the need for medical care, women who bear children have a greater need for medical care than men, and one would therefore expect hospital use to be higher among women than men. But again, this hunch is not clearly borne out by the results.

TABLE 27. INCIDENCE OF HOSPITAL AND CLINIC USE IS SIMILAR FOR MEN AND WOMEN

Have you ever been to a clinic or a hospital?	Women (90)	Men (245)
No, never	41%	35%
Yes, for treatment	31	39
Yes, for other reasons	28	26

There is, then, reasonable justification for inferring that reported use of clinics or hospitals reflects predisposition to use modern health facilities and not simply a need for medical care.

*178

Economic Level

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Although higher economic level was linked to the principal agricultural innovations, it is not related to use of hospital or clinic facilities.

Literacy

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On the other hand, just as literate persons were more disposed to use the major innovations (p. 19), in the same way those who can read and write report a greater incidence of hospital or clinic use.

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TABLE 28. INCIDENCE OF HOSPITAL AND CLINIC USE IS HIGHER AMONG LITERATE VILLAGERS

Have you ever been to a clinic or a hospital?	Literate (163)	Illiterate (169)
No, never	27%	44%
Yes, for treatment	42	33
Yes, for other reasons	31	23

Apparently here, too, exposure to sources of information predisposes the inhabitants to greater acceptance of modern health practices.

Exposure to Mass Media

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Again, as with agricultural innovations, exposure to the media of mass communication is linked to acceptance of modern health practices.

TABLE 29. INCIDENCE OF HOSPITAL AND CLINIC USE IS HIGHER AMONG VILLAGERS EXPOSED TO MASS MEDIA

	Movie Attendance		
Have you ever been to a clinic or hospital?	Ten or more times (161)	4-9 times (60)	Three times or less (108)
No, never	25%	32%	55%
Yes, for treatment	48	33	22
Yes, for other reasons	27	35	23

	Radio Listening		
	Daily or occasionally (111)	Seldom (148)	Never (60)
No, never	20%	39%	58%
Yes, for treatment	52	33	18
Yes, for other reasons	28	28	23

Mass Media as a Substitute for Literacy

It will be recalled (see p. 21) that the mass media seem to act as a substitute for literacy. The same relationship reappears here. The table following indicates that literacy links with use of hospitals or clinics only when exposure to mass media is rare.

[212]

*178 With more frequent exposure to these media, the link between literacy and use of hospitals or clinics decreases.
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TABLE 30. EXPOSURE TO MASS MEDIA IS LINKED TO HOSPITAL USE, ESPECIALLY AMONG ILLITERATES

	Literate		Illiterate	
Movie Attendance	(Proportion reporting use of hospital or clinic)			
High (ten or more times)	78%	(103)	71%	(56)
Low (nine times or less)	64	(34)	48	(111)
Radio Listening				
High (listen "frequently")	81%	(48)	79%	(42)
Low (listen "seldom or never")	66	(88)	48	(122)

*178 Acceptance of Urban Practices
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743 Table 17 showed that acceptance of certain urban practices was linked to acceptance of the major agricultural innovations. Acceptance of urban practices is also associated with use of clinics and hospitals. Use of modern medicine is significantly higher among those who no longer eat with their hands than among those who do.

TABLE 31. ACCEPTANCE OF URBAN PRACTICES IS LINKED TO USE OF CLINIC AND HOSPITAL FACILITIES

	Customarily Eat With	
	Fork or spoon (84)	Hands (342)
Have you ever been to a clinic or a hospital?		
No, never	28%	39%
Yes, for treatment	48	33
Yes, for other reasons	24	28

*178 Contact Outside Bang Chan
369
484 It has already been reported (see Table 25) that hospital and clinic use is higher for those who, during the past year, have
743 paid more frequent visits to Bangkok. This correlation may seem, at first, spurious, since the main centers of medical care are situated in Bangkok. But the questions asked about contact with Bangkok for the one-year period preceding the survey, and visits to the hospital or clinic over an unspecified time period show

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and accepting of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike acceptors of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

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b. IF YES: What various things do you do with the polishings?

1.	Is as still not used	3
2.	Used for feed	99
3.	Used for food	—
4.	They are sold	3
5.	Other, specify _____	3
6.	Unascertainable	2

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[243]

c. ASK ALL: During this past year, did your family eat home-milled rice entirely, in major part, in minor part, or not at all?

[262]

7.	Entirely	5
8.	For major part	51
9.	For minor part	78
X.	Not at all	199

30.a. As you know, some people have had plenty of chance to learn to read, while others have hardly had any chance. How about you yourself? Are you able to read the Thai language, or haven't you ever had the opportunity to do any reading?

[212]

1.	Yes, can read	224
2.	No	109

b. IF R CAN READ: Would you say it is hard for you to read, or easy, or about medium?

3.	Hard	15
4.	Easy	85
5.	Medium	124
6.	Unascertainable	—

c. ASK ALL: Now how about writing? How is it with you yourself? Are you able to write Thai, or haven't you ever had the opportunity to do any writing?

7.	Yes, can write	227
8.	No	106

d. IF R CAN WRITE: How much writing do you do? Are you able to sign your name, or can you also write a letter?

9.	Sign name only	63
X.	Can write letter	163
C.	Unascertainable	1

31.a. Suppose there were a factory in Nimburi paying 20 ticals per day. Would you apply for a job to work in this factory?

[464]

7.	Yes	162
8.	No	159
9.	Unascertainable	12

b. Do you think that someone else from your house would apply for a job there?

X.	Yes	105
Y.	No	211
C.	Unascertainable	17

759 [465] Although as to fees, they said, "It is as you please," these women received as a rule the higher honoraria of 10, 20, and 30 baht. They did not have a separate teacher-rite but paid their respects during regular temple events, such as offering a pig's head and the other items during someone's ordination, though the Muslim midwife had her modified teacher-rite in a separate home ceremony, not at the mosque (cf. [212] Appendix:Muslim Customs). It was even said of the best female midwife that "she had a book." She was literate in [214] Thai. Even if her book were a popular astrological guide, it carried the reverence accorded all books. Whatever it was, its possession increased her aura of reliability. [789] Though the women did not receive their magic at the temple but rather from a kinsman in the maternal line, their incantations, which appeared to be in the Pali-Thai tradition, were no less effective.

759 The professional midwives, both men and women, saw themselves as individual custodians of sacred knowledge and competent in a technique. They were not only interested and ready, but obligated to give expert care to anyone, anywhere it was needed.

The non-professional midwives always thought of themselves as voluntary helpers of kinsmen, acting "out of pity" and carrying on their female responsibility for new life as [562] older women helping their younger relatives. The idea of giving nurture and assistance was so deeply ingrained in the female office that the professional midwives saw themselves fundamentally as volunteers.

Learning Midwifery

The decision to deliver a daughter or a wife was not momentous. One did not have to be "suk" to deliver a baby. The same practical and compassionate motives that led a mother or husband to do this led some of these people to seek out professional techniques so that they might "help more." One woman, bearing her own child at 25 with intense suffering, became angry (chap thai) because "the midwife did nothing to help, but just sat and chewed betel while others did all the work." In desperation she called in her own mother to deliver her. She also "felt she had many relatives who would need her help." Another was asked by her mother's brother, a midwife, to accompany him as he was getting too old. He then gave her his magic. A man took up the specialty after his first child, a son, died at birth from ineptness, he thought, of the midwife. Another man, though, took it up as a "minor extra" to his career as a [illegible]. All learned the skill by accompanying and helping an

243 per cent in 1949 to thirteen per cent in 1953 suggests that
464
621 the problem of population pressure on land has become more
161 acute, although it may also indicate changes in the cost
178 structure of rice production which will be discussed in Chapter VI.

494 Concluding the discussion of this section, we may
463 say that rice growing is the core of the occupational struc-
222 ture of Bangchan around which other occupations rotate. It
226 is not uncommon that one family has several occupations,
[243] and in addition to income from these most families get "free" food in the forms of fish and uncultivated aquatic plants. This is the principal reason why families with apparently no cash income still thrive.

433 It is conceivable that in years of poor rice crop
434 the family put more effort in the secondary occupations;
21 when such an attempt does not work out well -- for example,
[136] no work for manual labor and no capital for trivial trade -- an effort is made to obtain subsistence directly from nature.

In any event, every family in the village is engaged
[136] in fishing in varying degree. It is because of this fact coupled with the fact that the village fish supply is decreasing that the problem of fish conservation is very important.

243 Finally, the dynamic nature of rice farming, with varying efforts on getting extra jobs and securing free food outside the farm depending upon the increase and decrease of the rice crop, suggests that the economy of any rice

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janlekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 16 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand [Kingshill 1960:73]).

Besides the work in rice-fields, women dug and cleaned

SUMMARY

A general description is given of conditions in a 105 Siamese rice village, 1952-54, as they relate to food supply 26 and food habits. Activities at various seasons of the year [220] are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

105 Food was mostly home produced and an important factor 262 in the standard of living was the number of productive hands 433 available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods [235] were used. Nearly all of the families in Bang Chan raised [433] chickens, and some raised ducks, but about 3/5 of all eggs [244] produced were sold. Every family had some sort of kitchen [245] garden, including banana trees and other plants, but spices [222] and chili were much more commonly grown than vegetables and fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

[443] Cash expenditures for food were small. When canals were navigable, boat vendors brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, coconut, palm sugar and small amounts of vegetables.

[434] Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. [178] Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

105 Preparation of some typical dishes, meal service and 264 techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from vendors on the school grounds. Sweets and fruit were the

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132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [143] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop of wet rice. From May or June to February, the principal activ- [220] ities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [433] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part [028] of the Thai-Buddhist community. Information to be presented on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

133 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the 484 nearest market town, ran through one edge of the village. Bus 587 service was available along this road, to either Bangkok or [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

221 The year starts with May, the beginning of the rice-
132 year. At this time the rains began to soften the parched
241 ground, and the heat slackened. School re-opened. Farmers
512 turned to plowing, harrowing, raising the seedlings. Both
871 sexes worked about equally in field labor, boys from 14 and
462 girls from about 15 years of age performing tasks according
843 to skill and strength. Everyone was in the field at dawn. The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy
244 day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third
1264 meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

221 With the rains, the canals had filled, so that by June
132 buyers with big rice boats could return. The few farmers who
501 could afford to hold onto a portion of their last year's crop
443 sold it for a better price at this time. Vegetables and
241 fruits which had died in the long drought were replaced, and trees were planted.

24 In July the heavy transplanting season began. Because
221 of cooperative work habits or hiring out, people worked
132 solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly con-
1312 trollable. Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School
871 vacation was scheduled at this time so both teachers and
857 children could help. Older children might work in the fields,
887 while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food
438 for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

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2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ←----------WET----------→							←-----COOL------→		←----HOT-----		
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	---→ heavy		moderate	←---heavy---→		←------light-----→			←-------negligible--------			
Canals		rising			high	(floods)				lowering fast		low,dry
Cultivation of Rice	plowing-------→ seedbed grown					growing	early var. mature					
			TRANSPLANTING				←---------HARVEST--------→					
School			vacation						vacation			vacation
Cash available Source	cash in hand----------					←-----cash shortage-----→					cash in hand--	
	rice				cash jobs---------→				main rice sale			
Fruit;vegetables	--→ ←-new planting-→								←------annuals die-----			
Fish: Supplies	ponds drained-→								←-----ponds drained-------			
Maturation			←-------many varieties----------→						←---best varieties---→			
Preserving	←----much----→		←----------moderate----------→						←----------most-------→			
Ceremonies	ceremonies-------→		←-----Buddhist Lent-----→								←--ceremonies---	
Dietary survey	--→	←-----Round I------→			←--------Round II--------→			←----Round III----→			←--Round IV-	

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 18°F (10°C) in April and 22°F (12°C) in January.

221 435 Despite the availability of fish and of vegetables in the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

221 [512] The two months of September and October during which the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit [138] and take trips. A few might go on a pilgrimage. Therefore, [240] in this season, all family members were less often together [224] at the evening meal. Fishing was a continuous occupation, [443] with some preserving and home craft. Jobs such as selling [454] food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

[342] [133] High water caused time-consuming inconvenience only in earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

243 [221] By November, the earliest varieties of rice matured. Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could [461] not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into [226] the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience [434] of purchased food was greatest, cash was exhausted. With [426] rice money in sight, venders might be generous with credit, [443] but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

[804] 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

There was an important psychological difference between
221 the two work seasons. At planting time, people were anxious;
243 at harvest they were happy. People saw cash just ahead, for
434 the crop was now safe. Each host of a cooperative work party
466 gave at least one big convivial feast, the best he could pro-
527 vide and even the hired laborers got a round of liquor. People
461 joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

221 When the crop was in, the people rested, fished, and be-
226 gan to prepare for big ceremonies demanding organized work.
527 Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

221 Most farmers sold their rice in February. Capital was
45 invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they
[871] were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

221 The land dried up and cracked, rainwater for drinking
132 gave out, and some canals were reduced to mud. Cherished
312 plants were kept alive by watering, but no new planting could
241 be done. Buffalo, which at either seasons were confined and
231 fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another.
796 Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather
[563] slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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1. In some large houses, two related family groups lived together but maintained separate kitchens.

273 in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

433 434 443 Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary [142] study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

121 In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

221 269 125 [125] From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953, and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

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1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 29 -- Analyst]

221 262 [126] [128]

Chart 2. Annual Calendar of Fresh Foods Commonly Used in Bang Chan[1]

	No. Records[1]	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Fish													
Climbing perch	114	x[3]	x	x		x	x	x	x	x	x		
Eels	27	x	x	x		x	x	x		x	x		
Field crab (salted before use)	16	x					x	x		x			
Oysters	22		x	x			x			x			
Notopterus notopterus	10	x						x	x		x		
Serpent head	99	x	x	x		x	x	x	x	x	x		
Silurus	66	x	x	x		x	x	x	x	x	x		
(1)plaa (1)thuu	163	x	x	x		x	x	x	x	x			
Other Animal Foods													
Beef	30	x				x	x	x	x	x	x		
Chicken	72	x	x	x		x	x	x		x			
Eggs	142	x	x	x	x	x	x	x	x	x	x	x	x
Frogs	18	x	x	x				x		x			
Pork	51	x	x	x		x	x	x	x	x	x		

1. Based on 539 records obtained from school children, and observations in 11 households on 44 survey days. Figures in the column headed No. Records indicate the number of 1-day records on which the item appeared.

2. No records were obtained from school children during March, April or August, hence absence of the item from these columns means simply that the 4 households visited in each of these months did not use the item.

3. x indicates that the item appeared frequently on records obtained in this month. Note that frequency of use may be influenced by farm work and circumstances other than relative availability.

Chart 2. (continued)

	No.[1] Records	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Green and Yellow Vegetables													
Basil, sweet		x	x	x	x	x	x	x	x	x	x	x	x
Chili, fresh		x	x	x	x	x	x	x	x	x	x	x	x
(3)Khii-(2)leg	10			x		x	x	x		x			
Lettuce	49	x	x	x		x	x	x		x	x		
(2)Phag (2)ka-(2)cheed[4]	138	x	x	x	x	x	x	x	x	x	x		
Pumpkin	19	x	x	x				x		x	x		
Snap beans	12	x	x	x	x				x	x	x	x	x
Swamp cabbage	147	x	x	x	x	x	x	x	x	x	x	x	
Sweet potato	72			x	x	x	x	x			x		
Other Vegetables													
Bamboo shoots	53	x	x	x	x	x	x	x	x				
Banana, inflorescence	25	x	x	x		x	x	x		x	x		
Calabash	31	x	x	x		x					x		
Cucumber	10		x	x				x			x		
Egg plants[5]	29	x	x	x	x	x	x	x	x	x	x	x	x
Garlic		x	x	x	x	x	x	x	x	x	x	x	x
Gourds, bitter	11			x	x					x			
Gourds, towel	11	x				x	x	x					
Lotus stalks	48	x		x		x	x	x	x				
Mushrooms	25	x	x	x		x	x	x		x			
Onions		x	x	x	x	x	x	x	x	x	x	x	x
West India pea tree flowers	39	x					x	x	x	x	x		

4. Thai names are given when English equivalents are not known. For scientific names see Appendix C, pp. 126-129.

5. Several varieties of egg plant were used. On many records the variety used was not indicated.

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Chart 2. (continued)

	No.[1] Records	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Fruits[6]													
Banana[7]	129	x	x	x	x	x	x	x	x	x	x	x	x
Chico	17						x	x					
*Guava	14						x	x		x			
*Jujube	18							x	x	x			
Longan	41			x									
*Limes		x	x	x		x	x	x		x			
*Mango	25		x								x		x
*Orange	48					x	x	x	x				
*Papaya	11			x		x	x	x		x			
*Pineapple	63	x	x	x						x	x		
Rambai	46	x		x								x	
Sandorica	18	x	x										
Singharanut	22						x	x	x	x			
*Star gooseberry	28	x				x					x		
Source of water[8]													
For drinking:													
Rain		x	x	x	x	x	x	x	x	x	x	x	x
Canal										x	x	x	x
Fishpond		x	x									x	x
For food preparation:													
Canal		x	x	x	x	x	x	x	x	x	x	x	x
Fishpond		x										x	x

6. Good sources of ascorbic acid have been marked with an asterisk.

7. Bananas of the (4)nam-(4)waa variety were most commonly used.

8. Data for households participating in the dietary study.

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7
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listed on 10 or more of the 24-hour dietary records obtained. For items which were major ingredients, the number of records on which the item appeared, is given.[1] Thus (1)plaa (1)thuu, which is bought by residents of Bang Chan during the busy work seasons, was used more often than any other single variety of fish named. Of the varieties caught locally, climbing perch, serpenthead, and silurus were most commonly used. Fermented fish, not included in the calendar, appeared on 53 records, and fish with kind not specified, on 180. Eggs were used more often than any animal food other than fish. Among green vegetables, swamp cabbage and (2)phag (2)ka-(2)cheed were commonly used. Bamboo shoots and lotus stalks were prominent among the non-leafy vegetables. Bananas which are grown in every garden and are available all year round were much the most common fruit, although other seasonal fruits were eaten more often in 6 of the 9 months in which school children submitted records.

Some idea may be obtained of peak seasons for use of various common foods by noting the months designed by X. Thus in January and May, serpentheads were listed on about 1/3 of the records, and were frequently served at more than one meal. Sweet potato, usually fried and eaten as a snack, was listed on 35 of 52 records obtained from school children in September. Flowers of the West India pea tree were listed on 10 of 55 records in October, and 12 of 88 in November, with occasional mention on records obtained in 4 other months.

Fruits were eaten much less often than one might expect in a tropical area where many varieties are available and fruit can be grown the year round. They were most often eaten by children as snacks, although pineapple and papaya were usually, and banana occasionally cooked in "with-rice" dishes such as curry. In September, fruit was included in the diets of less than 1/3 of the children. An average of more than one serving of fruit per child per day was recorded in 5 months only, May, June, October, November and February. In May, when (4)ma-(1)faj or rambai was in season 46 of 76 children reported having eaten it. Pineapple, listed by 35 of 61 children in June, was most often served in curry at one or more of the family meals. In October, oranges were eaten by 30 of 55 children who submitted records. Bananas (mostly of the (4)nam-(4)waa variety) topped the list in November and February.

Items mentioned on fewer than 10 records, and hence arbitrarily omitted from the chart, are worth noting as they

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1. No figures are given for sweet basil, garlic, onions, chili or limes, which were so often used in small amounts as seasoning that the count obtained would give no clear idea of the extent of their use. Some common spice plants were not mentioned on the records.

understood that her merit helped her not to be hungry. Once she asked an eminent layman about eating at night. He said, "If you are not hungry, do not eat. If you feel hungry, it is better to eat. If someone invites you to eat, it is sinful to refuse."

Even young adults had a strong revulsion against gluttony. One of the symptoms of a man who went mad and had to be committed to an institution was that "he ate too much." A woman was despised because "she ate in secret. She stole eggs from her husband, sold them in the market, and then spent the cash on food which she ate there, instead of bringing it home." Definitions of a glutton were, "A 'with-rice' eater," or simply as "one who eats alone." These comments highlight the counsels of eating in moderation and in company. On the other hand, a full stomach was valued for "home is where one eats one's fill."

At maturity, when farm and other tasks were shared as equals, men and women ate almost the same food. The old prescription against animal food for women was somewhat relaxed, but not entirely. To sustain farmers during the seasons of hard work, however, extra quantities of rice and rice alone, were considered essential. "With-rice" was pleasant but not so necessary. Any shift away from a diet of rice as ordinarily cooked in Bang Chan was construed as a shift either in occupation or in health. For example an eminent citizen who gave up farming took to eating (3)khaaw (3)tom often. This soupy rice, a staple dish for infant feeding, had interesting socio-economic connotations. It was served as a light lunch to cooperative farm-workers to be followed at the day's end by a real meal. It was also "delicate" food, suitable for the sick, for city-people, for those who did not toil with their hands and backs. Consequently, when this man ate this "delicate food" more often, he was consciously or unconsciously serving notice on the community that he was not going to do farm work any more, for (3)khaaw (3)tom could not possibly have sustained a farmer's strength. Caustic villagers hinted that he was putting on airs.

Among conditions in which some change from the usual diet was found were pregnancy, post parturition and lactation. Relatively few foods were generally considered to be tabooed under any of these conditions, but many women preferred to limit intake to "safe" foods if there were any possibility that certain foods might cause harm.

"Information was obtained from 42 mothers about the food they ate during the post-partum rest period. Two said they ate as usual, but for the remainder, the diet was considerably

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1. Literally "beautiful rice." For method of cooking, see p. 33.

252 Another, who had time during Round IV to prepare food twice a
262 day, preferred to prepare more in the morning when she expected
264 to offer food to her son who had just been ordained. In two
518 instances an evening meal was not prepared because the father
[525] and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

262 Cost of Food Purchased. - The lowest cash expenditure
435 for food by any household on a survey day was 0.12 baht, for
511 a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year progressed was apparent. Most of the rice was sold at the end
262 of Round III. The cash went for capital investments, not
432 food, during Round IV. With time to drain ponds and to fish
[221] intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

146 Caloric and Nutrient Value of Foods Eaten. - The
221 seasonal variation in calorie and nutrient intake of the two groups of families is shown in Table 15. As one would expect,
[221] the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 --- Analyst]

146 Table 15. Seasonal Variation in the Average per Capita Intake per Day of Calories and Nutrients by Two Groups of Households

	Family Group	Round[1] I	II	III	IV
Calories	A	1906	1560	1752	1708
	B	2262	1757	2156	1862
Protein, gm	A	53	44	48	55
	B	59	49	59	68
Fat, gm	A	15	15	14	13
	B	25	21	19	21
Carbohydrate, gm	A	382	302	349	334
	B	437	334	427	340
Calcium, mg	A	239	84	86	107
	B	343	181	223	128
Phosphorus, mg	A	953	782	734	917
	B	1033	737	960	851
Iron, mg	A	9.0	6.4	5.6	6.6
	B	7.7	7.1	12.5	6.1
Vitamin A, I.U.	A	4414	582	1392	1802
	B	1337	1939	1197	884
Thiamine, mg	A	0.86	0.63	0.59	0.63
	B	0.92	0.57	0.72	0.57
Riboflavin, mg	A	0.61	0.27	0.34	0.24
	B	0.43	0.24	0.27	0.25
Niacin, mg	A	13.2	11.1	9.2	11.8
	B	14.1	9.2	11.7	11.2
Ascorbic acid, mg	A	48	19	21	18
	B	15	45	21	15

1. For dates of Rounds, see Table 7, p. 58.

higher calorie intake in these periods. In general, the level of calories, phosphorus and thiamine and to some extent the protein varied with the rice consumption. The greater consumption of fish when fish ponds were drained during Round IV, accounted for the relatively higher protein content of the diets of both groups at this time, even though calorie intake was not at its peak. During this period, animal foods provided 45 and 53% of the total protein intake of Groups A and B respectively, whereas for the year as a whole, 37 and 40% of the protein intake of these groups was of animal origin.

The relatively high vitamin A and C intakes of families in Group A, during Round I as compared to other periods, was associated with a higher consumption of green leafy vegetables, and the use of sweet potatoes in quantity by one family. During Round II, families in Group A had few green vegetables, and their average intake of vitamin A was very low. The use of papaya, obtained as a gift, by one family in Group B during Round II raised the average ascorbic acid intake for this group substantially. Better average intakes, by one or both groups, of vitamin A, thiamine, riboflavin and calcium during the first Round, were not such as to provide liberal body stores to be called upon when food supplies of these nutrients were low.

SOME RECOMMENDATIONS FOR IMPROVEMENT OF DIET AND NUTRITURE AMONG RESIDENTS OF BANG CHAN

Attempts to improve nutritional status in Bang Chan should be directed both toward increasing the supply and intake of certain nutrients and toward improvement of sanitary conditions so that intestinal infestation, diarrhea and other related illnesses will not lead to needless loss or increased requirement of nutrients.

Solution of the related problems of disposal of human excreta and provision of a year-round safe water supply are in the province of the sanitary engineer. Intestinal parasitism was common, but little can be done through treatment of individuals so long as the water supply is contaminated. Rain water was preferred for drinking, so provision of adequate and sanitary storage for rain water, coupled with sterilization of water from ponds and canals when rain water is not available, would do much to ensure safe drinking water. The custom of giving mother and infant boiled water only, during the post-partum rest period, provides a starting point for extending use of boiled water to other ages and conditions.

4:Phillips E-4,5 (1956-1957) 1966
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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[10] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[10] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

BANG CHAN

FOREWORD

The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, Minburi. A century-old canal and to the north of it a post-war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

In 1954, when data for the present study were still being gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the households were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupation of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple food of the people. During the wet season and into the cooler dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

The Thai countryside is divided into hamlets, each with a headman in charge of the thirty to sixty households of the hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

235 was slightly higher than that of chickens, averaging 155 eggs per laying duck.

178 231 Hogs: In 1949, two families were raising hogs which according to our observation did not seem to be well fed. When we returned to the village in 1952, not a single hog remained in Bangchan.

Fish

262 443 434 After rice, fish (and other marine animals) are by far the most important ingredient in the diet of Bangchan. More fish are bought from the outside than the very small amount that is exported from the village mainly by one or two very poor families who have availed themselves of this means of augmenting their income.

221 226 The villagers' annual cycle for fish-taking varies somewhat with the particular method used, and with the annual rice and ceremonial cycles: Yet the maturation cycle of the principal types of fish is also a factor, and one which tends to give an overall orderliness to the annual cycle for fish in general. There is no time in the year when at least some fish are not available, nor is there any time in the year, even the busiest, when the family does not want fresh fish for its menu. For this reason, there is fishing the year round, at least in the form of the housewives simply setting nets in the canal and then tending them according to some schedule or whenever the noise of caught fish sloshing about in the water is heard. When a lull from the pressure of

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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221 other activities permits, members of the family are likely
226 to be seen fishing.

The period of late December through February is the period in which the canal fish are mature and most delicious to eat. Notwithstanding that this is the busy harvest time, it is also the busiest catching period, because it is at this time that many of the more important varieties of marine animals mature. Shrimp, for example, is available for only about twenty days during January. While this period is correctly described as the rice harvest time for the community as a whole, almost all individual families are likely to have lulls of a few days between the maturation of one rice variety and another. Such lulls are devoted to intensive fishing.

There is less urgency in the "harvesting" of fish by pool-draining methods than there is in fish-catching. The first pool-draining might occur as early as February, or as late as May; a second and even a third draining might occur later in the year. There are biological factors underlying this, such as the presence on the banks and bases of the pools of a longer-lasting supply of plant food for the fish than is available in the canals, especially since the canals tend to recede more and more as the dry season progresses until, in the higher northern section of the village, they dry up completely well before the onset of the rainy season.

443 she wanted to spend more time collecting debts."

221 433 434 443 261 262 It should be noted that A's brief duration of peddling started in the harvesting season. During this time the village cash supply was high, resulting in demand for such a delicacy as pork which normally constituted a negligible fraction of the diet of Bangchan people. This is a good business period for the peddlers. Another good business period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this latter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

443 It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

427 434 454 621 463 426 Five families were classified as investors in 1953. All these families lived on rents from land, interest on loans, and income from speculative sources such as buying paddy when the price was low and selling it at high prices. Actually, most of these five families were not among large land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

*243 Since the farm work usually followed the same pattern for a
461 certain period, it was observed that Phan remembered quite well
+128 the time and the kind of work done by each family worker during the past two or even three days. The time of work was recorded
[231] to the hearest half-hour. In Tables 35 and 35, labor spent by
[464] family workers, piece-workers hired by the family, and buf-
[592] faloes, on different steps in rice production was given in man-hours and buffalo-hours. The dates when these various
[476] jobs started and ended were also given. It should be noted, however, that labor recorded as spent on cooperative work was actually not spent on the family farm but rather on farms of other cooperative members. This was nevertheless exactly compensated by cooperative work on this farm on several occasions which were not entered in the calculation to avoid error because of duplication.

*243 The data from Tables 35 and 36 may be summarized as
461 follow:

• 221 1. Man labor provided by farm staff.

[592] Work started June 4, ended February 14, a total of 248
[464] work days.
[231] Total man-hours spent by farm staff -- 5,478½.

2. Man labor provided by piece-workers.

Work started July 19, ended August 30, a total of 10 work days.
Total man-hours spent by piece-workers -- 229.

3. Animal labor provided by buffaloes.

Work started June 4, ended February 13, a total of 112 work days.
Total buffalo-hours -- 2,119.

[TEXT CONTINUED ON PAGE 246]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 35

SUMMARY OF YEAR ROUND WORK BY CHOM FARM STAFFS
Bangchan, Thailand, 1953

*243
• 221
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[592]

Steps*	Duration Start	End	Days in work	Man-hrs.
A. Work by Farm Staff				
1. Plowing	June 4	Aug 23	49	918½
2. Harrowing	June 13	Aug 24	28	291
3. Remove weeds after harrow	June 13	Aug 15	25	219½
4. Irrigate and drain	June 4	July 8	21	186½
5. Rolling	June 13	Aug 22	7	42
6. Sow, broadcast	June 18	July 15	13	42½
7. Prepare and repair	July 5	Dec 9	10	106½
8. Prepare bamboo binders	July 17	Aug 27	10	45½
9a. Coop uprooting	July 15	Sept 11	25	127½
9b. Family uprooting	July 17	Sept 8	20	115½
10a. Coop transplanting	July 18	Sept 19	36	267½
10b. Family transplanting	Aug 20	Sept 10	13	125
11. Hauling	July 17	Sept 14	55	733
12. Field inspection	Aug 25	Nov 30	42	87
13a. Care of the plants	July 24	Sept 28	14	114½
13b. Coop weeding	Sept 20	Sept 29	8	86
14. Prepare thresh floor	Nov 29	Jan 27	7	13½
15a. Coop harvesting	Dec 4	Jan 25	44	747½
15b. Family harvesting	Dec 12	Feb 6	18	148½
16. Threshing	Dec 15	Feb 14	43	597
17. Winnowing	Dec 25	Feb 14	9	86½
18. Stacking of straw	Dec 29	Feb 4	2	16
19. Procure grass for buf.	June 14	Nov 27	83	157
20. Supervise coop work	July 22	Jan 24	8	26
21. Entertaining guest workers	July 22	Jan 24	7	158½
Total	June 4	Feb 14	248	5,478½
B. Work by Piece-workers				
1. Coop uprooting	Aug 18	Aug 25	6	24
2. Uprooting	Aug 23	Aug 30	2	45
3. Transplanting	July 19	Aug 2	5	160
Total	July 19	Aug 30	10	229
Grand total	June 4	Feb 14	248	5,707½

[464]

* See details in the section on steps in rice production.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 36

SUMMARY OF YEAR ROUND WORK BY BUFFALOES ON CHOM FARM
Bangchan, Thailand, 1953

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	Duration Start	End	Days in work	Buf-hrs.
1. Plowing	June 4	Aug 23	49	918½
2. Harrowing	June 13	Aug 24	28	582
3. Rolling	June 13	Aug 22	7	84
4. Hauling	Aug 23	Aug 23	1	8
5. Prepare thresh floor	Nov 30	Dec 4	5	32
6. Threshing	Dec 15	Feb 13	35	494½
Total	June 4	Feb 13	112	2,119

*243 461 • 221

4. Labor requirement per rai.

Our records show that the total area planted to rice was 49 rai.
Therefore, man labor per rai was $\frac{5,707\frac{1}{2}}{49}$ = 116 man-hours.[4]
And animal labor per rai was $\frac{2,119}{49}$ = 43 buffalo-hours.[5]

5. Labor requirement per 100 tang of paddy.

Our records show that a total crop of 2,100 tang of paddy was produced.
Therefore, man labor per 100 tang of paddy was
$\frac{5,707\frac{1}{2}}{2,100}$ X 100 = 272 man-hours
And animal labor per 100 tang of paddy was
$\frac{2,119}{2,100}$ X 100 = 101 buffalo hours.

The Critical Period in Rice Production

*243 221

The entire length of rice producing activities, which in the case under study lasted from June 4, 1953 to February 14 1954, may be subdivided into three distinct phases: (1) cultivation and planting season which lasts from the first day of field work to the date when the seedlings have all been transplanted and properly cared for; (2) flooding season which lasts approximately from the date when the water level has risen up over the dikes to the time when the early varieties of rice are ready to be harvested; and (3) harvesting season which lasts from the harvesting time of the early varieties until all varieties have been harvested, threshed, and winnowed.

Bangchan farmers recognize these three distinct phases which are called in Thai na nar (lit., field season), na nam (lit., water season), and na khao (lit., paddy season). They

4. This would be 290 man-hours per acre.

5. This would be 107½ buffalo-hours per acre.

243 know that they must work hard and spend long hours in the
221 field during na nar which is the critical period during which all steps in rice growing must be finished before the deadline set by the end of this phase. Perfect timing of each step is required because one step is a prerequisite to another. Preparation of the seedbed, for example, is the first thing to be done and must be done as soon as possible, for unless this is finished seeds could not be sown and it takes at least thirty days of good care for the seedlings to attain an appropriate growth so that they may be transplanted onto the fields. During the time the seedlings are being nurtured in the seedbed, the fields must be made ready for transplanting at a certain date set by the age of the seedlings. Normally, seedlings may be transplanted at an age between thirty to fifty days. If they are too young, they would be too weak to stand the uprooting and transplanting processes. Yet, if they are too old, the rate of development after transplanting would be retarded and a poor crop would result. The date of transplanting is also conditioned by the general water level, which is sometimes controllable and is sometimes beyond human control. In transplanting, the water level of the parcel should be about 8-10 inches, and should certainly not exceed the height of the seedlings of about 15 inches. Allowance must be made for the expected rain water, since transplanting time coincides with the period of heaviest rainfalls in September. Normally, the young seedlings are able to survive total submergence for two or three days but they will be drowned by a longer submergence.

*243 Hence, transplanting should be completed some time before the
• 221 whole field is inundated. It is seen, then, that this critical period of na nar is not only one of physical strain on the part of the farmer but also a period of anxieties.

When the rice plants are well established in the fields, they more or less can take care of themselves, for they grow sufficiently rapidly to keep up with the rising water level unless the rise is abnormally rapid. Thus, na nam or the flooding season is a period when farmers have nothing to do except procure grass for the buffaloes. It was earlier indicated that field inspection that was done during this period was actually a pleasure trip to observe the general growth of the rice plants; for even if anything wrong was noticed, nothing could be done about it.

Farmers are busy again when harvesting season starts. Each variety of rice ripens on its exact date and it must be harvested within a day or two. If harvesting is delayed even for a short period of three or four days, the paddy will be over-ripe, resulting in a higher proportion of breakage and hence a lower price. If there is any anxiety at all, it is now over the possibility of rain which may damage the paddy which is left to dry in the field. This is unlikely, however, for the rainy season has just passed. Generally speaking, this
[461] is a period of joy rather than anxiety. The major field work -- harvesting -- although one of the most burdensome field operations consuming one-sixth of the total man labor spent on rice production, is largely a cooperative undertaking carried on

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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243 under a lively atmosphere. Moreover, the amount of work done
221 depends solely on the amount of human labor utilized. Hence,
461 if the operator wants to finish his harvesting in time when he has not enough available labor, he simply hires more piece-workers. The situation is different in the critical period of cultivation and planting, when the amount of work done depends not only on the amount of labor utilized but also on the accomplishment of the preceding steps which are governed by water condition, weather condition, available equipment, animal labor as well as man labor.

243 In the 1953-54 crop year, it was observed that na nar
221 started on June 4 and ended on September 30, na nam lasted from October 1 to December 3, and na khag from December 4 to February 14.

243 While the figures on total labor requirement in rice
461 production represent valuable information, an earlier discussion in this section has led us to the belief that the mere knowledge that it takes 272 man-hours and 101 buffalo-hours to produce 100 tang of paddy is not enough to demonstrate the labor requirement situation if it is to serve as a guide in problem locating and problem solving. These figures must be further broken down into those required during the critical period and those required in the non-critical period.

243 Our records show that of the 5,707½ man-hours spent
221 in producing 2,100 tang of paddy on Chom Farm, 3,226½ man-
231 hours were utilized in na nar (June 4 to September 30, 119 days),
461 133½ man-hours in na nam (October 1 to December 3, 64 days),

243 and 2,347½ man-hours in na khao (December 4 to February 14, 72
221 days). Similarly, of 2,119 buffalo-hours spent on the same
231 production, 1,592½ were utilized in na nar, 24 in na nang, and
461 502½ in na khao. From these data, we may calculate the averages for daily labor utilization in each period as follow:

1. Na nar (119 days)

Total man-hours, 3,226½; daily man-hours, 27.1
Total buf-hours, 1,592½; daily buf-hours, 13.4

Man-hours per rai, 66.
Buf-hours per rai, 32½.

2. Na nang (64 days)

Total man-hours, 133½; daily man-hours, 2.1
Total buf-hours, 24 ; daily buf-hours, 0.4

Man-hours per rai, 2½.
Buf-hours per rai, ½.

3. Na khao (72 days)

Total man-hours, 2,347½; daily man-hours, 32.6
Total buf-hours, 502½; daily buf-hours, 7.0

Man-hours per rai, 47.
Buf-hours per rai, 10.

It is seen that three-fourths of the total buffalo labor was utilized in na nar. This was to be expected, for most of the steps involving buffalo labor were in this period. It is important to observe that buffaloes assumed an active rol in practically all steps of land preparation -- plowing, harrowing, and rolling. Human labor, on the other hand, played only a passive part in these steps.

243 Table 36 shows that buffaloes were utilized in six
231 steps in rice production -- plowing, harrowing, rolling, haul-
461 ing, preparation of threshing floor, and threshing. These step

243 may be classified according to the way the animals are used
231 as follow:
461

1. Steps in which buffaloes are always used and in constant proportion to men.

Steps	Proportion of buffaloes to men
Plowing	1 to 1
Harrowing	2 to 1
Rolling	2 to 1

2. Steps in which buffaloes are always used but not necessarily in constant proportion to men.

Preparation of threshing floor: Four buffaloes are led by one worker to tramp over the dirt floor which was soaked with water on the previous day. While the buffaloes are tramping over the floor, another worker levels the floor with hoe. The number of buffaloes and workers may be more or may be less, and there is no definite proportion between the animals and men.

Threshing: Four buffaloes are led by one worker to tramp over harvested rice stalks (with paddy still intact) which have been spread over the threshing floor. While the buffaloes are tramping over the rice stalks, two or three other workers separate straw from the threshed paddy with pitchforks.

3. Steps in which buffaloes are not usually used but are sometimes used to minimize human labor when opportunity permits.

Hauling: Two buffaloes are led by two workers to draw the boat carrying seedlings along the muddy water way. Of a total hauling work of 733 man-hours in 55 work days lasting from July 17 to February 14, buffaloes were used only once on August 23, involving only 8 buffalo-hours.

243 Since buffaloes are used in the critical period of
221 ne nar in the three steps where they must be used and used in
231 constant proportion to men, it is not difficult to see that
461 the field work accomplished in this critical period depends more on buffaloes than on human workers. It was mentioned that

243 Chom Farm utilized four buffaloes and four regular workers
221 including the operator himself. Supposing that one buffalo
231 is sick, we might expect that the work accomplished in this
461 period would be reduced to three-fourths. On the other hand, if one regular worker is sick, that would not materially affect the amount of work done, for the sick worker would certainly be replaced by a substitute. Even if no extra family worker is available, it would be only a matter of hours that Chom would be able to recruit one more worker among his relatives and neighbors. He could not recruit a temporary service of a buffalo. If more buffalo labor is badly needed, the only alternative is to purchase the animal. Looking from a different angle, if Chom wants to finish plowing and harrowing ahead of the original schedule for fear of an early inundation, he could not accomplish that by simply utilizing more human labor alone. It is thus seen that buffaloes, more than human workers, are the limiting factor in the accomplishment of the field work during the critical period of cultivation and planting season.

Labor Adjustment Devices

243 Rice plants have one unique quality: each variety will
221 mature on a certain exact date no matter how early or how late it is planted.[6] If there were only one variety of rice in existence, this would be a serious handicap to rice growers, for there would certainly be much more demand for labor in

6. The exceptions are the very early varieties which mature at the age of about 90-100 days. Ripening dates of these varieties are set only by the length of time they have been planted, regardless of the time of the year.

243 harvesting time than could be coped with by the supply for it.
221 Chom Farm, for example, would alone need 916 man-hours in one or two days, during which time approximately the same amount of labor would be needed by each of the other farms. Fortunately, there are in existence hundreds of rice varieties whose maturing dates vary from October to February. These different varieites are grouped into the early, medium, and late varieties according to their ripening dates of October to November, early December to early January, and middle January to middle February, respectively. Usually, the choice of varieties of rice to be grown in a certain locality is so conditioned by local water levels at different periods that a narrower range of selection is forced. Thus, the earliest variety in Bangchan is harvested in early December and the latest in middle February. The terms "early," "medium," and "late" are also arbitrarily used by local people to denote the relative ripening dates of locally grown varieties. Thus, in Bangchan the varieties ripening in early and middle December are known as the early varieites, those ripening between late December and middle January the medium varieties, and those ripening in late January and after the late varieties. It is possible, then, that the same variety may be called an early variety in one place and a medium or even a late variety in another.

243 By growing several varieties of different ripening
221 dates, a farmer is able to spread out labor required in har-
461 vesting. In the same manner, labor required in uprooting and transplanting is spread out by sowing these seeds at different

243 times. Using too many varieties of rice on a farm, however,
221 will complicate the working schedule; and sowing times of these
461 varieties cannot also be spread out too far apart because seedlings should all grow up to the size appropriate for transplanting some time before the deadline set by the water level. It has been observed that most farmers grow from three to six varieties on their farms.

243 Another efficient device for spreading out labor is
221 that of farmers in a locality organizing themselves into
461 informal cooperative work groups to perform on a mutual help
467 basis such field work which can be best cooperatively done, such as uprooting, transplanting and harvesting. There were three cooperative work groups in Bangchan: (1) Mu Sapan Yao, or the Bridge Group, consisting of farm operating families living in the vicinity of the bridge across Bangchan Canal; (2) Mu ha Wat, or the Near Wat Group, consisting of families living around Wat Bangchan; and (3) Mu Bon, or the North Group, consisting of families living in Upcanal Bangchan. The organization and the system for labor compensation of these various informal work cooperatives will be discussed in the next section.

Cooperative Work

243 There were five kinds of cooperative work in Bangchan --
476 cooperative uprooting, cooperative transplanting, cooperative harvesting, cooperative weeding, and cooperative pounding of cargo rice. While the first three kinds were important undertakings through which a major part of those rice production

7: Janlekha X-4.5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

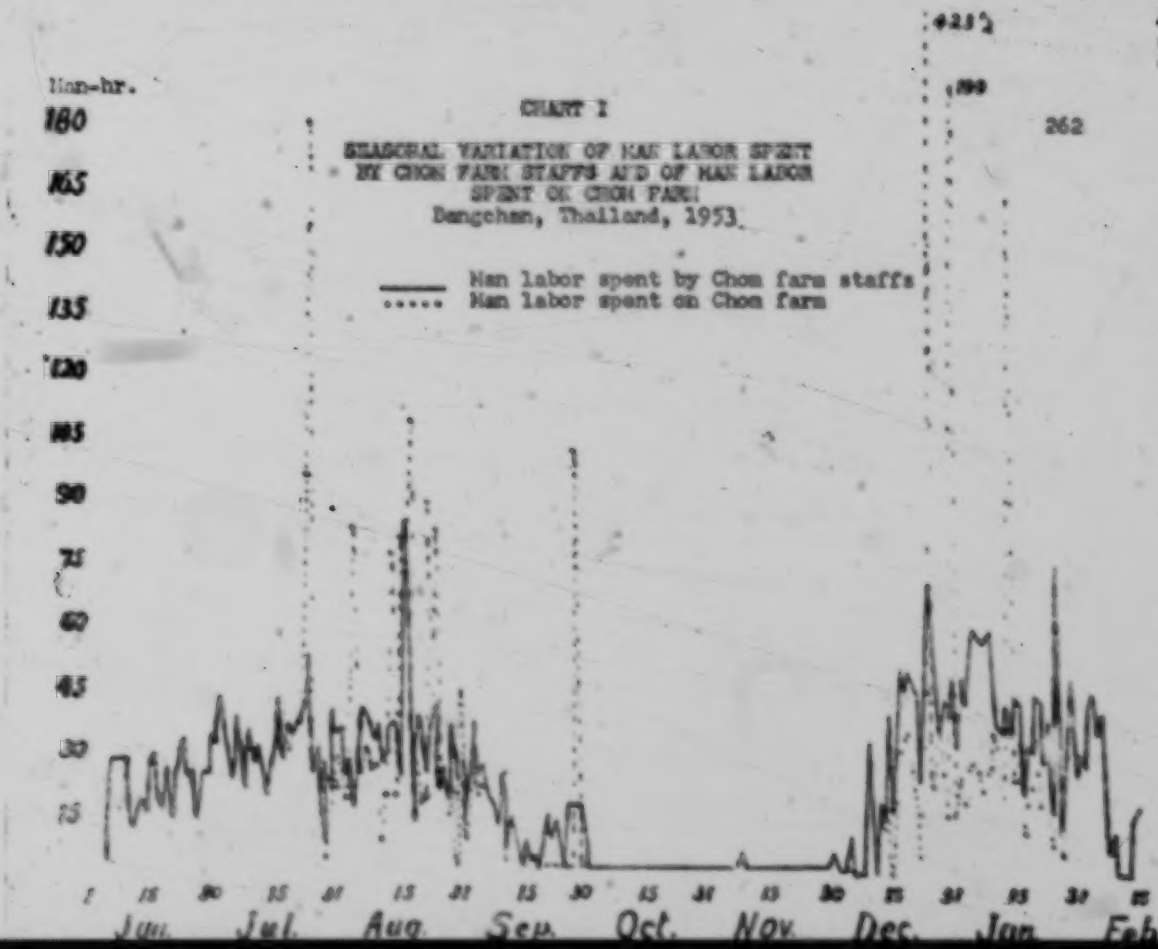

CHART I

SEASONAL VARIATION OF MAN LABOR SPENT BY CHON FARM STAFFS AND OF MAN LABOR SPENT ON CHON FARM
Bangchan, Thailand, 1953

——— Man labor spent by Chon farm staffs
..... Man labor spent on Chon farm

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•243
• 221
231
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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

CHART II

SEASONAL VARIATION OF BUFFALO LABOR SPENT ON CHOM FARM
Bangchan, Thailand, 1953

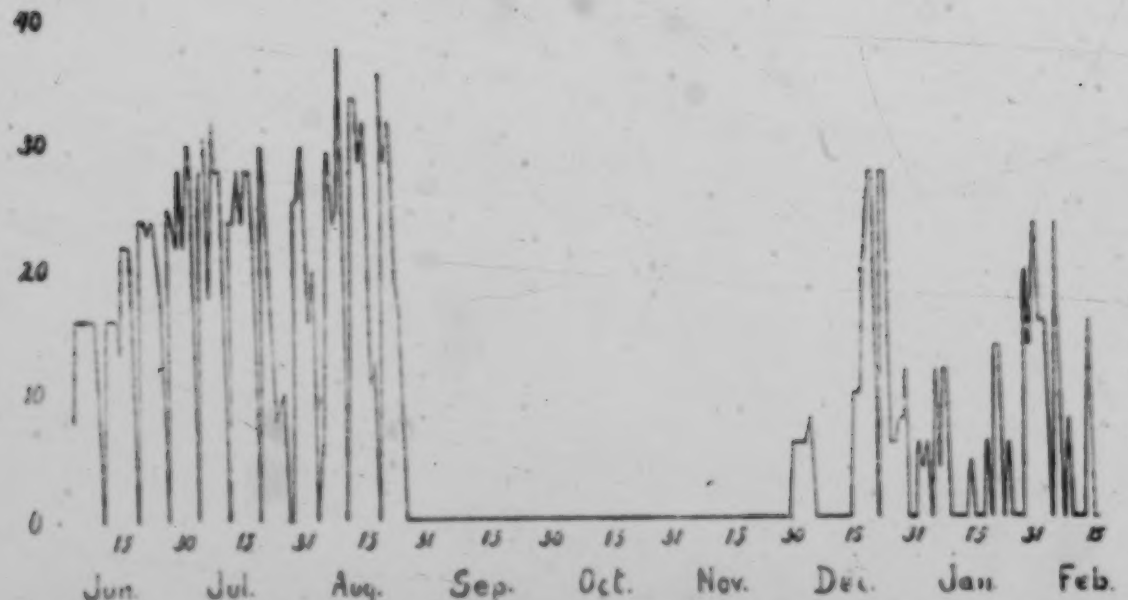

TABLE 37

DAILY LABOR SPENT BY CHOW FARM STAFFS
Bangchan, Thailand, 1953

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Jun	4	8	24	--	24
	5	16	28	--	28
	6	16	28	--	28
	7	16	28	--	28
	8	16	28	--	28
	9	16	28	--	28
	10	8	12	--	12
	11	--	16	--	16
	12	16	18	--	18
	13	16	15½	--	15½
	14	16	27½	--	27½
	15	13½	29	--	29
	16	22	19½	--	19½
	17	22	16½	--	16½
	18	20	26½	--	26½
	19	--	14½	--	14½
	20	24	25	--	25
	21	24	24	--	24
	22	23	33	--	33
	23	24	24	--	24
	24	21½	25½	--	25½
	25	18	14	--	14
	26	--	18½	--	18½
	27	25	25	--	25
	28	24	25	--	25
	29	22	34½	--	34½
	30	28	32	--	32
July	1	22	43	--	43
	2	30	38	--	38
	3	27½	30	--	30
	4	--	23	--	23
	5	28	38	--	38
	6	30½	32½	--	32½
	7	18	21	--	21
	8	32	35	--	35
	9	28	28	--	28
	10	28	3-½	--	30½

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

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Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
July	11	--	23½	--	23½
	12	24	20	--	20
	13	24	26½	--	26½
	14	28	31	--	31
	15	24	38	5½	43½
	16	28	27½	--	27½
	17	28	36	--	36
	18	22	30	5	35
	19	--	36	--	36
	20	30	37½	--	37½
	21	28	37	4½	41½
	22	19	46½	5	51½
	23	8	20½	4½	25
	24	9	31	--	31
	25	10	16	--	16
	26	--	4	4	8
	27	--	17	4½	21½
	28	25½	27½	12	39½
	29	26	28½	9½	38
	30	28	21	13½	34½
	31	30	35	--	35
Aug	1	16	18	6	24
	2	20	21½	7	28½
	3	--	7½	8½	16
	4	8	17	9½	26½
	5	25½	24½	16	40½
	6	29½	29½	10½	40
	7	24	30½	6½	37
	8	25½	25½	7½	33
	9	38	26	10½	36½
	10	--	8	19½	27½
	11	28	16	13	29
	12	34	19	16½	35½
	13	34	25½	12	37½
	14	29	19	7½	26½
	15	32	81½	4	85½
	16	11	67½	4	71½
	17	12½	35	5½	39½
	18	--	4½	8	12½
	19	36	38	--	38
	20	29	17½	8½	26

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hr	man-hr	man-hr	man-hr
Aug 21	32	18	6½	24½
22	19	28	7	35
23	17	41½	--	41½
24	8	16	4½	20½
25	--	19	7	26
26	--	14½	3½	18
27	--	21	15	36
28	--	4	16	30
29	--	2	22½	24½
30	--	14	14	28
31	--	8	4	12
Sept 1	--	8	9	17
2	--	27½	10	37½
3	--	12½	11½	24
4	--	19	7	26
5	--	21½	3½	25
6	--	19	--	19
7	--	17	--	17
8	--	12	--	12
9	--	24	--	24
10	--	6	--	6
11	--	11	3	14
12	--	9	--	9
13	--	6	--	6
14	--	2	--	2
15	--	8	--	8
16	--	3½	--	3½
17	--	4½	--	4½
18	--	2	--	2
19	--	2	3½	5½
20	--	2	12	14
21	--	2	7	9
22	--	2	11	13
23	--	2	7	9
24	--	2	--	2
25	--	2	14	16
26	--	2	14	16
27	--	2	14	16
28	--	16	--	16
29	--	2	7	9
30	--	2	--	2

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

243
221
231
461
476
592

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Oct	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	2	--	2
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2
	11	--	2	--	2
	12	--	2	--	2
	13	--	2	--	2
	14	--	2	--	2
	15	--	2	--	2
	16	--	2	--	2
	17	--	2	--	2
	18	--	2	--	2
	19	--	2	--	2
	20	--	2	--	2
	21	--	2	--	2
	22	--	2	--	2
	23	--	2	--	2
	24	--	2	--	2
	25	--	2	--	2
	26	--	2	--	2
	27	--	2	--	2
	28	--	2	--	2
	29	--	2	--	2
	30	--	2	--	2
	31	--	2	--	2
Nov	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	5	--	5
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Nov	11	--	2	--	2
	12	--	2	--	2
	13	--	2	--	2
	14	--	2	--	2
	15	--	2	--	2
	16	--	2	--	2
	17	--	2	--	2
	18	--	2	--	2
	19	--	2	--	2
	20	--	2	--	2
	21	--	2	--	2
	22	--	2	--	2
	23	--	2	--	2
	24	--	2	--	2
	25	--	2	--	2
	26	--	2	--	2
	27	--	2	--	2
	28	--	2	--	2
	29	--	2	--	2
	30	6	5	--	5
Dec	1	6	2½	--	2½
	2	6	1½	--	1½
	3	6	1½	--	1½
	4	8	2	7	9
	5	--	--	--	--
	6	--	--	--	--
	7	--	--	--	--
	8	--	25½	--	25½
	9	--	33	--	33
	10	--	--	--	--
	11	--	12½	4½	17
	12	--	8	5	13
	13	--	16	22	38
	14	--	--	15	15
	15	10	17	16	33
	16	10	30	19	49
	17	20	33	10	43
	18	22	34	15	49
	19	28	24½	21	45½
	20	28	19½	24	43½

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hrs	man-hr	man-hr	man-hr
Dec	21	--	4½	18	22½
	22	28	30½	21	51½
	23	28	43½	27½	71
	24	6	40	8	48
	25	6	21	18½	39½
	26	8	34½	--	34½
	27	8	24	18	42
	28	12	17½	24	41½
	29	--	14½	24	38½
	30	--	47	--	47
	31	--	14½	16	30½
Jan	1	6	23	24½	47½
	2	4	17	24	41
	3	6	26½	24	50½
	4	--	27½	32	59½
	5	12	25½	32	57½
	6	4	20	36	56
	7	12	25½	32	57½
	8	12	26½	32	58½
	9	--	34	15	49
	10	--	19½	16	35½
	11	--	25	9	34
	12	--	23½	18	41½
	13	--	23½	10	33½
	14	4½	32	11	43
	15	--	26	16	42
	16	--	10	9	19
	17	--	16½	15	31½
	18	6	21	9½	30½
	19	--	33	10	43
	20	14	25½	16	41½
	21	14	17½	10	27½
	22	--	32½	5	37½
	23	6	5½	9½	15
	24	--	74½	--	74½
	25	--	2½	8½	11
	26	--	22	--	22
	27	--	29½	--	29½
	28	20	47½	--	47½
	29	14	31	--	31
	30	20	24	--	24
	31	24	29	--	29

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

*243
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592

Date		Animal labor	Human Labor		
			On farm	On coop. work	Total
		Buf-hrs	man-hr	man-hr	man-hr
Feb	1	16	25½	--	25½
	2	16	39½	--	39½
	3	14	43½	--	43½
	4	--	34	--	34
	5	24	38½	--	38½
	6	8	22	--	22
	7	--	5	--	5
	8	8	10½	--	10½
	9	--	--	--	--
	10	--	--	--	--
	11	--	--	--	--
	12	--	--	--	--
	13	16	12½	--	12½
	14	--	16	--	16

243 423 464 427 from the homelot because much time and energy would be wasted in daily walking to the field.

It would seem, then, that most rice farm operators had little opportunity to obtain a farm size they thought best and had to accept what was due them. Thus, their role in choosing the size of business, which is the most important role, is also limited.

243 221 433 2. Limited role in management: Inasmuch as management refers to the function of putting the scheme into operation, Bangchan operators certainly have a large part to play. A good rice crop depends largely on the relationship between the height of the young plant and the rising water level. Since the rise of water level is highly seasonal, depending on local rains as well as rains elsewhere that affect the general water level, scheduling the farm work and seeing to it that the schedule is followed becomes a most important function of the farm operator.

243 433 Management, however, refers also to the function of making those adjustments in the business which are necessary in order to obtain the maximum economic returns from the farm business as a whole. Inasmuch as this latter function is concerned, the operator's role has been limited as in the case of the organizational function. As previously stated, under the present stage of technological development in rice production in this country, not only the points of diminishing return of both labor and capital (farm equipment, at the present state of technical development in the village)

*243 434 464 Some farmers had artificially reduced their operational cost by utilizing free labor of transient members of the family, who would not stay long if they were not adequately taken care of. These farmers would have to resort to pieceworkers or hired laborers when transient members decided to leave them.

*243 434 655 The farm price of paddy was adversely affected by the government control of rice export. It was estimated that huge profits of no less than 100 per cent had been made each year by the government through its monopoly over and later control of rice export and foreign exchange control. This will be dealt with separately later in this chapter.

*243 434 423 Although the average size of farm of 30.7 rai for Bangchan can be favorably compared to the average of 23.1 rai for the Central Plain, this does not mean that size of farm is not a problem contributing to low returns from rice. [464] It was pointed out earlier that there was a condition of disguised unemployment among Bangchan operators. Small size elsewhere simply indicates the widespread nature of the problem of disguised unemployment among farm operators in the Central Plain.

*243 434 Limited earning opportunity for incomes from sources other than rice is due to the fact that at the present stage of technological development no other crop can be profitably grown in rotation with rice because of agronomic limitations.

*243 434 The inundation period from the middle of September to early December, during which time no work is needed on

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 the rice enterprise, cannot be devoted to gainful utiliza-
221 tion of labor because: (a) there is not enough space in
434 the homelot, the only place above water; (b) poultry is not a competing crop as long as it is raised naturally in limited number. It becomes a competing crop when it is raised com-
[235] mercially. Commercial raising of poultry in Bangchan is handicapped by locational reasons (far from market and far from sources of feeds other than paddy). It is further handicapped by a higher chance of contamination which is true in such a geographical condition as prevailing in Bangchan; (c) another factor limiting an opportunity for growing a secondary crop during this period is that cash is most scarce in this time of the year and interest rate is highest. Any cash outlay for investment is thus discouraged. Farmers who have any cash at all will do much better by straight lending, or disguised lending in the form of petty trade on credit putting a high premium on credit purchases of 50 per cent extra on articles payable in two or three months; and (d) opportunity for wage earnings is also limited during this period because farmers do not need any help at this time of the year, and because successive rains prevent extensive public work and large scale construction.

It cannot be said, however, that there is no possible way for farmers to be gainfully employed during this period of inundation. Researches along this line are needed, ones that should take into consideration details of climatic, technical, economic, and social conditions of the village.

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The lean time from the middle of February to the end of May is devoted by some villagers, mostly young men, to wage earning outside the village. The size of this temporary labor migration depends on the job opportunities, and these job opportunities depend largely on personal contact. Seasonal off farm jobs are: (a) crude carpentry work usually on nonpermanent construction where cheap temporary labor is preferred; and (b) plantation work in the sugar cane region of Cholburi some eighty miles east of Bangkok.

Inherent Excess of Expenses over Incomes

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The prevalence of debts in the form of credit purchases among Bangchan farmers indicates an excess of expenses over incomes. It has been shown that most cash loans were sought to clear high interest bearing credit purchase accounts, although some were for productive purposes. Even in this latter case, it has been observed that farmers usually borrowed no more than an amount that was immediately needed together with cash on hand to pay for the capital investment. This means that after such capital purchases there was less cash for the household and operating expenses, and so there would be a higher credit account to be settled in the following harvest.

Low incomes coupled with relatively high expenses leave little or no room for internal savings.

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The situation is aggravated by an increasing rate of consumption relative to the ability to produce. While

2: Hauck et al. D.E-5 (1952-1954) 1958 AO? Central Thai AO? Bang Chan

SUMMARY

A general description is given of conditions in a Siamese rice village, 1952-54, as they relate to food supply and food habits. Activities at various seasons of the year are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

Food was mostly home produced and an important factor in the standard of living was the number of productive hands available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods were used. Nearly all of the families in Bang Chan raised chickens, and some raised ducks, but about 3/5 of all eggs produced were sold. Every family had some sort of kitchen garden, including banana trees and other plants, but spices and chili were much more commonly grown than vegetables and fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, coconut, palm sugar and small amounts of vegetables.

Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

Preparation of some typical dishes, meal service and techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

244 Vegetables and Fruit. - Although kitchen-gardening has been encouraged by the Thai government, vegetables and fruit were grown in Bang Chan to a limited extent only. Every family had some sort of kitchen garden, but many edible plants which can be grown in the village were grown by relatively few families. The list of fruits grown in Bang Chan in 1948-49 (Sharp et al., 1953) included four times as many items as were grown by one or more of the 11 families that participated in the dietary study. The list of vegetables and spice plants grown or gathered by these families included 27 items, as compared to 41 listed by Sharp et al. Spices and chili were more commonly grown than vegetables and fruit.[1]

244 One affluent household whose food expenditures for 1949 245 were reported by Sharp et al., (1953, pp. 214-215) produced 453 for home use, 125 kg. of palm sugar valued at 200 baht and 500 coconuts, valued at 450 baht. Home production of both of these was unusual. Few families in Bang Chan grew either sugar palms or coconut palms and expenditures for coconuts and palm sugar were usual. During the major flood of 1942, villagers noted that coconut palms survived whereas all other fruit trees were destroyed. After this, a number of farmers planted coconut palms, but they had not yet begun to produce.

361 311 351 In 1954, about 120 acres (300 rai) of the total of about 2800 acres (7000 rai) of land in the village were used for home sites and home gardens for 336 households. Individual home sites usually varied in area from about one-quarter to one acre, and were occupied by buildings, threshing floor and space for poultry as well as trees and garden space. Portions of this might be under water for several months of the year. Increased home production of fruit and vegetables would in many cases necessitate increasing the size of the home site by purchase, mounding or both. Ordinarily, increased land for the kitchen garden was obtained at the expense of some of the

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[248] 1. In a typical farm garden in Bang Chan one would find [249] bananas growing, and a number of plants used for seasoning curry. Various kinds of chilies, lemongrass, bergamot, of which both rind and leaves are used, and galangal were grown by all families who participated in the dietary study. Both sweet and holy basil were commonly grown. Many families grew one or more varieties of gourds and of eggplant, some of which [247] can be trained to grow on a tree or trellis. The inflorescence of the banana was also used as a vegetable. Leafy vegetables were not commonly cultivated but some families grew (2)phag (2)ka-(2)cheed, a green water plant, in gardens staked out at the edge of the canal, or in a pool, and some had trees, [246] the leaves of which were edible. Swamp cabbage or (2)phag [247] (3)bung grew wild along the edge of the canals and was the most commonly used green leafy vegetable. A few families [248] grew guava, jujube, star gooseberry, Manila tamarind, mango and pineapple.

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from venders almost every day. They said "Some do not pay money to buy food, but pick or get it from the canal or gardens --this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chillies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)sa-(5)noo flowers were used by 3 families on one day each;

Table 9. Use of Home-milled and Polished Rice by Households Participating in the Dietary Study

Group and Code No.	Round of Dietary Study[1]							
	I		II		III		IV	
	HM[2]	P[2]	HM	P	HM	P	HM	P
GROUP A								
2		x		x		x		x
12		x		x		x		x
67	x			x		x		x
103	x		x			x	x	
215		x		x		x		x
222		x		x		x		x
Total No.	2	4	1	5	0	6	1	5
GROUP B								
16	x		x			x		x
20		x		x		x		x
21		x		x		x		x
23		x		x		x		x
25	x			x		x		x
Total No.	2	3	1	4	0	5	0	5

1. For dates, see Table 7, p. 58.

2. HM and P stand for home-milled and polished rice respectively.

Truffles were used as snacks on 2 occasions, and (1) bauaun, (2)phag (2)tob, lotus stems and lotus seeds, the latter as a snack, were used once each. The two groups of families appeared to grow fruits and vegetables and to gather edible wild plants to about the same extent. Two families, one in each group, raised mushrooms during the period when farm work was slack.

per cent in 1949 to thirteen per cent in 1953 suggests that the problem of population pressure on land has become more acute, although it may also indicate changes in the cost structure of rice production which will be discussed in Chapter VI.

Concluding the discussion of this section, we may say that rice growing is the core of the occupational structure of Bangchan around which other occupations rotate. It is not uncommon that one family has several occupations, and in addition to income from these most families get "free" food in the forms of fish and uncultivated aquatic plants. This is the principal reason why families with apparently no cash income still thrive.

It is conceivable that in years of poor rice crop the family put more effort in the secondary occupations; when such an attempt does not work out well -- for example, no work for manual labor and no capital for trivial trade -- an effort is made to obtain subsistence directly from nature.

In any event, every family in the village is engaged in fishing in varying degree. It is because of this fact coupled with the fact that the village fish supply is decreasing that the problem of fish conservation is very important.

Finally, the dynamic nature of rice farming, with varying efforts on getting extra jobs and securing free food outside the farm depending upon the increase and decrease of the rice crop, suggests that the economy of any rice

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

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16.a. ASK ONLY FARMERS: This year just now beginning, will you do anything for increasing your income, outside of rice farming? [125] [434]

3.	Does not apply	13
4.	Yes	162
5.	No	107
6.	Unascertainable	11

b. IF YES: What various things will you do? [224]

0.	Nothing	3
1.	Mushrooms	12
2.	Poultry	51
3.	Fish (Incl. tilapia)	10
4.	Fertiliser	2
5.	Other, specify_____	85
6.	Unascertainable	6

[235] [228] [241]

17. ASK ONLY FARMERS:

a. Last time you planted rice, how many rai of rice did you plant? [243] [483]

1.	4 rai or less	14
2.	5 to 9 rai	35
3.	10 to 19 rai	59
4.	20 to 29 rai	65
5.	30 to 39 rai	33
6.	40 to 49 rai	12
7.	50 to 59 rai	19
8.	60 to 69 rai	14
9.	70 to 79 rai	2
X.	80 rai or more	—
0.	Unascertainable	20

b. And what was the total yield?

1.	120 tang or less	15
2.	121 to 300 tang	28
3.	301 to 600 tang	39
4.	601 to 900 tang	39
5.	901 to 1200 tang	38
6.	1201 to 1500 tang	25
7.	1501 to 1800 tang	10
8.	1801 to 2100 tang	10
9.	2101 to 2700 tang	7
X.	2701 or more tang	3
0.	Unascertainable	21

c. How about the year before—how many rai did you plant?

1.	4 rai or less	16
2.	5 to 9 rai	19
3.	10 to 19 rai	51
4.	20 to 29 rai	67
5.	30 to 39 rai	33
6.	40 to 49 rai	26
7.	50 to 59 rai	20
8.	60 to 69 rai	13
9.	70 to 89 rai	5
X.	90 rai or more	—
0.	Unascertainable	23

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

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Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended to live in proximity. Around the houses were kitchen gardens and threshing floors, and behind them, the fields. Bananas grew abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, while fish were plentiful. Water sources were the rain, kept in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

General Nutritional Level

The population was physically well-formed with few physical deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. Food at the not-infrequent festivals was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The change-over, some decades ago, from home pounding of rice to steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community.

2. Dr. H.M. Hauck, personal communication, 1959.

10

462 Besides the work in rice-fields, women dug and cleaned [503] canals and ditches, mounded land, and fished in many ways, the [226] most laborious of which was plunging a heavy basket into the mud to catch burrowing fish. In the household chores, in which men shared to some extent, they carried water, cut and fetched wood, tended livestock, cultivated kitchen gardens, [501] pounded rice in mortars, and cleaned houses. Boats were rowed by paddling or sculled by standing and pushing a single large [354] oar. Cooking was time consuming. The low stoves were on the [352] ground or floor. Since there were no tables or chairs, one squatted two to four hours a day to cut or pound ingredients, [516] stir the curry, or wash the dishes.

868 The training of boys and girls for farm and household 561 work was thorough and started early. By 18 years of age, 461 boys and girls with few exceptions were experienced in every step of farming. Janlekha's chart (1955:82) indicates the progression (parenthetical additions are the present author's):

Age	Method	Kinds of farm work
6 - 7	not forced, but allowed or induced to work if they want to	light hauling, removal of weeds which have been turned over by harrowing
8 - 12	mild pressure	light hauling, removal of weeds which have been turned over by harrowing; some household work and help in the kitchen - girls only - (sometimes boys)
13 - 14	moderate pressure	hauling, weeding, buffalo-tending, transplanting, chicken-feeding, fishing, household work (boys and girls)
15 - 16	high pressure	all kinds of farm work, harrowing, harvesting, and uprooting - boys only - are started at this age.

872 Children worked in the fields before and after school
461 which, compulsory for all children aged eight to fourteen, was held from 9 a.m. to 3 p.m. five and one-half days a week. Vacations coincided with peak work seasons so children could help in the fields or at home.

221 Despite the availability of fish and of vegetables in
435 the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

22
512 The two months of September and October during which the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit
[illegible] and take trips. A few might go on a pilgrimage. Therefore,
20 in this season, all family members were less often together
22 at the evening meal. Fishing was a continuous occupation,
443 with some preserving and home craft. Jobs such as selling
456 food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

[illegible]
[illegible] High water caused time-consuming inconvenience only in earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

243
221 By November, the earliest varieties of rice matured. Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could
[illegible] not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into
226 the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience
434 of purchased food was greatest, cash was exhausted. With
426 rice money in sight, venders might be generous with credit,
443 but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

[illegible] 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at other seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

261 701 As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in 731 diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be ra- 133 tioned. People still ate their fill. Even floods had their • 226 advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the 146 school children (Hauck, 1956). "On the average . . . Bang 145 Chan children could not be considered as markedly under- weight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American 141 standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

262 Rice. - Rice is an essential part of any Thai meal. 256 The majority of the rice farmers in Bang Chan had rice for 251 home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely [26] used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

221 In households where home-milled rice was used, during 254 June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and 505 home pounding was impossible. At the time when data for the 256 present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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[252] 1. In some large houses, two related family groups lived together but maintained separate kitchens.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

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Killing
fish was apparently regarded more lightly by many Buddhists than killing of larger animals, but fishing on (1)wan (4)phra, the weekly holy day, was forbidden. Fish were caught from the canal with nets, traps, spears and hooks. Some were trapped in trenches in the rice fields. Techniques varied with the varieties of fish mature and plentiful at different seasons.[1] Moreover, every house had a fish pond. It was usually the hole from which earth had been removed for mounding the home site, and was connected by a ditch to the canal. Fish were lured from the canal into the pond by clearing it of injurious undergrowth, planting appropriate fish-feeding plants, of

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Smaller fish were preserved as fermented fish. The fish with bones left in, were salted overnight. This product was called (1)plaa (1)raa. For fermented fish to be used as seasoning, in various dishes, the liquid was drained off, then the fish were washed and mixed with salt and specially prepared rice. This had been soaked overnight, fried and pounded. The mixture was allowed to ferment in a small jar for from 2 weeks to 2 or 3 months, depending on the product desired. Large bones were removed by putting the product through a colander before use. Fermented fish had the advantage that it could be eaten without further preparation, and the flavor was generally liked.

Small shrimp, which were caught in quantity during only about 3 weeks in February, were made into shrimp paste as follows: the shrimp were washed, mixed with salt and allowed to stand overnight. The liquid was drained off, and the shrimp were spread out on trays and exposed to the sun for a day or so. Larger ones might then be beaten to loosen the shells, which could be winnowed away. For very small shrimp, this step was omitted. The shrimp were then pounded thoroughly in a mortar, and stored in a jar for about a month before use. Very small fish were sometimes made into fish paste in the same way. The yield was about 2 kg. of the tannish or grayish colored shrimp paste from 4 baskets (4/5 tang) of shrimp. Shrimp paste or (2)ka-(2)pi was an essential ingredient of Thai hot dishes.

The liquid which was drained off from the mixture of fish or shrimp and salt in the first stage of preparing fermented fish or shrimp paste was used by some villagers to prepare (4)naam (1)plaa or fishsoy. The liquid was boiled with certain green leaves such as mango leaves, onion, garlic and salt for from 30 minutes to an hour, then it was strained. The resulting red-brown liquid was bottled and was ready for use as a condiment.

1. Sharp et al. (1953, pp. 185-196) described some common fishing techniques and listed 32 varieties of fish known to be found in Bang Chan in 1948-49.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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235 was slightly higher than that of chickens, averaging 155 eggs per laying duck.

178 231 Hogs: In 1949, two families were raising hogs which according to our observation did not seem to be well fed. When we returned to the village in 1952, not a single hog remained in Bangchan.

Fish

262 443 434 After rice, fish (and other marine animals) are by far the most important ingredient in the diet of Bangchan. More fish are bought from the outside than the very small amount that is exported from the village mainly by one or two very poor families who have availed themselves of this means of augmenting their income.

221 226 The villagers' annual cycle for fish-taking varies somewhat with the particular method used, and with the annual rice and ceremonial cycles: yet the maturation cycle of the principal types of fish is also a factor, and one which tends to give an overall orderliness to the annual cycle for fish in general. There is no time in the year when at least some fish are not available, nor is there any time in the year, even the busiest, when the family does not want fresh fish for its menu. For this reason, there is fishing the year round, at least in the form of the housewives simply setting nets in the canal and then tending them according to some schedule or whenever the noise of caught fish sloshing about in the water is heard. When a lull from the pressure of

7: Janiekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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221 other activities permits, members of the family are likely
• 226 to be seen fishing.

The period of late December through February is the period in which the canal fish are mature and most delicious to eat. Notwithstanding that this is the busy harvest time, it is also the busiest catching period, because it is at this time that many of the more important varieties of marine animals mature. Shrimp, for example, is available for only about twenty days during January. While this period is correctly described as the rice harvest time for the community as a whole, almost all individual families are likely to have lulls of a few days between the maturation of one rice variety and another. Such lulls are devoted to intensive fishing.

There is less urgency in the "harvesting" of fish by pool-draining methods than there is in fish-catching. The first pool-draining might occur as early as February, or as late as May; a second and even a third draining might occur later in the year. There are biological factors underlying this, such as the presence on the banks and bases of the pools of a longer-lasting supply of plant food for the fish than is available in the canals, especially since the canals tend to recede more and more as the dry season progresses until, in the higher northern section of the village, they dry up completely well before the onset of the rainy season.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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243 per cent in 1949 to thirteen per cent in 1953 suggests that
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621
161 the problem of population pressure on land has become more
178 acute, although it may also indicate changes in the cost structure of rice production which will be discussed in Chapter VI.

494
463 Concluding the discussion of this section, we may say that rice growing is the core of the occupational struc-
222 ture of Bangchan around which other occupations rotate. It
226 is not uncommon that one family has several occupations,
[243] and in addition to income from these most families get "free" food in the forms of fish and uncultivated aquatic plants. This is the principal reason why families with apparently no cash income still thrive.

433
434 It is conceivable that in years of poor rice crop the family put more effort in the secondary occupations;
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[136] when such an attempt does not work out well -- for example, no work for manual labor and no capital for trivial trade -- an effort is made to obtain subsistence directly from nature.

In any event, every family in the village is engaged
[136] in fishing in varying degree. It is because of this fact coupled with the fact that the village fish supply is decreasing that the problem of fish conservation is very important.

243 Finally, the dynamic nature of rice farming, with varying efforts on getting extra jobs and securing free food outside the farm depending upon the increase and decrease of the rice crop, suggests that the economy of any rice

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243 buffaloes heretofore undreamt of and will have to bear
231 the consequent burden of increased cost of producing rice.
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Some description of the homelots which constitute
311 almost five per cent of the land area of Bangchan has already
351 been given in the section on vegetation, Chapter II. From
[234] the standpoint of land utilization, functions of the homelot
[235] other than providing standing room for the living quarters
[244] may be mentioned as follows:
[245]
[226]

1. It provides space for threshing and for storage of rice and farm equipment including buffaloes.
2. It provides room for chicken or duck raising.
3. It provides land for a kitchen garden, and for fruit and vegetable growing.
4. It provides space for fish trapping by the draining method.

To serve these functions, homelots in any rice growing village, where the fields are submerged under water during the entire [illegible] of the rice plant, must be high above water level during the flood season, must be well drained, and must have pools with ample shade.

243
311 Rice land in its natural state does not meet these requirements for a homelot. In the first place its level is too low. Second, the impervious layer of clay characteristic of rice land does not permit soil drainage. To make a homelot out of rice land, it is necessary that the prospective site be mounded up to a level two or three feet higher than the level of the surrounding fields. The hole from which

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235 433 434 Of the 46 families covered by the survey, 23 or one-half raised ducks with an average annual production of 155 eggs per duck, and an average of 11.7 ducks per family raising them. Egg production for each of these families thus averaged about 1,200 per year. Of these, 1,350 were consumed by the family and 450 sold at the same price as chicken eggs. It was estimated, then, that from duck eggs alone, the average cash income in 1949 was about 150 baht per family raising ducks.

226 262 433 [434] After rice, fish were by far the most important ingredient in the diet of Bangchan. In contrast to poultry, however, fish did not constitute a source of cash income of the villagers. As a matter of fact, more fish were bought from the outside than the negligible amount that was exported from the village mainly by one or two very poor families who had availed themselves of this means of augmenting [435] their income. From our consumption study of 106 families in 1953, it was found that of an aggregate amount of 17,786 kilograms consumed by these families in the previous year 16,027 kilograms were caught by the families while 1,759 kilograms were bought at five baht per kilogram. The rate of fish production may thus be estimated at 151 kilograms annually per family, or 44,998 kilograms for the entire village.

262 244 433 The same consumption study shows that the 106 families consumed in 1953 a total of 18,402 kilograms of vegetables all of which were produced or acquired by the families.

*243 242 requires much additional hand labor and reduces the possibilities for mechanization to a minimum. On the other hand, the more labor intensive transplanting method would seem to be more suitable to a population pressure area like Thailand if it really gives as relatively higher a yield as it is claimed to give.

Farm equipment

*243 351 [235] [244] [245] [226] In Thai agriculture, it is very difficult to separate the farm from the home. In the chapter on the community it has already been indicated that the home lot not only is the living place for the farm family but also provides space for threshing and for storage of farm equipment, room for chicken raising, land for kitchen garden and for fruit and vegetable growing, and space for fish trapping by the draining method.

*243 351 422 In other words, all the material components of the farm, except the rice fields, are located or stored on the home lot. Here, items that are uniformly or frequently found include:

A. Household equipment

1. Buildings
2. Furniture
3. Bedding facilities
4. Kitchen accessories
5. Storing facilities
6. Lamps of various sizes
7. Ritual accessories

B. Farm equipment

1. Farm building: equipment and buffalo shed.
2. Implement: plow, harrow, yoke, roller, shovel, spade, hoe, weeding knife, noria, sickle, pitchfork, rake, broom, winnowing machine, wooden winnowing spitula, basket, mat bin, box bin, home-mill.

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[243] [434] [433] income and operator's labor earnings lies in the value of farm produce consumed by the family. Earlier, five kinds of produce were listed -- rice, fish, eggs, fruit and vegetables. For technical reasons, we consider only rice and eggs as products of the farm, rice being the primary crop and eggs the secondary crop. Fish is not considered a farm product because Bangchan villagers fish for consumption, not for sale. Besides, fishing is done by every resident of the village, farmers and non-farmers alike. It is thus more of a way of life than an economic enterprise. The same is true for fruit and vegetable growing which is done in a very small scale.

[235] [226] [244] [245]

If we agree on considering only rice and eggs as the products of the farm, it is not difficult to estimate the amount and value of farm produce consumed by the family for Bangchan operators can readily give a rather accurate information on their rates of consumption of these two products. Thus, under Bangchan condition the figure for operator's earnings is not as difficult to obtain as it appears to be the case among most American farms. The frequency distribution of operator's labor earnings of our 104 sample-farms is given in Table 48. It is seen that only 17 farms produced negative remuneration for the operator computed by this method as against 47 farms by the labor income method. As Professor Warren has said, of these two, labor earnings is a better measure of profits. It is especially so in Bangchan and perhaps in other agricultural regions in Southeast Asia

[171]

[TEXT CONTINUED ON PAGE 306]

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511 needs at least two work suits in each rice season, one during the field preparation and another during the harvesting season.

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511 Kerosine is used every day for lighting purposes. We do not include in this category kerosine which is used in the farm work; but that used with the pressure lamp in fishing by spearing during the night is included in the ordinary household expenses, for we do not consider fishing as a farm enterprise but as a routine activity participated in by all Bangchan residents, farmers and non-farmers alike.

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[792]
[764]
[585] Contributions to neighbors is a necessary item of expense in the village. These are cash gifts made by invited guests to the sponsor of such rituals as ordination, cremation, marriage, topnotch-cutting, and teacher worship. These rituals usually take place during the dry season following harvesting when cash is abundant in the village and are always followed by feasts, not uncommonly in a series of two or three days. Since all these rituals necessitate the participation of the priests, they have to be arranged in consultation with the temple to avoid conflicting schedules. Although few rituals have been noted to be in conflict with one another, usually they are spread throughout the dry season and most people are able to attend rituals to which they are invited. In cases where they cannot attend in person, they are obliged by conventional requirement to send in their cash contributions. The standard cash contribution is 5 - 10 baht. Usually, a

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161
434 among these contributing factors is population pressure.

Disguised unemployment in the case of farm operators
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161 and their family workers and actual unemployment in case of
434 farm laborers indicates a condition of over-population in
464 Bangchan in the sense that a certain part of its population can be removed without materially reducing total production in the area.

178 In view of a continually decreasing supply of fish,
• 226 it may be said that the situation has reached the point where
433 it not only affects the per capita income of Bangchan resi-
262 dents but actually exerts pressure on means of subsistence. There are several indications of decreasing supply of fish and other marine animals in the village. First, it is the consensus of opinion gathered by our daily informal talk with villagers non of whom was found to hold a contrary view. Second, a passage in our 1948 log, "X is very lazy. Everybody here in Bangchan catches shrimps and makes his own shrimp paste. He alone does not catch shrimps even though he is among the poorest," indicates that purchase of shrimp paste was in 1948 an exception rather than a rule. In 1952, however, it was found that a total of 22.7 kilograms of shrimp paste consumed in a year by an average family, 6 kilograms, or more than a quarter, was purchased. In this latter year, 83 baht worth of fish and 54 baht of fish sauce were purchased by an average family in addition to shrimp paste as against negligible amounts for the same items in 1948 (we did not conduct a systematic consumption

178 survey in 1948, the "negligible amounts" comes from daily
226 talk with Bangchan residents). Third, several informants
433 testified that the amount of fish caught from the same pool
[262] by the draining method had been decreasing each year. One of these gave the following comparative figures for fish caught from the same pool on April 8 - 10, 1953 and on approximately the same time of the year in 1952 as follows:

Kind of Fish	Number Caught in 1953	Number Caught in 1952
Pla Salid	400	800
Pla Salad	100	200
Pla Kasong	50	120
Pla Chado	6	15
Pla Krai	1	--
Pla Doog	50	50
Pla Mor	20	25
Pla Chorn	150	300
Large turtle	5	3
Small turtle	7	3
Eel	5	5

Others also gave the 1953 figures, but could not itemize the 1952 figures; they only said that they "got much more than this year."

226 There had been until 1952 no positive program for
654 fish conservation; only negative measures have been taken, such as the Ministry of Agriculture's ordinance against fishing by certain methods at certain times of the year. In 1952, however, the Government began an extensive program of introducing a new variety of fish, Pla Mor Thed, into rural areas of Thailand. This new variety has been claimed to grow faster than the native varieties. While this program cannot as yet be appraised, a point of observation may be

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made that any program of fish raising in a closed pond, no matter how effective it may be, should not preclude the need for conservation of fish naturally existing in the open canals.

It has been pointed out that Bangchan operators produce 52 per cent of the things they need for ordinary consumption. Thus, rice growing may be seen as a farming-to-reduce-cost enterprise where maximization of profit ceases to be the primary motive of production. It has been pointed out also that rice growing is a losing concern to many operators (in terms of labor income and operator's labor earnings), but the loss has been compensated by the privilege to fish which is open to all village residents. Since the amount of fish caught constitutes the main and probably the only source of protein intake and at the same time a considerable share in the diet of villagers, continually decreasing supply of fish therefore underscores the immediate need for an effective program for fish conservation as a means to prevent the standard of living of the villagers from falling below the minimum level of subsistence.

Over-population in an area of limited job opportunities naturally creates an over supply of labor, which in turn results in low wages. This is further complicated by a wide variation of individual earnings from labor of from two thousand baht annually to almost nothing, the latter being the case of transient members of farm operating families.

APPENDIX F

• 226

LIST OF FISH AVAILABLE IN BANGCHAN

Thai name	English name	Season
Hoy karb	. . .	July - Sept.
Koy khong	. . .	all year
Kung	Prawn	July - Sept.
Kung foy	Shrimp	January
Pla boo	Goby	July - Dec.
Pla chado	. . .	all year
Pla chalad	. . .	" "
Pla chon	Serpentheadfish	" "
Pla dug	Silurid	" "
Pla jeed	Catfish	July - Feb.
Pla juad	. . .	July - Oct.
Pla kad	Fightingfish	July - Sept.
Pla kating	. . .	July - Oct.
Pla katunghew	. . .	July - Feb.
Pla khayaeng	. . .	July - Dec.
Pla khem	Needlefish	July - Feb.
Pla kod	. . .	July - Dec.
Pla kradi	Gourami	all year
Pla krai	Featherbackfish	July - Dec.
Pla krasong	. . .	all year
Pla krim	. . .	July - Dec.
Pla lai	Eel	all year
Pla lod	. . .	" "
Pla mor	Climbingfish	" "
Pla nua-on	Sheatfish	July - Dec.
Pla paeb	Minnow	July - Dec.
Pla salid	Pilotfish	all year
Pla siw	Carp	July - Dec.
Pla soy	. . .	July - Oct.
Pla tapian	Dace	July - Dec.
Taparb-nam	. . .	all year

(. . .) Not available.

killing
262 fish was apparently regarded more lightly by many Buddhists
226 than killing of larger animals, but fishing on (1)wan (4)phra,
784 the weekly holy day, was forbidden. Fish were caught from the
canal with nets, traps, spears and hooks. Some were trapped
226 in trenches in the rice fields. Techniques varied with the
varieties of fish mature and plentiful at different seasons.[1]
228 Moreover, every house had a fish pond. It was usually the
hole from which earth had been removed for mounding the home
site, and was connected by a ditch to the canal. Fish were
lured from the canal into the pond by clearing it of injurious
undergrowth, planting appropriate fish-feeding plants, of

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251 Smaller fish were preserved as fermented fish. The fish
with bones left in, were salted overnight. This product was
263 called (1)plaa (1)raa. For fermented fish to be used as
seasoning, in various dishes, the liquid was drained off, then
the fish were washed and mixed with salt and specially pre-
pared rice. This had been soaked overnight, fried and pounded.
The mixture was allowed to ferment in a small jar for from 2
weeks to 2 or 3 months, depending on the product desired.
Large bones were removed by putting the product through a col-
ander before use. Fermented fish had the advantage that it
could be eaten without further preparation, and the flavor was
generally liked.

Small shrimp, which were caught in quantity during only
about 3 weeks in February, were made into shrimp paste as
follows: the shrimp were washed, mixed with salt and allowed
to stand overnight. The liquid was drained off, and the shrimp
were spread out on trays and exposed to the sun for a day or
so. Larger ones might then be beaten to loosen the shells,
which could be winnowed away. For very small shrimp, this
step was omitted. The shrimp were then pounded thoroughly in
a mortar, and stored in a jar for about a month before use.
Very small fish were sometimes made into fish paste in the
same way. The yield was about 2 kg. of the tannish or grayish
colored shrimp paste from 4 baskets (4/5 tang) of shrimp.
Shrimp paste or (2)ka-(2)pi was an essential ingredient of
Thai hot dishes.

The liquid which was drained off from the mixture of
fish or shrimp and salt in the first stage of preparing fer-
mented fish or shrimp paste was used by some villagers to pre-
pare (4)nam (1)plaa or fishsoy. The liquid was boiled with
certain green leaves such as mango leaves, onion, garlic and
salt for from 30 minutes to an hour, then it was strained.
263 The resulting red-brown liquid was bottled and was ready for
use as a condiment.

136 1. Sharp et al. (1953, pp. 185-196) described some
common fishing techniques and listed 32 varieties of fish
known to be found in Bang Chan in 1948-49.

228 which the leafy vegetable (2)phag (2)ka-(2)cheed is one, and digging a deep hole at its entry. At the proper time the opening was plugged. The fish grew in the pool and were taken as needed, sometimes, for convenience, several at a time, to be kept alive in a large pot near the house. By draining the pond fish were "harvested" (p. 12). Yields varied, but villagers had the impression that they had declined considerably over a period of years.[1] In 1952, at the suggestion of FAO, the Thai government tried to increase the supply by introducing tilapia culture. During the first three years of the experiment about one-third of the families in Bang Chan had tried to raise tilapia, but in the summer of 1957 members of the research group were told that no one had persisted (see Appendix A, p. 101).

235 Eggs. - Chickens were raised by about 90% of the families in Bang Chan, and over 70% owned 10 or more. In contrast, only 37% of the households had ducks, and only 13% had 10 or more (Goldsen and Ralis, 1957, p. 56). Ducks were regarded as trouble makers. Moreover, chickens could feed "naturally" and certainly helped themselves to paddy from the bin, whereas ducks did not eat paddy, but had to be provided with bran and broken rice.

235 443 433 262 Most of the eggs produced were sold. Janlekha (1955) estimated the annual production of chicken eggs in Bang Chan as 366,540, and that of duck eggs as 268,200 eggs. According to the information which Janlekha obtained from 106 households in 1953, about 4/5 of the chicken eggs were sold as a secondary source of farm income whereas more than 3/4 of the duck eggs were home consumed. Slightly over 2/5 of all eggs produced in the village were consumed there. On a per capita basis, the average annual consumption of 708 eggs for an average family size of 5.7 persons (Janlekha, 1955) amounted to a little over 1/3 of an egg per day. Home consumption of eggs might be less in households in which enough chickens were raised to make regular sale of eggs possible. Thus in 5 of the 31 households studied by Sharp et al. (1953, p. 197) all hen's eggs produced were consumed at home.[2] For these families, an average of 452 eggs per family per year or about 1-1/4 egg per family per day, were thus available. Home consumption in the 26 families which sold eggs amounted to an average of 215 per year or about 0.6 egg per family per day. One informant commented that a rich man could eat an egg every day, but she could not afford to do so. She said she sold eggs, when she had them, and bought foods to eat with rice.

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1. Sharp et al., 1953, pp. 191-192.

2. This probably means that eggs were not sold in quantity, not that none were used in barter (cf p. 5); thus the number of eggs available may be overestimated.

235 Eggs and poultry. - Every household which took part in the survey raised chickens, and 3 of the 11 households had ducks also. In both groups of families, most of the eggs produced were sold. Home consumption of eggs on survey days was small.

228 Fish. - Each family studied had a fish pool. One family only, Household 25 in Group B raised tilapia. They began tilapia culture during the third round of the study, too late to ascertain how this might affect fish consumption in the family.

251 Preservation of Foods at Home. - Home food preservation was practiced to a very limited extent only, fish products being the principal ones produced.

Dried fish. - Families in both groups salted and dried fish throughout the year whenever they were available in excess of immediate needs.

Fermented fish. - In 10 of the 11 households, fermented fish was prepared. The 6 families in Group A had prepared a total of 30 kg., and 4 of the 5 families in Group B, a total of 29 kg. The largest amount prepared in one household, for one year was 10 kg.

Shrimp paste. - Because shrimp were caught in insufficient quantity, shrimp paste was prepared by only 6 of the 11 families. Four families in Group A prepared a total of 26 kg., and 2 families in Group B prepared a total of 7 kg. These amounts were insufficient for their needs.

Fishsoy. - One family only, in Group A, prepared fishsoy. All others in both groups purchased this product.

Buffalo meat. - During the survey year, the buffalo belonging to one family died. Some of the meat was used fresh for curry, and the remainder was salted, dried and sold.

Comparison of Caloric and Nutrient Intakes of the Two Groups With Each Other and With the Estimated Allowances.

128 146 In Table 11, the estimated calories and nutrients available to the two groups of families, are shown together with the estimated allowances.

146 On the average, the number of calories, and amounts of protein, iron, niacin and ascorbic acid in the diets of persons in Group B, the apparently better nourished group, approximated or exceeded the conservative allowances. For Group A, this was true for niacin and ascorbic acid only, the calories being 11%, protein 15% and iron 21% below the allowances.

000 Growing other kinds of green and yellow vegetables should be fostered. Although vitamin A value and riboflavin content appear to be critical, in choosing vegetables to be stressed, specialists in agriculture should consider greens [P62] with high calcium and low oxalic acid content also. A variety of edible leaves of trees were used by a few families; some used sweet basil as a vegetable rather than just a seasoning; pumpkin and sweet potato were familiar, but less often used than would be desirable. More green or yellow vegetables which mature when canals are low and aquatic plants no longer available, would be especially good. If increased production by most households[1] is not practicable, a few of the more successful gardeners might be persuaded to produce vegetables and fruits which would help to bridge the gap between rainy seasons. Mushrooms, which can be grown readily, would provide a good source of ribo- [P64] flavin when leafy vegetables are in short supply. The boom-and-bust experience in mushroom culture (See Appendix A, pp. 101-102) might, however, make its revival as a source of healthful food for home use more difficult than if the villagers did not think of mushrooms as a cash crop for which the market failed.

Eating more fruit would help to tide over the dry 262 season. Fruits were commonly used as snacks, not at meal- [264] time, hence snacks of fruit should be encouraged for adults as well as children. Bananas grew in all gardens and were available the year round. The (4)nam (4)waa variety, which was used in ceremonies, and considered safe for all, should 000 be stressed. More families could grow pineapple, which is [777] relished both raw and in curries. Mango and papaya, fruits of outstanding value for both vitamin A and ascorbic acid, would be excellent, but the idea that growing papayas is "unlucky" must be taken into account. If a few of the more thoughtful and forward-looking farmers could be persuaded to start papaya trees, even though they were not willing to plant them near the house, the practice might spread in time.

146 On the average, the Bang Chan diet did not seem to be [64] very deficient in protein, but distribution is not proportional to need, and protein deficiency may be in part responsible for periods of weight loss, or failure to gain, so 000 common among infants and children. The presence of other [136] essential nutrients in animal foods is important also. If, the local supply of fish is indeed diminishing, efforts to [228] increase it through pond culture should be continued. Abandonment of tilapia culture in Bang Chan, after about one-third of the families had tried it, (Appendix A, p. 101) suggests that not enough of the right kind of help was given

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1. Tenant farmers may not be permitted to enlarge gardens by mounding at the expense of rice fields.

concerning its culture and use. Tilapia culture was learned largely by trial and error, and was considered primarily as a source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

More home consumption of eggs would be desirable, but their ready sale and acceptability for barter may present an obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

Milk, as canned, dried or malted milk preparations, was considered an appropriate gift for the priests, who are forbidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to include milk among them. People gladly bought food for the priests and would probably accept on the authority of the head priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headman were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

The importance of merit making and the relatively large cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

Notes on Tilapia Culture in Bang Chan

228 654 In 1952, the Thai government, at the suggestion of FAO, began to encourage tilapia culture. Fingerlings and some information on tilapia culture could be obtained from the Minburi district office, where a demonstration pond was maintained. Early in 1953, we learned from the records of the district officer that three persons in Bang Chan, two of them hamlet headmen, had obtained tilapia from this source. In 1953 the commune chief called a meeting in the village and explained the importance of tilapia raising. In May 1955 when Ralis conducted a survey in Bang Chan (Goldsen and Ralis, 1957), tilapia raising had been tried in nearly a third (31%) of the households, but was considered by 2/3 of the respondents to pay little.

The authors comment:

> From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply [434] rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months.

From the comments just quoted, tilapia culture appears to have been undertaken for the anticipated cash return. No [114] information was obtained by Ralis concerning the extent to which the villagers used tilapia to increase their supply of fish for home use. In the summer of 1957 members of the research group who visited Bang Chan found that no one was raising tilapia; they were neither a source of food nor of cash. Some indication was obtained that their flavor and texture were not agreeable. Clearly the attempt to introduce a rapidly growing but unfamiliar variety of fish failed in Bang Chan. An understanding of the reasons for this failure might help to prevent other costly failures in future.

Notes on Mushroom Culture in Bang Chan

177 244 Goldsen and Ralis (1957) commented as follows:

> Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per

3. Tilapia raising. In 1951, FAO suggested to the Thai Government that cultivation of tilapia be encouraged to help meet the rising need for fish in Thailand. Tilapia is a species of fish which multiplies and grows relatively fast. The strain, which came originally from Africa, is popular in Malaya and was expected to be easily marketable, thus a source of added income in Thailand. The Thai Government followed the FAO suggestion in 1952: a few Bang Chan residents dug the special pools required for the fish culture and began to raise tilapia mainly for commercial purposes. About a third (31 per cent of the households*) reported in 1955 that they have engaged in this activity. 177* 178* 228*

From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply rapidly, the cash return is not as great as that realised from mushroom growing. The cycle of raising tilapia lasts about four months. [434]

4. Artificial fertilizer. Artificial fertilizer has made its appearance in Bang Chan only recently. Informants in the community reported that only two farmers had tried artificial fertilizer in 1952. In the 1955 survey, 12 per cent of the farmers reported that they have used fertilizer or are using it. This fertilizer is mainly ammonium sulphate sold both by the government and commercial distributors. Only a few farmers (3 per cent) have ever employed it for all, or for the larger part of their fields. The remainder (9 per cent) have used it on a trial basis in only a small part of their fields.** 241 197* 178*

Fertilizer, then, has been tried out on a much smaller scale than either mushroom growing or raising tilapia. Apparently two important barriers operate against its wider acceptance. First, its high cost and the difficulty of purchase and transportation (66 per cent of farmers with ideas on the subject gave these reasons for not using fertilizers); second, popular opinion in Bang Chan declares that artificial fertilizer is not fit for low lands since it washes away and is thus wasted (29 per cent of the farmers with ideas on the subject advanced this as reason for not using fertilizer). In addition, fertilizer yields delayed returns.

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* The question: "Have you ever raised tilapia, or not?" [125]

** The question: "Have you ever used fertilizer or not? .. To what extent have you used fertilizer on your fields?" [125]

TABLE 1. THOSE WHO OWN OR USE SMALL MOTOR ARE MORE LIKELY THAN OTHERS TO TRY OTHER AGRICULTURAL INNOVATIONS (FARMERS ONLY)

	Owns motor	Does not own motor but uses it	Neither owns nor has used motor
(Total cases)*	(70)	(150)	(106)
Have you ever used fertilizer?**			
Yes	18%	16%	3%
No	82	84	97
Have you ever raised tilapia?			
Yes	53%	29%	22%
No	47	71	78
Have you ever grown mushrooms?			
Yes	40%	49%	37%
No	52	51	64

* The bases on which per cents are computed appear in parenthesis at the head of each column in this and subsequent tables. Actually the bases vary by a few cases, table to table, since there were always a few respondents who did not answer a given question or whose answers were unclassifiable.

** Asked of farmers only. The bases are:

Owns motor	65
Does not own motor but uses it	141
Neither owns nor has used motor	82
NA	5

There is some evidence, then, that if a person is willing to try out one agricultural device, such as the motor, he is more likely to try out other agricultural innovations. However, this "clustering" cannot support the hypothesis that there is something like "innovation mindedness" in general, or that acceptance of any innovation in a series is predictive of acceptance of all other innovations in the same series.

Evidence may be cited to substantiate this contention. In the first place, if such a clustering indeed prevailed, one would expect users of any of these agricultural innovations to be more disposed than others to use, as well, certain non-agricultural innovations, such as hospital or clinic facilities, for example.

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• 228 And no such tendency may be discerned in the present data. (See Table 2.)
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743
182 TABLE 2. USERS OF HOSPITAL AND CLINIC FACILITIES SHOW NO SIGNIFICANT DIFFERENCES IN RATES OF ACCEPTANCE OF AGRICULTURAL INNOVATIONS

Agricultural Innovations	Percentage who have ever gone to hospital or clinic for treatment	Total cases
Mushrooms		
Tried them out	36%	(143)
Never did	38	(188)
Tilapia		
Tried it out	44%	(104)
Never did	34	(223)
Motor		
Tried it out	37%	(213)
Never did	36	(106)
Fertilizer*		
Tried it out	37%	(32)
Never did	34	(232)

* Farmers only

228 In the second place: use of the motor is much less strongly
241 linked to use of mushrooms than the use of fertilizer or tilapia.
244 It may well be that there may be some common factor strongly underlying the decision to use the motor on the one hand, fertilizer and tilapia on the other, while the decision to try mushroom-growing is relatively more "autonomous". A possible explanation for the
402 greater "autonomy" may be sought in the differential requirements
*177 for growing mushrooms compared with the requirements for adopting
*178 the other innovations.

Both tilapia and sulphates demand extra heavy work, care, an essential initial investment, and willingness to wait for a delayed return. An additional requirement for a successful and continuous pay-off from both these innovations may be an aptitude to follow rather complicated instructions. In the case of mushroom growing, however, the initial investment is relatively small, the labor may be tedious but is not heavy, no protracted or complicated care is involved, and the results of the effort are relatively quickly realizable.

There is some justification, then, for the inference that initial adoption of innovations such as fertilizer and tilapia, which require increased labor, will depend to some extent upon the availability of some labor-saving device (such as the small motor) which will enable the busy farmer to perform the necessary labor and, perhaps, leave him freer to exercise the care required for these innovations to be successful. Hence the relatively stronger relationship among these innovations. An innovation which does not make these demands, however (such as mushroom growing), is more likely to find acceptance on its own terms and may thus be less dependent for its acceptance upon availability of some sort of labor-saving device.

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Innovation and Attitude Towards It

There is further evidence in the survey substantiating the greater "autonomy" so to speak, of the decision to try mushroom culture compared with the decision to try fertilizer or tilapia.

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The present study tested the hypothesis that use of these innovations would be related to a favorable attitude toward them. Attitude toward the four innovations was determined by examining responses to the questions: "What is your opinion about fertilizer?" "...about mushroom growing?" "...about tilapia?" Responses were classified according to whether they revealed positive, mixed, or negative affective feelings to each of the innovations.

In general, positive attitudes towards all these innovations are widespread in Bang Chan. About three-quarters of the residents express positive feelings toward mushroom growing and over half express positive attitudes to artificial fertilizer and tilapia raising. (See Table 3.) None of these innovations elicits widespread expressions of disfavor, although the respondents are more likely to express an unfavorable attitude to tilapia (29 per cent) than to fertilizer (14 per cent) or to mushrooms (7 per cent)

TABLE 3. THE MAJORITY IN BANG CHAN HOLD POSITIVE ATTITUDES TOWARDS AGRICULTURAL INTRODUCTIONS

Attitude	"What is your opinion about..." Mushrooms	Fertilizer	Tilapia
Positive	76%	59%	57%
Neutral or mixed*	6	3	2
Negative	7	14	29
No opinion	9	16	8
Not ascertainable	2	8	4
Total cases	(333)	(333)	(333)

* The neutral or mixed attitude category comprises responses conveying partly favorable and partly unfavorable feelings such as, "some kind is good, some kind is not so good"; "in some ways I like it, in some ways I dislike it."

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Now let us examine the extent to which the decision to try out the innovation is linked to a positive feeling towards it. The decision to try fertiliser and to raise tilapia turned out to be indeed linked with positive feelings towards these innovations. Among those favoring fertiliser, the proportion using it is six times as high as those with neutral, mixed or negative attitudes (18 versus 3 per cent); among those with positive attitudes to tilapia raisers of this fish are twice as frequent in comparison with those having neutral, mixed, or negative attitudes (43 versus 22 per cent). These relationships are shown in Table 4 below.

TABLE 4. ATTITUDES TO FERTILIZER AND TILAPIA RAISING ARE LINKED TO THEIR USE

	Attitude	
	Positive	Neutral, Mixed & Negative
Fertiliser		
Tried it out	18%	3%
Never did	82	97
Total cases*	(168)	(33)
Tilapia		
Tried it out	43%	22%
Never did	57	78
Total cases	(191)	(104)

[125] * Based on responses made by 293 farmers who expressed a codable attitude to fertiliser.

244 On the other hand, the data revealed no relationship between
*177 attitude to mushroom growing and growing them. The proportion of
*178 users and former users among those who have favorable attitudes and those who have negative attitudes remains relatively constant. Table 5 shows that among respondents with positive attitudes, per cent have tried mushroom growing; while among respondents with negative attitudes, 42 per cent have done so; percentage differences are statistically insignificant.

TABLE 5. ATTITUDES TO MUSHROOM GROWING SHOW NO RELATION TO ITS ADOPTION

	Attitude	
	Positive	Neutral or Negative
	(252)	(42)
Tried mushrooms	47%	42%
Never did	53%	58%

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It appears, then, that we may be dealing with two types of innovations, one type (fertilizer and tilapia) where attitude is linked to decision to use it and another (mushrooms) where attitude seems to be unrelated to such use.* And here again may be further substantiation of the greater autonomy of the acceptance of mushroom growing. For, in the case of innovations such as artificial fertilizer and tilapia, it is known that they require investment of funds and labor, risk, delayed return, and departure from well-known ways. It could be that in the face of these disadvantages acceptance will occur only if motivation is high. Acceptors would then be selected mainly from among those who have high motivation and accompanying positive affective feeling. Those who do not have these feelings would, following this reasoning, be less likely to overcome their objections to the disadvantages of the innovation in question.

There is also the second type of innovation like mushroom growing. This innovation is much less "costly" not only of funds but effort. Hence, high motivation and accompanying positive affect might be less influential than other factors--factors quite aside from the crop itself--on acceptance of this type of innovation. Consequently, growers of mushrooms may be recruited equally from persons with favorable attitudes and less favorable attitudes towards this crop.

These findings suggest the more general hypothesis (which might be corroborated by analysis of related contextual data collected in Bang Chan, and by examining equivalent situations in other underdeveloped areas) that: the more complex the innovation, the more effort involved in employing it, the more risk involved, and the less immediate the return, the greater the likelihood that acceptors will be recruited from a selected group of highly motivated people, rather than at random among all persons "eligible" to accept it. If the innovation requires the high motivation which is needed to overcome the disadvantages of investment, work, risk, and rarity, then this attitude toward it is important. If the innovation demands only short-term investment and relatively light labor, then this motivation is of little importance in the decision to try it.

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Sociological Factors in Agricultural Innovation

The decision to use the small motor, once made, tends to accelerate the decision to try out other agricultural innovations, especially fertilizer and tilapia and, to a lesser extent, even mushrooms.

• Both mushroom growing and tilapia raising are sideline activities to the Bang Chan rice farmer and are, therefore, comparable in this respect.

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228 mushrooms. The following section searches for sociological factors
241 linked to these decisions. For example, are the well-to-do farmers*
244 more apt than the less well-to-do to adopt agricultural innovations? To what extent is literacy a factor in acceptance of innovations? To what extent do differences in literacy, communications habits, cultural contacts and urban orientation account for tendencies to adopt or reject these changes?

[125]* The following analysis has been made, in most cases, for male farmers only. The distribution of initial acceptance among the three groups of male farmers, females, and male non-farmers is given in the following table.

*179
*178 TABLE 6. USE OF AGRICULTURAL INNOVATIONS AMONG THREE GROUPS OF BANG CHAN VILLAGERS

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	Male Farmers (211)	Male Non-farmers (82)	Females (32)
Tried motor	71%	61%	48%
Didn't try	29	39	52
Tried mushroom growing	46%	35%	41%
Didn't try	54	65	59
Tried tilapia raising	35%	25%	31%
Didn't try	65	75	69
Tried fertilizer	15%	5%	**
Didn't try	85	95	

** Asked of farmers only.

It is apparent, as one would expect, that it is mainly the farmers who try these innovations. Relatively few women (with the exception of tilapia raising) and even fewer non-farmers say they have tried them. Since the absolute number of acceptors among women and non-farmers is too small to bear the separate treatment which would be essential to analyse the factors influencing the use or non-use of innovations, they have been excluded from the following presentation, which refers, thus, to male farmers only.

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Decisions to use all these innovations--with the possible exception of the use of fertilizer--seem to be more widespread among the upper economic levels of the population. (See Table 8.) One wonders whether the initial link between use of the motor and readiness to try the innovations may actually disguise a more basic relationship based simply on ability to afford the investment and the risk.

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TABLE 8. FARMERS* ON HIGHER SES LEVELS ARE MORE LIKELY THAN OTHERS TO HAVE USED THE MOTOR, TO HAVE GROWN MUSHROOMS AND TO HAVE RAISED TILAPIA

	Ownership of Buffaloes	
	2 or less (99)	3 or more (112)
Used motor		
Own	6%	37%
Use	53	45
Neither	41	18
Grew mushrooms		
Yes	30%	60%
No	70	40
Raised tilapia		
Yes	26%	42%
No	74	58
Used fertilizer		
Yes	12%	17%
No	78	83

* Male farmers only

The following table presents again the initial relationships between use of motor and readiness to try out other innovations. But this time the link is examined separately for persons on the different economic levels.

Table 9 was made by first dividing the population into two groups, those from high and those from low economic levels. The resulting two groups were then further subdivided on the basis of whether they owned (or used) a motor or whether they did not. In each of the four resultant groups the percentage that raised tilapia was then calculated. Thus among those of high economic level who own or use motors, 43 per cent raised tilapia, and we infer that 55 per cent did not raise tilapia. The same procedure was repeated to ascertain the percentage that has tried fertilizer and subsequently the percentage that has tried mushroom growing.

This table shows that in tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertiliser holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic Level			
	High*		Low**	
Owns or used motor (Proportion who have raised tilapia)				
Yes	45%	(89)	33%	(57)
No	25	(21)	17	(40)
Owns or used motor (Proportion who have tried fertiliser)				
Yes	20%	(89)	18%	(57)
No	5	(21)	*	(40)
Owns or used motor (Proportion who have tried mushroom growing)				
Yes	60%	(89)	38%	(57)
No	57	(21)	23	(40)

* Three buffaloes or more
** Two buffaloes or fewer

[231]

Literacy

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

he could write, could only sign his name, or could do neither.* Those who said they could write a letter are considered here to be literate. All others are grouped together as illiterates or on a low level of literacy.

The literacy rating was tested for validity as follows: in Bang Chan literacy is known to be related to age. Ever since 1935** there has been a school in the community. Since that date school attendance has been compulsory. Attendance has been fairly full for the last twenty years, but most older residents have never had the opportunity for formal schooling.

The survey data reflect this correlation between literacy and age. Among farmers under 40 years of age, only 16 per cent were rated as illiterate or barely literate by the survey criterion; while 39 per cent of those of 40 years or older are rated as illiterate. Thus one can have reasonable confidence in the survey response as a rating of literacy.

TABLE 10. LITERACY OF FARMERS DECREASES WITH AGE

	Age	
	Under 40 yrs.	40 yrs. or more
Literacy		
Illiterate	16%	39%
Literate	84	41
Total cases	(79)	(131)

Literacy is linked discernibly to acceptance of the motor and mushroom growing. The proportion of literate farmers who have tried the motor is twice as high as the corresponding proportion among those who are illiterate. It is less strongly linked to the decision to grow mushrooms, and is, at best, weakly linked to the decision to raise tilapia or to use fertilizer.

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* In addition, interviewers asked respondents who said they could write to demonstrate it by writing something on the questionnaire.

** See Siamese Rice Village, op. cit.

TABLE 11. LITERATE FARMERS* ARE MORE LIKELY TO HAVE USED THE MOTOR AND TO HAVE TRIED MUSHROOM GROWING

	Illiterate (Cannot write a letter) (92)	Literate (Can write a letter) (118)
Motor		
Own	16%	26%
Use	35	60
Neither	48	14
Mushrooms		
Have tried	38%	53%
Have not	62	47
Fertilizer		
Have used	12%	17%
Have not	88	83
Tilapia		
Have tried	29%	39%
Have not	71	61

* Male farmers only

If Bang Chan were like certain areas of the United States and Europe, it might be objected that such a relationship between acceptance of innovations and literacy reflects a spurious link with economic level: that illiterates tend to come from the economically deprived strata of the population; hence an observed relationship with literacy may actually reflect the initial correlation with economic level. In Bang Chan, however, this is not the case. A Bang Chan farmer who is well-to-do is as likely to be illiterate as literate, as is illustrated by the table below.

TABLE 12. LITERACY AND ECONOMIC LEVELS ARE UNRELATED IN BANG CHAN*

	Literacy	
	Low (91)	High (119)
Economic Level		
Low	48%	56%
High	52	44

* Male farmers only

Hence the correlation between use of innovations and literacy may be taken at face value and does not reflect a spurious link with economic level.

Communications Media

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With the increasing use of mass communications, the community member is exposed to sources of information other than the printed word. Ownership of radios has nearly tripled in about five years (in the 1955 survey radios were reported in 14 per cent of the households, whereas in 1949* only 5 per cent of the households reported owning a radio). Quite apart from ownership, radio listening is widespread; less than one-fifth of the people in Bang Chan claim they never listen to the radio (18 per cent). Motion pictures are also popular. Only one-tenth claim to having never attended a movie, while half (49 per cent) say they have seen motion pictures more than ten times.

There is, of course, a strong relationship between exposure to one of these media and exposure to the other. Table 13 below indicates that the majority (64 per cent) of respondents who listen to the radio likewise report frequent movie attendance. Similarly, the majority (67 per cent) of those who say they never listen to the radio, reported that they go to movies rarely or never.

TABLE 13. EXPOSURE TO RADIO AND MOVIES SHOWS HIGH INTERRELATION

	Radio Listening		
Movie Attendance	High Exposure (regular or occasional listeners) (111)	Low Exposure (listen seldom) (148)	No Exposure (60)
High exposure (10 times or more)	64%	52%	12%
Medium exposure (4 to 9 times)	19	17	21
Low Exposure (0 to 3 times)	16	31	67

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Exposure to the communications media is strongly linked to acceptance of a basic innovation such as the motor. It is not directly linked to acceptance of the other agricultural innovations (fertilizer, tilapia, mushrooms). Respondents who report frequent exposure to radio listening and motion picture attendance are significantly more likely than others to say they own or have used the motor. (Among daily radio listeners 88 per cent report use of the motor; and this proportion declines steadily until among those who never listen, only 46 per cent use the motor; for movies, the corresponding proportion of users ranges from 76 to 36 per cent.)

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* Siamese Rice Village, op. cit.

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TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Pattern	
	With hands (342)	With fork and/or spoon (84)
Listens to radio		
Regularly (daily)	10%	25%
Occasionally	17	38
Seldom	51	35
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	13
2 - 4 times	29	23
5 or more times	28	55

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When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive to urban influence are twice as likely as others to use fertiliser (21 per cent versus 9 per cent), one and a half times as likely to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per cent versus 61 per cent). There is no noticeable relationship, however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

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These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for those on high as well as low economic levels and also for the literate as well as illiterate farmers.

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as ept to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	38%	(40)	86%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	50%	(67)	85%	(76)
One or more	57	(24)	88	(43)

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*Male farmers only

However, no such relationship was discerned between these culture contacts and trying out either fertiliser, tilapia, or mushrooms.

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Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

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Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

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The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertiliser or mushrooms.

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TABLE 21. INCIDENCE OF MOTOR USE IS HIGHER AMONG VILLAGERS WHO REPORT WIDER SOCIAL CONTACTS

	Social Contacts ("...Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?")	
	"More" or "the same" (143)	"Fewer" (55)
Motor		
Has used it	77%	55%
Never did	23	45
Tilapia		
Has tried it	39%	21%
Never did	61	79
Fertilizer		
Has used it	16%	11%
Never did	84	89
Mushrooms		
Has tried them	49%	40%
Never did	51	60

[212]

Once again, however, when this link between breadth of social contacts and use of the innovations is examined separately for the literate, compared with the illiterate farmers, we find further substantiation of the previous finding that under certain circumstances contact may act as a substitute for literacy in acceptance of complex innovations. For, although the link between social contacts and use of tilapia remains constant for literate as well as illiterate farmers, it is mainly for those who are illiterate that exposure to wider local social contacts is associated with greater incidence of motor use.

6: Goldsen and Ralis Z-4.5 (1955) 1957
AO7 Central Thai AO7

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TABLE 22. AMONG ILLITERATE FARMERS USE OF MOTOR IS LINKED TO WIDER SOCIAL CONTACTS

	Exposure to Influence of Others: Have more friends or about the same		Have fewer friends	
	(Proportion who tried small motor)			
Literacy				
Illiterate	64%	(56)	26%	(27)
Literate	87	(86)	86	(78)
	(Proportion who tried tilapia)			
Illiterate	34%	(56)	15%	(28)
Literate	43%	(86)	26	(27)

[369] This finding corroborates and expands the previous discussion of the culture contact and acceptance of innovations. Exposure to influence of others from outside the community (through contact with the city, with the airport, with the agricultural fair, for example), as well as exposure to the influence of others from within (through friends and associates) clearly relates to the decision to use an innovation such as the motor. Its effectiveness is not felt equally by the whole population, mainly instead, by those who are illiterate.

The significance of these internal and external contacts to illiterates may be that through such contacts they are likely to gain needed information and motivation which, if one can read and write, is available through other sources. If one cannot read and write, however, it is the outside world which provides this kind of needed information.

Capital Investment and Debt

426 Bang Chan's economy is largely a money economy and many farmers avail themselves of credit facilities through professional money lenders. Most loans are sought for the purpose of replacing capital equipment and purchasing land and buffalo.*

The present survey secures a rough measure of the extent of such borrowing in Bang Chan. The majority of farmers (59 per cent)

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[113] * See Janlekha, Kamol O. A Preliminary Study of the Economic Conditions of Siamese Rice Farmers in Bang Chan, Thailand. M.S. Thesis Cornell University, 1951, p. 75.

admit in response to a direct question* that they have a debt. Confidence in the validity of these responses as an index of indebtedness is increased since the expected correlation between indebtedness and ownership of buffalo is reflected in the survey data.

TABLE 23. INCIDENCE OF REPORTED DEBT IS HIGHER AMONG VILLAGERS WHO REPORT OWNERSHIP OF MORE BUFFALOES

	Reported Ownership of Buffaloes		
	None (81)	One to three (155)	Four or more (97)
"...Do you now have a debt?			
Yes	49%	56%	69%
No	51	44	31

When the use of agricultural innovations is examined for those farmers who say they have a debt, compared with those who deny it, it becomes apparent that there is a relationship only between indebtedness and use of the motor but not with any of the other mentioned innovations. Seventy-nine per cent of the male farmers who said they have a debt own or use the motor; among those who claim they have no debt the proportion owning or using the motor is significantly less (60 per cent).

TABLE 24. INCIDENCE OF MOTOR USE IS HIGHER AMONG FARMERS WHO REPORT INDEBTEDNESS

	"...Do you now have a debt?"**	
	Yes (125)	No (85)
Motor		
Has used it	79%	60%
Never did	21	40
Tilapia		
Has tried it	37%	33%
Never did	63	67
Fertilizer		
Has used it	14%	16%
Never did	86	84
Mushrooms		
Has tried them	43%	48%
Never did	55	52

**Male farmers only

* The question: "...I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?" Janlekha's M.S. thesis, ibid., reports a similar distribution of indebtedness for his sample of 98 farmers.

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Use of Health Facilities and Other Factors Associated With Agricultural Innovations

Although use of the basic agricultural innovations was shown to be linked to breadth of contacts within the community, on the one hand, and to indebtedness, on the other hand, the association between these factors and use of modern health facilities, although showing the same tendency, is not statistically significant. For the sake of completeness, the figures are reported below:

TABLE 34. NO RELATIONSHIP BETWEEN INDEBTEDNESS OR INTERNAL SOCIAL CONTACTS AND USE OF HOSPITALS AND CLINICS

	"Have you ever been to a clinic or a hospital?"			
	No, Never	Yes, for treatment	Yes, for other reasons	Total 100%
Social Contacts				
"More friends"	31%	35%	34%	(62)
"The same"	40	35	25	(154)
"Fewer friends"	32	41	27	(94)
Do you now have a debt?				
No	40%	32%	28%	(140)
Yes	33	41	26	(192)

*177
*178
228
241
244
402
743

SUMMARY

1. In the community of Bang Chan in Central Thailand, various factors are studied statistically in order better to determine the conditions of acceptance of selected agricultural innovations and conditions for using the facilities of modern medicine in clinics and hospitals. Four agricultural innovations were selected, viz. gasoline motor, raising of fish (tilapia), use of fertilizer, and mushroom culture.

2. The present study was concerned with the initial adoption or trial of innovations, rather than the continuing use of these innovations or the merging of the new with the old features of the culture.

3. While adoption of the gasoline motor was associated with all other agricultural innovations, no generalized acceptance of the new was found because: a) adoption of the gasoline motor bore little or no relation to use of non-agricultural innovations such as hospital and clinic facilities; and b) adoption of gasoline motors was only weakly associated with raising of mushrooms.

4. A cluster of traits including high motivation and sizable capital outlay was associated with the use of the gasoline motor.

177*
178*
207
212
228
241
244
369
434
454
743
426
546
572

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and acceptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike acceptors of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things? [177*] [178*] [125]

1.	Fertiliser	9	
2.	Small engine	4	
3.	New rice seeds	3	[241]
4.	Tilapia	98	[402]
5.	Other fish, specified	13	[243]
6.	Fish, unspecified	80	[228]
7.	Mushrooms	45	
8.	Poultry	179	[244]
9.	Pigs	21	[235]
X.	Other, specify	68	[231]
0.	Unascertainable	45	

8. Here, some farmers get a lot more rice from one rai of land than others get. Generally speaking, what are the various reasons why this is so? [243] [433]

1.	Fertiliser	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify _____	53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify _____	25
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

125
[402] b. If no: have you ever made use of one in your work, or not?

3. Yes	145
4. No	106
5. Unascertainable	8

11. What is your opinion about fertiliser?
(See code at end)

[241] 12.a. IF R IS A FARMER: Have you ever used fertiliser or not?

6. Does not apply	17
7. Yes	32
8. No	232
— No Answer	12

b. IF HAS NOT USED FERTILIZER: For what various reasons have you not used fertiliser?
(See code at end)

c. IF HAS USED FERTILIZER: Have you ever used fertiliser in your seed-beds, or not?

9. Yes	20
X. No	13

d. IF HAS USED FERTILIZER: To what extent have you used fertiliser on your fields? On all your fields, or on the larger part of your fields, or on the smaller part of your fields?

1. On all fields	4
2. On larger part of fields	4
3. On minor part of fields	24
4. Unascertainable	1

13. What is your opinion about mushroom growing?
(See code at end)

[244] 14.a. Have you ever grown mushrooms, or not?

1. Yes	143
2. No	188
— No Answer	2

b. IF NO: Do you have any relatives or relative-like neighbors, who have grown mushrooms or not?

3. Yes	141
4. No	44
5. Unascertainable	4

15.a. What is your opinion about tilapia raising?

[228] b. Have you ever raised tilapia, or not?

1. Yes	104
2. No	225
— No Answer	4

16.a. ASK ONLY FARMERS: This year just now beginning, will you do anything for increasing your income, outside of rice farming? [125] [434]

3.	Does not apply	13
4.	Yes	162
5.	No	107
6.	Unascertainable	11

b. IF YES: What various things will you do? [224] [235] [228] [241]

0.	Nothing	3
1.	Mushrooms	42
2.	Poultry	51
3.	Fish (Incl. tilapia)	10
4.	Fertiliser	2
5.	Other, specify_____	84
6.	Unascertainable	6

17. ASK ONLY FARMERS:

a. Last time you planted rice, how many rai of rice did you plant? [243] [433]

1.	4 rai or less	14
2.	5 to 9 rai	25
3.	10 to 19 rai	49
4.	20 to 29 rai	65
5.	30 to 39 rai	53
6.	40 to 49 rai	32
7.	50 to 59 rai	19
8.	60 to 69 rai	14
9.	70 to 79 rai	2
X.	90 rai or more	—
0.	Unascertainable	20

b. And what was the total yield?

1.	120 tang or less	15
2.	121 to 300 tang	28
3.	301 to 600 tang	59
4.	601 to 900 tang	59
5.	901 to 1200 tang	56
6.	1201 to 1500 tang	25
7.	1501 to 1800 tang	10
8.	1801 to 2100 tang	10
9.	2101 to 2700 tang	7
X.	2701 or more tang	3
0.	Unascertainable	21

c. How about the year before--how many rai did you plant?

1.	4 rai or less	16
2.	5 to 9 rai	19
3.	10 to 19 rai	51
4.	20 to 29 rai	67
5.	30 to 39 rai	53
6.	40 to 49 rai	26
7.	50 to 59 rai	20
8.	60 to 69 rai	13
9.	70 to 89 rai	5
X.	90 rai or more	—
0.	Unascertainable	23

125
[244]

b. And how about mushroom growing? Do you think mushroom growing yields very good money, good money, or little money?
   5. Very good money 68
   6. Good money 160
   7. Little money 49
   8. Unascertainable 56

[228]

c. And what about Tilapia. Do you think tilapia raising pays very good money, or good money, or little money?
   9. Very good money 15
   X. Good money 73
   Y. Little money 175
   O. Unascertainable 70

[787]

39. Do you believe in medium strongly, somewhat, or not at all?
   1. Strongly 12
   2. Somewhat 192
   3. Not at all 105
   4. Unascertainable 24

[166]

40.a. Suppose you could do the same work in another rural place and earn ½ more than here. For example, it would be a place 100 kilometers from here. Would you be willing to leave for that place or not?
   5. Yes 118
   6. No 203
   7. Unascertainable 12

.b. IF NO: For what various reasons would you not be willing to go?
(See code at end)

41.a. If you had no land to work in EC-KY would you move to another place or not?
   X. Yes 166
   Y. No 112
   O. Unascertainable 20
   — No Answer 35

b. IF NO: For what various reasons?
(See code at end)

[369]
[829]

42.a. Some people say that, generally speaking people who live in Bangkok have more genuine and lasting happiness than people here in EC-KY. Do you agree or disagree?
   1. Agree 136
   2. Disagree 134
   3. Unascertainable 63

b. IF AGREE: For what various reasons do you agree?

If Agreement (See code at end)

	Qu 11	Qu 13	Qu 15A	
1. Positive, no evidence: very good, good, nice	103	114	77	125 241
2. Positive, with evidence: good results, specific statements	47	120	95	244
3. Neutral or mixed	11	20	6	228
4. Negative, no evidence: no good, bad, of no use	9	5	15	
5. Negative, with evidence: difficult to apply in deep water, must keep using it, too expensive, some results as without fertiliser	33	13	80	
6. Positive, qualified: Fertilizer too expensive	13	—	1	
7. Positive, qualified otherwise: only for high land; very hard to purchase; requires to keep on using it	32	18	18	
8. Respondent states he has no opinion	54	31	86	
X. Negative, qualified: It's not quite good, it depends on the soil	4	4	3	
0. No answer	4	3	1	
9. Respondent's attitude not ascertainable	23	5	11	

Qu 12B		
0. D.A.	85	125 241
1. Too expensive	78	
2. Difficult to purchase	15	
3. Not fit for low land	39	
4. Soil not suitable	3	
5. No ascertainable reason given	28	
6. Too little land	7	
7. Other reasons	56	
8. Have never used it before. Do not now either	12	
X. N.A.	105	
9.	21	

Qu 16B		
X. N.A. Unascertainable	60	125 243 435 458
0. D.A.	151	
1. Nothing, cannot do anything	70	
2. Grow mushrooms	12	
3. Raise poultry	15	
4. Raise fish (including Tilapia	7	
5. Use fertiliser	—	
6. Find job as laborers	6	
7. Other: try to find new seed, sell vegetables, borrow money from neighbors, keep rice until price goes up, economise, send sons to work	86	

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at either seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

was given away fresh to selected kin and friends, including those who helped to butchor, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

252 usually covered. A common practice was to remove the cover and stir the rice once, toward the end of the cooking process. When the rice was almost done, surplus cooking water was drained off, and often after a lapse of time, the covered pot was put back onto the fire which had been allowed to die down, for about 6 minutes.[1] Thus the final cooking was essentially a process of steaming. Total cooking time varied from a little over 20 minutes to three-quarters of an hour, depending primarily on the amount of rice cooked. The finished product was moist enough to form a ball when pressed between the fingers. Left-over rice, if not eaten cold as a snack, was reheated by being added to the hot rice at the next meal. Rice water was commonly given to pets if there were any. In 4 families which participated in the dietary study, rice water was given to infants, one 11-year old boy served himself liberally to it, and one adult man was observed to drink rice water before meals.

The many recipes for preparation of "with-rice" dishes may be grouped into two categories, hot and mild. Hot dishes always contain chili and varieties of spices which are hot tasting. One type of hot dish is curry which may be designated as either "hot" or "sour". Thai curry consists chiefly of fish or any available kind of meat, with or without vegetables. To make curry, shrimp paste, chili and spices were pounded thoroughly and then mixed with the meat and condiments and frequently with coconut milk. All were boiled together. Vegetables, if used, were added when the mixture was nearly done. Both vegetables and meat were cut into small pieces and washed before cooking. With the exception of dried chilies and tamarind, foods were not ordinarily left to soak in water. Sour curry differs from hot curry in that it contains less chili and spices and has a mixture of tamarind ((4)ma-(1)dan might be substituted) crushed with water added to it.

The other type of hot dish is (4)nam (3)phrig or chili sauce. It is made of shrimp paste, chili, garlic and other spices ground together in the mortar and then mixed with lime juice, sugar and salt or fishsoy. (4)Nam (3)phrig was always served with either raw or cooked vegetables. One informant commented that (4)nam (3)phrig was the everyday food among the villagers.

Preparation of mild dishes varied. These included panned vegetables, meat or eggs cooked with small amount of fat and a variety of spices and condiments including black pepper but not chili. Fish were sometimes roasted or boiled. Vegetables might be eaten either raw or cooked in coconut milk without seasoning. If vegetables were simply boiled in water,

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1. Median times for a series. In 15 instances cooking time before draining ranged from 18 to 38 minutes and rice was steamed from 2 to 12 minutes after draining.

APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children. . . . . The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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1. In reproducing these notes, slight changes have been made such as substitution of descriptive terms for personal names which appeared in the original.

94

117 takes it down the steps to the fish pond, where she swishes
252 the basket around to wash the fish, and rinses her hands at the same time.

[231] There are some hazards to the food--chickens trying to get at the edible part of fish while the niece cleans it (she leaves the scales, etc. for them to eat); cat and kittens in the kitchen, having to be driven away from the grated coconut and coconut milk, and getting an occasional unweighed nip. Whether we start to weigh food for the evening meal or a.m. meal, some cooked foods are apt to be used, either left over
[262] from a previous meal, or cooked in advance. This a.m., for
[126] example, buffalo meat, already cooked (but not weighed before cooking) was used, and (3)khii-(2)leg leaves, which SS weighed last night. These latter were cooked last night, to reduce bitterness, then put into curry today.

Description of Food Preparation Area in a Relatively Poor Household

Wednesday, May 27, 1953

117 Arrived about 5:45 a.m. While other food was being pre-
[262] pared, the 11-year old son came in with a package of salted white radish and a small milk tin with some coconut oil which had just been bought. This is the house which we found flooded when they sent for us to see the baby last fall. The roof seems to be well thatched. The floor is not wet after last
[358] night's downpour. The bed platform, in one corner, is about
[359] 8 x 10 feet. The baby's cradle hangs above it. In the oppo-
[362] site corner is a shelf where utensils are kept. Some food,
[261] in paper bags, is in a basket hung from the roof. Fresh fish
[359] is kept in a jar of water until needed. The stove is on a small mound of earth, and further elevated on a small box (just big enough for the stove) filled with earth.

[355] We sit on a mat, spread on the mud floor, with the scales, plastic bowls and waxed paper ready for weighing food.
[355] The children lie on a mat nearby. In the house is a fresh mound of earth, a small straw bin with rice, and various pieces of equipment.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

that it is simply a "story," a description of the plight of other people, not the self. The story-teller or listener has the pleasure of a vicarious experience, but none of the pain of the real life situation. He can laugh over his good fortune in not being the person who was cheated out of his money or who was caught philandering by his wife. On the negative side, these stories also serve as a means by which the participants can express, through identification and projection, some of their own hostilities. The veil of humor provides in fact the ideal dress for hostility: one can be completely unabashed about expressing one's feelings (of wanting to steal, say, or wanting to humiliate), since what is expressed, in a form so exaggerated as to be acceptable, is simply the feeling and not the act itself. The hostility is made even more acceptable by the fact that it is projected onto the person in the story rather than referred to ego himself. In these terms, the telling of these stories probably does have something of the cathartic function cited earlier in the chapter: aggressions and hostilities that are otherwise kept under careful control are here permitted to emerge not only painlessly, but with a bit of relish. Finally, some of the laughter at these stories is probably also based on the feelings of embarrassment evoked in listeners. This is similar to the "there but for the grace of God . . ." motive but is different in that it is not based on personal identification with the person who suffers but rather on a diffuse feeling of discomfort over the expression of aggression—aggression toward anybody. There is embarrassment over things not being as they should be, over one's moral universe being temporarily out of joint. Also, the laughter is probably symptomatic of the listener's uneasiness as he becomes aware that the hostilities portrayed in the story are strikingly similar to those he himself harbors toward others. Embarrassed about his own aggressive impulses, he assuages them with laughter.

The motives for focusing on whimsical topics of conversation are less recondite and defensive than the above. Stories of the type describing "super-dogs" who find buried treasure are told because they are at the same time such outrageous and yet gentle distortions of reality. It is the juxtaposition of incongruous elements that is so appealing here. In ordinary Thai thought, for example, the dog is generally considered to be one of the most inconsequential and worthless of creatures. He is tolerated for his ability to warn of strangers and dispose of refuse, but nothing remotely approximating the feeling of "man's best friend" is associated with him. For such a lowly creature to be the sudden possessor of miraculous power is just too foolish. An elephant, monkey, or cobra perhaps, but not a dog.[11] Only "uncivilized" forest people would accept such a story. Yet, because the dog is such a familiar part of one's environment and also a living creature

[11] Doubt would exist for these creatures too, but because of their mythological and historical significance it would be somewhat tempered.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

538 231 ("Who knows what he was in earlier lives and what powers he brought with him into this one?"), there is enough reality about the tale to make people want to listen. Moreover, it is wish-fulfilling fantasy; people laugh because reality has been outraged, but with a lingering desire that it really could be.

522 [538] The kinds of stories outlined above do not exhaust the villagers' stock of conversational humor. There are also tall stories without the supernatural touch, broad burlesques, "dirty" jokes,[12] and the countless epigrams that work their way into almost any conversation; the last are not so much topics of conversation as they are means of punctuating a point. However, enough has been said to indicate that in its cognitive stylization and social psychological purposes, Bang Chan humor is not too different from Western humor. It is rather the content, frequency, and evaluation of the humor that is so distinctive. That the content should be distinctive is of course self-evident, since all humor is rooted in the implicit and familiar premises of workaday, cultural life. In fact the very essence of a joke is seeing the culturally familiar in an entirely new light. This may help to explain, incidentally, why it is always so painfully self-defeating to try "to explain" the content of a joke: its entire effect is dependent on the listener's implicit

522 121

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522 831 538 [081] [12] Sexual and scatological humor in Bang Chan pose some special problems. On the one hand, because villagers take such a matter-of-fact approach to sex, there are actually few jokes and stories that aim explicitly at being titillating or risqué. For most Bang Chaners, sex is something to be experienced and enjoyed in private, not snickered about barracks-style; there is no *sanug* in *talking* about sex (although there may be in playing with tabooed words, especially if cleverly done). Also, villagers seem to lack any interest in lewdness for its own sake. Not only Bang Chan, but Thai culture in general, is striking for its relative absence of attempts to edify sex: there is nothing in Thai literature or art, for example, approximating the exaggerated bawdiness of Rabelais or the graphic sensuality of the kind of sculpture found at Khajuraho and Konarak in India.

On the other hand, sexual situations are very often used as vehicles for portraying the foibles and stupidities of people. Villagers particularly enjoy stories of individuals of either sex who devise ways for seducing the unsuspecting, or of individuals who manage to outwit their spouses while philandering with their lovers; the more complex their machinations, the more amusing the stories. However, it is the social psychological, not the sexual, dimensions of these tales that form the major bases of their appeal.

Finally, it should be noted that villagers tend to distinguish between what could be called "genital" and "anal" modes of humor. The latter type has considerably fewer taboos associated with it. Thus, whereas most villagers would avoid going into descriptive detail in reporting the physical aspects of a tale of sexual conquest, they would have few qualms about discussing (and often with acoustical detail) such things as people who pass air in public or who otherwise get themselves into compromising anal situations. (Interestingly, J. Marvin Brown in his linguistic work with Thai informants, often including female university students, reports in a personal communication that he encountered difficulty in obtaining the various Thai terms for sexual organs and acts, but that the terms for anal and excretory behavior were given with little hesitation.)

BANG CHAN

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Sanitation

364 Disposal of Garbage. - Of the 6 categories for disposal of garbage listed on the schedule (Appendix A), 3 only were used by the families who took part in the dietary study (Table 18).

Table 18

Disposal of Garbage in 11 Households, Bang Chan

Round[1] of dietary study	Number of Families Using Each Method			
	I	II	III	IV
[231] Garbage fed to animals	10	10	10	10
Garbage thrown into canal	2	6	3	4
Garbage thrown elsewhere	5	5	5	5

1. Each family was visited 4 times during the year. Each series of visits to the 11 households was called a round.

Ten of the 11 families fed some garbage to animals, and for 4 families, on 10 survey days, (i.e. 1 to 4 days per family), this was the only manner of garbage disposal. One family had no animals other than chickens, and these were not fed garbage on the survey days.

Each family seemed to have its own pattern for disposal of garbage which was not fed to stock. Those who threw it in the canal, did so consistently, except when the nearby canal was dry, and those who threw garbage elsewhere, did this consistently. No one was observed to burn or bury garbage.

251 Protection of Food From Contamination by Insects and Other Animals. - Large oil tins, with covers, were commonly used to store dry rice and other non-perishable foods in the kitchen area. One family covered the container with a plate.

In 8 of the 11 households of the dietary study some provision was made for storage of left-over and perishable foods. None of the households had screened cupboards, but two used some means to ant-proof the legs of the cupboard such as rubbing them with powdered pitch, or setting them in bowls of water.

A2 [See p. 63 - Analyst]

Economic Level

It could be, of course, that people on a higher economic level are in a better position to try agricultural innovations, since they might more easily afford not only an initial cost but also possible loss in trying out something new.

The survey data provide several indicators of economic level. Among other questions on this subject, all respondents were asked: "Here in your household how many buffaloes do you own?" About one-quarter reported owning no buffaloes at all; a little more than that proportion reported owning four or more; the median number of buffaloes reported was between two and three.

In Bang Chan buffalo are an indication of wealth, as is the amount of land planted to rice. Thus all farmers in the sample were also asked, "Last time you planted rice, how many rai* of rice did you plant?" About a third reported that they planted 19 rai or less; about one-fourth reported that they planted 40 rai or more; the median number of rai reported was 26.3.

If the reported number of buffalo owned is an adequate measure of economic level, then one would expect a high correlation between reported buffalo ownership and reported number of rai planted. If the expectation is borne out by the survey data the two indices may be used interchangeably. (Table 7 reports this relationship for the male farmers in the sample.)

TABLE 7. FARMERS# WHO OWN MORE BUFFALOES ARE MORE LIKELY TO CULTIVATE LARGER LAND HOLDINGS

"...how many buffaloes do you own?"

"...how many rai of rice did you plant?	None, one or two (99)	Three or more (112)
Less than 9	31%**	1%
10-19	32	7
20-29	18	27
30-39	15	23
40-or more	3	41

Male farmers only
** Percentages may add to 99 or 101 owing to rounding of figures.

* A Thai land measure; 1 rai = 0.4 acres.

6: Goldsen and Ralis Z-4.5 (1955) 1957
AO7 Central Thai AO7

*177
*178
241
402
434
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Decisions to use all these innovations--with the possible exception of the use of fertilizer--seem to be more widespread among the upper economic levels of the population. (See Table 8.) One wonders whether the initial link between use of the motor and readiness to try the innovations may actually disguise a more basic relationship based simply on ability to afford the investment and the risk.

*177
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• 231
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434
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TABLE 8. FARMERS* ON HIGHER SES LEVELS ARE MORE LIKELY THAN OTHERS TO HAVE USED THE MOTOR, TO HAVE GROWN MUSHROOMS AND TO HAVE RAISED TILAPIA

	Ownership of Buffaloes	
	2 or less (99)	3 or more (112)
Used motor		
Own	6%	37%
Use	53	45
Neither	41	18
Grew mushrooms		
Yes	30%	60%
No	70	40
Raised tilapia		
Yes	26%	42%
No	74	58
Used fertilizer		
Yes	12%	17%
No	78	83

* Male farmers only

The following table presents again the initial relationships between use of motor and readiness to try out other innovations. But this time the link is examined separately for persons on the different economic levels.

Table 9 was made by first dividing the population into two groups, those from high and those from low economic levels. The resulting two groups were then further subdivided on the basis of whether they owned (or used) a motor or whether they did not. In each of the four resultant groups the percentage that raised tilapia was then calculated. Thus among those of high economic level who own or use motors, 45 per cent raised tilapia, and we infer that 55 per cent did not raise tilapia. The same procedure was repeated to ascertain the percentage that has tried fertilizer and subsequently the percentage that has tried mushroom growing.

This table shows that in tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertiliser holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic Level	
	High*	Low**
Owns or used motor (Proportion who have raised tilapia)		
Yes	45% (89)	33% (57)
No	25 (21)	17 (40)
Owns or used motor (Proportion who have tried fertiliser)		
Yes	20% (89)	16% (57)
No	5 (21)	* (40)
Owns or used motor (Proportion who have tried mushroom growing)		
Yes	60% (89)	36% (57)
No	57 (21)	23 (40)

* Three buffaloes or more
** Two buffaloes or fewer

Literacy

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

admit in response to a direct question* that they have a debt. Confidence in the validity of these responses as an index of indebtedness is increased since the expected correlation between indebtedness and ownership of buffalo is reflected in the survey data.

TABLE 23. INCIDENCE OF REPORTED DEBT IS HIGHER AMONG VILLAGERS WHO REPORT OWNERSHIP OF MORE BUFFALOES

	Reported Ownership of Buffaloes		
	None (81)	One to three (155)	Four or more (97)
"...Do you now have a debt?			
Yes	49%	56%	69%
No	51	44	31

When the use of agricultural innovations is examined for those farmers who say they have a debt, compared with those who deny it, it becomes apparent that there is a relationship only between indebtedness and use of the motor but not with any of the other mentioned innovations. Seventy-nine per cent of the male farmers who said they have a debt own or use the motor; among those who claim they have no debt the proportion owning or using the motor is significantly less (60 per cent).

TABLE 24. INCIDENCE OF MOTOR USE IS HIGHER AMONG FARMERS WHO REPORT INDEBTEDNESS

	"...Do you now have a debt: "**	
	Yes (125)	No (85)
Motor		
Has used it	79%	60%
Never did	21	40
Tilapia		
Has tried it	37%	33%
Never did	63	67
Fertilizer		
Has used it	14%	16%
Never did	86	84
Mushrooms		
Has tried them	45%	48%
Never did	55	52

**Male farmers only

* The question: "...I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?" Janlekha's M.S. thesis, ibid., reports a similar distribution of indebtedness for his sample of 96 farmers.

7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things? [177* 178* 125]

1.	Fertilizer	9	
2.	Small engine	4	[241]
3.	New rice seeds	3	
4.	Tilapia	98	[402]
5.	Other fish, specified	13	
6.	Fish, unspecified	80	[243]
7.	Mushrooms	45	
8.	Poultry	179	[228]
9.	Pigs	21	
X.	Other, specify	68	[244]
0.	Unascertainable	45	[235]

8. Here, some farmers get a lot more rice from one rai of land than others get. Generally speaking, what are the various reasons why this is so? [231] [243] [433]

1.	Fertiliser	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify	53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify _____	25
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

125 [412] 50.d. (In your household) is there a pair of scissors of any kind or not?

7.	Yes, scissors	219
8.	No	114

[207] e. (In your household) is there a radio or not?

9.	Yes, radio	47
0.	No	286

[402] f. (In your household) is there a winnowing machine, or not?

X.	Yes, winnowing machine	102
Y.	No	231

[243] [402] g. (In your household) is there a windmill, or not?

1.	Yes, windmill	161
2.	No	172

[805] [405] 51. Do you have a wrist watch, or not?

3.	Yes	79
4.	No	252
—	No Answer	2

[231] a. Here in your household, how many buffaloes do you own?

5.	None	81
6.	One	27
7.	Two	67
8.	Three	61
9.	Four or more	97

b. (Here in your household) how many pigs do you have?

0.	None	321
1.	One	2
2.	Two	2
3.	3 or more	1
—	No Answer	7

[235] c. (Here in your household) how many chickens do you have?

4.	None	35
5.	1 to 2	7
6.	3 to 4	17
7.	5 to 9	31
8.	10 or more	243

d. (Here in your household) how many ducks do you have?

0.	None	208
1.	1 to 2	9
2.	3 to 4	16
3.	5 to 9	58
4.	10 or more	42

132 *243 The normal distribution of rain in the region, however, is almost ideal for single crop rice production. Heavy rainfall in May and June softens the soil for easy plowing and harrowing. During July and August, when the young plant does not require much water, the rainfall moderates. Again there is heavy rainfall in September and October when the maturing plant needs rising water as it shoots upward. Finally, during the harvesting season of December and January there is a minimum of rainfall. It is in terms of rainfall that the people divide the year into three seasons: (1) the rainy season of late May to November; (2) the cold season, December into early February; and (3) the dry hot season from late February to early May.

Vegetation

*243 137 [311] [351] [361] [312] Of the 6,404 rai privately owned in Bangchan 6,106 rai is devoted to rice and 298 rai to homelots. During the rice season the village is seen as a vast rice field interspersed with bamboos and fruit trees on the homelots which string along the half dozen canals of the village. In the dry season only stumps of rice stalks are left in the field.

192 • 231 Some of these may be removed by burning. With the coming of rains, which usually fall once or twice in March and four or five times in April, a variety of grasses begin to appear and the rice field is gradually transformed into a grass field, providing a pasture for the buffaloes until the next planting season when the size of the grass field available

*243
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137 to the buffaloes will be gradually reduced by the process
• 231 of land preparation.

The homelot is usually surrounded on all sides,
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245 except the one facing the canal, with bamboos which serve
351 to protect the farm home from strong wind. Within this compound there always is a kitchen garden where a variety of plants and vegetables for everyday use are grown. If the homelot is large, there may be enough room at the backyard for an orchard where fruit trees may be grown. In some cases, aquatic plants are cultivated in the canal in front of the house.

137 In addition to cultivated plants, there are to be seen also wild shrubs and vines which are more or less restricted to small strips of land along the banks of the canals. Wild aquatic vegetables, especially the morning glory, are always seen in these canals, making them appear narrower than they actually are.

Livestock

231 Buffaloes: As in most of the rice producing areas of the country, so in Bangchan buffaloes are used in all kinds of farm work where the help of draft animals is needed. Since the village is without land which can be grazed the year-round, buffaloes are not locally bred but are brought in from the northeast and other parts of the kingdom. To be sure, there are some local-born buffaloes, and these are considered to be stronger and to live longer than the imported

231 ones, but limited grazing areas and the burden of work imposed on them have been a factor militating against their reproducing themselves. During the first half of the rice year (April-September) buffaloes feed on green grasses, direct in the field which has not yet been plowed or cut for them by the farmers. During the second half of the year when the supply of green grasses is reduced to the minimum, they feed on straw which normally lasts until new grasses become available with the coming of rains. Buffaloes are used only for farm work and never for milking purposes.

235 Chickens: Practically every family in Bangchan raises chickens which are second only to rice as a source of cash income. Many breeds are found in the village. Most common are the native mixed breed and the imported Rhode Island Red. These chickens are raised "naturally" -- although the farmers feed them with paddy once in a while, most of the time they help themselves to paddy in the mat bins and in addition scavenge for a part of their feed. The size of the flock averaged 8.6 laying hens per family according to the 1949 survey. The same survey showed an average rate of production of 143 eggs per laying hen per year.

Ducks: In 1949, only one-half of Bangchan residents raised ducks but the size of the flocks was slightly larger than that of chickens, averaging 11.7 laying ducks per family raising them. The annual rate of production, too,

235 was slightly higher than that of chickens, averaging 155 eggs per laying duck.

178 231 Hogs: In 1949, two families were raising hogs which according to our observation did not seem to be well fed. When we returned to the village in 1952, not a single hog remained in Bangchan.

Fish

262 443 434 After rice, fish (and other marine animals) are by far the most important ingredient in the diet of Bangchan. More fish are bought from the outside than the very small amount that is exported from the village mainly by one or two very poor families who have availed themselves of this means of augmenting their income.

221 226 The villagers' annual cycle for fish-taking varies somewhat with the particular method used, and with the annual rice and ceremonial cycles: yet the maturation cycle of the principal types of fish is also a factor, and one which tends to give an overall orderliness to the annual cycle for fish in general. There is no time in the year when at least some fish are not available, nor is there any time in the year, even the busiest, when the family does not want fresh fish for its menu. For this reason, there is fishing the year round, at least in the form of the housewives simply setting nets in the canal and then tending them according to some schedule or whenever the noise of caught fish sloshing about in the water is heard. When a lull from the pressure of

*243 well into August and September. Thus, it would appear that the rice field is utilized for only six months of the year, leaving much to be desired for an economic use of it during the other half-year.

• 231 311 If consideration is given to the nature of buffalo raising, however, it will be realized that these six months are not actually wasted. In the dry season following rice harvest, buffaloes feed freely on rice stumps in the fields and on supplementary straw accumulated in the homelot during threshing. After the first few showers of rain in April, the fields are gradually covered with noncultivated grasses and the buffaloes enjoy this green feed all the more. Even when the fields are wet enough for plowing in June, the early field work is concentrated on the seedbed, leaving the greater part of the fields which have not yet been plowed to the buffaloes to graze usually during their 10 a.m. to 2 p.m. recess from work in the seedbed. When the farmer starts working on the fields other than the seedbed, the grazing area is gradually reduced and the buffaloes are now partially fed with green grasses which grow wild in limited areas between rice fields and canals to which the farmer has customary right. As the grazing area is further reduced, more and more grasses are given. By the time all the fields have been plowed, the buffaloes are totally fed with the green grasses. This total green grass feeding lasts until the next harvesting season when straw becomes available to supplement green grasses which now become

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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911 more scarce as the dry season creeps in, thus completing the annual buffalo feeding cycle.

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231 Double cropping has been suggested as a means by
911 which farm income may be increased. To this suggestion
[312] several obstacles have been mentioned, most important of which center around the lack of ample water supply and water control and an envisaged severity of pests predatory on an early crop.[2] In the light of the discussion in the previous paragraph, the inevitable reduction of grazing area and the consequent loss of feed supply may be added to the list of obstacles to double cropping. It is rather unfortunate that little attention has been paid to this all important problem of buffalo feeding. The general idea seems to follow the line that there is no problem of feed and that the only problem concerning draft animals lies in the control of diseases. If this negligence persists, there is danger that the uncultivated grasses which are the least expensive buffalo feed might be depleted. Because of limited grazing area, buffaloes in most commercial rice growing villages in the Central plain are already not reproducing themselves rapidly enough to maintain their number. This is evident in the annual importation into the region from the northeast of inferior stock which is less strong and has shorter life. Without grass conservation, it would not be long when Thai farmers will have to deliberately "grow grass" for their

2. Janlekha, op. cit.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 buffaloes heretofore undreamt of and will have to bear
231 the consequent burden of increased cost of producing rice.
311

Some description of the homelots which constitute
311 almost five per cent of the land area of Bangchan has already
951 been given in the section on vegetation, Chapter II. From
[231] the standpoint of land utilization, functions of the homelot
[235] other than providing standing room for the living quarters
[244] may be mentioned as follows:
[245]
[226]

1. It provides space for threshing and for storage of rice and farm equipment including buffaloes.
2. It provides room for chicken or duck raising.
3. It provides land for a kitchen garden, and for fruit and vegetable growing.
4. It provides space for fish trapping by the draining method.

To serve these functions, homelots in any rice growing village, where the fields are submerged under water during the entire life of the rice plant, must be high above water level during the flood season, must be well drained, and must have pools with ample shade.

243
311 Rice land in its natural state does not meet these requirements for a homelot. In the first place its level is too low. Second, the impervious layer of clay characteristic of rice land does not permit soil drainage. To make a homelot out of rice land, it is necessary that the prospective site be mounded up to a level two or three feet higher than the level of the surrounding fields. The hole from which

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B. Old equipment with slight modifications:

Noria (larger ones are now used because they are more adapted to windmills than smaller ones to which human energy was applied in the old days).

C. Recently employed equipment, mostly labor saving devices:

Gasoline engine, first used in Bangchan in 1930 or slightly later.
Winnowing machine, relatively new, date of introduction into the village not certain.
Propeller windmill, allegedly invented in the village, first used in 1940.

On the whole, it may be said that very few improvements have been made in farm equipment. For this, two opposing explanations may be advanced: (1) Little attention has been paid in the past to farm equipment, resulting in continual using of primitive implements which are inefficient and could be improved if enough attention and effort along the line were given; (2) These basic farm equipment are functionally efficient although they may be simple in form -- the fact that there has been no structurally change in the past few hundred years means that they have successfully stood the test of time rather than that the effort to improve these equipment has been lacking.

The author reserves his judgment on the validity of either of these two explanations, for scientific study of rice farm equipment in Thailand on which proper judgment may be based is not known to him.

Draft Animals

• 231

In Bangchan, as in most of the rice producing areas of the country, only one kind of draft animal is used -- the buffalo. This subject has already been dealt with in the

231 section on livestock, Chapter 2. The method of buffalo feed has also been mentioned in the section on land utilization, Chapter 3.

243
231 Inasmuch as draft animals, or more specifically buffaloes, provide services in rice production, they may very well be considered a kind of farm equipment. They are used in all steps of breaking and leveling the soil and also in threshing. They are absolutely indispensable on rice farms.

231
435 An average purchased value of a work buffalo was 985 baht per head. According to the 1948 survey, buffaloes began their farm work at the age of 4-5 years and remained in service [237] for an average of 10½ years. When they are dead, their meat is consumed and the hide is dired and made into rope. Some farmers sold the buffalo carcass on the spot and received an average price of 250 baht in 1948. When the original cost of 985 baht was subtracted by the residual value of 250 baht and the result was divided by the length of service of 10½ years, the annual depreciation so obtained was found to be 70 baht. This method of computation for depreciation when adopted for buffaloes appears to be rather crude, for the maintenance cost was neglected and some buffaloes might be bought at the age over 5 years (at varying prices) in which case their length of service might be expected to be shorter than 10½ years. The general pattern, however, was that farmers bought buffaloes which were freshly brought in from the northeast at the age between 4 and 5 years.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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A243 Finally, buffaloes as equipment are as old as the wet
• 231 rice culture itself. It is rather unfortunate that in Thailand there has been no systematic effort to improve buffalo breeds. As a matter of fact, the general practice of castrating good buffaloes so that they may turn out even better work while letting alone the inferior ones has tended to lower the working quality of the buffalo.

A243 Steps in Rice Production

In the transplanting method of growing rice, the seeds are sown first in the seedbed, and then at the appropriate growth stage the seedlings are transplanted onto the fields which have been prepared during the time the seedlings are being nurtured in the seedbed. The preparation of the seedbed is generally the same as that of the transplanted fields, except that the former is more thoroughly done since the soil in the seedbed must be finely pulverized and very well leveled. From the standpoint of labor utilization, therefore, the process of production can be more conveniently described step by step according to the work schedule of one farm which was under observation during the entire work season of the 1953-54 crop year. The various steps are listed below:

1. Plowing. Started on June 4 and ended on August 23. This immediately followed the big shower of rain on June 3 which sufficiently wet the soil. Consideration was also paid to the water level in the canal which was then high enough. Plowing was first concentrated in the field designated to be the seedbed. The parcel was plowed and cross-plowed several

#243 cooperative work group, the proportion of the work done by the
476 family workers themselves and that done through cooperative harvesting being about one to five. Cooperative harvesting started on December 4 and ended on January 25, while family harvesting started on December 12 and ended on February 6.

#243 16. Threshing. This step can be further broken down into piling of harvested bundles of rice around the threshing floor, laying some of these on the threshing floor, actual threshing by having the buffaloes tramp over and over the rice stalks with rice seeds on them (by this time the stalks had already broken loose from the bundle), frequent turning of stalks that were in the lowest layer upward (with the use of pitchforks), separating the threshed paddy from the stalks (with the use of pitchforks and rakes), and finally piling of the threshed paddy. Threshing started on December 15 and ended on February 14. It was one of the few steps in rice production in which the work was often carried on into the night.

17. Winnowing. Started on December 25 and ended on February 14. The completion of winnowing marks the end of rice production as far as rice farmers are concerned.

18. Stacking of straw. After threshing, straw was piled up in stacks around poles in the homeyard or the edge of the field near the homeyard. This was done on December 29 and February 4. It was a simple step using only a total of 16 man-hours of labor.

231 19. Procuring grass for buffaloes. Care for buffaloes is a whole year job involving leisurely work, such as taking the buffaloes to graze on the fields which any child can do,

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

231 as well as painstaking work like ridding them of insects during a certain period of the year by smoking throughout the night. Besides, in some years when the water level is exceptionally high, for example in 1952, the buffaloes may have to be tended in other villages of higher elevation. Moreover, there always is need for constant guard against robbery of these precious draft animals. It is extremely difficult to keep a record of labor spent on these activities. The author is reluctant to attempt even at mere estimation.

In view of the difficulties mentioned above, only the procurement of grass for the buffaloes which could be measured was taken into consideration in the computation for labor requirements in rice production. This was done with the realization that there was more labor actually spent on the tending of buffaloes which could not be estimated and which should be considered as extra work over the calculated requirement. Our records show that cutting grass for buffaloes started on June 14 and ended on November 27 when the buffaloes began to feed on straw. (This straw was obtained from a neighbor's field at the mouth of Bangchan Canal which was planted to an early variety of rice; hence, even though harvesting had not yet begun on the farm under study, it was possible to feed the buffaloes with straw and save time that would have to be spent on procuring fresh grass for buffaloes during this busy period when all available labor should be spent on harvesting.)

243 476 20. Supervising the work done by cooperative workers. The amount of supervision varied with the kind of cooperative

*243 Since the farm work usually followed the same pattern for a
461 certain period, it was observed that Phan remembered quite well
+128 the time and the kind of work done by each family worker during
the past two or even three days. The time of work was recorded
• [231] to the nearest half-hour. In Tables 35 and 35, labor spent by
[464] family workers, piece-workers hired by the family, and buf-
[592] faloes, on different steps in rice production was given in
man-hours and buffalo-hours. The dates when these various
[476] jobs started and ended were also given. It should be noted,
however, that labor recorded as spent on cooperative work was
actually not spent on the family farm but rather on farms of
other cooperative members. This was nevertheless exactly com-
pensated by cooperative work on this farm on several occasions
which were not entered in the calculation to avoid error
because of duplication.

*243 The data from Tables 35 and 36 may be summarized as
461 follow:

221 1. Man labor provided by farm staff.

[592] Work started June 4, ended February 14, a total of 248
[464] work days.
[231] Total man-hours spent by farm staff -- 5,478½.

2. Man labor provided by piece-workers.

Work started July 19, ended August 30, a total of 10
work days.
Total man-hours spent by piece-workers -- 229.

3. Animal labor provided by buffaloes.

Work started June 4, ended February 13, a total of 112
work days.
Total buffalo-hours -- 2,119.

[TEXT CONTINUED ON PAGE 246]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 36

SUMMARY OF YEAR ROUND WORK BY BUFFALOES ON CHOM FARM
Bangchan, Thailand, 1953

	Duration Start	End	Days in work	Buf-hrs.
1. Plowing	June 4	Aug 23	49	918½
2. Harrowing	June 13	Aug 24	28	582
3. Rolling	June 13	Aug 22	7	84
4. Hauling	Aug 23	Aug 23	1	8
5. Prepare thresh floor	Nov 30	Dec 4	5	32
6. Threshing	Dec 15	Feb 13	35	494½
Total	June 4	Feb 13	112	2,119

243 221 461 under a lively atmosphere. Moreover, the amount of work done depends solely on the amount of human labor utilized. Hence, if the operator wants to finish his harvesting in time when he has not enough available labor, he simply hires more piece-workers. The situation is different in the critical period of cultivation and planting, when the amount of work done depends not only on the amount of labor utilized but also on the accomplishment of the preceding steps which are governed by water condition, weather condition, available equipment, animal labor as well as man labor.

243 221 In the 1953-54 crop year, it was observed that na nar started on June 4 and ended on September 30, na nam lasted from October 1 to December 3, and na khao from December 4 to February 14.

243 461 While the figures on total labor requirement in rice production represent valuable information, an earlier discussion in this section has led us to the belief that the mere knowledge that it takes 272 man-hours and 101 buffalo-hours to produce 100 tang of paddy is not enough to demonstrate the labor requirement situation if it is to serve as a guide in problem locating and problem solving. These figures must be further broken down into those required during the critical period and those required in the non-critical period.

243 221 231 461 Our records show that of the 5,707½ man-hours spent in producing 2,100 tang of paddy on Chom Farm, 3,226½ man-hours were utilized in na nar (June 4 to September 30, 119 days), 133½ man-hours in na nam (October 1 to December 3, 64 days),

243 and 2,347½ man-hours in na khao (December 4 to February 14, 72
221 days). Similarly, of 2,119 buffalo-hours spent on the same
231 production, 1,592½ were utilized in na nar, 24 in na nam, and
461 502½ in na khao. From these data, we may calculate the averages for daily labor utilization in each period as follow:

1. Na nar (119 days)

Total man-hours, 3,226½; daily man-hours, 27.1
Total buf-hours, 1,592½; daily buf-hours, 13.4

Man-hours per rai, 66.
Buf-hours per rai, 32½.

2. Na nam (64 days)

Total man-hours, 133½; daily man-hours, 2.1
Total buf-hours, 24 ; daily buf-hours, 0.4

Man-hours per rai, 2½.
Buf-hours per rai, ½.

3. Na khao (72 days)

Total man-hours, 2,347½; daily man-hours, 32.6
Total buf-hours, 502½; daily buf-hours, 7.0

Man-hours per rai, 47.
Buf-hours per rai, 10.

It is seen that three-fourths of the total buffalo labor was utilized in na nar. This was to be expected, for most of the steps involving buffalo labor were in this period. It is important to observe that buffaloes assumed an active role in practically all steps of land preparation -- plowing, harrowing, and rolling. Human labor, on the other hand, played only a passive part in these steps.

243 Table 36 shows that buffaloes were utilized in six
231 steps in rice production -- plowing, harrowing, rolling, haul-
461 ing, preparation of threshing floor, and threshing. These steps

*243 may be classified according to the way the animals are used
• 231 as follow:
461

1. Steps in which buffaloes are always used and in constant proportion to men.

Steps	Proportion of buffaloes to men
Plowing	1 to 1
Harrowing	2 to 1
Rolling	2 to 1

2. Steps in which buffaloes are always used but not necessarily in constant proportion to men.

Preparation of threshing floor: Four buffaloes are led by one worker to tramp over the dirt floor which was soaked with water on the previous day. While the buffaloes are tramping over the floor, another worker levels the floor with hoe. The number of buffaloes and workers may be more or may be less, and there is no definite proportion between the animals and men.

Threshing: Four buffaloes are led by one worker to tramp over harvested rice stalks (with paddy still intact) which have been spread over the threshing floor. While the buffaloes are tramping over the rice stalks, two or three other workers separate straw from the threshed paddy with pitchforks.

3. Steps in which buffaloes are not usually used but are sometimes used to minimize human labor when opportunity permits.

Hauling: Two buffaloes are led by two workers to draw the boat carrying seedlings along the muddy water way. Of a total hauling work of 733 man-hours in 55 work days lasting from July 17 to February 14, buffaloes were used only once on August 23, involving only 8 buffalo-hours.

*243 Since buffaloes are used in the critical period of
221 na nar in the three steps where they must be used and used in
231 constant proportion to men, it is not difficult to see that
461 the field work accomplished in this critical period depends more on buffaloes than on human workers. It was mentioned that

243 Chom Farm utilized four buffaloes and four regular workers
221 including the operator himself. Supposing that one buffalo
231 is sick, we might expect that the work accomplished in this
461 period would be reduced to three-fourths. On the other hand, if one regular worker is sick, that would not materially affect the amount of work done, for the sick worker would certainly be replaced by a substitute. Even if no extra family worker is available, it would be only a matter of hours that Chom would be able to recruit one more worker among his relatives and neighbors. He could not recruit a temporary service of a buffalo. If more buffalo labor is badly needed, the only alternative is to purchase the animal. Looking from a different angle, if Chom wants to finish plowing and harrowing ahead of the original schedule for fear of an early inundation, he could not accomplish that by simply utilizing more human labor alone. It is thus seen that buffaloes, more than human workers, are the limiting factor in the accomplishment of the field work during the critical period of cultivation and planting season.

Labor Adjustment Devices

243 Rice plants have one unique quality: each variety will
221 mature on a certain exact date no matter how early or how late it is planted.[6] If there were only one variety of rice in existence, this would be a serious handicap to rice growers, for there would certainly be much more demand for labor in

6. The exceptions are the very early varieties which mature at the age of about 90-100 days. Ripening dates of these varieties are set only by the length of time they have been planted, regardless of the time of the year.

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

Buf-hr.

CHART II

SEASONAL VARIATION OF BUFFALO LABOR SPENT ON CHOM FARM
Bangchan, Thailand, 1953

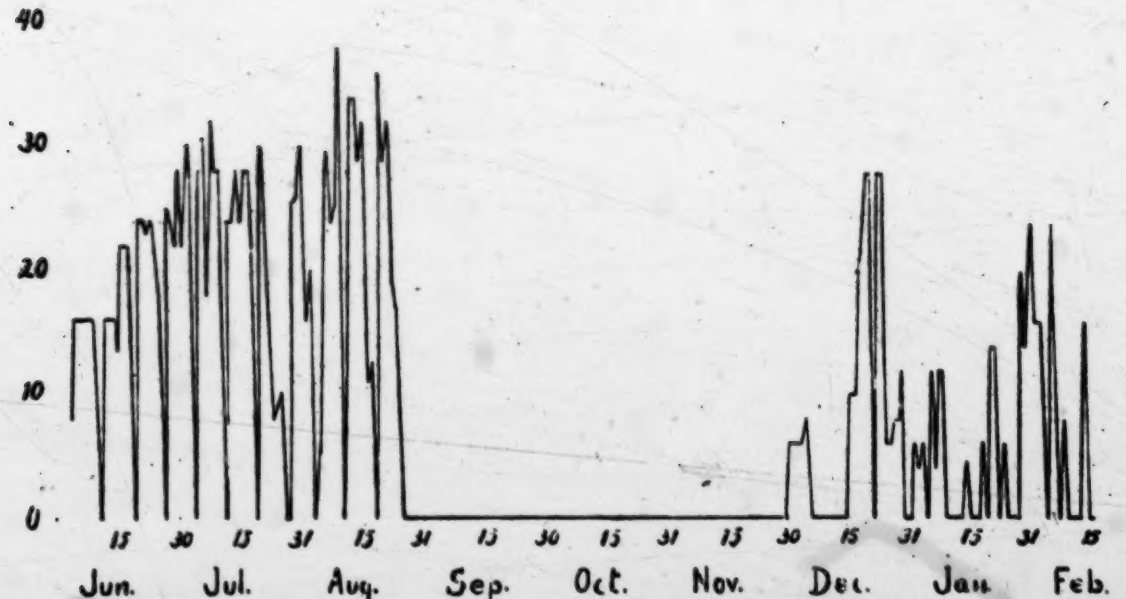

TABLE 37

DAILY LABOR SPENT BY CHOM FARM STAFFS
Bangchan, Thailand, 1953

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Jun	4	8	24	--	24
	5	16	28	--	28
	6	16	28	--	28
	7	16	28	--	28
	8	16	28	--	28
	9	16	28	--	28
	10	8	12	--	12
	11	--	16	--	16
	12	16	18	--	18
	13	16	15½	--	15½
	14	16	27½	--	27½
	15	13½	29	--	29
	16	22	19½	--	19½
	17	22	16½	--	16½
	18	20	26½	--	26½
	19	--	14½	--	14½
	20	24	25	--	25
	21	24	24	--	24
	22	23	33	--	33
	23	24	24	--	24
	24	21½	25½	--	25½
	25	18	14	--	14
	26	--	18½	--	18½
	27	25	25	--	25
	28	24	25	--	25
	29	22	34½	--	34½
	30	28	32	--	32
July	1	22	43	--	43
	2	30	38	--	38
	3	27½	30	--	30
	4	--	23	--	23
	5	28	38	--	38
	6	30½	32½	--	32½
	7	18	21	--	21
	8	32	35	--	35
	9	28	28	--	28
	10	28	3-½	--	30½

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
July	11	--	23½	--	23½
	12	24	20	--	20
	13	24	26½	--	26½
	14	28	31	--	31
	15	24	38	5½	43½
	16	28	27½	--	27½
	17	28	36	--	36
	18	22	30	5	35
	19	--	36	--	36
	20	30	37½	--	37½
	21	28	37	4½	41½
	22	19	46½	5	51½
	23	8	20½	4½	25
	24	9	31	--	31
	25	10	16	--	16
	26	--	4	4	8
	27	--	17	4½	21½
	28	25½	27½	12	39½
	29	26	28½	9½	38
	30	28	21	13½	34½
	31	30	35	--	35
Aug	1	16	18	6	24
	2	20	21½	7	28½
	3	--	7½	8½	16
	4	5	17	9½	26½
	5	22½	24½	16	40½
	6	29½	29½	10½	40
	7	24	30½	6½	37
	8	25½	25½	7½	33
	9	38	26	10½	36½
	10	--	8	19½	27½
	11	28	16	13	29
	12	34	19	16½	35½
	13	34	25½	12	37½
	14	29	19	7½	26½
	15	32	81½	4	85½
	16	11	67½	4	71½
	17	12½	35	5½	39½
	18	--	4½	8	12½
	19	36	38	--	38
	20	29	17½	8½	26

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hr	man-hr	man-hr	man-hr
Aug 21	32	18	6½	24½
22	19	28	7	35
23	17	41½	--	41½
24	8	16	4½	20½
25	--	19	7	26
26	--	14½	3½	18
27	--	21	15	36
28	--	4	16	30
29	--	2	22½	24½
30	--	14	14	28
31	--	8	4	12
Sept 1	--	8	9	17
2	--	27½	10	37½
3	--	12½	11½	24
4	--	19	7	26
5	--	21½	3½	25
6	--	19	--	19
7	--	17	--	17
8	--	12	--	12
9	--	24	--	24
10	--	6	--	6
11	--	11	3	14
12	--	9	--	9
13	--	6	--	6
14	--	2	--	2
15	--	8	--	8
16	--	3½	--	3½
17	--	4½	--	4½
18	--	2	--	2
19	--	2	3½	5½
20	--	2	12	14
21	--	2	7	9
22	--	2	11	13
23	--	2	7	9
24	--	2	--	2
25	--	2	14	16
26	--	2	14	16
27	--	2	14	16
28	--	16	--	16
29	--	2	7	9
30	--	2	--	2

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

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Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Oct	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	2	--	2
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2
	11	--	2	--	2
	12	--	2	--	2
	13	--	2	--	2
	14	--	2	--	2
	15	--	2	--	2
	16	--	2	--	2
	17	--	2	--	2
	18	--	2	--	2
	19	--	2	--	2
	20	--	2	--	2
	21	--	2	--	2
	22	--	2	--	2
	23	--	2	--	2
	24	--	2	--	2
	25	--	2	--	2
	26	--	2	--	2
	27	--	2	--	2
	28	--	2	--	2
	29	--	2	--	2
	30	--	2	--	2
	31	--	2	--	2
Nov	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	5	--	5
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Nov	11	--	2	--	2
	12	--	2	--	2
	13	--	2	--	2
	14	--	2	--	2
	15	--	2	--	2
	16	--	2	--	2
	17	--	2	--	2
	18	--	2	--	2
	19	--	2	--	2
	20	--	2	--	2
	21	--	2	--	2
	22	--	2	--	2
	23	--	2	--	2
	24	--	2	--	2
	25	--	2	--	2
	26	--	2	--	2
	27	--	2	--	2
	28	--	2	--	2
	29	--	2	--	2
	30	6	5	--	5
Dec	1	6	2½	--	2½
	2	6	1½	--	1½
	3	6	1½	--	1½
	4	8	2	7	9
	5	--	--	--	--
	6	--	--	--	--
	7	--	--	--	--
	8	--	25½	--	25½
	9	--	33	--	33
	10	--	--	--	--
	11	--	12½	4½	17
	12	--	8	5	13
	13	--	16	22	38
	14	--	--	15	15
	15	10	17	16	33
	16	10	30	19	49
	17	20	33	10	43
	18	22	34	15	49
	19	28	24½	21	45½
	20	28	19½	24	43½

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hrs	man-hr	man-hr	man-hr
Dec 21	--	4½	18	22½
22	28	30½	21	51½
23	28	43½	27½	71
24	6	40	8	48
25	6	21	18½	39½
26	8	34½	--	34½
27	8	24	18	42
28	12	17½	24	41½
29	--	14½	24	38½
30	--	47	--	47
31	--	14½	16	30½
Jan 1	6	23	24½	47½
2	4	17	24	41
3	6	26½	24	50½
4	--	27½	32	59½
5	12	25½	32	57½
6	4	20	36	56
7	12	25½	32	57½
8	12	26½	32	58½
9	--	34	15	49
10	--	19½	16	35½
11	--	25	9	34
12	--	23½	18	41½
13	--	23½	10	33½
14	4½	32	11	43
15	--	26	16	42
16	--	10	9	19
17	--	16½	15	31½
18	6	21	9½	30½
19	--	33	10	43
20	14	25½	16	41½
21	14	17½	10	27½
22	--	32½	5	37½
23	6	5½	9½	15
24	--	74½	--	74½
25	--	2½	8½	11
26	--	22	--	22
27	--	29½	--	29½
28	20	47½	--	47½
29	14	31	--	31
30	20	24	--	24
31	24	29	--	29

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human Labor		
			On farm	On coop. work	Total
		Buf-hrs	man-hr	man-hr	man-hr
Feb	1	16	25½	--	25½
	2	16	39½	--	39½
	3	14	43½	--	43½
	4	--	34	--	34
	5	24	38½	--	38½
	6	8	22	--	22
	7	--	5	--	5
	8	8	10½	--	10½
	9	--	--	--	--
	10	--	--	--	--
	11	--	--	--	--
	12	--	--	--	--
	13	16	12½	--	12½
	14	--	16	--	16

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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Buffaloes are considered as a kind of farm equipment, so the cost of buffalo labor appears under the item of cost of equipment. Buffalo labor is, however, so closely associated with man labor that it seems to be more appropriate to discuss it here.

It has been pointed out that the accomplishment of farm work during the critical period depends largely on buffalo labor. Farmers fully realize the importance of this draft animal, which is always given good treatment. Even in the busiest season of field preparation, when farmers work from dawn to dusk seven days a week, the buffalo has a full holiday each week (on Wan Phra, the Buddhist holiday) and has a four-hour noon recess, usually from 10 a.m. to 2 p.m., on work days.

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3. Farm equipment and supplies: This element represents 26 per cent of the total cost of producing paddy. Our records show that in 1948 the total value of farm equipment and materials of the 104 sample-farms amounted to 559,626 baht, averaging 5,381 baht per farm, and ranging from 443 to 16,733 baht. The frequency distribution of the value per farm of farm equipment and materials is shown in Table 44.

[128]

Table 45 shows the frequency distribution of the value per rai of farm equipment and materials which ranges from 34 to 518 baht, averaging 159 baht. It is seen, in spite of this rather wide range, that three-fifths of the value per rai concentrate in the interval between 100 and 200 baht per rai.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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*[231]
[235]

The only livestock kept on rice farms other than buffalo, which were included under consideration of farm equipment, are chickens and ducks, which are raised "naturally." It was earlier mentioned that the size of the flock was more or less constant. Livestock, therefore, did not figure in significant inventory changes, and can also be left out.

*[243]

The only item of supplies on rice farms is paddy stock. This is used up and sold out each year. For more or less the same size of farm, and spreading over a series of five years, a difference in the average amount of paddy stock at about the same time of the year in 1948 and in 1953 would not figure significantly in inventory change.

It was also already mentioned that rice farmers did not want to keep cash at their homes for fear of robbery, and that any person receiving a large amount of cash quickly passed the money on to others. We can therefore assume that the amount of cash on hand at the same time of the year does not vary much. Cash, then, may also be left out of consideration.

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Of the items of assets enumerated above, there are now to be considered only land, household equipment, gold and accounts receivable (payable). In all purchases of land, gold, and household equipment, only the cash paid was recorded and considered as assets accumulated. For example, when an operator purchased a parcel of land at 7,000 baht and paid the down payment of 1,000 baht, only the 1,000 baht

cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

At the height of the boom, the demand for rice straw swept many of the fields clean of the stubble usually left there after harvest, thereby decreasing food for the roaming buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralis (1957) were 1) the cash outlay required was small, 2) returns were realized quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralis made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

Food for Homage-to-the-Teacher Rite Performed by a Buddhist Priest Who Was a Traditional Practitioner

Item	Amount	Cost in Baht
Cereals and Legume Seeds:		
Rice noodles		10.
Soybeans & fermented vegetables	25 kg.	12.
Mung beans	10 lit.	25.
Cassava flour		2.25
Sugar and dessert:		
Palm sugar	1 pail	67.
Cane sugar	14 kg.	85.
(2)Kha-(5)nom (3)tuaj-(1)foo	500 cups	35.
Fish and Meat:		
Fish ((1)plaa (2)myk) for soup		6.
Silurus and serpenthead	60 kg.	gift
Dried fish	6	gift
Roasted fish	3 kg.	gift
Shrimp paste	2 kg.	18.
Lobsters		15.
Lobsters (for soup)		7.50
Pig's skin (for soup)		10.
Beef[1]	15 kg.	150.
Ingredients for Mussel-man curry[1]		27.
Boiled chickens[2]	2	22.
Pig's head[2]	4 heads	222.
Pork[2]	4 kg.	40.

Breast Feeding.

853 184 As previously noted breast feeding was the rule. One child in this series, whose mother died when he was 5 days old, was never breast fed but was given canned or dried milk[1] diluted with boiled water. Another infant, whose mother died of tuberculosis when the child was a year old, was weaned at 5 months because of the mother's illness. A few breast fed infants were given cow's milk preparations at times. A child whose mother was a vender had cow's milk daily during the mother's absence; in another instance, cow's milk was given a baby when the mother was at work in a distant field. Whenever practicable, however, mothers apparently returned to the house to nurse the baby or had it brought to the field to be fed. One woman teacher who had a baby during the school year returned to her nearby home at recess to nurse the infant. Two mothers said they gave their infants some cow's milk because they thought their own milk supply was not adequate. One of these was the vender previously mentioned.

Supplementary Feeding of Infants.

853 Infant feeding during the mother's postpartum rest period has already been described (p. 12). After (2)juu (1)faj no mention was made of giving honey in water to babies, but up to about one month of age the only other change in practice which occurred was that two or three mothers started to mix a little rice with the crushed or baked banana which had been started previously. As during the mother's rest period, however, a minority of infants were being given banana, i.e. most of them had nothing except water in addition to mother's milk.

By 3 months of age about half of the infants were being given banana, (3)kluaj (4)nam-(4)waa, and mixing rice with it was more common. A few infants were being given rice as such. In most instances, for infants up to 6 months of age, rice was cooked with extra water and mashed, (3)khaaw (2)piag, a preparation which was considered baby food. Rice water with sugar was added to the soupy rice for one infant less than 3 months old

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[1] No fresh milk of any kind was available in Bang Chan. Water buffaloes were ordinarily not bred in the village and use of buffalo milk was unheard of. Among the light refreshments which could be bought at village stores, however, were coffee with condensed milk and diluted canned milk. Storekeepers stocked imported canned and dried milk including some brands designed for infant feeding. Directions for use were not in Thai, however, and the preparations actually fed to infants were often diluted more than recommended.

SUMMARY

A general description is given of conditions in a 105 Siamese rice village, 1952-54, as they relate to food supply 26 and food habits. Activities at various seasons of the year [220] are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

105 Food was mostly home produced and an important factor 262 in the standard of living was the number of productive hands 433 available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods [235] were used. Nearly all of the families in Bang Chan raised [433] chickens, and some raised ducks, but about 3/5 of all eggs [244] produced were sold. Every family had some sort of kitchen [245] garden, including banana trees and other plants, but spices and chili were much more commonly grown than vegetables and [223] fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

[443] Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, coconut, palm sugar and small amounts of vegetables.

[434] Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. [178] Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

105 Preparation of some typical dishes, meal service and 264 techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

792 262 411 village offers of regular service, the holiday offerings, home invitations and sporadic gifts so that all priests had places to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut[1] or hardship.

792 796 262 About mid-July, Buddhist Lent changed the food habits somewhat. This three-month period corresponded with the height of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering, and thereafter the priests went regularly on their appointed rounds.

796 261 On Buddhist holidays, the people did not usually eat any of the food brought to the temple, but on (3)thaauad (2)ka-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bounteously.

792 857 262 Residing at Wat Bang Chan in 1954 were 22 boys, aged 10 to 16, sent to serve the priests, get their living and attend school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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792 262 737 235 1. Amounts of food given usually exceeded the actual needs of the priests and temple boys. One instance was noted in which food was sent by the priests to a needy old person nearby. Leftover rice was dried and sold for chicken feed.

114 104 2. The transcription used throughout this report is that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

256 canal misjudged his needs for milled rice and ran out, he had
505 to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

256 Of 105 households which had and used a home rice mill,
231 99 used the polishings for feed but no family in Bang Chan
262 used them for human food (Goldsen and Ralis, 1957). One far-
433 mer, headman of a hamlet, who lived near the main canal and
235 the road to Minburi but who used home-milled rice, offered as
256 the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

114 As reported by Janlekha (1955) consumption of milled
146 rice in 106 households amounted to about 285 kilograms per
262 capita per year or 780 grams per person per day. Such "house-
433 hold consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

262 Flesh Foods Other than Fish. - The people of Bang Chan
231 had a taste and appreciation for flesh food, but the production
784 and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied
[792] with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they
[792] were cut up and given to the priests. When the buffalo belong-
[252] ing to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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[443] 1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the
[184] killing. Actual butchering was done by Moslems or Chinese who did not object.

[26] 2. Households were identified by numbers assigned by lot.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

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1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

228 which the leafy vegetable (2)phag (2)ka-(2)cheed is one, and digging a deep hole at its entry. At the proper time the opening was plugged. The fish grew in the pool and were taken as needed, sometimes, for convenience, several at a time, to be kept alive in a large pot near the house. By draining the pond fish were "harvested" (p. 12). Yields varied, but villagers had the impression that they had de- 654 clined considerably over a period of years.[1] In 1952, at the suggestion of FAO, the Thai government tried to increase the supply by introducing tilapia culture. During the first three years of the experiment about one-third of the families in Bang Chan had tried to raise tilapia, but in the summer of 1957 members of the research group were told that no one had persisted (see Appendix A, p. 101).

235 Eggs. - Chickens were raised by about 90% of the families in Bang Chan, and over 70% owned 10 or more. In contrast, only 37% of the households had ducks, and only 13% had 10 or more (Goldsen and Ralis, 1957, p. 56). Ducks were regarded as trouble makers. Moreover, chickens could feed "naturally" and certainly helped themselves to paddy from the bin, whereas ducks did not eat paddy, but had to be provided with bran and broken rice.

235 Most of the eggs produced were sold. Janlekha (1955) 443 estimated the annual production of chicken eggs in Bang Chan 433 as 366,540, and that of duck eggs as 268,200 eggs. According 262 to the information which Janlekha obtained from 106 households in 1953, about 4/5 of the chicken eggs were sold as a secondary source of farm income whereas more than 3/4 of the duck eggs were home consumed. Slightly over 2/5 of all eggs produced in the village were consumed there. On a per capita basis, the average annual consumption of 708 eggs for an average family size of 5.7 persons (Janlekha, 1955) amounted to a little over 1/3 of an egg per day. Home consumption of eggs might be less in households in which enough chickens were raised to make regular sale of eggs possible. Thus in 5 of the 31 households studied by Sharp et al. (1953, p. 197) all hen's eggs produced were consumed at home.[2] For these families, an average of 452 eggs per family per year or about 1-1/4 egg per family per day, were thus available. Home consumption in the 26 families which sold eggs amounted to an average of 215 per year or about 0.6 egg per family per day. One informant commented that a rich man could eat an egg every day, but she could not afford to do so. She said she sold eggs, when she had them, and bought foods to eat with rice.

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1. Sharp et al., 1953, pp. 191-192.

2. This probably means that eggs were not sold in quantity, not that none were used in barter (cf p. 5); thus the number of eggs available may be overestimated.

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

235 Eggs and poultry. - Every household which took part in the survey raised chickens, and 3 of the 11 households had ducks also. In both groups of families, most of the eggs produced were sold. Home consumption of eggs on survey days was small.

228 Fish. - Each family studied had a fish pool. One family only, Household 25 in Group B raised tilapia. They began tilapia culture during the third round of the study, too late to ascertain how this might affect fish consumption in the family.

251 Preservation of Foods at Home. - Home food preservation was practiced to a very limited extent only, fish products being the principal ones produced.

Dried fish. - Families in both groups salted and dried fish throughout the year whenever they were available in excess of immediate needs.

Fermented fish. - In 10 of the 11 households, fermented fish was prepared. The 6 families in Group A had prepared a total of 30 kg., and 4 of the 5 families in Group B, a total of 29 kg. The largest amount prepared in one household, for one year was 10 kg.

Shrimp paste. - Because shrimp were caught in insufficient quantity, shrimp paste was prepared by only 6 of the 11 families. Four families in Group A prepared a total of 26 kg., and 2 families in Group B prepared a total of 7 kg. These amounts were insufficient for their needs.

Fishsoy. - One family only, in Group A, prepared fishsoy. All others in both groups purchased this product.

Buffalo meat. - During the survey year, the buffalo belonging to one family died. Some of the meat was used fresh for curry, and the remainder was salted, dried and sold.

Comparison of Caloric and Nutrient Intakes of the Two Groups With Each Other and With the Estimated Allowances.

128 In Table 11, the estimated calories and nutrients avail-
146 able to the two groups of families, are shown together with the estimated allowances.

146 On the average, the number of calories, and amounts of protein, iron, niacin and ascorbic acid in the diets of persons in Group B, the apparently better nourished group, approximated or exceeded the conservative allowances. For Group A, this was true for niacin and ascorbic acid only, the calories being 11%, protein 15% and iron 21% below the allowances.

7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things? (177* 178* 125 [241] 402 243 228 244 235 231)

1.	Fertiliser	9
2.	Small engine	4
3.	New rice seeds	3
4.	Tilapia	98
5.	Other fish, specified	13
6.	Fish, unspecified	80
7.	Mushrooms	45
8.	Poultry	179
9.	Pigs	21
X.	Other, specify	68
0.	Unascertainable	45

8. Here, some farmers get a lot more rice from one rai of land than others get. Generally speaking, what are the various reasons why this is so? [243] [433]

1.	Fertiliser	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify	53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify _____	25
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

125
[434]

16.a. ASK ONLY FARMERS: This year just now beginning, will you do anything for increasing your income, outside of rice farming?

3.	Does not apply	13
4.	Yes	162
5.	No	107
6.	Unascertainable	11

[224]

b. IF YES: What various things will you do?

0.	Nothing	3
1.	Mushrooms	42
2.	Poultry	51
3.	Fish (Incl. tilapia)	10
4.	Fertiliser	2
5.	Other, specify_____	84
6.	Unascertainable	6

[235]
[228]
[241]

17. ASK ONLY FARMERS:

a. Last time you planted rice, how many rai of rice did you plant?

[243]
[433]

1.	4 rai or less	14
2.	5 to 9 rai	25
3.	10 to 19 rai	49
4.	20 to 29 rai	65
5.	30 to 39 rai	53
6.	40 to 49 rai	32
7.	50 to 59 rai	19
8.	60 to 69 rai	14
9.	70 to 79 rai	2
X.	90 rai or more	—
0.	Unascertainable	20

b. And what was the total yield?

1.	120 tang or less	15
2.	121 to 300 tang	28
3.	301 to 600 tang	59
4.	601 to 900 tang	59
5.	901 to 1200 tang	56
6.	1201 to 1500 tang	25
7.	1501 to 1800 tang	10
8.	1801 to 2100 tang	10
9.	2101 to 2700 tang	7
X.	2701 or more tang	3
0.	Unascertainable	21

c. How about the year before--how many rai did you plant?

1.	4 rai or less	16
2.	5 to 9 rai	19
3.	10 to 19 rai	51
4.	20 to 29 rai	67
5.	30 to 39 rai	53
6.	40 to 49 rai	26
7.	50 to 59 rai	20
8.	60 to 69 rai	13
9.	70 to 89 rai	5
X.	90 rai or more	—
0.	Unascertainable	23

125
[412]
50.d. (In your household) is there a pair of scissors of any kind or not?

7.	Yes, scissors	219
8.	No	114

[207]
e. (In your household) is there a radio or not?

9.	Yes, radio	47
0.	No	286

[402]
f. (In your household) is there a winnowing machine, or not?

X.	Yes, winnowing machine	102
Y.	No	231

[243]
[402]
g. (In your household) is there a windmill, or not?

1.	Yes, windmill	161
2.	No	172

[805]
[405]
51. Do you have a wrist watch, or not?

3.	Yes	79
4.	No	252
—	No Answer	2

[231]
a. Here in your household, how many buffaloes do you own?

5.	None	81
6.	One	27
7.	Two	67
8.	Three	61
9.	Four or more	97

b. (Here in your household) how many pigs do you have?

0.	None	321
1.	One	2
2.	Two	2
3.	3 or more	1
—	No Answer	7

[235]
c. (Here in your household) how many chickens do you have?

4.	None	35
5.	1 to 2	7
6.	3 to 4	17
7.	5 to 9	31
8.	10 or more	243

d. (Here in your household) how many ducks do you have?

0.	None	208
1.	1 to 2	9
2.	3 to 4	16
3.	5 to 9	58
4.	10 or more	42

231 ones, but limited grazing areas and the burden of work imposed on them have been a factor militating against their reproducing themselves. During the first half of the rice year (April-September) buffaloes feed on green grasses, direct in the field which has not yet been plowed or cut for them by the farmers. During the second half of the year when the supply of green grasses is reduced to the minimum, they feed on straw which normally lasts until new grasses become available with the coming of rains. Buffaloes are used only for farm work and never for milking purposes.

• 235 Chickens: Practically every family in Bangchan raises chickens which are second only to rice as a source of cash income. Many breeds are found in the village. Most common are the native mixed breed and the imported Rhode Island Red. These chickens are raised "naturally" -- although the farmers feed them with paddy once in a while, most of the time they help themselves to paddy in the mat bins and in addition scavenge for a part of their feed. The size of the flock averaged 8.6 laying hens per family according to the 1949 survey. The same survey showed an average rate of production of 143 eggs per laying hen per year.

Ducks: In 1949, only one-half of Bangchan residents raised ducks but the size of the flocks was slightly larger than that of chickens, averaging 11.7 laying ducks per family raising them. The annual rate of production, too,

236 was slightly higher than that of chickens, averaging 155 eggs per laying duck.

178 231 Hogs: In 1949, two families were raising hogs which according to our observation did not seem to be well fed. When we returned to the village in 1952, not a single hog remained in Bangchan.

Fish

262 443 434 After rice, fish (and other marine animals) are by far the most important ingredient in the diet of Bangchan. More fish are bought from the outside than the very small amount that is exported from the village mainly by one or two very poor families who have availed themselves of this means of augmenting their income.

221 226 The villagers' annual cycle for fish-taking varies somewhat with the particular method used, and with the annual rice and ceremonial cycles: yet the maturation cycle of the principal types of fish is also a factor, and one which tends to give an overall orderliness to the annual cycle for fish in general. There is no time in the year when at least some fish are not available, nor is there any time in the year, even the busiest, when the family does not want fresh fish for its menu. For this reason, there is fishing the year round, at least in the form of the housewives simply setting nets in the canal and then tending them according to some schedule or whenever the noise of caught fish sloshing about in the water is heard. When a lull from the pressure of

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 buffaloes heretofore undreamt of and will have to bear
231 the consequent burden of increased cost of producing rice.
311

Some description of the homelots which constitute
311 almost five per cent of the land area of Bangchan has already
351 been given in the section on vegetation, Chapter II. From
231 the standpoint of land utilization, functions of the homelot
235 other than providing standing room for the living quarters
244 may be mentioned as follows:
245
226

1. It provides space for threshing and for storage of rice and farm equipment including buffaloes.
2. It provides room for chicken or duck raising.
3. It provides land for a kitchen garden, and for fruit and vegetable growing.
4. It provides space for fish trapping by the draining method.

To serve these functions, homelots in any rice growing village, where the fields are submerged under water during the entire life of the rice plant, must be high above water level during the flood season, must be well drained, and must have pools with ample shade.

243 Rice land in its natural state does not meet these
311 requirements for a homelot. In the first place its level is too low. Second, the impervious layer of clay characteristic of rice land does not permit soil drainage. To make a homelot out of rice land, it is necessary that the prospective site be mounded up to a level two or three feet higher than the level of the surrounding fields. The hole from which

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 15

VILLAGE PADDY CONSUMPTION
Bangchan, Thailand, 1953

Item	Units of Consumption	Rate	Total Consumption
		tang	tang
Food	1,372 man equivalent	38.3	52,548
Feed	5,066 chicken equiv.	4.0	20,264
Seeds	7,682 rai equivalent	1.0	7,682
Total		--	80,494

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 433 In Table 15, units of consumption of paddy are arrived at by the following procedure:

*243 433 146 1. Food. Children age 14 and under are considered to have one-half of the rate of consumption of adults and the old. Thus, 644 children in Table 2 comprise 322 man equivalent units of consumption. When 1,050 people over 14 years of age, each having one man equivalent unit of consumption, are added, a total of 1,372 units is obtained.

The rate of consumption of 38.3 tang per man equivalent was obtained from our consumption study of 106 families in 1953.

*243 433 = 235 2. Feed. Due to the lack of adequate data for 1953, figures obtained by the poultry survey conducted in 1949 were used in the calculation for feed. Items in that survey include roosters, hens, chicks, and ducks. Information on poultry feed consumption was obtained from Luang Suwan, the poultry expert of Kasetsat University, Bangkok, who gave the following figures: roosters, hens and ducks, naturally raised, consume four tang of paddy per head per year; and a chick's paddy consumption, negligible at the beginning but gradually increasing with its age, is about three tang per year. Most of these chicks were disposed of at the age of seven months when each had consumed about one tang. One chicken equivalent is therefore assigned to each head of roosters, hens and ducks, and one-fourth chicken equivalent to each chick. On the basis of a stock of 17 chicken equivalents per family, which was found to be the case in 1949,

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

a total of 5,066 chicken equivalents was estimated for 1953.

3. Seeds. Since broadcast and transplanted rice require different amounts of seeds per rai, the total rice area planted to broadcast and transplanted rice must first be reduced into comparable figures -- the rai equivalent, or an area of one raidfor transplanted rice and two rai for broadcast rice. We do not know the actual proportion of broadcast area to transplanted area in 1953, but the proportion figure of 497 1/4 to 3,030 or roughly one to six for 1949 may be assumed.[5] Thus, the total area of 6,722 rai for both broadcast and transplant rice is changed into 7,682 rai equivalent for the purpose of estimating the amount of seeds required. It was found in 1949 that one tang of seed was used for each rai equivalent of rice field. This figure is used in the present calculation.

Table 16 shows that an annual surplus of 113,100 tang of paddy, or about 1,244 tons, was estimated for 1953 on the basis of past performance. This is about 58 per cent of the crop.

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5. Sharp et al., op. cit., pp. 145-46.

TABLE 16

ESTIMATED VILLAGE PADDY SURPLUS
Bangchan, Thailand, 1953

Paddy Production		193,594 tang
Paddy Consumption		
As food	52,548	
As feed	20,264	
As seeds	7,682	
Sub-total		80,494 tang
Paddy Surplus		113,100 tang

Other Food Production

235 433 Other food products which are produced in a considerable amount in Bangchan include chicken eggs, duck eggs, and fish. To a lesser extent, fruit and vegetables are also produced locally.

Practically every family in Bangchan raises chickens, and half raise ducks. In April, 1949, the author conducted a poultry survey covering 46 families whose homes were on the banks of Bangchan Canals. Of these, 45 families were found to be raising chickens and 23 families raising ducks.

Of 45 families raising chickens, 38 families from which data were available reported rates of egg production showing that for these families 53,750 eggs were produced annually from 376 laying hens, averaging 143 eggs per hen. [146] [438] Of 31 families who gave information about sales, five consumed all 2,260 chicken eggs produced; the other 26 families sold 31,040 eggs and consumed 5,590. The proportion of consumption to sale was thus 7,850 to 31,040 or approximately one to four.

There were 393 laying hens in the yards of 45 families, averaging 8.6 hens per family. Chicken egg production [434] was estimated at 1,230 per family. Assuming that four-fifths of these were sold at three for one baht, which was the local price in 1949, average cash income for these families from sale of chicken eggs was estimated at 326 baht annually. [435] With a higher price in 1953 of fifty satang a piece, the estimated income from sale of chicken eggs rose to 492 baht per family.

235 433 434 Of the 46 families covered by the survey, 23 or one-half raised ducks with an average annual production of 155 eggs per duck, and an average of 11.7 ducks per family raising them. Egg production for each of these families thus averaged about 1,200 per year. Of these, 1,350 were consumed by the family and 450 sold at the same price as chicken eggs. It was estimated, then, that from duck eggs alone, the average cash income in 1949 was about 150 baht per family raising ducks.

226 262 413 [434] After rice, fish were by far the most important ingredient in the diet of Bangchan. In contrast to poultry, however, fish did not constitute a source of cash income of the villagers. As a matter of fact, more fish were bought from the outside than the negligible amount that was exported from the village mainly by one or two very poor families who had availed themselves of this means of augmenting [435] their income. From our consumption study of 106 families in 1953, it was found that of an aggregate amount of 17,786 kilograms consumed by these families in the previous year 16,027 kilograms were caught by the families while 1,759 kilograms were bought at five baht per kilogram. The rate of fish production may thus be estimated at 151 kilograms annually per family, or 44,998 kilograms for the entire village.

262 244 433 The same consumption study shows that the 106 families consumed in 1953 a total of 16,402 kilograms of vegetables all of which were produced or acquired by the families.

243 requires much additional hand labor and reduces the possibil-
242 ities for mechanization to a minimum. On the other hand, the more labor intensive transplanting method would seem to be more suitable to a population pressure area like Thailand if it really gives as relatively higher a yield as it is claimed to give.

Farm equipment

243 In Thai agriculture, it is very difficult to separate
351 the farm from the home. In the chapter on the community it
235 has already been indicated that the home lot not only is the
244 living place for the farm family but also provides space for
245 threshing and for storage of farm equipment, room for chicken
226 raising, land for kitchen garden and for fruit and vegetable growing, and space for fish trapping by the draining method.
243 In other words, all the material components of the farm, except
351 the rice fields, are located or stored on the home lot. Here,
422 items that are uniformly or frequently found include:

A. Household equipment

1. Buildings
2. Furniture
3. Bedding facilities
4. Kitchen accessories
5. Storing facilities
6. Lamps of various sizes
7. Ritual accessories

B. Farm equipment

1. Farm building: equipment and buffalo shed.
2. Implement: plow, harrow, yoke, roller, shovel, spade, hoe, weeding knife, noria, sickle, pitch-fork, rake, broom, winnowing machine, wooden winnowing spitula, basket, mat bin, box bin, home-mill.

243 433 44 plan of production. If a crop is to be produced for market in Bangchan, in all probability it must be rice. Since crop rotation is not practiced, there is no need for decision making as to the kinds of crops which are to be grown other than rice. 235 The operator may have to decide how many chickens he should keep, but he normally settles on a flock of ten to fifteen, for it would be too much a burden to keep a larger flock and fewer heads of poultry would not be worth the time. 243 433 The production function, or the choice of the best factor combination, also does not call for any serious consideration. For it has been observed that at the present stage of technological development of rice production in Thailand or even in the whole region of Southeast Asia the marginal product of labor has already approached zero. In other words, more labor applied to the same area under the same method of planting would not materially increase the crop harvested. It has been claimed, though, that a larger crop may be expected from the same parcel planted to broadcast rice by changing the planting method to the more labor intensive transplanting system. This claim has never been substantiated, however, by any systematic comparative study. Besides, the transplanting method is so universally adopted in Bangchan that it can almost be taken for granted to be the one in use by any rice farmer. Moreover, it was mentioned earlier that the planting method is not optional with the farmer but is governed by topography, expected condition of water supply, and availability of labor.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

[243] [434] [433] income and operator's labor earnings lies in the value of farm produce consumed by the family. Earlier, five kinds of produce were listed -- rice, fish, eggs, fruit and vege-
[235] tables. For technical reasons, we consider only rice and eggs as products of the farm, rice being the primary crop
[226] and eggs the secondary crop. Fish is not considered a farm product because Bangchan villagers fish for consumption, not for sale. Besides, fishing is done by every resident of the village, farmers and non-farmers alike. It is thus
[244] more of a way of life than an economic enterprise. The same
[245] is true for fruit and vegetable growing which is done in a very small scale.

If we agree on considering only rice and eggs as the products of the farm, it is not difficult to estimate the amount and value of farm produce consumed by the family for Bangchan operators can readily give a rather accurate information on their rates of consumption of these two products. Thus, under Bangchan condition the figure for operator's earnings is not as difficult to obtain as it appears to be the case among most American farms. The frequency distribution of operator's labor earnings of our 104 sample-farms is given in Table 48. It is seen that only 17 farms produced negative remuneration for the operator computed by this method as against 47 farms by the labor income method. As Professor Warren has said, of these two, labor earnings is a better
[171] measure of profits. It is especially so in Bangchan and perhaps in other agricultural regions in Southeast Asia

[TEXT CONTINUED ON PAGE 306]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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[231]
[235]

The only livestock kept on rice farms other than buffalo, which were included under consideration of farm equipment, are chickens and ducks, which are raised "naturally." It was earlier mentioned that the size of the flock was more or less constant. Livestock, therefore, did not figure in significant inventory changes, and can also be left out.

*[243]

The only item of supplies on rice farms is paddy stock. This is used up and sold out each year. For more or less the same size of farm, and spreading over a series of five years, a difference in the average amount of paddy stock at about the same time of the year in 1948 and in 1953 would not figure significantly in inventory change.

It was also already mentioned that rice farmers did not want to keep cash at their homes for fear of robbery, and that any person receiving a large amount of cash quickly passed the money on to others. We can therefore assume that the amount of cash on hand at the same time of the year does not vary much. Cash, then, may also be left out of consideration.

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Of the items of assets enumerated above, there are now to be considered only land, household equipment, gold and accounts receivable (payable). In all purchases of land, gold, and household equipment, only the cash paid was recorded and considered as assets accumulated. For example, when an operator purchased a parcel of land at 7,000 baht and paid the down payment of 1,000 baht, only the 1,000 baht

7. Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 the rice enterprise, cannot be devoted to gainful utiliza-
221 tion of labor because: (a) there is not enough space in
434 the homelot, the only place above water; (b) poultry is not a competing crop as long as it is raised naturally in limited number. It becomes a competing crop when it is raised commercially. [235] Commercial raising of poultry in Bangchan is handicapped by locational reasons (far from market and far from sources of feeds other than paddy). It is further handicapped by a higher chance of contamination which is true in such a geographical condition as prevailing in Bangchan; (c) another factor limiting an opportunity for growing a secondary crop during this period is that cash is most scarce in this time of the year and interest rate is highest. Any cash outlay for investment is thus discouraged. Farmers who have any cash at all will do much better by straight lending, or disguised lending in the form of petty trade on credit putting a high premium on credit purchases of 50 per cent extra on articles payable in two or three months; and (d) opportunity for wage earnings is also limited during this period because farmers do not need any help at this time of the year, and because successive rains prevent extensive public work and large scale construction.

It cannot be said, however, that there is no possible way for farmers to be gainfully employed during this period of inundation. Researches along this line are needed, ones that should take into consideration details of climatic, technical, economic, and social conditions of the village.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

231 section on livestock, Chapter 2. The method of buffalo feed has also been mentioned in the section on land utilization, Chapter 3.

*243 231 Inasmuch as draft animals, or more specifically buffaloes, provide services in rice production, they may very well be considered a kind of farm equipment. They are used in all steps of breaking and leveling the soil and also in threshing. They are absolutely indispensable on rice farms.

231 435 An average purchased value of a work buffalo was 985 baht per head. According to the 1948 survey, buffaloes began their farm work at the age of 4-5 years and remained in service [237] for an average of 10½ years. When they are dead, their meat is consumed and the hide is dired and made into rope. Some farmers sold the buffalo carcass on the spot and received an average price of 250 baht in 1948. When the original cost of 985 baht was subtracted by the residual value of 250 baht and the result was divided by the length of service of 10½ years, the annual depreciation so obtained was found to be 70 baht. This method of computation for depreciation when adopted for buffaloes appears to be rather crude, for the maintenance cost was neglected and some buffaloes might be bought at the age over 5 years (at varying prices) in which case their length of service might be expected to be shorter than 10½ years. The general pattern, however, was that farmers bought buffaloes which were freshly brought in from the northeast at the age between 4 and 5 years.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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121 lies the main problem of Southeast Asia -- the problem basically of transition. Writing in 1949, Paul Mus rightly states: "The traditional world was not dead; it still held sway in the countryside. A state of affairs, in which the people's livelihood is calculated in terms of one world and their taxes in those of quite another, cannot endure."[2]

* 128 433 Degree of Self-sufficiency

During 1952-53, a consumption study was made on 106 sample-farms, which include the 96 continuing sample-farms and 10 new farms brancing off from the original sample-farms of 1948. Details of this consumption study will be discussed in the section on ordinary household expenses later in this chapter. For the purpose of the present discussion, Table 46 -- frequency distribution of degree of self-sufficiency of those 106 sample-farms -- is here introduced. By degree of self-sufficiency is meant the proportion of the value of home-grown products expressed as a percentage of the total value of annual consumption. Quantitatively speaking, it is seen that Bangchan farm families produce more than half of the things they ordinarily consume.

• 24 433 [592] 000 However, the number of different products consumed which are produced by the family can be counted with the fingers of one hand. These are rice, fish, eggs, fruit and vegetables. On the other hand, there are scores of items

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2. Paul Mus, The Role of the Village in Vietnamese Politics.

[TEXT CONTINUED ON PAGE 296]

361 Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended 351 to live in proximity. Around the houses were kitchen gardens 245 and threshing floors, and behind them, the fields. Bananas grew abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, 241 while fish were plentiful. Water sources were the rain, kept 226 in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large 312 tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

General Nutritional Level

146 The population was physically well-formed with few physical [142] deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. Food at the not-infrequent festivals [272] was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The [178] change-over, some decades ago, from home pounding of rice to [256] steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community.

2. Dr. H.M. Hauck, personal communication, 1959.

534 What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the
434 families, living in tiny separate cottages.[1] Usually with in-
464 adequate or no land, they earned an irregular income by hiring
423 themselves out for farm or other work. At the other extreme,
in a hamlet-like cluster of dwellings, lived a closely affili-
596 ated group of kin. A senior couple more or less headed the
592 married sisters, brothers, or children, maybe with a hired man,
476 or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

855 Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long
enough to get a big batch of fish or greens from the canal, or
[252] go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes stay-
596 ing home from school to do so. Where the adult cooperative
476 group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons
[871] could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

241 Plowing could be done by a man and wife, but for both
462 transplanting and harvesting which had to be done within a few
476 days, large groups were necessary. Two patterns of auxiliary
464 group labor prevailed: reciprocal cooperative work, and hiring of labor.

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114 1. Janlekha, 1955, categorized families as 5% "one-
162 person," 59% nuclear, 8% limited extended (including one or
594 more parents of a spouse), 27% extended (including dependent
596 married couples or other collateral relatives), and the temple
423 residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

221 The year starts with May, the beginning of the rice-
192 year. At this time the rains began to soften the parched
241 ground, and the heat slackened. School re-opened. Farmers
512 turned to plowing, harrowing, raising the seedlings. Both
871 sexes worked about equally in field labor, boys from 14 and
562 girls from about 15 years of age performing tasks according
to skill and strength. Everyone was in the field at dawn.
The buffalo, but not the farmer, rested through the noonday
heat (about 10 a.m. until 2 p.m.) and also on the weekly holy
264 day. Meals were usually eaten about 10 a.m. and after re-
turning from the field at dark. Although two meals a day
were usual at other times, at this season, some had a third
120 meal about 2 p.m. If the buffalo were brought home to rest,
this meal could be eaten at home, but hired laborers or those
working far from home often took with them rice and other
foods in a (2)pin-(1)too, or tiered lunch kit.

221 With the rains, the canals had filled, so that by June
132 buyers with big rice boats could return. The few farmers who
501 could afford to hold onto a portion of their last year's crop
443 sold it for a better price at this time. Vegetables and
124 fruits which had died in the long drought were replaced, and
trees were planted.

24 In July the heavy transplanting season began. Because
221 of cooperative work habits or hiring out, people worked
192 solidly day after day for two months on their own or on an-
other's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly con-
312 trollable. Lack of rain might be remedied by pumping water
from the canals but flooding would drown the plants. School
871 vacation was scheduled at this time so both teachers and
857 children could help. Older children might work in the fields,
887 while younger ones, from 8 to 13, and the aged took over the
care of babies and toddlers, fished, cooked, gathered food
433 for the family and grass for the buffalo. People knew the
crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

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There was an important psychological difference between
221 the two work seasons. At planting time, people were anxious;
243 at harvest they were happy. People saw cash just ahead, for
439 the crop was now safe. Each host of a cooperative work party
466 gave at least one big convivial feast, the best he could pro-
527 vide and even the hired laborers got a round of liquor. People
461 joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

221 When the crop was in, the people rested, fished, and be-
224 gan to prepare for big ceremonies demanding organized work.
527 Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fish-ponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

221 Most farmers sold their rice in February. Capital was
45 invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they
[871] were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

221 The land dried up and cracked, rainwater for drinking
132 gave out, and some canals were reduced to mud. Cherished
312 plants were kept alive by watering, but no new planting could
241 be done. Buffalo, which at other seasons were confined and
231 fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another.
796 Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather
[563] slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

BANG CHAN

FOREWORD

The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, Minburi. A century-old canal and to the north of it a post-war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

In 1954, when data for the present study were still being gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the households were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupation of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple food of the people. During the wet season and into the cooler dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

The Thai countryside is divided into hamlets, each with a headman in charge of the thirty to sixty households of the hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

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The Innovations

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A. Agricultural Innovations: During the past few years, certain innovations have come to Bang Chan which have increased agricultural productivity and improved the level of living. Some of these innovations are listed below.

1. The small motor. One innovation is the small engine, gasoline motor, which is used mainly as a water-lifting device for irrigation purposes. In 1950 only five small motors were found in Bang Chan.* Twenty-one per cent of the respondents in the 1955 survey, however, report owning these motors; the majority of the respondents (68 per cent) claim to have used this labor-saving device which is sometimes jointly owned by more than one household and is frequently loaned out.**

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2. Straw mushroom growing. Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per cent of the respondents report that they have engaged in this activity***). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

One advantage in the culture of straw mushrooms is that it permits quickly realized returns. The cycle, from sowing spores in moistened straw to harvesting the mushrooms, takes about two to three weeks. Another advantage is that there is relatively little heavy work or investment required besides the acquisition of straw and spores. A third advantage is a ready market, for the plant is sought by Chinese dealers in Bangkok who supply hotels and restaurants. Bang Chan rice farmers who engage in mushroom growing as a sideline activity sell it either to local middlemen or directly to the Chinese in Bangkok.

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[113] * Sharp, L., H. M. Hauck, K. Jamlekha, and R. S. Tuxbay, Siamese Rice Village. A Preliminary Study of Bang Chan. Thailand, Cornell Research Center, June, 1953).

[125] ** The questions: "Do you own a small engine motor or not? (If "NO"): Have you ever made use of one in your work?"

[125] *** The question: "Have you ever grown mushrooms, or not?"

3. Tilapia raising. In 1951, FAO suggested to the Thai Government that cultivation of tilapia be encouraged to help meet the rising need for fish in Thailand. Tilapia is a species of fish which multiplies and grows relatively fast. The strain, which came originally from Africa, is popular in Malaya and was expected to be easily marketable, thus a source of added income in Thailand. The Thai Government followed the FAO suggestion in 1952: a few Bang Chan residents dug the special pools required for the fish culture and began to raise tilapia mainly for commercial purposes. About a third (31 per cent of the households*) reported in 1955 that they have engaged in this activity. 177* 178* 228

From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months. [434]

4. Artificial fertilizer. Artificial fertilizer has made its appearance in Bang Chan only recently. Informants in the community reported that only two farmers had tried artificial fertilizer in 1952. In the 1955 survey, 12 per cent of the farmers reported that they have used fertilizer or are using it. This fertilizer is mainly ammonium sulphate sold both by the government and commercial distributors. Only a few farmers (3 per cent) have ever employed it for all, or for the larger part of their fields. The remainder (9 per cent) have used it on a trial basis in only a small part of their fields.** 241* 177* 178*

Fertilizer, then, has been tried out on a much smaller scale than either mushroom growing or raising tilapia. Apparently two important barriers operate against its wider acceptance. First, its high cost and the difficulty of purchase and transportation (66 per cent of farmers with ideas on the subject gave these reasons for not using fertilizer); second, popular opinion in Bang Chan declares that artificial fertilizer is not fit for low lands since it washes away and is thus wasted (29 per cent of the farmers with ideas on the subject advanced this as reason for not using fertilizer). In addition, fertilizer yields delayed returns.

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* The question: "Have you ever raised tilapia, or not?" [125]

** The question: "Have you ever used fertilizer or not? .. To what extent have you used fertilizer on your fields?" [125]

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743 *177 *178 B. Institutional Care of the Sick: Equally important as agricultural innovations in raising the level of living of an area such as Bang Chan are the efforts to improve the health and welfare of the population. Since the thirties there has been a clinic in the neighboring market town of Minburi and some Bang Chan farmers used clinics and hospitals in Bangkok before that time. Only about a third (36 per cent) say they have never been to a clinic or a hospital; over a third (37 per cent) have themselves gone for treatment; about one fourth (23 per cent) report having brought a patient there; over one tenth (12 per cent) say they visited relatives there; and a few (3 per cent) say they went there for various other reasons.*

ANALYSIS OF DATA ON AGRICULTURAL INNOVATIONS

121 The central question to which the present analysis directs itself is: What are some of the factors which may be said to account for the fact that certain members of the community are willing to try out these innovations and to continue using them, while others are unwilling even to make the initial attempt? Is there some general pattern to be discerned among the several innovations? Is there any discernible clustering among them; that is, are some community members more "innovation-minded" than others, in the sense that if they try out or accept one innovation they are more likely to accept another? Or are these innovations accepted independently of each other? The following analysis of the survey responses attempts to shed some light on these and related problems.

Factors in Acceptance of Agricultural Innovations

* 241 402 *177 *178 Use of the small motor is basic to acceptance of other agricultural innovations. Although only a minority of the persons of Bang Chan report that they own a small motor, many more used this machine through joint ownership or borrowing. Indeed, knowing whether a person owns or uses such a motor is a useful indicator of his readiness to accept other agricultural innovations. If he owns or has used a motor, then he is about five times more likely than others to try fertilizer, about two and a half times more likely to try raising tilapia, and about one and a third times more likely to try straw mushrooms.

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[125] * The question: "Have you ever been to a clinic or hospital...? In what various places...? For what various purposes did you go ...?"

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TABLE 1. THOSE WHO OWN OR USE SMALL MOTOR ARE MORE LIKELY THAN OTHERS TO TRY OTHER AGRICULTURAL INNOVATIONS (FARMERS ONLY)

	Owns motor	Does not own motor but uses it	Neither owns nor has used motor
(Total cases)*	(70)	(150)	(105)
Have you ever used fertilizer?**			
Yes	18%	16%	3%
No	82	84	97
Have you ever raised tilapia?			
Yes	53%	29%	22%
No	47	71	78
Have you ever grown mushrooms?			
Yes	48%	49%	37%
No	52	51	66

* The bases on which per cents are computed appear in parenthesis at the head of each column in this and subsequent tables. Actually the bases vary by a few cases, table to table, since there were always a few respondents who did not answer a given question or whose answers were unclassifiable. [125]

** Asked of farmers only. The bases are:

Owns motor	65
Does not own motor but uses it	141
Neither owns nor has used motor	82
NA	3

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There is some evidence, then, that if a person is willing to try out one agricultural device, such as the motor, he is more likely to try out other agricultural innovations. However, this "clustering" cannot support the hypothesis that there is something like "innovation mindedness" in general, or that acceptance of any innovation in a series is predictive of acceptance of all other innovations in the same series.

Evidence may be cited to substantiate this contention. In the first place, if such a clustering indeed prevailed, one would expect users of any of these agricultural innovations to be more disposed than others to use, as well, certain non-agricultural innovations, such as hospital or clinic facilities, for example.

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228 And no such tendency may be discerned in the present data. (See Table 2.)

• 241 TABLE 2. USERS OF HOSPITAL AND CLINIC FACILITIES SHOW NO SIGNIFI-
244 CANT DIFFERENCES IN RATES OF ACCEPTANCE OF AGRICULTURAL
743 INNOVATIONS
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Agricultural Innovations	Percentage who have ever gone to hospital or clinic for treatment	Total cases
Mushrooms		
Tried them out	36%	(143)
Never did	38	(186)
Tilapia		
Tried it out	44%	(104)
Never did	34	(223)
Motor		
Tried it out	37%	(215)
Never did	34	(106)
Fertiliser*		
Tried it out	37%	(32)
Never did	34	(232)

* Farmers only

228 In the second place: use of the motor is much less strongly
241 linked to use of mushrooms than the use of fertiliser or tilapia.
244 It may well be that there may be some common factor strongly underlying the decision to use the motor on the one hand, fertiliser and
402 tilapia on the other, while the decision to try mushroom-growing
*177 is relatively more "autonomous". A possible explanation for the greater "autonomy" may be sought in the differential requirements
*178 for growing mushrooms compared with the requirements for adopting the other innovations.

Both tilapia and sulphates demand extra heavy work, care, an essential initial investment, and willingness to wait for a delayed return. An additional requirement for a successful and continuous pay-off from both these innovations may be an aptitude to follow rather complicated instructions. In the case of mushroom growing, however, the initial investment is relatively small, the labor may be tedious but is not heavy, no protracted or complicated care is involved, and the results of the effort are relatively quickly realizable.

6: Goldsen and Ralis Z-4.5 (1955) 1957
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There is some justification, then, for the inference that initial adoption of innovations such as fertilizer and tilapia, which require increased labor, will depend to some extent upon the availability of some labor-saving device (such as the small motor) which will enable the busy farmer to perform the necessary labor and, perhaps, leave him freer to exercise the care required for these innovations to be successful. Hence the relatively stronger relationship among these innovations. An innovation which does not make these demands, however (such as mushroom growing), is more likely to find acceptance on its own terms and may thus be less dependent for its acceptance upon availability of some sort of labor-saving device.

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Innovation and Attitude Towards It

There is further evidence in the survey substantiating the greater "autonomy" so to speak, of the decision to try mushroom culture compared with the decision to try fertilizer or tilapia.

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The present study tested the hypothesis that use of these innovations would be related to a favorable attitude toward them. Attitude toward the four innovations was determined by examining responses to the questions: "What is your opinion about fertilizer?" "...about mushroom growing?" "...about tilapia?" Responses were classified according to whether they revealed positive, mixed, or negative affective feelings to each of the innovations.

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In general, positive attitudes towards all these innovations are widespread in Bang Chan. About three-quarters of the residents express positive feelings toward mushroom growing and over half express positive attitudes to artificial fertilizer and tilapia raising. (See Table 3.) None of these innovations elicits widespread expressions of disfavor, although the respondents are more likely to express an unfavorable attitude to tilapia (29 per cent) than to fertilizer (14 per cent) or to mushrooms (7 per cent)

TABLE 3. THE MAJORITY IN BANG CHAN HOLD POSITIVE ATTITUDES TOWARDS AGRICULTURAL INTRODUCTIONS

Attitude	"What is your opinion about..." Mushrooms	Fertilizer	Tilapia
Positive	78%	39%	37%
Neutral or mixed*	6	3	3
Negative	7	14	29
No opinion	9	16	8
Not ascertainable	2	8	4
Total cases	(333)	(333)	(333)

* The neutral or mixed attitude category comprises responses conveying partly favorable and partly unfavorable feelings such as, "some kind is good, some kind is not so good"; "in some ways I like it, in some ways I dislike it."

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228 Now let us examine the extent to which the decision to try out
*241 the innovation is linked to a positive feeling towards it. The decision to try fertilizer and to raise tilapia turned out to be indeed linked with positive feelings towards these innovations. Among those favoring fertilizer, the proportion using it is six times as high as those with neutral, mixed or negative attitudes (18 versus 3 per cent); among those with positive attitudes to tilapia raisers of this fish are twice as frequent in comparison with those having neutral, mixed, or negative attitudes (43 versus 22 per cent). These relationships are shown in Table 4 below.

TABLE 4. ATTITUDES TO FERTILIZER AND TILAPIA RAISING ARE LINKED TO THEIR USE

	Attitude	
	Positive	Neutral, Mixed & Negative
Fertilizer		
Tried it out	18%	3%
Never did	82	97
Total cases*	(168)	(55)
Tilapia		
Tried it out	43%	22%
Never did	57	78
Total cases	(191)	(104)

[125] * Based on responses made by 293 farmers who expressed a codable attitude to fertilizer.

244 On the other hand, the data revealed no relationship between
*177 attitude to mushroom growing and growing them. The proportion of
*178 users and former users among those who have favorable attitudes and those who have negative attitudes remains relatively constant. Table 5 shows that among respondents with positive attitudes, 47 per cent have tried mushroom growing; while among respondents with negative attitudes, 42 per cent have done so; percentage differences are statistically insignificant.

TABLE 5. ATTITUDES TO MUSHROOM GROWING SHOW NO RELATION TO ITS ADOPTION

	Attitude	
	Positive	Neutral or Negative
	(252)	(41)
Tried mushrooms	47%	42%
Never did	53%	58%

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It appears, then, that we may be dealing with two types of innovations, one type (fertiliser and tilapia) where attitude is linked to decision to use it and another (mushrooms) where attitude seems to be unrelated to such use.* And here again may be further substantiation of the greater autonomy of the acceptance of mushroom growing. For, in the case of innovations such as artificial fertiliser and tilapia, it is known that they require investment of funds and labor, risk, delayed return, and departure from well-known ways. It could be that in the face of these disadvantages acceptance will occur only if motivation is high. Acceptors would then be selected mainly from among those who have high motivation and accompanying positive affective feeling. Those who do not have these feelings would, following this reasoning, be less likely to overcome their objections to the disadvantages of the innovation in question.

There is also the second type of innovation like mushroom growing. This innovation is much less "costly" not only of funds but effort. Hence, high motivation and accompanying positive affect might be less influential than other factors--factors quite aside from the crop itself--on acceptance of this type of innovation. Consequently, growers of mushrooms may be recruited equally from persons with favorable attitudes and less favorable attitudes towards this crop.

These findings suggest the more general hypothesis (which might be corroborated by analysis of related contextual data collected in Bang Chan, and by examining equivalent situations in other underdeveloped areas) that: the more complex the innovation, the more effort involved in employing it, the more risk involved, and the less immediate the return, the greater the likelihood that acceptors will be recruited from a selected group of highly motivated people, rather than at random among all persons "eligible" to accept it. If the innovation requires the high motivation which is needed to overcome the disadvantages of investment, work, risk, and rarity, then this attitude toward it is important. If the innovation demands only short-term investment and relatively light labor, then this motivation is of little importance in the decision to try it.

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Sociological Factors in Agricultural Innovation

The decision to use the small motor, once made, tends to accelerate the decision to try out other agricultural innovations, especially fertiliser and tilapia and, to a lesser extent, even mushrooms.

* Both mushroom growing and tilapia raising are sideline activities to the Bang Chan rice farmer and are, therefore, comparable in this respect.

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228 mushrooms. The following section searches for sociological factors
241 linked to these decisions. For example, are the well-to-do farmers* more apt than the less well-to-do to adopt agricultural innovations?
244 To what extent is literacy a factor in acceptance of innovations? To what extent do differences in literacy, communications habits, cultural contacts and urban orientation account for tendencies to adopt or reject these changes?

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[125]* The following analysis has been made, in most cases, for male farmers only. The distribution of initial acceptance among the three groups of male farmers, females, and male non-farmers is given in the following table.

*179
*178 TABLE 6. USE OF AGRICULTURAL INNOVATIONS AMONG THREE GROUPS OF BANG CHAN VILLAGERS

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	Male Farmers (211)	Male Non-farmers (62)	Females (32)
Tried motor	71%	61%	48%
Didn't try	29	39	52
Tried mushroom growing	46%	35%	41%
Didn't try	54	65	59
Tried tilapia raising	35%	25%	31%
Didn't try	65	75	69
Tried fertiliser	15%	5%	**
Didn't try	85	95	

** Asked of farmers only.

It is apparent, as one would expect, that it is mainly the farmers who try these innovations. Relatively few women (with the exception of tilapia raising) and even fewer non-farmers say they have tried them. Since the absolute number of acceptors among women and non-farmers is too small to bear the separate treatment which would be essential to analyse the factors influencing the use or non-use of innovations, they have been excluded from the following presentation, which refers, thus, to male farmers only.

Economic level

It could be, of course, that people on a higher economic level are in a better position to try agricultural innovations, since they might more easily afford not only an initial cost but also possible loss in trying out something new.

The survey data provide several indicators of economic level. Among other questions on this subject, all respondents were asked: "Here in your household how many buffaloes do you own?" About one-quarter reported owning no buffaloes at all; a little more than that proportion reported owning four or more; the median number of buffaloes reported was between two and three.

In Bang Chan buffalo are an indication of wealth, as is the amount of land planted to rice. Thus all farmers in the sample were also asked, "Last time you planted rice, how many rai* of rice did you plant?" About a third reported that they planted 19 rai or less; about one-fourth reported that they planted 40 rai or more; the median number of rai reported was 26.3.

If the reported number of buffalo owned is an adequate measure of economic level, then one would expect a high correlation between reported buffalo ownership and reported number of rai planted. If the expectation is borne out by the survey data the two indices may be used interchangeably. (Table 7 reports this relationship for the male farmers in the sample.)

TABLE 7. FARMERS# WHO OWN MORE BUFFALOES ARE MORE LIKELY TO CULTIVATE LARGER LAND HOLDINGS

"...how many buffaloes do you own?"

	Four, one or two (99)	Three or more (112)
"...how many rai of rice did you plant?		
Less than 9	31%**	11
10-19	32	7
20-29	18	27
30-39	15	33
40-or more	3	41

Male farmers only
** Percentages may add to 99 or 101 owing to rounding of figures.

* A Thai land measure; 1 rai = 0.4 acres.

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Decisions to use all these innovations--with the possible exception of the use of fertilizer--seem to be more widespread among the upper economic levels of the population. (See Table 8.) One wonders whether the initial link between use of the motor and readiness to try the innovations may actually disguise a more basic relationship based simply on ability to afford the investment and the risk.

TABLE 8. FARMERS* ON HIGHER SES LEVELS ARE MORE LIKELY THAN OTHERS TO HAVE USED THE MOTOR, TO HAVE GROWN MUSHROOMS AND TO HAVE RAISED TILAPIA

	Ownership of Buffaloes	
	2 or less (99)	3 or more (112)
Used motor		
Own	6%	37%
Use	53	45
Neither	41	18
Grew mushrooms		
Yes	30%	60%
No	70	40
Raised tilapia		
Yes	26%	42%
No	74	58
Used fertilizer		
Yes	12%	17%
No	78	83

* Male farmers only

The following table presents again the initial relationships between use of motor and readiness to try out other innovations. But this time the link is examined separately for persons on the different economic levels.

Table 9 was made by first dividing the population into two groups, those from high and those from low economic levels. The resulting two groups were then further subdivided on the basis of whether they owned (or used) a motor or whether they did not. In each of the four resultant groups the percentage that raised tilapia was then calculated. Thus among those of high economic level who own or use motors, 45 per cent raised tilapia, and we infer that 55 per cent did not raise tilapia. The same procedure was repeated to ascertain the percentage that has tried fertilizer and subsequently the percentage that has tried mushroom growing.

This table shows that in tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertiliser holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic Level			
	High*		Low**	
Owns or used motor (Proportion who have raised tilapia)				
Yes	45%	(89)	33%	(57)
No	25	(21)	17	(40)
Owns or used motor (Proportion who have tried fertiliser)				
Yes	20%	(89)	10%	(57)
No	5	(21)	*	(40)
Owns or used motor (Proportion who have tried mushroom growing)				
Yes	60%	(89)	36%	(57)
No	57	(21)	23	(40)

* Three buffaloes or more
** Two buffaloes or fewer

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Literacy

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

he could write, could only sign his name, or could do neither.* Those who said they could write a letter are considered here to be literate. All others are grouped together as illiterates or on a low level of literacy.

The literacy rating was tested for validity as follows: in Bang Chan literacy is known to be related to age. Ever since 1935** there has been a school in the community. Since that date school attendance has been compulsory. Attendance has been fairly full for the last twenty years, but most older residents have never had the opportunity for formal schooling.

The survey data reflect this correlation between literacy and age. Among farmers under 40 years of age, only 16 per cent were rated as illiterate or barely literate by the survey criterion; while 59 per cent of those of 40 years or older are rated as illiterate. Thus one can have reasonable confidence in the survey response as a rating of literacy.

TABLE 10. LITERACY OF FARMERS DECREASES WITH AGE

	Age	
	Under 40 yrs.	40 yrs. or more
Literacy		
Illiterate	16%	59%
Literate	84	41
Total cases	(79)	(131)

Literacy is linked discernibly to acceptance of the motor and mushroom growing. The proportion of literate farmers who have tried the motor is twice as high as the corresponding proportion among those who are illiterate. It is less strongly linked to the decision to grow mushrooms, and is, at best, weakly linked to the decision to raise tilapia or to use fertilizer.

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* In addition, interviewers asked respondents who said they could write to demonstrate it by writing something on the questionnaire.

** See Siamese Rice Village, 22. cit.

TABLE 11. LITERATE FARMERS* ARE MORE LIKELY TO HAVE USED THE MOTOR AND TO HAVE TRIED MUSHROOM GROWING

	Illiterate (Cannot write a letter) (92)	Literate (Can write a letter) (118)
Motor		
Own	16%	26%
Use	35	60
Neither	48	14
Mushrooms		
Have tried	38%	53%
Have not	62	47
Fertilizer		
Have used	12%	17%
Have not	88	83
Tilapia		
Have tried	29%	39%
Have not	71	61

* Male farmers only

If Bang Chan were like certain areas of the United States and Europe, it might be objected that such a relationship between acceptance of innovations and literacy reflects a spurious link with economic level: that illiterates tend to come from the economically deprived strata of the population; hence an observed relationship with literacy may actually reflect the initial correlation with economic level. In Bang Chan, however, this is not the case. A Bang Chan farmer who is well-to-do is as likely to be illiterate as literate, as is illustrated by the table below.

TABLE 12. LITERACY AND ECONOMIC LEVELS ARE UNRELATED IN BANG CHAN*

	Literacy	
	Low (91)	High (119)
Economic Level		
Low	48%	36%
High	52	64

* Male farmers only

Hence the correlation between use of innovations and literacy may be taken at face value and does not reflect a spurious link with economic level.

Communications Media

* 177 * 178 207 546 With the increasing use of mass communications, the community member is exposed to sources of information other than the printed word. Ownership of radios has nearly tripled in about five years (in the 1955 survey radios were reported in 14 per cent of the households, whereas in 1949* only 5 per cent of the households reported owning a radio). Quite apart from ownership, radio listening is widespread; less than one-fifth of the people in Bang Chan claim they never listen to the radio (18 per cent). Motion pictures are also popular. Only one-tenth claim to having never attended a movie, while half (49 per cent) say they have seen motion pictures more than ten times.

There is, of course, a strong relationship between exposure to one of these media and exposure to the other. Table 13 below indicates that the majority (64 per cent) of respondents who listen to the radio likewise report frequent movie attendance. Similarly, the majority (67 per cent) of those who say they never listen to the radio, reported that they go to movies rarely or never.

TABLE 13. EXPOSURE TO RADIO AND MOVIES SHOWS HIGH INTERRELATION

	Radio Listening		
Movie Attendance	High Exposure (regular or occasional listeners) (111)	Low Exposure (listen seldom) (148)	No Exposure (60)
High exposure (10 times or more)	64%	52%	12%
Medium exposure (4 to 9 times)	19	17	21
Low Exposure (0 to 3 time)	16	31	67

[402] [241] [228] [244] Exposure to the communications media is strongly linked to acceptance of a basic innovation such as the motor. It is not directly linked to acceptance of the other agricultural innovations (fertilizer, tilapia, mushrooms). Respondents who report frequent exposure to radio listening and motion picture attendance are significantly more likely than others to say they own or have used the motor. (Among daily radio listeners 88 per cent report use of the motor; and this proportion declines steadily until among those who never listen, only 46 per cent use the motor; for movies, the corresponding proportion of users ranges from 76 to 36 per cent.)

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* Rimmer Rice Village, op. cit.

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TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Pattern	
	With hands (342)	With fork and/or spoon (84)
Listens to radio		
Regularly (daily)	10%	25%
Occasionally	17	28
Seldom	31	35
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	13
2 - 4 times	29	23
5 or more times	28	55

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When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive to urban influence are twice as likely as others to use fertiliser (21 per cent versus 9 per cent), one and a half times as likely to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per cent versus 61 per cent). There is no noticeable relationship, however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

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These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for those on high as well as low economic levels and also for the literate as well as illiterate farmers.

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TABLE 17. VILLAGERS RESPONSIVE TO URBAN PATTERNS ARE MORE LIKELY THAN OTHERS TO USE AGRICULTURAL INNOVATIONS

Agricultural Innovations	Eat with fork and/or spoon	Eat with hands
Artificial fertiliser		
Tried it	21%	9%
Never did	79	91
Total cases*	(69)	(218)
Mushrooms		
Tried growing	57%	39%
Never did	43	61
Total cases	(84)	(242)
Small engine motor		
Own one or have used it	82%	61%
Never did	18	39
Total cases	(84)	(242)

* For farmers only; excludes all non-farmers

TABLE 18. ACCEPTANCE OF URBAN PATTERNS IS LINKED TO ACCEPTANCE OF MOTOR AND MUSHROOM GROWING, IRRESPECTIVE OF ECONOMIC AND LITERACY LEVELS

	Economic Level				Literacy Level			
	Low		High		Illiterate		Literate	
Acceptance of urban patterns	(Proportion who used motor)							
Eat with hands	53%	(77)	76%	(73)	47%	(73)	83%	(76)
Fork or spoon	75	(20)	89	(34)	69%	(16)	90	(38)
	(Proportion who tried mushroom growing)							
Eat with hands	28%	(77)	58%	(73)	38%	(73)	47%	(76)
Fork or spoon	45	(20)	65	(34)	44	(16)	66	(40)
	(Proportion who used fertiliser)							
Eat with hands	11%	(77)	13%	(73)	10%	(73)	14%	(76)
Fork or spoon	19	(20)	26	(34)	3	(16)	23	(40)

6: Goldsen and Rallis Z-4.5 (1955) 1957
AO7 Central Thai AO7

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 18.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)		Twice or more (Proportion who own or use the motor)	
Illiterate	44%	(40)	58%	(31)
Literate	83	(36)	88	(83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

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as apt to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	38%	(40)	86%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	50%	(67)	83%	(76)
One or more	57	(24)	88	(43)

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*Male farmers only

However, no such relationship was discerned between these culture contacts and trying out either fertiliser, tilapia, or mushrooms.

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Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

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Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

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The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertiliser or mushrooms.

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TABLE 21. INCIDENCE OF MOTOR USE IS HIGHER AMONG VILLAGERS WHO REPORT WIDER SOCIAL CONTACTS

	Social Contacts ("...Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?")	
	"More" or "the same" (143)	"Fewer" (53)
Motor		
Has used it	77%	55%
Never did	23	45
Tilapia		
Has tried it	39%	21%
Never did	61	79
Fertiliser		
Has used it	16%	11%
Never did	84	89
Mushrooms		
Has tried them	49%	40%
Never did	51	60

Once again, however, when this link between breadth of social contacts and use of the innovations is examined separately for the literate, compared with the illiterate farmers, we find further substantiation of the previous finding that under certain circumstances contact may act as a substitute for literacy in acceptance of complex innovations. For, although the link between social contacts and use of tilapia remains constant for literate as well as illiterate farmers, it is mainly for those who are illiterate that exposure to wider local social contacts is associated with greater incidence of motor use.

[212]

admit in response to a direct question* that they have a debt. Confidence in the validity of these responses as an index of indebtedness is increased since the expected correlation between indebtedness and ownership of buffalo is reflected in the survey data.

TABLE 23. INCIDENCE OF REPORTED DEBT IS HIGHER AMONG VILLAGERS WHO REPORT OWNERSHIP OF MORE BUFFALOES

	Reported Ownership of Buffaloes		
	None (81)	One to three (155)	Four or more (97)
"...Do you now have a debt?			
Yes	49%	36%	69%
No	51	64	31

When the use of agricultural innovations is examined for those farmers who say they have a debt, compared with those who deny it, it becomes apparent that there is a relationship only between indebtedness and use of the motor but not with any of the other mentioned innovations. Seventy-nine per cent of the male farmers who said they have a debt own or use the motor; among those who claim they have no debt the proportion owning or using the motor is significantly less (60 per cent).

TABLE 24. INCIDENCE OF MOTOR USE IS HIGHER AMONG FARMERS WHO REPORT INDEBTEDNESS

	"...Do you now have a debt" Yes (125)	No (85)
Motor		
Has used it	79%	60%
Never did	21	40
Tilapia		
Has tried it	37%	33%
Never did	63	67
Fertilizer		
Has used it	16%	16%
Never did	84	84
Mushrooms		
Has tried them	45%	48%
Never did	55	52

*male farmers only

* The question: "...I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?" Janlekha's M.S. thesis, ibid., reports a similar distribution of indebtedness for his sample of 96 farmers.

*178
743
561

TABLE 26. INCIDENCE OF HOSPITAL AND CLINIC VISITS IS SIMILAR FOR ALL AGE GROUPS

Have you ever been to a clinic or a hospital?	20-29 (41)	30-39 (30)	40-49 (33)	50-59 (30)	60 or over (37)
No, never	31%	31%	36%	37%	41%
Yes, for treatment	39	44	39	31	33
Yes, for other reasons	29	25	25	32	26

*178
743
562

If the responses reflect primarily the need for medical care, women who bear children have a greater need for medical care than men, and one would therefore expect hospital use to be higher among women than men. But again, this hunch is not clearly borne out by the results.

TABLE 27. INCIDENCE OF HOSPITAL AND CLINIC USE IS SIMILAR FOR MEN AND WOMEN

Have you ever been to a clinic or a hospital?	Women (90)	Men (143)
No, never	41%	35%
Yes, for treatment	31	39
Yes, for other reasons	28	26

There is, then, reasonable justification for inferring that reported use of clinics or hospitals reflects predisposition to use modern health facilities and not simply a need for medical care.

*178

Economic Level

• 241
434
743

Although higher economic level was linked to the principal agricultural innovations, it is not related to use of hospital or clinic facilities.

Literacy

*178
212
743

On the other hand, just as literate persons were more disposed to use the major innovations (p. 19), in the same way those who can read and write report a greater incidence of hospital or clinic use.

*178
743
*241
572
426

Use of Health Facilities and Other Factors Associated With Agricultural Innovations

Although use of the basic agricultural innovations was shown to be linked to breadth of contacts within the community, on the one hand, and to indebtedness, on the other hand, the association between these factors and use of modern health facilities, although showing the same tendency, is not statistically significant. For the sake of completeness, the figures are reported below:

TABLE 34. NO RELATIONSHIP BETWEEN INDEBTEDNESS OR INTERNAL SOCIAL CONTACTS AND USE OF HOSPITALS AND CLINICS

	"Have you ever been to a clinic or a hospital?"			
	No, never	Yes, for treatment	Yes, for other reasons	Total 100%
Social Contacts				
"More friends"	31%	27%	34%	(61)
"The same"	40	35	25	(134)
"Fewer friends"	32	41	27	(94)
Do you now have a debt?				
No	40%	33%	28%	(140)
Yes	32	41	26	(192)

*177
*178
228
241
244
402
743

SUMMARY

1. In the community of Bang Chan in Central Thailand, various factors are studied statistically in order better to determine the conditions of acceptance of selected agricultural innovations and conditions for using the facilities of modern medicine in clinics and hospitals. Four agricultural innovations were selected, viz. gasoline motor, raising of fish (tilapia), use of fertilizer, and mushroom culture.

2. The present study was concerned with the initial adoption or trial of innovations, rather than the continuing use of these innovations or the merging of the new with the old features of the culture.

3. While adoption of the gasoline motor was associated with all other agricultural innovations, no generalized acceptance of the new was found because: a) adoption of the gasoline motor bore little or no relation to use of non-agricultural innovations such as hospital and clinic facilities; and b) adoption of gasoline motors was only weakly associated with raising of mushrooms.

4. A cluster of traits including high motivation and sizable capital outlay was associated with the use of the gasoline motor.

The meter users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be meter users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and receptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike acceptors of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

177*
178*
207
212
228
241 *
244
369
434
454
743
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546
572

43

7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things? [177* 178* 125]

1.	Fertiliser	9	[241]
2.	Small engine	4	[402]
3.	New rice seeds	3	[243]
4.	Tilapia	98	[228]
5.	Other fish, specified	13	[244]
6.	Fish, unspecified	80	[235]
7.	Mushrooms	45	[231]
8.	Poultry	179	
9.	Pigs	21	
X.	Other, specify	68	
0.	Unascertainable	45	

8. Here, some farmers get a lot more rice from one rai of land than others get. Generally speaking, what are the various reasons why this is so? [243] [433]

1.	Fertiliser	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify	
		53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify _____	15
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

125
[402] b. If no: have you ever made use of one in your work, or not?

3. Yes	115
4. No	106
5. Unascertainable	8

11. What is your opinion about fertilizer?
(See code at end)

[241] 12.a. IF R IS A FARMER: Have you ever used fertilizer or not?

6. Does not apply	17
7. Yes	31
8. No	132
— No Answer	13

b. IF HAS NOT USED FERTILIZER: For what various reasons have you not used fertilizer?
(See code at end)

c. IF HAS USED FERTILIZER: Have you ever used fertilizer in your seed-beds, or not?

9. Yes	20
X. No	13

d. IF HAS USED FERTILIZER: To what extent have you used fertilizer on your fields? On all your fields, or on the larger part of your fields, or on the smaller part of your fields?

1. On all fields	4
2. On larger part of fields	4
3. On minor part of fields	24
4. Unascertainable	1

13. What is your opinion about mushroom growing?
(See code at end)

[244] 14.a. Have you ever grown mushrooms, or not?

1. Yes	143
2. No	188
— No Answer	2

b. IF NO: Do you have any relatives or relative-like neighbors, who have grown mushrooms or not?

3. Yes	111
4. No	44
5. Unascertainable	4

15.a. What is your opinion about tilapia raising?

[228] b. Have you ever raised tilapia, or not?

1. Yes	104
2. No	225
— No Answer	4

45

16.a. ASK ONLY FARMERS: This year just now beginning, will you do anything for increasing your income, outside of rice farming? [125] [434]

3.	Does not apply	13
4.	Yes	162
5.	No	107
6.	Unascertainable	11

b. IF YES: What various things will you do? [224]

0.	Nothing	3	[235]
1.	Mushrooms	12	
2.	Poultry	51	[228]
3.	Fish (Incl. tilapia)	10	
4.	Fertilizer	2	[241]
5.	Other, specify _____	86	
6.	Unascertainable	6	

17. ASK ONLY FARMERS:

a. Last time you planted rice, how many rai of rice did you plant? [243] [483]

1.	4 rai or less	14
2.	5 to 9 rai	25
3.	10 to 19 rai	59
4.	20 to 29 rai	45
5.	30 to 39 rai	53
6.	40 to 49 rai	32
7.	50 to 59 rai	19
8.	60 to 69 rai	14
9.	70 to 79 rai	2
X.	90 rai or more	—
0.	Unascertainable	20

b. And what was the total yield?

1.	120 tang or less	15
2.	121 to 300 tang	28
3.	301 to 600 tang	59
4.	601 to 900 tang	59
5.	901 to 1200 tang	36
6.	1201 to 1500 tang	25
7.	1501 to 1800 tang	10
8.	1801 to 2100 tang	10
9.	2101 to 2700 tang	7
X.	2701 or more tang	3
0.	Unascertainable	21

c. How about the year before—how many rai did you plant?

1.	4 rai or less	14
2.	5 to 9 rai	19
3.	10 to 19 rai	51
4.	20 to 29 rai	47
5.	30 to 39 rai	53
6.	40 to 49 rai	26
7.	50 to 59 rai	20
8.	60 to 69 rai	13
9.	70 to 99 rai	5
X.	90 rai or more	—
0.	Unascertainable	23

52

125 [513] f. During the last year, did it occur to you frequently, sometimes, or never that you had a nightmare?

4. Frequently	16
5. Occasionally	120
6. Never	197

[546] 35. In your life, how many times have you seen a movie, or haven't you ever seen one?

5. Ten times and more	161
6. 4 to 9 times	60
7. 1 to 3 times	75
8. Never	33
— No Answer	4

[426] 36.a. Excuse me, I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?

5. Yes	192
6. No	110
7. Unascertainable	1

b. IF YES: Is your debt now higher, or lower, or about the same as it was two years ago?

8. Higher	68
9. Lower	95
X. About the same	28
Y. Unascertainable	1

c. IF NO: How about two years ago, did you have a debt then or not?

9. Yes	61
X. No	78
Y. Unascertainable	—
— No Answer	1

[441] 37.a. Do you or anybody in your household buy certain products in order to resell them at a profit?

9. Yes	85
X. No	242
Y. Unascertainable	2
— No Answer	4

b. IF YES: Do (you/they) sell things regularly, occasionally or just at festival times?

7. Regularly	31
8. Occasionally	49
9. Just at festival times	5
X. Unascertainable	—

[241] 38.a. And now, I would like to know a little more about fertiliser. Do you think fertiliser is very good, fairly good or bad?

1. Very good	106
2. Fairly good	149
3. Bad	15
4. Unascertainable	63

61

	Qu 11	Qu 12	Qu 13	
1. Positive, no evidence: very good, good, nice	103	114	77	125
2. Positive, with evidence: good results, specific statements	47	120	95	241 •
3. Neutral or mixed	11	20	6	244
4. Negative, no evidence: no good, bad, of no use	9	5	15	228
5. Negative, with evidence: difficult to apply in deep water, must keep using it, too expensive, same results as without fertiliser	33	13	80	
6. Positive, qualified: Fertiliser too expensive	13	—	1	
7. Positive, qualified otherwise: only for high land; very hard to purchase; requires to keep on using it	32	18	18	
8. Respondent states he has no opinion	54	31	26	
X. Negative, qualified: It's not quite good, it depends on the soil	4	4	3	
0. No answer	4	3	1	
9. Respondent's attitude not ascertainable	23	5	11	

	Qu 12a	
0. D.A.	85	125
1. Too expensive	78	241
2. Difficult to purchase	15	
3. Not fit for low land	39	
4. Soil not suitable	3	
5. No ascertainable reason given	28	
6. Too little land	7	
7. Other reasons	56	
8. Have never used it before. Do not now either	12	
X. N.A.	105	
9.	21	

	Qu 12b	
X. N.A. Unascertainable	60	125
0. D.A.	151	243
1. Nothing, cannot do anything	70	435
2. Grow mushrooms	12	458
3. Raise poultry	15	
4. Raise fish (including Tilapia	7	
5. Use fertiliser	—	
6. Find job as laborers	6	
7. Other: try to find new seed, sell vegetables, borrow money from neighbors, keep rice until price goes up, economise, send sons to work	26	

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

CHAPTER VI

FARM ORGANIZATION AND MANAGEMENT

Broadly speaking, a farm is one or more tracts of land held or operated as a unit for the production of agricultural products.[1] The subject of farm organization and farm management is usually treated under the more general term "farm management". A recognition of the distinction between these two functions of the farm operator is necessary. Organization refers specifically to the function of creating the general scheme or plan of production, whereas management refers to the function of putting the scheme into operation and of making those adjustments in the business which are necessary in order to obtain the maximum economic returns from the farm business as a whole.[2]

Limited Role of Bangchan Operators

1. Limited role in organization: Discussions in the preceding chapters have indicated that at the present stage of technological development Bangchan operators have really not much choice in creating the general scheme or

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1. H. C. M. Case and Paul E. Johnston, Principles of Farm Management, J. B. Lippincott Company, Chicago, 1953. pp. 466.

2. G. W. Forster, Farm Organization and Management (New York: Prentice-Hall, Inc., 1950), p. 19.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 312 themselves only to the broadcasting method of sowing, while the non-floating varieties are sometimes broadcast and sometimes transplanted. In the broadcasting method, the farmer simply strews the seeds on the plowed-and-harrowed field. In the more or less twice-as-laborious transplanting method the farmer first nurtures seedlings in a special bed and then at the appropriate growth stage transplants the seedlings onto his field in even rows. Both before and after transplanting, the plants require rather careful water control, possibly only by the employment of dikes. It has been observed that the method of planting is not optional with the farmer. Rather, it is governed by topography, expected condition of water supply, and availability of labor. To sum up: Bangchan rice is irrigated, non-floating, and usually transplanted but sometimes broadcast.[1]

243 247 Any attempt to get the farmers to alter the system of planting should be planned with care; otherwise more harm than good might result. There is a general belief among leading agricultural officials that the broadcasting method is undesirable because it allegedly gives only one-half the yield of the transplanting method. The author reserves his judgment on this, for no systematic comparison between these two methods of growing rice has as yet been made. Consideration also must be given to the fact that the transplanting method

1. According to our 1948 survey of 104 rice farms, of a total of 3,528 rai 3,030 rai were transplanted and 498 rai broadcast. Thus, the proportion was roughly six transplanted rai to one broadcast rai.

243 requires much additional hand labor and reduces the possibil-
242 ities for mechanization to a minimum. On the other hand, the more labor intensive transplanting method would seem to be more suitable to a population pressure area like Thailand if it really gives as relatively higher a yield as it is claimed to give.

Farm equipment

243 In Thai agriculture, it is very difficult to separate
351 the farm from the home. In the chapter on the community it
[235] has already been indicated that the home lot not only is the
[244] living place for the farm family but also provides space for
[245] threshing and for storage of farm equipment, room for chicken
[226] raising, land for kitchen garden and for fruit and vegetable growing, and space for fish trapping by the draining method.
243 In other words, all the material components of the farm, except
351 the rice fields, are located or stored on the home lot. Here,
422 items that are uniformly or frequently found include:

A. Household equipment

1. Buildings
2. Furniture
3. Bedding facilities
4. Kitchen accessories
5. Storing facilities
6. Lamps of various sizes
7. Ritual accessories

B. Farm equipment

1. Farm building: equipment and buffalo shed.
2. Implement: plow, harrow, yoke, roller, shovel, spade, hoe, weeding knife, noria, sickle, pitch-fork, rake, broom, winnowing machine, wooden winnowing spitula, basket, mat bin, box bin, home-mill.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 The preliminary study in 1948-49 shows that a well
433 equipped farm has a higher crop yield than a poorly equipped farm. Yet the issue here is not one of deliberately choosing the best factor combination among several others. Rather, the lowly capitalized farm is so equipped because of the failure on the part of the operator to command enough capital to meet the required standard factor combination. It is seen, then, that if the operator had enough resources he would follow the established pattern of farm capitalization, thus there appears also to be not much choice either in the selection of the kinds and amount of farm equipment.

243 The operator may decide on whether or not fertilizer
242 is to be used, and this will certainly affect factor combina-
433 tion. It has been observed, however, that Bangchan farmers have never applied any commercial fertilizer to their rice fields of which plant nutrients have been replenished only by the annual inundation and natural deposition of buffalo manure. The reason for the rice farmer's disinclination to fertilization as given by the Thai Ministry of Agriculture was the relatively high price of commercial fertilizers.[3] In fact, progress reports on fertilizer, a study conducted by the ministry, indicate the possibility of profit from proper application of commercial fertilizer on rice fields, but operating on a narrow margin the rice farmer simply could not afford the risk. Uncertainty due to weather and

3. Ministry of Agriculture, Problems in Thai Agriculture, op. cit.

[P. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

6

278 [563] The Chinese druggists, many of whom stocked among their traditional pharmacopeia a few modern medications, gave out occasionally to their customers information derived from the manufacturer's instructions for use. People with minor indispositions sometimes sought a druggist's advice. He suggested traditional or modern remedies, depending on the wishes of the customer. Thus, the druggists also acted as a bridge to the use of modern remedies.

484 Facets of Social Life Pertinent to Childbearing:

Communication and Transportation

People went to Minburī, and less often to Bangkok, to buy, sell, work, or visit relatives. A few adults had never been outside Bang Chan.

494 [484] [206] [493] Along the road buses passed Bang Chan every two or three hours during the daytime only. Minburī was a ten minute ride, Bangkok, an hour. Minburī had no taxis, and no telephone existed to call a taxi from Bangkok. Two or three persons owned bicycles.

505 484 Within Bang Chan, transportation varied with the season. From June to February travel was entirely by boat, even to a neighbor. A message to a local midwife, for instance, could be carried quickly by a speedy peddler in his skiff. If an emergency trip to the Minburī Health Center appeared necessary, a person could be rowed fairly comfortably along the canal that bordered the road. Going by boat to Bangkok, a whole day's row away, or four hours by the motor boat from Minburī, was not considered convenient even for passenger traffic, much less for a sick person or a woman in labor.

484 844 [494] The inconvenient time of year was the three month dry season. Boats then could hardly go on the canal that ran through the middle of Bang Chan, while the smaller canals became muddy or even dry. Walking barefoot over sharp stubble in tropical sun was hard. To transport a woman in labor, assuming she could stand it, an improvised stretcher could be made, but to subject her to the jolting bus was usually foolhardy. It was not customary to flag down passing cars. If things went wrong for a woman in labor during the hot, dry season, there was practically no chance of getting her to a hospital, and none of getting modern help to her.

243 433 Work Habits in the Economy

Because of the annual flood the land was admirably suited to growing a single bounteous crop of rice. After all needs for

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janlekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 16 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively man's work (even this was done by women elsewhere in Thailand [Kingshill 1960:73]).

Besides the work in rice-fields, women dug and cleaned

Thus she performed several rites involving the maintenance of the immature khwan of children and of rice.[54]

The acme of maternal virtues was manifested in the "good nourishers" (lîang dî). These women had borne many children who "nursed and slept well, did not cry, and easily established good habits." They were lîang dî not just because of the time spent by the fire, for that time could be matched by persons who had lost babies. They were special persons of more than usual capacities for success in nurture. Good to have around for their auspicious influence, they were called upon to inaugurate or help processes concerned with health and growth. They performed, or caught the child in the winnowing ceremony, or gave babies their first suck. They were the persons to whom a sickly child was brought so that his health might be improved by calling the soul and tying holy cord at wrist and ankle (riak khwan).

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54. If a child indicated by continuous crying that he had lost his khwan, a mature (sùk) woman had to be asked to call it back ritually and re-tie it into the body with sacred cord at wrist and ankle. There was no special magic. Her words suffice. Khwan-ladlâng, a more elaborate and compelling form of the same ceremony, used magical formulae (Textor:401-402). One of Phillips' sentence-completion tests was, "If one is frightened, the best thing to do is..." Of the respondents, 7 women, including one Muslim, would set to work to "call back the khwan" (Phillips:267-268). No man suggested the latter.

In the agricultural rites, women handled the rice's khwan in basically the same way when it was immature: inviting the young Rice Goddess to stay and grow in the field, and transporting to the house the child-like seed that only next year would grow to maturity. For these rites a woman used an incantation if she knew one. That she could also handle the rice khwan by speaking "extemporaneously" (Textor:429), indicated that her mere words were enough. If no one else were available, a non-sùk woman could call the khwan of a child or of the Rice Mother by reason of her in-born female potency, but could not "ladle" a khwan.

When the khwan was mature (after a person was about age 10) men took over its care. In the men's thaw khwan (khwan-strengthening) rite, here, too, women were the ones to carry off the cloth-and-leaf covering of the bàisĭ (tiered offering) into which the khwan [illegible]flitted during the ceremony. The rice-ceremony at the threshing floor was a thaw khwan, so was performed by men.

4

132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [943] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [221] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [435] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part [028] of the Thai-Buddhist community. Information to be presented on food habits refers prisarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

193 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 481 more, a year-round road, connecting Bangkok and Minburi, the 484 nearest market town, ran through one edge of the village. Bus 587 service was available along this road, to either Bangkok or [934] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [501] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ‹---WET---›							‹--COOL--›		‹--HOT--›		
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	---→ heavy		moderate	‹---heavy---›		‹------light------›			‹------negligible------			
Canals	rising			high		(floods)			lowering fast		low,dry	
Cultivation of Rice	plowing-------→ seedbed grown				growing	early var. mature						
				TRANSPLANTING		‹---------HARVEST--------›						
School	vacation							vacation			vacation	
Cash available Source	cash in hand---------- rice					‹-----cash shortage-----›				cash in hand--		
						cash jobs---------→			main rice sale			
Fruit;vegetables	--→ ‹-new planting-›									‹------annuals die-----		
Fish: Supplies	ponds drained-→									‹-----ponds drained-------		
Maturation			‹-------many varieties----------›							‹---best varieties---›		
Preserving	‹---much---›		‹----------moderate----------›							‹----------most-------›		
Ceremonies	ceremonies-------→			‹-----Buddhist Lent-----›							‹--ceremonies---	
Dietary survey	--→ ‹-----Round I------›					‹-------Round II-------›			‹----Round III----›		‹--Round IV-	

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 15°F (10°C) in April and 22°F (12°C) in January.

Despite the availability of fish and of vegetables in the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

The two months of September and October during which the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit and take trips. A few might go on a pilgrimage. Therefore, in this season, all family members were less often together at the evening meal. Fishing was a continuous occupation, with some preserving and home craft. Jobs such as selling food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

High water caused time-consuming inconvenience only in earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

By November, the earliest varieties of rice matured. Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience of purchased food was greatest, cash was exhausted. With rice money in sight, venders might be generous with credit, but they could navigate only the larger canals, so were not available to many.

There was an important psychological difference between

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1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at either seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

Attitudes Toward Food

To older Bang Chan residents, to lack rice was to starve even though fish or vegetable fare were at hand. Since rice was the staff of life, many important customs clustered about it. Ceremonies to the Rice Goddess accompanied the raising, selling, and storing of rice. When the unhusked rice was in the bin, it could not be withdrawn at any time as needed, but astrological charts had to be consulted to make sure the day was auspicious. Paddy could never be withdrawn on Friday, a day sacred to the Rice Goddess. After cooking, the best rice was said to be at the mouth of the pot, so this was offered on ceremonial occasions. Important rules were that when cooking rice, the cover of the pot must never be laid in a mortar and it must be inverted, never laid down flat; otherwise one would be short of rice. One must never scrape the top of the rice with the cover, or the "soul" of the rice would be scraped out of the pot. Moslem residents murmured an Arabic prayer every time the rice was put into the pot, and every time the pot was put onto the fire, as well as before eating.

Rice has been generally regarded as the strength-giving food par excellence. A portion of Chutima's (1939) description of the "old system" follows:

> Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal. Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply.

The quotation indicates first that in the past, rice was considered much more important as food than the "with-rice" dishes. Since the Food and Drug Division of the Ministry of Public Health has been attempting to encourage the eating of more "with-rice," the attitudes found in Bang Chan are of interest. One informant stated that only rice can make children fat, and that the "hot taste" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish, and was weak; he refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk (evaporated or dried milk, diluted with boiled water) expressed the opinion that the ancient belief was based on thrift. He said that thrifty

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from venders almost every day. They said [554] [922] "Some do not pay money to buy food, but pick or get it from the canal or gardens --this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

433 511 Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

243 [649] 256 [262] Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

244 [554] [945] Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chilies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

222 262 Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)ga-(5)noo flowers were used by 3 families on one day each;

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244 cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

243 At the height of the boom, the demand for rice straw
244 swept many of the fields clean of the stubble usually left
234 there after harvest, thereby decreasing food for the roaming
177 buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralis (1957) were 1) the cash outlay required was small, 2) returns were realized quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralis made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

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Food for Homage-to-the-Teacher Rite Performed by a Buddhist Priest Who Was a Traditional Practitioner

Item	Amount	Cost in Baht	Item	Amount	Cost in Baht
Cereals and Legume Seeds:			Fish and Meat (cont.):		
Rice noodles		10.	Dried fish	6	gift
Soybeans & fermented vegetables	25 kg.	12.	Roasted fish	3 kg.	gift
			Shrimp paste	2 kg.	18.
Mung beans	10 lit.	25.	Lobsters		15.
Cassava flour		2.25	Lobsters (for soup)		7.50
Sugar and dessert:			Pig's skin (for soup)		10.
			Beef[1]	15 kg.	150.
Palm sugar	1 pail	67.	Ingredients for Mussel-man curry[1]		27.
Cane sugar	14 kg.	85.			
(2)Kha-(5)nom (3)tuaj-(1)foo	500 cups	35.	Boiled chickens[2]	2	22.
			Pig's head[2]	4 heads	222.
Fish and Meat:			Pork[2]	4 kg.	40.
Fish ((1)plaa (2)myk) for soup		6.			
Silurus and serpenthead	60 kg.	gift			

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

whole, depends in large part on one's frame of reference.[2] In the most general terms, the people of Bang Chan are like almost all ethnic Thai peasants (excepting on some counts Thai Moslems and some of the economically disenfranchised people of the Northeast) in that they have a keen sense of membership in the nation-state with a deep loyalty to the Crown, speak the Thai language, are Therevada Buddhists, are outwardly highly deferential to the authority of the Central government, and have a conception of the good life that stresses fun, physical comfort and security, intellectual simplicity and practicality, and a moral (as contrasted with a natural) ordering of the universe. Too, like the vast majority of their rural compatriots,[3] they are engaged in the production of rice, an activity which to them is not only an economic operation (Ingram 1955, Janlekha 1955) but almost a way of life, being bound up with their social structure, dietary habits, religious practices, and even their philosophical (J. R. Hanks 1961) and aesthetic conceptions.

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[2] For readers unfamiliar with Thailand, the nation-state, it should be noted that the country is predominantly rural; 84 percent of the total national labor force is in agriculture and there are only ten towns with populations of 20,000 people or more, in which 6 percent of the national population (1947 census) live. Although Bangkok has a population of approximately 1,200,000, the second largest city, Chiengmai, has only 60,000 (1957 estimate).

The nation also has a high degree of ethnic homogeneity, 82 percent of the population considering themselves native Thai (1957 estimate). The largest ethnic minority group is the overseas Chinese, comprising 11.3 percent of the population (1953 estimate, from Skinner 1957), the balance being Malays, Cambodians, and Indians; the so-called tribal groups number in toto only about 150,000 people.

The religious composition of the country is 94.1 percent Buddhist, 3.9 percent Moslem, 0.5 percent Christian, and 1.5 percent "others," many of whom are tribal animists. Thai Buddhism is of the Southern (Therevada, Hinayana, or "Lesser Vehicle") variety and as practiced by most Thai, has syncretized within it many Brahmanic and traditional Southeast Asian animistic elements (see the chapter on "Religion" in Sharp *et al.* 1956, and Textor 1960). The largest minority religion, Islam, is practiced by ethnic Malay living in the four southernmost provinces of Thailand, as well as by some ethnic Thai—many of them descendants of former Malay slaves or war prisoners—scattered through the areas north and east of Bangkok, including Bang Chan, where they comprise 9.8 percent of the local population. Relationships between Buddhists and Moslems, at least in Bang Chan, are quite amicable and except for ideal prohibitions against intermarriage and occasional offhand remarks such as "Moslem women are loose" or "Moslems kill animals," there is little overt hostility between the two groups. Certainly few Bang Chaners ever distinguish between their Buddhist and Moslem neighbors when arranging a work group, selecting a drinking partner, or even compiling a guest list for a son's ordination.

[3] Janlekha (in Sharp *et al.* 1953: 110) indicates that 55 percent of the total national labor force is involved *solely* in the cultivation of rice—which occupies approximately 90 percent of the total cultivated land area—and as many as 92 percent of all agricultural households are rice households. The 55 percent figure excludes all those people who are involved in the transportation, milling, storing, and distribution of rice. Eighty-five percent of the population of Bang Chan (1953) are rice farmers.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

593 she gives it to me." In describing his relationship with his maternal grand-
152 parents, with whom he spent all but two of the first twelve years of his life,
159 this same person says:
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> My younger sister and I were born one year after the other. So mother gave me to grandmother to be weaned. I lived with her until I became a novice at the monastery at the age of twelve. I lived with grandmother, so I loved grandmother and grandfather more. I loved grandmother even more than my own mother and father. Wherever grandfather and grandmother went, I went too. Grandmother loved me: she always gave me sweets and toys. I had everything I wanted because I was the only young thing in the house. She loved me. She was going to give her property to me, land and gold, as much as she was going to give to her own children. But it was only a promise. I got the gold, but not the land, because when grandmother died, grandfather got a new wife. She was young. . . . I didn't quite like her. The young woman was too economical. . . . Sometimes she prevented grandfather from buying good things for me. When grandfather was going to buy gold or anything for me, she stopped him. She wanted him to buy for her more than for his grandchild.

593 This excerpt, taken from the biography of one of the life history informants and comprising almost the complete portrayal of the relationship between the informant and the individuals with whom he spent the crucial years of his childhood, is by no means atypical. The point is that of all the myriad
(431) elements in the relationship, or of all the loving characteristics that in his
(603) eyes the grandparents had, he chose to emphasize only the material gifts they had given him as the measure of their love. Other informants are no different: one man said he knew his father did not love him because when he died he left the family home to the Buddhist monastery; and a woman said she admired her father because "when he died there was property left. He was a good man: he did not abandon his children. He was worried about them." (Her other reason for *admiring* him was that "he was the person who brought me into the world.")

596 The other major form of familial love is evidenced in the camaraderie,
593 warmth, and generosity that surrounds the family in planning and ac-
243 complishing the various tasks associated with rice farming. As indicated earlier, the cultivation and harvesting of rice is not only an economic operation in Bang Chan, but almost a way of life. When villagers must deal with the very real and complex problems of planting and bringing in the harvest, all the individualistic propensities, and even to an extent the authority patterns, with which they normally indulge themselves recede before the coöperative requirements of the task at hand. In a very real sense the functional requirements of the economic activity, particularly during

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[16] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[16] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy, parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

BANG CHAN

FOREWORD

The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, Minburi. A century-old canal and to the north of it a post-war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

In 1954, when data for the present study were still being gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the households were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupation of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple food of the people. During the wet season and into the cooler dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

The Thai countryside is divided into hamlets, each with a headman in charge of the thirty to sixty households of the hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

121 I recall seeing portable motors stored in some Bang Chan houses and
• [243] can still picture many threshing floors with neatly layered heaps
[244] of rice straw where the mushrooms grew. A few of these apparently "progressive" farmers had special ponds to which they proudly invited me to watch the feeding of the tilapia fish. Occasionally one of them seized the opportunity of my visit to inquire about sending a sick kinsman to a Bangkok hospital. Without Dr. Goldsen's analysis I might easily have been lured to generalize that certain farmers were "innovation minded."

*177 The survey's evidence against a general "innovation mindedness"
*178 cautioned me to reconsider my impressions. I realized that it would
121 be an oversimplification of the social network in Bang Chan to
621 think of it as containing a group of "progressives" who sought avidly each new agricultural wrinkle and who pitted themselves against another group of "conservatives" who resisted change. Instead I was led to see some farmers interested in certain new things, others indifferent to these but interested in other things. Bang Chan looked more like a mosaic of small groups, each fitting or rejecting the new according to its circumstance.

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*178 Instead of thinking simply of a group of highly motivated,
243 wealthy farmers who assumed the responsibility of trying out the
244 new for the benefit of their less affluent neighbors, I was alerted to recognize a variety of kinds of innovation. Innovation in growing rice, where one might employ a motor or fertilizer, differed considerably from earning extra cash during the dry season by growing mushrooms. The analysis of the survey evidence made me sensitive to the realization that mushroom culture was clearly a seasonal activity requiring little investment and open to any family, rich or poor, that needed cash. Certainly no genuine rice farmer would permit this extra work to interfere when the rains called time for ploughing. The finding that no correlation existed between acceptance of motors and growing mushrooms seemed in retrospect clear, almost self-evident.

*177 The survey analysis indicating that owning a motor, despite
182 my initial impressions, bears no relation to use of modern medical
244 facilities, made me reexamine my initial impressions. My own
757 studies had made me aware that making a living is a positive action among Bang Chan farmers: it requires forethought and will. Health, however, for Bang Chan is a kind of negative entity to be taken for granted until sickness arrives. Bang Chan has no vitamin pills nor tonics to maintain health, though all work actively to relieve sickness. Growing mushrooms and using modern medical facilities are phenomenally different undertakings. Certainly the survey analysis in this regard bore out and corroborated this "thematic" analysis.

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 • 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. So also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

*177
*178
243
433

The Innovations

A. Agricultural Innovations: During the past few years, certain innovations have come to Bang Chan which have increased agricultural productivity and improved the level of living. Some of these innovations are listed below.

402
*177
*178
[ZH]

1. The small motor. One innovation is the small engine, gasoline motor, which is used mainly as a water-lifting device for irrigation purposes. In 1950 only five small motors were found in Bang Chan.* Twenty-one per cent of the respondents in the 1955 survey, however, report owning these motors; the majority of the respondents (68 per cent) claim to have used this labor-saving device which is sometimes jointly owned by more than one household and is frequently loaned out.**

244
434
*177
*178

2. Straw mushroom growing. Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per cent of the respondents report that they have engaged in this activity***). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

One advantage in the culture of straw mushrooms is that it permits quickly realized returns. The cycle, from sowing spores in moistened straw to harvesting the mushrooms, takes about two to three weeks. Another advantage is that there is relatively little heavy work or investment required besides the acquisition of straw and spores. A third advantage is a ready market, for the plant is sought by Chinese dealers in Bangkok who supply hotels and restaurants. Bang Chan rice farmers who engage in mushroom growing as a sideline activity sell it either to local middlemen or directly to the Chinese in Bangkok.

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[113] * Sharp, L., H. M. Hauck, K. Janlekha, and R. B. Textor, Siamese Rice Village, A Preliminary Study of Bang Chan. Thailand, Cornell Research Center, June, 1953.

[125] ** The questions: "Do you own a small engine motor or not? (If 'NO'): Have you ever made use of one in your work?"

[125] *** The question: "Have you ever grown mushrooms, or not?"

Economic Level

It could be, of course, that people on a higher economic level are in a better position to try agricultural innovations, since they might more easily afford not only an initial cost but also possible loss in trying out something new.

The survey data provide several indicators of economic level. Among other questions on this subject, all respondents were asked: "Here in your household how many buffaloes do you own?" About one-quarter reported owning no buffaloes at all; a little more than that proportion reported owning four or more; the median number of buffaloes reported was between two and three.

In Bang Chan buffalo are an indication of wealth, as is the amount of land planted to rice. Thus all farmers in the sample were also asked, "Last time you planted rice, how many rai* of rice did you plant?" About a third reported that they planted 19 rai or less; about one-fourth reported that they planted 40 rai or more; the median number of rai reported was 26.3.

If the reported number of buffalo owned is an adequate measure of economic level, then one would expect a high correlation between reported buffalo ownership and reported number of rai planted. If the expectation is borne out by the survey data the two indices may be used interchangeably. (Table 7 reports this relationship for the male farmers in the sample.)

TABLE 7. FARMERS# WHO OWN MORE BUFFALOES ARE MORE LIKELY TO CULTIVATE LARGER LAND HOLDINGS

"...how many buffaloes do you own?"	None, one or two (99)	Three or more (112)
"...how many rai of rice did you plant?		
Less than 9	31%**	11
10-19	32	7
20-29	18	27
30-39	15	23
40-or more	3	41

Male farmers only
** Percentages may add to 99 or 101 owing to rounding of figures.

* A Thai land measure; 1 rai = 0.4 acres.

7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things? (177* 178* 125 [241] 402 [243] 228 244 235 231)

1.	Fertiliser	9
2.	Small engine	4
3.	New rice seeds	3
4.	Tilapia	98
5.	Other fish, specified	13
6.	Fish, unspecified	80
7.	Mushrooms	45
8.	Poultry	179
9.	Pigs	21
X.	Other, specify	68
0.	Unascertainable	45

8. Here, some farmers get a lot more rice from one rai of land than others get. Generally speaking, what are the various reasons why this is so? [243] [433]

1.	Fertiliser	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify	53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify	25
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

16.a. ASK ONLY FARMERS: This year just now beginning, will you do anything for increasing your income, outside of rice farming? [125] [434]

3.	Does not apply	13
4.	Yes	162
5.	No	107
6.	Unascertainable	

b. IF YES: What various things will you do? [224] [235] [228] [241]

0.	Nothing	3
1.	Mushrooms	42
2.	Poultry	51
3.	Fish (Incl. tilapia)	10
4.	Fertiliser	2
5.	Other, spec[illegible]	84
6.	Unascertainable	6

17. ASK ONLY FARMERS:

a. Last time you planted rice, how many rai of rice did you plant? [243] [433]

1.	4 rai or less	14
2.	5 to 9 rai	25
3.	10 to 19 rai	49
4.	20 to 29 rai	65
5.	30 to 39 rai	53
6.	40 to 49 rai	32
7.	50 to 59 rai	19
8.	60 to 69 rai	14
9.	70 to 79 rai	2
X.	90 rai or more	—
0.	Unascertainable	20

b. And what was the total yield?

1.	120 tang or less	15
2.	121 to 300 tang	28
3.	301 to 600 tang	59
4.	601 to 900 tang	59
5.	901 to 1200 tang	56
6.	1201 to 1500 tang	25
7.	1501 to 1800 tang	10
8.	1801 to 2100 tang	10
9.	2101 to 2700 tang	7
X.	2701 or more tang	3
0.	Unascertainable	21

c. How about the year before--how many rai did you plant?

1.	4 rai or less	16
2.	5 to 9 rai	19
3.	10 to 19 rai	51
4.	20 to 29 rai	67
5.	30 to 39 rai	53
6.	40 to 49 rai	26
7.	50 to 59 rai	20
8.	60 to 69 rai	13
9.	70 to 89 rai	5
X.	90 rai or more	—
0.	Unascertainable	23

125
[243]
[433]

17.d. And what was the total yield at that time?

1.	120 tang or less	20
2.	121-300 tang	14
3.	301-600 tang	62
4.	601-900 tang	64
5.	901-1200 tang	50
6.	1201-1500 tang	23
7.	1501-1800 tang	10
8.	1801-2100 tang	8
9.	2101-2700 tang	7
X.	2701 or more tang	4
0.	Unascertainable	31

e. And how many rai did you plant two years back?

1.	4 rai or less	18
2.	5 to 9 rai	17
3.	10-19 rai	45
4.	20-29 rai	72
5.	30-39 rai	52
6.	40-49 rai	26
7.	50-59 rai	18
8.	60-69 rai	12
9.	70-89 rai	4
X.	90 rai or more	—
0.	Unascertainable	29

f. And what was the total yield that time?

1.	120 tang or less	20
2.	121-300 tang	24
3.	301-600 tang	48
4.	601-900 tang	69
5.	901-1200 tang	38
6.	1201-1500 tang	8
7.	1501-1800 tang	7
8.	1801-2100 tang	5
9.	2101-2700 tang	4
X.	2701 or more tang	1
0.	Unascertainable	69

[243]
[435]

18. ASK ONLY FARMERS:

a. Have the changes in the price of rice during the last two or three yea
caused you any worry, or not?

7.	Yes	156
8.	No	104
9.	Unascertainable	33

b. IF YES: What are you doing about it?
(See code at end)

[243]

19.a. Do you, at present, have your own home rice mill, or not?

X.	Yes	105
Y.	No	228

b. IF YES: What various things do you do with the polishings? 125

1.	DA as mill not used	3
2.	Used for feed	99
3.	Used for food	—
4.	They are sold	3
5.	Other, specify_____	3
6.	Unascertainable	2

[243]

c. ASK ALL: During this past year, did your family eat home-milled rice entirely, in major part, in minor part, or not at all? [262]

7.	Entirely	5
8.	For major part	51
9.	For minor part	78
X.	Not at all	199

20.a. As you know, some people have had plenty of chance to learn to read, while others have hardly had any chance. How about you yourself? Are you able to read the Thai language, or haven't you ever had the opportunity to do any reading? [212]

1.	Yes, can read	224
2.	No	109

b. IF R CAN READ: Would you say it is hard for you to read, or easy, or about medium?

3.	Hard	15
4.	Easy	85
5.	Medium	124
6.	Unascertainable	—

c. ASK ALL: Now how about writing? How is it with you yourself? Are you able to write Thai, or haven't you ever had the opportunity to do any writing?

7.	Yes, can write	227
8.	No	106

d. IF R CAN WRITE: How much writing do you do? Are you able to sign your name, or can you also write a letter?

9.	Sign name only	63
X.	Can write letter	163
0.	Unascertainable	1

21.a. Suppose there were a factory in Minburi paying 20 tiesls per day. Would you apply for a job to work in this factory? [464]

7.	Yes	162
8.	No	159
9.	Unascertainable	12

b. Do you think that someone else from your house would apply for a job there?

X.	Yes	105
Y.	No	211
0.	Unascertainable	17

125
[412] 50.d. (In your household) is there a pair of scissors of any kind or not?

	7. Yes, scissors	219
	8. No	114

[207] e. (In your household) is there a radio or not?

	9. Yes, radio	47
	0. No	286

[402] f. (In your household) is there a winnowing machine, or not?

	X. Yes, winnowing machine	102
	Y. No	231

[243] g. (In your household) is there a windmill, or not?
[402]

	1. Yes, windmill	161
	2. No	172

[805] 51. Do you have a wrist watch, or not?
[405]

	3. Yes	79
	4. No	252
	— No Answer	2

[231] a. Here in your household, how many buffaloes do you own?

	5. None	81
	6. One	27
	7. Two	67
	8. Three	61
	9. Four or more	97

b. (Here in your household) how many pigs do you have?

	0. None	321
	1. One	2
	2. Two	2
	3. 3 or more	1
	— No Answer	7

[235] c. (Here in your household) how many chickens do you have?

	4. None	35
	5. 1 to 2	7
	6. 3 to 4	17
	7. 5 to 9	31
	8. 10 or more	243

d. (Here in your household) how many ducks do you have?

	0. None	208
	1. 1 to 2	9
	2. 3 to 4	16
	3. 5 to 9	58
	4. 10 or more	42

	Qu 11	Qu 13	Qu 152	
1. Positive, no evidence: very good, good, nice	103	114	77	125 241
2. Positive, with evidence: good results, specific statements	47	120	95	244
3. Neutral or mixed	11	20	6	228
4. Negative, no evidence: no good, bad, of no use	9	5	15	
5. Negative, with evidence: difficult to apply in deep water, must keep using it, too expensive, some results as without fertiliser	33	13	80	
6. Positive, qualified: Fertiliser too expensive	13	—	1	
7. Positive, qualified otherwise: only for high land; very hard to purchase; requires to keep on using it	32	18	18	
8. Respondent states he has no opinion	54	31	86	
X. Negative, qualified: It is not quite good, it depends on the soil	4	4	3	
0. No answer	4	3	1	
9. Respondent's attitude not ascertainable	23	5	11	

	Qu 129	
0. D.A.	85	125 241
1. Too expensive	78	
2. Difficult to purchase	15	
3. Not fit for low land	39	
4. Soil not suitable	3	
5. No ascertainable reason given	28	
6. Too little land	7	
7. Other reasons	56	
8. Have never used it before. Do not now either	12	
X. N.A.	105	
9.	21	

	Qu 168	
X. N.A. Unascertainable	60	125 243 • 435 458
0. D.A.	151	
1. Nothing, cannot do anything	70	
2. Grow mushrooms	12	
3. Raise poultry	15	
4. Raise fish (including Tilapia	7	
5. Use fertiliser	—	
6. Find job as laborers	6	
7. Other: try to find new seed, sell vegetables, borrow money from neighbors, keep rice until price goes up, economise, send sons to work	86	

243

[For agricultural data, passim, see category 116, pp. 1-4, 31-38, 45-48, 92-148, 166-319, and 336-393.]

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7
Bang Chan

SUMMARY

A general description is given of conditions in a
105 Siamese rice village, 1952-54, as they relate to food supply
26 and food habits. Activities at various seasons of the year
[22] are described. The heavy work seasons occurred during trans-planting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

105 Food was mostly home produced and an important factor
262 in the standard of living was the number of productive hands
433 available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods
[235] were used. Nearly all of the families in Bang Chan raised
[433] chickens, and some raised ducks, but about 3/5 of all eggs
[244] produced were sold. Every family had some sort of kitchen garden, including banana trees and other plants, but spices
[245] and chili were much more commonly grown than vegetables and
[227] fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

[443] Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, coconut, palm sugar and small amounts of vegetables.

[434] Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items.
[178] Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

105 Preparation of some typical dishes, meal service and
264 techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

221 132 243 244 245 262 434 503 796 871

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ←WET→							←COOL→		←HOT→		
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	---→ heavy		moderate	←heavy→		←light→			←negligible→			
Canals	rising			high		(floods)			lowering fast		low,dry	
Cultivation of Rice	plowing→ seedbed grown		TRANSPLANTING		growing	early var. mature		←HARVEST→				
School	vacation							vacation			vacation	
Cash available Source	cash in hand rice				←cash shortage→ cash jobs→				main rice sale		cash in hand	
Fruit;vegetables	→ ←new planting→								←annuals die→			
Fish: Supplies	ponds drained→								←ponds drained→			
Maturation			←many varieties→						←best varieties→			
Preserving	←much→			←moderate→					←most→			
Ceremonies	ceremonies→			←Buddhist Lent→						←ceremonies→		
Dietary survey	→ ←Round I→			←Round II→				←Round III→		←Round IV→		

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 18°F (10°C) in April and 22°F (12°C) in January.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

244 Vegetables and Fruit. - Although kitchen-gardening has been encouraged by the Thai government, vegetables and fruit were grown in Bang Chan to a limited extent only. Every family had some sort of kitchen garden, but many edible plants which can be grown in the village were grown by relatively few families. The list of fruits grown in Bang Chan in 1948-49 (Sharp et al., 1953) included four times as many items as were grown by one or more of the 11 families that participated in the dietary study. The list of vegetables and spice plants grown or gathered by these families included 27 items, as compared to 41 listed by Sharp et al. Spices and chili were more commonly grown than vegetables and fruit.[1]

244 245 433 One affluent household whose food expenditures for 1949 were reported by Sharp et al., (1953, pp. 214-215) produced for home use, 125 kg. of palm sugar valued at 200 baht and 500 coconuts, valued at 450 baht. Home production of both of these was unusual. Few families in Bang Chan grew either sugar palms or coconut palms and expenditures for coconuts and palm sugar were usual. During the major flood of 1942, villagers noted that coconut palms survived whereas all other fruit trees were destroyed. After this, a number of farmers planted coconut palms, but they had not yet begun to produce.

361 311 351 In 1954, about 120 acres (300 rai) of the total of about 2800 acres (7000 rai) of land in the village were used for home sites and home gardens for 336 households. Individual home sites usually varied in area from about one-quarter to one acre, and were occupied by buildings, threshing floor and space for poultry as well as trees and garden space. Portions of this might be under water for several months of the year. Increased home production of fruit and vegetables would in many cases necessitate increasing the size of the home site by purchase, mounding or both. Ordinarily, increased land for the kitchen garden was obtained at the expense of some of the

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245 249 262 262 245 1. In a typical farm garden in Bang Chan one would find bananas growing, and a number of plants used for seasoning curry. Various kinds of chilies, lemongrass, bergamot, of which both rind and leaves are used, and galangal were grown by all families who participated in the dietary study. Both sweet and holy basil were commonly grown. Many families grew one or more varieties of gourds and of eggplant, some of which can be trained to grow on a tree or trellis. The inflorescence of the banana was also used as a vegetable. Leafy vegetables were not commonly cultivated but some families grew (2)phag (2)ka-(2)cheed, a green water plant, in gardens staked out at the edge of the canal, or in a pool, and some had trees, the leaves of which were edible. Swamp cabbage or (2)phag (3)bung grew wild along the edge of the canals and was the most commonly used green leafy vegetable. A few families grew guava, jujube, star gooseberry, Manila tamarind, mango and pineapple.

262 might provide clues to ways in which the diet may be improved.
128 Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

128 At the end of Chart 2, sources of water for drinking and food
312 preparation have been included, not only because water is
271 properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

271 Untreated water was the customary beverage with meals.
[64 Ordinarily no distinction was made in source of drinking water
[86 for children and adults although boiled water was given to mothers and infants to drink during the post partum rest
[158 period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink
[272 hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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[114 1. See Sharp et al., 1953, pp. 193-196 for a list of 32
[136 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits
[244 grown in Bang Chan, and p. 295 for 11 fruits known to be used
[245 but not grown there; pp. 296-298 for 41 vegetables grown in
[262 Bang Chan, and pp. 299-300 for 24 other vegetables used.

[824 2. (4)Khlyb was the term used in Bang Chan for an uni-
[852 dentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

[114 3. Golden and Ralis, 1957, p. 57. The answers to:
[126 "Do you drink tea frequently, occasionally, seldom or never?"
[272 were: often, 22; occasionally, 68; seldom, 158; never, 85.

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from venders almost every day. They said [554] [222] "Some do not pay money to buy food, but pick or get it from the canal or gardens --this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

433 511 Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

243 [545] 256 [262] Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

244 [554] [245] Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chilies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

222 262 Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)sa-(5)noo flowers were used by 3 families on one day each;

256 Table 9. Use of Home-milled and Polished Rice by Households
262 Participating in the Dietary Study

Group and Code No.	Round of Dietary Study[1]							
	I		II		III		IV	
	HM[2]	P[2]	HM	P	HM	P	HM	P
Group A								
2		x		x		x		x
12		x		x		x		x
67	x			x		x		x
103	x		x			x	x	
215		x		x		x		x
222		x		x		x		x
Total No.	2	4	1	5	0	6	1	5
Group B								
16	x		x			x		x
20		x		x		x		x
21		x		x		x		x
23		x		x		x		x
25	x			x		x		x
Total No.	2	3	1	4	0	5	0	5

1. For dates, see Table 7, p. 58.

2. HM and P stand for home-milled and polished rice respectively.

222 truffles were used as snacks on 2 occasions, and (1) bauaun,
262 (2) phag (2) tob, lotus stems and lotus seeds, the latter as a snack, were used once each. The two groups of families appeared to grow fruits and vegetables and to gather edible
244 wild plants to about the same extent. Two families, one in each group, raised mushrooms during the period when farm work was slack.

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245 Table 10. List of Edible Plants Grown by the Two Groups of Households Studied

Name of plant[1]	Number of Families	
	Group A	Group B
Green and leafy vegetables		
Basil	3	1
Bean, string	1	-
Chili	6	5
Coral[2]	-	1
(3)Khii-(2)leg[2]	1	1
(4)Khlyb[2]	-	1
(4)Ma-(1)dan[2]	2	1
Morinda	-	1
(2)Sa-(1)daw[2]	-	1
Other vegetables		
Bamboo	1	2
Calabash	3	1
Egg plant	2	1
Gourd	1	-
(2)Kha-(1)cauaun	1	-
Mushrooms, straw	1	1
West Indian pea tree[2]	1	1
Fruits		
Banana	6	5
Guava	1	1
Jujube	1	-
(4)Ma-(1)dan[2]	2	1
Mango	1	1
Manila tamarind	1	-
Star gooseberry	1	-
(2)Ta-(1)koo	-	1
Spice plants		
Bergamot	6	5
Galangal	6	5
Ginger	2	-
(2)Ka-(1)chaaj	1	2
Lemongrass	6	5

1. See list, Appendix C, p. 126 for botanical names.

2. Trees

[146] Eggs were eaten occasionally; pork and beef were bought in-
[262] frequently and in small amounts by some families. One family only, ate chicken; other meats eaten on survey days included buffalo, frogs, eels and field rats.

Vegetables. - More than three quarters of the estimated vitamin A value of these diets was provided by green and leafy vegetables, although the pale yellow sweet potatoes, eaten in quantity by one family in Group A increased the vitamin A from other vegetables substantially. The greater use of swamp cabbage, a wild aquatic plant by families in Group A, may be explained by the fact that more visits to this group occurred when the water level in the canals was relatively high. Families in Group B, however, used a greater variety
[263] of greens, especially leaves from a number of trees. For families in Group A, sweet basil contributed substantially to the vitamin A and riboflavin content of the diets, whereas families in Group B used this herb in trivial amounts for flavoring. No nutrient values were found for lemongrass, which was used regularly in substantial amounts for flavoring. Persons in Group B got a greater percentage of their calcium and iron from green than from other vegetables, whereas those in Group A obtained as much or more of these nutrients from other vegetables.

Nearly 3/5 of the ascorbic acid intake of Group A was provided by other vegetables as compared to 1/4 from green vegetables, whereas Group B obtained about equal amounts of ascorbic acid from green and other vegetables. Egg plants[1], calabash and white radish were most commonly used in quantity. Onion, garlic and dried chilies were used daily, but in smaller amounts. With the exception of one family which ate a large amount of sweet potato on one survey day, consumption of tubers, i.e. sweet potato and taro, was small and usually in the form of snacks eaten by children. Legumes were seldom eaten in Bang Chan. Two families had bean sprouts on survey days, and children occasionally ate mungbeans and peanuts as snacks.

Fruit. - Although technically a fruit, the coconut does not resemble fruits as a group in its contributions to the diet, hence coconut and other fruits are treated here as two sub-groups. Coconut meat, and its products, coconut milk and coconut cream (Appendix C, p.128), were used almost daily in the participating households. These coconut products contributed about 1/5 of the total fat of the diet, for Group A,

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[244] [252] 1. Many varieties of eggplant are grown in Thailand. Three were used on survey days: the pea-size variety which was frequently put in hot curry, a round type which was served raw with chili sauce and a long variety which was either panned with a small amount of fat or used in curry.

000 and conditions. An improved stove[1], by making more efficient
[351] use of fuel, would reduce one obstacle to boiling drinking water. The alternative, chemical treatment, might be regarded as "medicine," and people might be more willing to spend money for this than for firewood. Water supply and latrine facilities at the school and wat should be such as to set a good example. Since links between sanitation and health have not been established in the minds of the villagers, no proposed solutions are apt to be effective without a strenuous and continued educational campaign.

Since the nutrient content of many foods used in Bang Chan has not been ascertained, the responsible Thai government personnel should as soon as possible seek to analyze those more commonly used, in particular fish, fermented fish, shrimp paste, fish paste and fishsoy, both commercial and home-made products, edible green leaves and flowers. Discovery, among the many varieties of fish used, of some which are good sources
146 of vitamin A, would be particularly useful. Of the calculated vitamin A values in diets for the two groups of households studied 90% or more of the vitamin A value was from vegetable sources, therefore in the precursor form. Among foods of animal origin which were used, eggs were the only food known to contain appreciable amounts of vitamin A. With more, and more complete, analyses of Thai foods, some of unusual nutritive value would probably be discovered. Also, information on composition of coconut milk should permit reasonably accurate calculation if the weight of coconut meat and the resulting product are known. Use of figures now available in food value tables, for coconut milks as prepared in Bang Chan, would lead to gross overestimate of caloric value and fat content of diets.

000 In using present knowledge to improve nutrient intake, emphasis should be placed on changes which would improve the everyday diet for all members of the family. We would start with familiar foods and methods of preparation, stressing the types of food which should be produced and used in increasing amounts. Advice of specialists in agriculture at nearby Kasetsart University should be sought in making choices appropriate to the location, among vegetables which would enhance the nutrient content of the diet, particularly in vitamin A value
[247] and riboflavin. Since garden area is often limited, vine vegetables which can be trellised may be useful. In introducing innovations, we would, if possible, build on procedures known to be acceptable to some respected persons in the community.

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1. The "Hyderabad Smokeless Chula" would be useful in Bang Chan. In Smokeless Kitchens for the Millions, S. P. Raju (1953) includes designs for models with one to three cooking holes and hot water pot (The Christian Literature Society, P. O. Box 501, Park Town, Madras, India).

000 Growing other kinds of green and yellow vegetables should be fostered. Although vitamin A value and riboflavin content appear to be critical, in choosing vegetables to be stressed, specialists in agriculture should consider greens [P62] with high calcium and low oxalic acid content also. A variety of edible leaves of trees were used by a few families; some used sweet basil as a vegetable rather than just a seasoning; pumpkin and sweet potato were familiar, but less often used than would be desirable. More green or yellow vegetables which mature when canals are low and aquatic plants no longer available, would be especially good. If increased production by most households[1] is not practicable, a few of the more successful gardeners might be persuaded to produce vegetables and fruits which would help to bridge the gap between rainy seasons. Mushrooms, which can be grown readily, would provide a good source of ribo- [P64] flavin when leafy vegetables are in short supply. The boom-and-bust experience in mushroom culture (See Appendix A, pp. 101-102) might, however, make its revival as a source of healthful food for home use more difficult than if the villagers did not think of mushrooms as a cash crop for which the market failed.

Eating more fruit would help to tide over the dry P62 season. Fruits were commonly used as snacks, not at meal- [P64] time, hence snacks of fruit should be encouraged for adults as well as children. Bananas grew in all gardens and were available the year round. The (4)nam (4)waa variety, which was used in ceremonies, and considered safe for all, should 000 be stressed. More families could grow pineapple, which is [777] relished both raw and in curries. Mango and papaya, fruits of outstanding value for both vitamin A and ascorbic acid, would be excellent, but the idea that growing papayas is "unlucky" must be taken into account. If a few of the more thoughtful and forward-looking farmers could be persuaded to start papaya trees, even though they were not willing to plant them near the house, the practice might spread in time.

146 On the average, the Bang Chan diet did not seem to be [P64] very deficient in protein, but distribution is not proportional to need, and protein deficiency may be in part responsible for periods of weight loss, or failure to gain, so 000 common among infants and children. The presence of other [136] essential nutrients in animal foods is important also. If, the local supply of fish is indeed diminishing, efforts to [228] increase it through pond culture should be continued. Abandonment of tilapia culture in Bang Chan, after about one-third of the families had tried it, (Appendix A, p. 101) suggests that not enough of the right kind of help was given

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1. Tenant farmers may not be permitted to enlarge gardens by mounding at the expense of rice fields.

Notes on Tilapia Culture in Bang Chan

228 654 In 1952, the Thai government, at the suggestion of FAO, began to encourage tilapia culture. Fingerlings and some information on tilapia culture could be obtained from the Minburi district office, where a demonstration pond was maintained. Early in 1953, we learned from the records of the district officer that three persons in Bang Chan, two of them hamlet headmen, had obtained tilapia from this source. In 1953 the commune chief called a meeting in the village and explained the importance of tilapia raising. In May 1955 when Ralis conducted a survey in Bang Chan (Goldsen and Ralis, 1957), tilapia raising had been tried in nearly a third (31%) of the households, but was considered by 2/3 of the respondents to pay little.

The authors comment:

> From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply [434] - rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months.

From the comments just quoted, tilapia culture appears to have been undertaken for the anticipated cash return. No [114] information was obtained by Ralis concerning the extent to which the villagers used tilapia to increase their supply of fish for home use. In the summer of 1957 members of the research group who visited Bang Chan found that no one was raising tilapia; they were neither a source of food nor of cash. Some indication was obtained that their flavor and texture were not agreeable. Clearly the attempt to introduce a rapidly growing but unfamiliar variety of fish failed in Bang Chan. An understanding of the reasons for this failure might help to prevent other costly failures in future.

Notes on Mushroom Culture in Bang Chan

177 • 244 Goldsen and Ralis (1957) commented as follows:

> Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per

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244 cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

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244 At the height of the boom, the demand for rice straw
234 swept many of the fields clean of the stubble usually left
177 there after harvest, thereby decreasing food for the roaming buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralis (1957) were 1) the cash outlay required was small, 2) returns were realized quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralis made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

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Food for Homage-to-the-Teacher Rite Performed by a Buddhist Priest Who Was a Traditional Practitioner

Item	Amount	Cost in Baht
Cereals and Legume Seeds:		
Rice noodles		10.
Soybeans & fermented vegetables	25 kg.	12.
Mung beans	10 lit.	25.
Cassava flour		2.25
Sugar and dessert:		
Palm sugar	1 pail	67.
Cane sugar	14 kg.	85.
(2)Kha-(5)nom (3)tuaj-(1)foo	500 cups	35.
Fish and Meat:		
Fish ((1)plaa (2)myk) for soup		6.
Silurus and serpenthead	60 kg.	gift
Dried fish	6	gift
Roasted fish	3 kg.	gift
Shrimp paste	2 kg.	18.
Lobsters		15.
Lobsters (for soup)		7.50
Pig's skin (for soup)		10.
Beef[1]	15 kg.	150.
Ingredients for Mussel-man curry[1]		27.
Boiled chickens[2]	2	22.
Pig's head[2]	4 heads	222.
Pork[2]	4 kg.	40.

121 I recall seeing portable motors stored in some Bang Chan houses and
[243] can still picture many threshing floors with neatly layered heaps
[244] of rice straw where the mushrooms grew. A few of these apparently "progressive" farmers had special ponds to which they proudly invited me to watch the feeding of the tilapia fish. Occasionally one of them seized the opportunity of my visit to inquire about sending a sick kinsman to a Bangkok hospital. Without Dr. Goldsen's analysis I might easily have been lured to generalize that certain farmers were "innovation minded."

*177 The survey's evidence against a general "innovation mindedness"
*178 cautioned me to reconsider my impressions. I realized that it would
121 be an oversimplification of the social network in Bang Chan to
621 think of it as containing a group of "progressives" who sought avidly each new agricultural wrinkle and who pitted themselves against another group of "conservatives" who resisted change. Instead I was led to see some farmers interested in certain new things, others indifferent to these but interested in other things. Bang Chan looked more like a mosaic of small groups, each fitting or rejecting the new according to its circumstance.

*177 Instead of thinking simply of a group of highly motivated,
*178 wealthy farmers who assumed the responsibility of trying out the
243 new for the benefit of their less affluent neighbors, I was
244 alerted to recognize a variety of kinds of innovation. Innovation in growing rice, where one might employ a motor or fertilizer, differed considerably from earning extra cash during the dry season by growing mushrooms. The analysis of the survey evidence made me sensitive to the realization that mushroom culture was clearly a seasonal activity requiring little investment and open to any family, rich or poor, that needed cash. Certainly no genuine rice farmer would permit this extra work to interfere when the rains called time for ploughing. The finding that no correlation existed between acceptance of motors and growing mushrooms seemed in retrospect clear, almost self-evident.

*177 The survey analysis indicating that owning a motor, despite
182 my initial impressions, bears no relation to use of modern medical
244 facilities, made me reexamine my initial impressions. My own
757 studies had made me aware that making a living is a positive action among Bang Chan farmers: it requires forethought and will. Health, however, for Bang Chan is a kind of negative entity to be taken for granted until sickness arrives. Bang Chan has no vitamin pills nor tonics to maintain health, though all work actively to relieve sickness. Growing mushrooms and using modern medical facilities are phenomenally different undertakings. Certainly the survey analysis in this regard bore out and corroborated this "thematic" analysis.

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The Innovations

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A. Agricultural Innovations: During the past few years, certain innovations have come to Bang Chan which have increased agricultural productivity and improved the level of living. Some of these innovations are listed below.

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1. The small motor. One innovation is the small engine, gasoline motor, which is used mainly as a water-lifting device for irrigation purposes. In 1950 only five small motors were found in Bang Chan.* Twenty-one per cent of the respondents in the 1955 survey, however, report owning these motors; the majority of the respondents (68 per cent) claim to have used this labor-saving device which is sometimes jointly owned by more than one household and is frequently loaned out.**

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2. Straw mushroom growing. Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per cent of the respondents report that they have engaged in this activity***). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

One advantage in the culture of straw mushrooms is that it permits quickly realized returns. The cycle, from sowing spores in moistened straw to harvesting the mushrooms, takes about two to three weeks. Another advantage is that there is relatively little heavy work or investment required besides the acquisition of straw and spores. A third advantage is a ready market, for the plant is sought by Chinese dealers in Bangkok who supply hotels and restaurants. Bang Chan rice farmers who engage in mushroom growing as a sideline activity sell it either to local middlemen or directly to the Chinese in Bangkok.

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[113] * Sharp, L., H. M. Hauck, K. Janlekha, and R. B. Textor, Siamese Rice Village, A Preliminary Study of Bang Chan. Thailand, Cornell Research Center, June, 1953.

[125] ** The questions: "Do you own a small engine motor or not? (If 'NO'): Have you ever made use of one in your work?"

[125] *** The question: "Have you ever grown mushrooms, or not?"

TABLE 1. THOSE WHO OWN OR USE SMALL MOTOR ARE MORE LIKELY THAN OTHERS TO TRY OTHER AGRICULTURAL INNOVATIONS (FARMERS ONLY)

	Owns motor	Does not own motor but uses it	Neither owns nor has used motor
(Total cases)*	(70)	(150)	(106)
Have you ever used fertiliser?**			
Yes	18%	16%	3%
No	82	84	97
Have you ever raised tilapia?			
Yes	33%	29%	22%
No	47	71	78
Have you ever grown mushrooms?			
Yes	48%	49%	37%
No	52	51	66

* The bases on which per cents are computed appear in parenthesis at the head of each column in this and subsequent tables. Actually the bases vary by a few cases, table to table, since there were always a few respondents who did not answer a given question or whose answers were unclassifiable.

** Asked of farmers only. The bases are:

Owns motor	65
Does not own motor but uses it	141
Neither owns nor has used motor	82
NA	5

There is some evidence, then, that if a person is willing to try out one agricultural device, such as the motor, he is more likely to try out other agricultural innovations. However, this "clustering" cannot support the hypothesis that there is something like "innovation mindedness" in general, or that acceptance of any innovation in a series is predictive of acceptance of all other innovations in the same series.

Evidence may be cited to substantiate this contention. In the first place, if such a clustering indeed prevailed, one would expect users of any of these agricultural innovations to be more disposed than others to use, as well, certain non-agricultural innovations, such as hospital or clinic facilities, for example.

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And no such tendency may be discerned in the present data. (See Table 2.)

TABLE 2. USERS OF HOSPITAL AND CLINIC FACILITIES SHOW NO SIGNIFICANT DIFFERENCES IN RATES OF ACCEPTANCE OF AGRICULTURAL INNOVATIONS

Agricultural Innovations	Percentage who have ever gone to hospital or clinic for treatment	Total cases
Mushrooms		
Tried them out	36%	(143)
Never did	38	(108)
Tilapia		
Tried it out	44%	(104)
Never did	34.	(225)
Motor		
Tried it out	37%	(213)
Never did	36	(106)
Fertiliser*		
Tried it out	37%	(32)
Never did	34	(232)

* Farmers only

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In the second place: use of the motor is much less strongly linked to use of mushrooms than the use of fertiliser or tilapia. It may well be that there may be some common factor strongly underlying the decision to use the motor on the one hand, fertiliser and tilapia on the other, while the decision to try mushroom-growing is relatively more "autonomous". A possible explanation for the greater "autonomy" may be sought in the differential requirements for growing mushrooms compared with the requirements for adopting the other innovations.

Both tilapia and sulphates demand extra heavy work, care, an essential initial investment, and willingness to wait for a delayed return. An additional requirement for a successful and continuous pay-off from both these innovations may be an aptitude to follow rather complicated instructions. In the case of mushroom growing, however, the initial investment is relatively small, the labor may be tedious but is not heavy, no protracted or complicated care is involved, and the results of the effort are relatively quickly realizable.

There is some justification, then, for the inference that initial adoption of innovations such as fertiliser and tilapia, which require increased labor, will depend to some extent upon the availability of some labor-saving device (such as the small motor) which will enable the busy farmer to perform the necessary labor and, perhaps, leave him freer to exercise the care required for these innovations to be successful. Hence the relatively stronger relationship among these innovations. An innovation which does not make these demands, however (such as mushroom growing), is more likely to find acceptance on its own terms and may thus be less dependent for its acceptance upon availability of some sort of labor-saving device.

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Innovation and Attitude Towards It

There is further evidence in the survey substantiating the greater "autonomy" so to speak, of the decision to try mushroom culture compared with the decision to try fertiliser or tilapia.

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The present study tested the hypothesis that use of these innovations would be related to a favorable attitude toward them. Attitude toward the four innovations was determined by examining responses to the questions: "What is your opinion about fertiliser?" "...about mushroom growing?" "...about tilapia?" Responses were classified according to whether they revealed positive, mixed, or negative affective feelings to each of the innovations.

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In general, positive attitudes towards all these innovations are widespread in Bang Chan. About three-quarters of the residents express positive feelings toward mushroom growing and over half express positive attitudes to artificial fertiliser and tilapia raising. (See Table 3.) None of these innovations elicits widespread expressions of disfavor, although the respondents are more likely to express an unfavorable attitude to tilapia (29 per cent) than to fertiliser (14 per cent) or to mushrooms (7 per cent)

TABLE 3. THE MAJORITY IN BANG CHAN HOLD POSITIVE ATTITUDES TOWARDS AGRICULTURAL INTRODUCTIONS

Attitude	"What is your opinion about..." Mushrooms	Fertiliser	Tilapia
Positive	76%	59%	57%
Neutral or mixed*	6	3	2
Negative	7	14	29
No opinion	9	16	8
Not ascertainable	2	8	4
Total cases	(333)	(333)	(333)

* The neutral or mixed attitude category comprises responses conveying partly favorable and partly unfavorable feelings such as, "some kind is good, some kind is not so good"; "in some ways I like it, in some ways I dislike it."

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228 Now let us examine the extent to which the decision to try out
241 the innovation is linked to a positive feeling towards it. The decision to try fertiliser and to raise tilapia turned out to be indeed linked with positive feelings towards these innovations. Among those favoring fertiliser, the proportion using it is six times as high as those with neutral, mixed or negative attitudes (18 versus 3 per cent); among those with positive attitudes to tilapia raisers of this fish are twice as frequent in comparison with those having neutral, mixed, or negative attitudes (43 versus 22 per cent). These relationships are shown in Table 4 below.

TABLE 4. ATTITUDES TO FERTILISER AND TILAPIA RAISING ARE LINKED TO THEIR USE

	Attitude	
	Positive	Neutral, Mixed & Negative
Fertiliser		
Tried it out	18%	3%
Never did	82	97
Total cases*	(168)	(55)
Tilapia		
Tried it out	43%	22%
Never did	57	78
Total cases	(191)	(104)

[125] * Based on responses made by 293 farmers who expressed a codable attitude to fertiliser.

• 244 On the other hand, the data revealed no relationship between
*177 attitude to mushroom growing and growing them. The proportion of
*178 users and former users among those who have favorable attitudes and those who have negative attitudes remains relatively constant. Table 5 shows that among respondents with positive attitudes, 47 per cent have tried mushroom growing; while among respondents with negative attitudes, 42 per cent have done so; percentage differences are statistically insignificant.

TABLE 5. ATTITUDES TO MUSHROOM GROWING SHOW NO RELATION TO ITS ADOPTION

	Attitude	
	Positive	Neutral or Negative
	(252)	(42)
Tried mushrooms	47%	42%
Never did	53%	58%

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It appears, then, that we may be dealing with two types of innovations, one type (fertilizer and tilapia) where attitude is linked to decision to use it and another (mushrooms) where attitude seems to be unrelated to such use.* And here again may be further substantiation of the greater autonomy of the acceptance of mushroom growing. For, in the case of innovations such as artificial fertilizer and tilapia, it is known that they require investment of funds and labor, risk, delayed return, and departure from well-known ways. It could be that in the face of these disadvantages Acceptance will occur only if motivation is high. Acceptors would then be selected mainly from among those who have high motivation and accompanying positive affective feeling. Those who do not have these feelings would, following this reasoning, be less likely to overcome their objections to the disadvantages of the innovation in question.

There is also the second type of innovation like mushroom growing. This innovation is much less "costly" not only of funds but effort. Hence, high motivation and accompanying positive affect might be less influential than other factors--factors quite aside from the crop itself--on acceptance of this type of innovation. Consequently, growers of mushrooms may be recruited equally from persons with favorable attitudes and less favorable attitudes towards this crop.

These findings suggest the more general hypothesis (which might be corroborated by analysis of related contextual data collected in Bang Chan, and by examining equivalent situations in other underdeveloped areas) that: the more complex the innovation, the more effort involved in employing it, the more risk involved, and the less immediate the return, the greater the likelihood that acceptors will be recruited from a selected group of highly motivated people, rather than at random among all persons "eligible" to accept it. If the innovation requires the high motivation which is needed to overcome the disadvantages of investment, work, risk, and rarity, then this attitude toward it is important. If the innovation demands only short-term investment and relatively light labor, then this motivation is of little importance in the decision to try it.

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Sociological Factors in Agricultural Innovation

The decision to use the small motor, once made, tends to accelerate the decision to try out other agricultural innovations, especially fertilizer and tilapia and, to a lesser extent, even mushrooms.

* Both mushroom growing and tilapia raising are sideline activities to the Bang Chan rice farmer and are, therefore, comparable in this respect.

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228 mushrooms. The following section searches for sociological factors
241 linked to those decisions. For example, are the well-to-do farmers*
more apt than the less well-to-do to adopt agricultural innovations?
To what extent is literacy a factor in acceptance of innovations?
• 244 To what extent do differences in literacy, communications habits,
cultural contacts and urban orientation account for tendencies to
adopt or reject these changes?

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[125]* The following analysis has been made, in most cases, for male
farmers only. The distribution of initial acceptance among the three
groups of male farmers, females, and male non-farmers is given in
*179 the following table.

*178 TABLE 6. USE OF AGRICULTURAL INNOVATIONS AMONG THREE GROUPS OF BANG
CHAN VILLAGERS

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	Male Farmers (211)	Male Non-farmers (82)	Females (32)
228 Tried motor	71%	61%	48%
Didn't try	29	39	52
241 Tried mushroom growing	46%	39%	41%
Didn't try	54	61	59
Tried tilapia raising	35%	25%	31%
Didn't try	65	75	69
Tried fertiliser	15%	5%	**
Didn't try	85	95	

** Asked of farmers only.

It is apparent, as one would expect, that it is mainly the farmers who try these innovations. Relatively few women (with the exception of tilapia raising) and even fewer non-farmers say they have tried them. Since the absolute number of acceptors among women and non-farmers is too small to bear the separate treatment which would be essential to analyse the factors influencing the use or non-use of innovations, they have been excluded from the following presentation, which refers, thus, to male farmers only.

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Decisions to use all these innovations--with the possible exception of the use of fertiliser--seem to be more widespread among the upper economic levels of the population. (See Table 8.) One wonders whether the initial link between use of the motor and readiness to try the innovations may actually disguise a more basic relationship based simply on ability to afford the investment and the risk.

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TABLE 8. FARMERS* ON HIGHER SES LEVELS ARE MORE LIKELY THAN OTHERS TO HAVE USED THE MOTOR, TO HAVE GROWN MUSHROOMS AND TO HAVE RAISED TILAPIA

	Ownership of Buffaloes	
	2 or less (99)	3 or more (112)
Used motor		
Own	6%	37%
Use	53	45
Neither	41	18
Grew mushrooms		
Yes	30%	60%
No	70	40
Raised tilapia		
Yes	26%	42%
No	74	58
Used fertiliser		
Yes	12%	17%
No	78	83

* Male farmers only

The following table presents again the initial relationships between use of motor and readiness to try out other innovations. But this time the link is examined separately for persons on the different economic levels.

Table 9 was made by first dividing the population into two groups, those from high and those from low economic levels. The resulting two groups were then further subdivided on the basis of whether they owned (or used) a motor or whether they did not. In each of the four resultant groups the percentage that raised tilapia was then calculated. Thus among those of high economic level who own or use motors, 45 per cent raised tilapia, and we infer that 55 per cent did not raise tilapia. The same procedure was repeated to ascertain the percentage that has tried fertiliser and subsequently the percentage that has tried mushroom growing.

This table shows that in tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertilizer holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic Level			
	High*		Low**	
Owns or used motor (Proportion who have raised tilapia)				
Yes	45%	(89)	33%	(57)
No	25	(21)	17	(40)
Owns or used motor (Proportion who have tried fertilizer)				
Yes	20%	(89)	18%	(57)
No	5	(21)	*	(40)
Owns or used motor (Proportion who have tried mushroom growing)				
Yes	60%	(89)	36%	(57)
No	57	(21)	23	(40)

* Three buffaloes or more
** Two buffaloes or fewer

[231]

Literacy

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

125 he could write, could only sign his name, or could do neither.* Those who said they could write a letter are considered here to be 212 literate. All others are grouped together as illiterates or on a low level of literacy.

212 The literacy rating was tested for validity as follows: in Bang Chan literacy is known to be related to age. Ever since 872 1935** there has been a school in the community. Since that date school attendance has been compulsory. Attendance has been fairly 125 full for the last twenty years, but most older residents have never had the opportunity for formal schooling.

212 The survey data reflect this correlation between literacy and age. Among farmers under 40 years of age, only 16 per cent were *177 rated as illiterate or barely literate by the survey criterion; *178 while 59 per cent of those of 40 years or older are rated as illiterate. Thus one can have reasonable confidence in the survey 561 response as a rating of literacy.

TABLE 10. LITERACY OF FARMERS DECREASES WITH AGE

	Age	
	Under 40 yrs.	40 yrs. or more
Literacy		
Illiterate	16%	59%
Literate	84	41
Total cases	(79)	(131)

*177 Literacy is linked discernibly to acceptance of the motor and *178 mushroom growing. The proportion of literate farmers who have tried the motor is twice as high as the corresponding proportion 228 among those who are illiterate. It is less strongly linked to the 241 decision to grow mushrooms, and is, at best, weakly linked to the decision to raise tilapia or to use fertilizer.

• 244 ---

212 * In addition, interviewers asked respondents who said they could write to demonstrate it by writing something on the ques- 402 tionnaire.

[125] ** See Siamese Rice Village, op. cit.

TABLE 11. LITERATE FARMERS* ARE MORE LIKELY TO HAVE USED THE MOTOR AND TO HAVE TRIED MUSHROOM GROWING

	Illiterate (Cannot write a letter) (92)	Literate (Can write a letter) (118)
Motor		
Own	16%	26%
Use	35	60
Neither	48	14
Mushrooms		
Have tried	38%	53%
Have not	62	47
Fertiliser		
Have used	12%	17%
Have not	88	83
Tilapia		
Have tried	29%	39%
Have not	71	61

* Male farmers only

If Bang Chan were like certain areas of the United States and Europe, it might be objected that such a relationship between acceptance of innovations and literacy reflects a spurious link with economic level: that illiterates tend to come from the economically deprived strata of the population; hence an observed relationship with literacy may actually reflect the initial correlation with economic level. In Bang Chan, however, this is not the case. A Bang Chan farmer who is well-to-do is as likely to be illiterate as literate, as is illustrated by the table below.

TABLE 12. LITERACY AND ECONOMIC LEVELS ARE UNRELATED IN BANG CHAN*

	Literacy	
	Low (91)	High (119)
Economic Level		
Low	48%	56%
High	52	44

* Male farmers only

Hence the correlation between use of innovations and literacy may be taken at face value and does not reflect a spurious link with economic level.

Communications Media

* 177 *178 207 546 With the increasing use of mass communications, the community member is exposed to sources of information other than the printed word. Ownership of radios has nearly tripled in about five years (in the 1955 survey radios were reported in 14 per cent of the households, whereas in 1949* only 5 per cent of the households reported owning a radio). Quite apart from ownership, radio listening is widespread; less than one-fifth of the people in Bang Chan claim they never listen to the radio (18 per cent). Motion pictures are also popular. Only one-tenth claim to having never attended a movie, while half (49 per cent) say they have seen motion pictures more than ten times.

There is, of course, a strong relationship between exposure to one of these media and exposure to the other. Table 13 below indicates that the majority (64 per cent) of respondents who listen to the radio likewise report frequent movie attendance. Similarly, the majority (67 per cent) of those who say they never listen to the radio, reported that they go to movies rarely or never.

TABLE 13. EXPOSURE TO RADIO AND MOVIES SHOWS HIGH INTERRELATION

	Radio Listening		
Movie Attendance	High Exposure (regular or occasional listeners) (111)	Low Exposure (listen seldom) (148)	No Exposure (60)
High exposure (10 times or more)	64%	32%	12%
Medium exposure (4 to 9 times)	19	17	21
Low Exposure (0 to 3 times)	16	31	67

[402] [241] [228] [244] Exposure to the communications media is strongly linked to acceptance of a basic innovation such as the motor. It is not directly linked to acceptance of the other agricultural innovations (fertilizer, tilapia, mushrooms). Respondents who report frequent exposure to radio listening and motion picture attendance are significantly more likely than others to say they own or have used the motor. (Among daily radio listeners 88 per cent report use of the motor; and this proportion declines steadily until among those who never listen, only 46 per cent use the motor; for movies, the corresponding proportion of users ranges from 76 to 36 per cent.)

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* Siamese Rice Village, op. cit.

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TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Patterns	
	With hands (242)	With fork and/or spoon (84)
Listens to radio		
Regularly (daily)	10%	25%
Occasionally	17	28
Seldom	51	35
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	15
2 - 4 times	29	23
5 or more times	28	55

178*
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When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive to urban influence are twice as likely as others to use fertiliser (21 per cent versus 9 per cent), one and a half times as likely to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per cent versus 61 per cent). There is no noticeable relationship, however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

[241]
[244]
[402]
[228]

These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for those on high as well as low economic levels and also for the literate as well as illiterate farmers.

[212]
[434]

*178
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TABLE 17. VILLAGERS RESPONSIVE TO URBAN PATTERNS ARE MORE LIKELY THAN OTHERS TO USE AGRICULTURAL INNOVATIONS

Agricultural Innovations	Eat with fork and/or spoon	Eat with hands
Artificial fertiliser		
Tried it	21%	9%
Never did	79	91
Total cases*	(69)	(218)
Mushrooms		
Tried growing	57%	39%
Never did	43	61
Total cases	(84)	(242)
Small engine motor		
Own one or have used it	82%	61%
Never did	18	39
Total cases	(84)	(242)

* For farmers only; excludes all non-farmers

*178
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TABLE 18. ACCEPTANCE OF URBAN PATTERNS IS LINKED TO ACCEPTANCE OF MOTOR AND MUSHROOM GROWING, IRRESPECTIVE OF ECONOMIC AND LITERACY LEVELS

	Economic Level				Literacy Level			
	Low		High		Illiterate		Literate	
Acceptance of urban patterns	(Proportion who used motor)							
Eat with hands	55%	(77)	76%	(73)	47%	(73)	83%	(76)
Fork or spoon	75	(20)	89	(34)	69%	(16)	90	(38)
	(Proportion who tried mushroom growing)							
Eat with hands	28%	(77)	58%	(73)	38%	(73)	47%	(76)
Fork or spoon	45	(20)	65	(34)	44	(16)	66	(40)
	(Proportion who used fertiliser)							
Eat with hands	11%	(77)	13%	(73)	10%	(73)	14%	(76)
Fork or spoon	19	(20)	26	(34)	3	(16)	23	(40)

*178
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as apt to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	38%	(40)	86%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	50%	(67)	85%	(76)
One or more	57	(24)	88	(43)

[562]
[241]
[228]
[244]

*Male farmers only

However, no such relationship was discerned between these culture contacts and trying out either fertilizer, tilapia, or mushrooms.

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Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

*178
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Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

[402]
[228]
[241]
[244]

The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertilizer or mushrooms.

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[125]

TABLE 21. INCIDENCE OF MOTOR USE IS HIGHER AMONG VILLAGERS WHO REPORT WIDER SOCIAL CONTACTS

	Social Contacts ("...Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?")	
	"More" or "the same" (143)	"Fewer" (55)
Motor		
Has used it	77%	55%
Never did	23	45
Tilapia		
Has tried it	39%	21%
Never did	61	79
Fertiliser		
Has used it	16%	11%
Never did	84	89
Mushrooms		
Has tried them	49%	40%
Never did	51	60

Once again, however, when this link between breadth of social contacts and use of the innovations is examined separately for the literate, compared with the illiterate farmers, we find further substantiation of the previous finding that under certain circumstances contact may act as a substitute for literacy in acceptance of complex innovations. For, although the link between social contacts and use of tilapia remains constant for literate as well as illiterate farmers, it is mainly for those who are illiterate that exposure to wider local social contacts is associated with greater incidence of motor use.

[212]

admit in response to a direct question* that they have a debt. Confidence in the validity of these responses as an index of indebtedness is increased since the expected correlation between indebtedness and ownership of buffalo is reflected in the survey data.

TABLE 23. INCIDENCE OF REPORTED DEBT IS HIGHER AMONG VILLAGERS WHO REPORT OWNERSHIP OF MORE BUFFALOES

	Reported Ownership of Buffaloes		
	None (81)	One to three (155)	Four or more (97)
"...Do you now have a debt?			
Yes	49%	56%	69%
No	51	44	31

When the use of agricultural innovations is examined for those farmers who say they have a debt, compared with those who deny it, it becomes apparent that there is a relationship only between indebtedness and use of the motor but not with any of the other mentioned innovations. Seventy-nine per cent of the male farmers who said they have a debt own or use the motor; among those who claim they have no debt the proportion owning or using the motor is significantly less (60 per cent).

TABLE 24. INCIDENCE OF MOTOR USE IS HIGHER AMONG FARMERS WHO REPORT INDEBTEDNESS

	"...Do you now have a debt"**	
	Yes (125)	No (85)
Motor		
Has used it	79%	60%
Never did	21	40
Tilapia		
Has tried it	37%	33%
Never did	63	67
Fertilizer		
Has used it	14%	16%
Never did	86	84
Mushrooms		
Has tried them	45%	48%
Never did	55	52

**Male farmers only

* The question: "...I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?" Janiskha's M.S. thesis, ibid., reports a similar distribution of indebtedness for his sample of 96 farmers.

*178

743 Use of Health Facilities and Other Factors Associated With
241 Agricultural Innovations

572 Although use of the basic agricultural innovations was shown
426 to be linked to breadth of contacts within the community, on the one hand, and to indebtedness, on the other hand, the association between these factors and use of modern health facilities, although showing the same tendency, is not statistically significant. For the sake of completeness, the figures are reported below:

TABLE 34. NO RELATIONSHIP BETWEEN INDEBTEDNESS OR INTERNAL SOCIAL CONTACTS AND USE OF HOSPITALS AND CLINICS

	"Have you ever been to a clinic or a hospital?"			
	No, Never	Yes, for treatment	Yes, for other reasons	Total 100%
Social Contacts				
"More friends"	31%	35%	34%	(62)
"The same"	40	35	25	(154)
"Fewer friends"	32	41	27	(94)
Do you now have a debt?				
No	40%	32%	28%	(140)
Yes	33	41	26	(192)

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SUMMARY

1. In the community of Bang Chan in Central Thailand, various factors are studied statistically in order better to determine the conditions of acceptance of selected agricultural innovations and conditions for using the facilities of modern medicine in clinics and hospitals. Four agricultural innovations were selected, viz. gasoline motor, raising of fish (tilapia), use of fertilizer, and mushroom culture.

2. The present study was concerned with the initial adoption or trial of innovations, rather than the continuing use of these innovations or the merging of the new with the old features of the culture.

3. While adoption of the gasoline motor was associated with all other agricultural innovations, no generalized acceptance of the new was found because: a) adoption of the gasoline motor bore little or no relation to use of non-agricultural innovations such as hospital and clinic facilities; and b) adoption of gasoline motors was only weakly associated with raising of mushrooms.

4. A cluster of traits including high motivation and sizable capital outlay was associated with the use of the gasoline motor.

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and acceptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike accepters of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

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43

7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things? [177*] [178*] [125]

1.	Fertiliser	9
2.	Small engine	4
3.	New rice seeds	3
4.	Tilapia	98
5.	Other fish, specified	13
6.	Fish, unspecified	80
7.	Mushrooms	45
8.	Poultry	179
9.	Pigs	21
X.	Other, specify	68
0.	Unascertainable	45

[241] [402] [243] [228] [244] [235] [231]

8. Here, some farmers get a lot more rice from one rai of land than others get. Generally speaking, what are the various reasons why this is so? [243] [433]

1.	Fertiliser	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify _____	53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	8

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify _____	25
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

125
[402] b. If no: Have you ever made use of one in your work, or not?
3. Yes 145
4. No 106
5. Unascertainable 8

11. What is your opinion about fertilizer?
(See code at end)

[241] 12.a. IF R IS A FARMER: Have you ever used fertilizer or not?
6. Does not apply 17
7. Yes 32
8. No 232
— No Answer 12

b. IF HAS NOT USED FERTILIZER: For what various reasons have you not used fertilizer?
(See code at end)

c. IF HAS USED FERTILIZER: Have you ever used fertilizer in your seed-bed or not?
9. Yes 20
X. No 13

d. IF HAS USED FERTILIZER: To what extent have you used fertilizer on your fields? On all your fields, or on the larger part of your fields, or on the smaller part of your fields?
1. On all fields 4
2. On larger part of fields 4
3. On minor part of fields 24
4. Unascertainable 1

13. What is your opinion about mushroom growing?
(See code at end)

[244] 14.a. Have you ever grown mushrooms, or not?
1. Yes 143
2. No 188
— No Answer 2

b. IF NO: Do you have any relatives or relative-like neighbors, who have grown mushrooms or not?
3. Yes 141
4. No 44
5. Unascertainable 4

15.a. What is your opinion about tilapia raising?

[228] b. Have you ever raised tilapia, or not?
1. Yes 104
2. No 225
— No Answer 4

125
[244]

b. And how about mushroom growing? Do you think mushroom growing yields very good money, good money, or little money?

5. Very good money	68
6. Good money	160
7. Little money	49
8. Unascertainable	56

[228]

c. And what about Tilapia. Do you think tilapia raising pays very good money, or good money, or little money?

9. Very good money	15
X. Good money	73
Y. Little money	175
O. Unascertainable	70

[787]

39. Do you believe in medium strongly, somewhat, or not at all?

1. Strongly	12
2. Somewhat	192
3. Not at all	105
4. Unascertainable	24

[166]

40.a. Suppose you could do the same work in another rural place and earn ½ more than here. For example, it would be a place 100 kilometers from here. Would you be willing to leave for that place or not?

5. Yes	118
6. No	203
7. Unascertainable	12

.b. IF NO: For what various reasons would you not be willing to go?

(See code at end)

41.a. If you had no land to work in BC-KY would you move to another place or not?

X. Yes	166
Y. No	112
O. Unascertainable	20
— No Answer	35

b. IF NO: For what various reasons?

(See code at end)

[369]
[829]

42.a. Some people say that, generally speaking people who live in Bangkok have more genuine and lasting happiness than people here in BC-KY. Do you agree or disagree?

1. Agree	136
2. Disagree	134
3. Unascertainable	63

b. IF AGREE: For what various reasons do you agree?

If Agreement (See code at end)

	Qu 11	Qu 13	Qu 15A	
1. Positive, no evidence: very good, good, nice	103	114	77	125 241
2. Positive, with evidence: good results, specific statements	47	120	95	244
3. Neutral or mixed	11	20	6	228
4. Negative, no evidence: no good, bad, of no use	9	5	15	
5. Negative, with evidence: difficult to apply in deep water, must keep using it, too expensive, some results as without fertiliser	33	13	80	
6. Positive, qualified: Fertiliser too expensive	13	—	1	
7. Positive, qualified otherwise: only for high land; very hard to purchase; requires to keep on using it	32	18	18	
8. Respondent states he has no opinion	54	31	26	
X. Negative, qualified: It's not quite good, it depends on the soil	4	4	3	
0. No answer	4	3	1	
9. Respondent's attitude not ascertainable	23	5	11	

	Qu 12B	
0. D.A.	85	125 241
1. Too expensive	78	
2. Difficult to purchase	15	
3. Not fit for low land	39	
4. Soil not suitable	3	
5. No ascertainable reason given	28	
6. Too little land	7	
7. Other reasons	56	
8. Have never used it before. Do not now either	12	
X. N.A.	105	
9.	21	

	Qu 16B	
X. N.A. Unascertainable	60	125 243
0. D.A.	151	435
1. Nothing, cannot do anything	70	458
2. Grow mushrooms	12	
3. Raise poultry	15	
4. Raise fish (including Tilapia	7	
5. Use fertiliser	—	
6. Find job as laborers	6	
7. Other: try to find new seed, sell vegetables, borrow money from neighbors, keep rice until price goes up, economise, send sons to work	26	

*243
132
137 to the buffaloes will be gradually reduced by the process
231 of land preparation.

The homelot is usually surrounded on all sides,
* 244
245 except the one facing the canal, with bamboos which serve
351 to protect the farm home from strong wind. Within this compound there always is a kitchen garden where a variety of plants and vegetables for everyday use are grown. If the homelot is large, there may be enough room at the backyard for an orchard where fruit trees may be grown. In some cases, aquatic plants are cultivated in the canal in front of the house.

137 In addition to cultivated plants, there are to be seen also wild shrubs and vines which are more or less restricted to small strips of land along the banks of the canals. Wild aquatic vegetables, especially the morning glory, are always seen in these canals, making them appear narrower than they actually are.

Livestock

231 Buffaloes: As in most of the rice producing areas of the country, so in Bangchan buffaloes are used in all kinds of farm work where the help of draft animals is needed. Since the village is without land which can be grazed the year-round, buffaloes are not locally bred but are brought in from the northeast and other parts of the kingdom. To be sure, there are some local-born buffaloes, and these are considered to be stronger and to live longer than the imported

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 buffaloes heretofore undreamt of and will have to bear
231 the consequent burden of increased cost of producing rice.
311

Some description of the homelots which constitute
311 almost five per cent of the land area of Bangchan has already
351 been given in the section on vegetation, Chapter II. From
[231] the standpoint of land utilization, functions of the homelot
[235] other than providing standing room for the living quarters
[244] may be mentioned as follows:
[245]
[226]

1. It provides space for threshing and for storage of rice and farm equipment including buffaloes.
2. It provides room for chicken or duck raising.
3. It provides land for a kitchen garden, and for fruit and vegetable growing.
4. It provides space for fish trapping by the draining method.

To serve these functions, homelots in any rice growing village, where the fields are submerged under water during the entire life of the rice plant, must be high above water level during the flood season, must be well drained, and must have pools with ample shade.

243 Rice land in its natural state does not meet these
311 requirements for a homelot. In the first place its level is too low. Second, the impervious layer of clay characteristic of rice land does not permit soil drainage. To make a homelot out of rice land, it is necessary that the prospective site be mounded up to a level two or three feet higher than the level of the surrounding fields. The hole from which

235 Of the 46 families covered by the survey, 23 or one-
433 half raised ducks with an average annual production of 155
434 eggs per duck, and an average of 11.7 ducks per family raising them. Egg production for each of these families thus averaged about 1,800 per year. Of these, 1,350 were consumed by the family and 450 sold at the same price as chicken eggs. It was estimated, then, that from duck eggs alone, the average cash income in 1949 was about 150 baht per family raising ducks.

226 After rice, fish were by far the most important
262 ingredient in the diet of Bangchan. In contrast to poultry,
433 however, fish did not constitute a source of cash income of
[434] the villagers. As a matter of fact, more fish were bought from the outside than the negligible amount that was exported from the village mainly by one or two very poor families who had availed themselves of this means of augmenting
[435] their income. From our consumption study of 106 families in 1953, it was found that of an aggregate amount of 17,786 kilograms consumed by these families in the previous year 16,027 kilograms were caught by the families while 1,759 kilograms were bought at five baht per kilogram. The rate of fish production may thus be estimated at 151 kilograms annually per family, or 44,998 kilograms for the entire village.

262 The same consumption study shows that the 106 fami-
244 lies consumed in 1953 a total of 16,402 kilograms of vegetables
433 all of which were produced or acquired by the families.

7: Janlekha X-4.5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

262 averaging 174 kilograms annually per family. It should
• 244 be noted here, as will be elaborated in the section on
433 consumption in Part II of this study, that while most respondents could fairly well estimate their rates of consumption of such items as rice and fish sauce which were somewhat constant, they were not as good in estimating their consumption of vegetables. Furthermore, while admitting that they did buy some vegetables during the year, they were reluctant to give any estimate of the purchase for fear of too much inaccuracy. At most, they were willing only to say that the amount of vegetables purchased was only a small fraction of what they produced or acquired freely from the canals.

245 Fruit production was even more difficult to estimate
433 than vegetable production, and we had to be content with only qualitative information which appears in the section on vegetation on pages 42-43 of this study. Our records show that a few families reported nominal incomes of some forty or fifty baht annually from sale of fruit to neighbors.

Table 17 shows estimated village production and surpluses of farm products other than rice, namely, chicken eggs, duck eggs, fish, vegetables, and fruit. The estimates are based on the poultry survey of 1949 and the consumption study of 1953.

*243 While the methods of selling and storing paddy enable
433 the farmer to know the exact amount of his crop, which condi-
*128 tion leads to our confidence in the accuracy of our estimate

[TEXT CONTINUED ON PAGE 129]

*243 requires much additional hand labor and reduces the possibil-
242 ities for mechanization to a minimum. On the other hand, the more labor intensive transplanting method would seem to be more suitable to a population pressure area like Thailand if it really gives as relatively higher a yield as it is claimed to give.

*243 Farm equipment

351 In Thai agriculture, it is very difficult to separate
[235] the farm from the home. In the chapter on the community it
[244] has already been indicated that the home lot not only is the
[245] living place for the farm family but also provides space for
[226] threshing and for storage of farm equipment, room for chicken raising, land for kitchen garden and for fruit and vegetable growing, and space for fish trapping by the draining method.

*243 In other words, all the material components of the farm, except
351 the rice fields, are located or stored on the home lot. Here,
422 items that are uniformly or frequently found include:

A. Household equipment

1. Buildings
2. Furniture
3. Bedding facilities
4. Kitchen accessories
5. Storing facilities
6. Lamps of various sizes
7. Ritual accessories

B. Farm equipment

1. Farm building: equipment and buffalo shed.
2. Implement: plow, harrow, yoke, roller, shovel, spade, hoe, weeding knife, noria, sickle, pitch-fork, rake, broom, winnowing machine, wooden winnowing spitula, basket, mat bin, box bin, home-mill.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

[243] [434] [433] income and operator's labor earnings lies in the value of farm produce consumed by the family. Earlier, five kinds of produce were listed -- rice, fish, eggs, fruit and vege-[235] tables. For technical reasons, we consider only rice and eggs as products of the farm, rice being the primary crop [226] and eggs the secondary crop. Fish is not considered a farm product because Bangchan villagers fish for consumption, not for sale. Besides, fishing is done by every resident of the village, farmers and non-farmers alike. It is thus [244] [245] more of a way of life than an economic enterprise. The same is true for fruit and vegetable growing which is done in a very small scale.

If we agree on considering only rice and eggs as the products of the farm, it is not difficult to estimate the amount and value of farm produce consumed by the family for Bangchan operators can readily give a rather accurate information on their rates of consumption of these two products. Thus, under Bangchan condition the figure for operator's earnings is not as difficult to obtain as it appears to be the case among most American farms. The frequency distribution of operator's labor earnings of our 104 sample-farms is given in Table 48. It is seen that only 17 farms produced negative remuneration for the operator computed by this method as against 47 farms by the labor income method. As Professor Warren has said, of these two, labor earnings is a better [171] measure of profits. It is especially so in Bangchan and perhaps in other agricultural regions in Southeast Asia

[TEXT CONTINUED ON PAGE 306]

APPENDIX E

• 244

LIST OF VEGETABLES GROWN IN BANGCHAN

Thai name	English name	Season
Bawn	. . .	all year
Bua	Lotus	July - Dec.
Bua-bog	. . .	all year
Buab	Sponge gourd	Sept.- Dec.
Buab-liam	Towel gourd	May - Sept.
Chaploo*	Wild betel	all year
Faeng	Little gourd	Sept.- July
Fagthong	Pumpkin	Mar. - June
Horapa	Sweet basil	all year
Kaprao	Holy basil	all year
Khamin	Turmeric	all year
Khar	Galanga root	" "
Khileg	. . .	" "
Khing	Ginger root	" "
Krachai	. . .	" "
Makhua	Eggplant	" "
Man-musua	Yam	Oct. - Dec.
Man-samparang	Cassava	Mar. - April
Man-samrong	Bitter cassava	Mar. - April
Namtao	Bottle gourd	Aug. - Sept.
Oy	Sugar cane	Nov. - Mar.
Pag-bia*	Purslane	all year
Pag-bung*	Morning glory	" "
Pag-chee	Parsley	" "
Pag-kached	. . .	" "
Pag-khom*	Amaranth	Dec. - May
Pag-pangpuay*	Primrose willow	May - June
Pag-waen	Marsilea	July - Oct.
Prig-khinu	Bird pepper	all year
Sadao	. . .	Dec. - Feb.
Sano	. . .	Oct. - Dec.
Saranae	Peppermint	all year
Takrai	Lemon grass	" "
Tamlung	. . .	" "
Thonglang	. . .	Feb. - Mar.
Thua-fagyao	String bean	all year
Yod-khae	Kauri	April- May

(. . .) Not available.

* These plants grow wild in Bangchan.

Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended to live in proximity. Around the houses were kitchen gardens and threshing floors, and behind them, the fields. Bananas grew abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, while fish were plentiful. Water sources were the rain, kept in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

General Nutritional Level

The population was physically well-formed with few physical deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. Food at the not-infrequent festivals was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The change-over, some decades ago, from home pounding of rice to steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community.

2. Dr. H.M. Hauck, personal communication, 1959.

People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauck, et al: 47-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny kluai nam, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" kluai nam wā. Here orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plus--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (wisāt:powerful) or natural (tām thammachāt) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "khun"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paroxysm, flatulence, convulsion,

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16. Phillips (p. 65) reported that parents did not give their child a disliked medicine because "it offends him.... It is better not to give it to him than hurt his feelings."

17. This small skin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely pained (cf. Textor:116-127). Suspected khun was one of the few reasons why a family would authorize so grave a violation of the body of a deceased member as an autopsy.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7
Bang Chan

SUMMARY

A general description is given of conditions in a
105 Siamese rice village, 1952-54, as they relate to food supply
26 and food habits. Activities at various seasons of the year
[22[are described. The heavy work seasons occurred during trans-
planting and harvest. In the dry season, many ceremonials
and festivals were held in which food played an important
role. Such occasions provided opportunity to "make merit"
and add to one's prestige as did the regular offering of
food to the priests, throughout the year. The relatively
large financial obligations undertaken by those sponsoring
ceremonies was a major factor in the economy of the village.

105 Food was mostly home produced and an important factor
262 in the standard of living was the number of productive hands
433 available. Rice was the first essential for any meal. Home
milled rice was used, even in part, only by a minority of
households. Fish, fresh or preserved, was the food next in
importance to rice. Use of flesh foods other than fish was
probably inhibited by Buddhist tenets which prohibit the tak-
ing of life, but some poultry, oxen, and other flesh foods
[235] were used. Nearly all of the families in Bang Chan raised
[433] chickens, and some raised ducks, but about 3/5 of all eggs
produced were sold. Every family had some sort of kitchen
[244] garden, including banana trees and other plants, but spices
[245] and chili were much more commonly grown than vegetables and
[22[fruit. Swamp cabbage, the green leafy vegetable used most
often, grew wild in the canals. A calendar of fresh foods
commonly used in Bang Chan is presented.

[443] Cash expenditures for food were small. When canals
were navigable, boat venders brought produce and during the
busy work seasons farmers often bought fish as well as the
usual foods: onions, garlic, limes, coconut, palm sugar and
small amounts of vegetables.

[434] Many households increased their income by the sale of
eggs, vegetables gathered from the canal and other items.
[178] Culture of tilapia and mushrooms, begun during the period of
study, was undertaken by a considerable number of farmers be-
tween 1953 and 1955. Both enterprises were apparently regard-
ed primarily as a supplementary source of cash rather than
as a means of improving the home food supply, and both
efforts had been largely if not entirely abandoned by 1957.

105 Preparation of some typical dishes, meal service and
264 techniques of eating are described. For adults, two meals a
day were usual, except during the busy work seasons when a
third meal might be eaten. Menus were similar for all. Two
observations from records of school children were 1) that
over 90% of them ate snacks, many of which were bought from
venders on the school grounds. Sweets and fruit were the

221 132 243 244 245 262 434 503 796 871

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ←WET→							←COOL→			←HOT→	
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	→heavy		moderate	←heavy→		←light→			←negligible→			
Canals		rising			high	(floods)			lowering fast			low,dry
Cultivation of Rice		plowing→ seedbed grown				growing	early var. mature					
			TRANSPLANTING				←HARVEST→					
School			vacation					vacation			vacation	
Cash available Source	cash in hand→					←cash shortage→				cash in hand→		
		rice			cash jobs→				main rice sale			
Fruit;vegetables	→	←new planting→							←annuals die→			
Fish: Supplies	ponds drained→								←ponds drained→			
Maturation			←many varieties→						←best varieties→			
Preserving	←much→		←moderate→						←most→			
Ceremonies	ceremonies→			←Buddhist Lent→						←ceremonies→		
Dietary survey	→	←Round I→		←Round II→			←Round III→		←Round IV→			

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 18°F (10°C) in April and 22°F (12°C) in January.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

244 Vegetables and Fruit. - Although kitchen-gardening has been encouraged by the Thai government, vegetables and fruit were grown in Bang Chan to a limited extent only. Every family had some sort of kitchen garden, but many edible plants which can be grown in the village were grown by relatively few families. The list of fruits grown in Bang Chan in 1948-49 (Sharp et al., 1953) included four times as many items as were grown by one or more of the 11 families that participated in the dietary study. The list of vegetables and spice plants grown or gathered by these families included 27 items, as compared to 41 listed by Sharp et al. Spices and chili were more commonly grown than vegetables and fruit.[1]

[433] [245] [244]

244 One affluent household whose food expenditures for 1949 245 were reported by Sharp et al., (1953, pp. 214-215) produced 433 for home use, 125 kg. of palm sugar valued at 200 baht and 500 coconuts, valued at 450 baht. Home production of both of these was unusual. Few families in Bang Chan grew either sugar palms or coconut palms and expenditures for coconuts and palm sugar were usual. During the major flood of 1942, villagers noted that coconut palms survived whereas all other fruit trees were destroyed. After this, a number of farmers planted coconut palms, but they had not yet begun to produce.

361 311 [351] In 1954, about 120 acres (300 rai) of the total of about 2800 acres (7000 rai) of land in the village were used for home sites and home gardens for 336 households. Individual home sites usually varied in area from about one-quarter to one acre, and were occupied by buildings, threshing floor and space for poultry as well as trees and garden space. Portions of this might be under water for several months of the year. Increased home production of fruit and vegetables would in many cases necessitate increasing the size of the home site by purchase, mounding or both. Ordinarily, increased land for the kitchen garden was obtained at the expense of some of the

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[245] [249] [262] [222] [262] [245] 1. In a typical farm garden in Bang Chan one would find bananas growing, and a number of plants used for seasoning curry. Various kinds of chilies, lemongrass, bergamot, of which both rind and leaves are used, and galangal were grown by all families who participated in the dietary study. Both sweet and holy basil were commonly grown. Many families grew one or more varieties of gourds and of eggplant, some of which can be trained to grow on a tree or trellis. The inflorescence of the banana was also used as a vegetable. Leafy vegetables were not commonly cultivated but some families grew (2)phag (2)ka-(2)cheed, a green water plant, in gardens staked out at the edge of the canal, or in a pool, and some had trees, the leaves of which were edible. Swamp cabbage or (2)phag (3)bung grew wild along the edge of the canals and was the most commonly used green leafy vegetable. A few families grew guava, jujube, star gooseberry, Manila tamarind, mango and pineapple.

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

262 753 853 constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

The belief that eggs would cause dental caries, and should therefore be omitted from children's diets, was expressed by the mother in a poorly nourished family. The possibility that such ideas arose from unwillingness to spend much money on food for a child has already been noted (see p. 42).

262 753 758 Information on food suitable in illness was obtained only incidentally. The Thai did not appear to have a consistent theory as to the cause of disease (Sharp et al. 1956, p. 489), and residents of Bang Chan did not seem to associate any of their illnesses with contaminated food or water. Choice of food in illness was probably associated in some instances with the idea that the body is composed of the four elements: wind, water, fire and earth, and that sickness results from or is a symptom of imbalance in the proportions or arrangement of these elements. Thus the "fragrant banana" and eggs, because of their "cooling effect," were said to be forbidden in measles. A child who was getting measles was restricted to rice and dried fish. In contrast the small, [853] rather flavorless banana, designated (3)kluaj (4)nam-(4)waa, was said to have "no cooling effect" and was considered an acceptable food in illness, as well as for newborn infants.

262 758 784 In one instance, when a patient had been taken to the hospital with severe diarrhea, a nurse instructed other family members not to eat ices, syrup (see p. 36), or raw vegetables, nor to drink unboiled water. The informant who told us about this offered no reason for these precautions. These foods were simply "forbidden" to the family of a patient with severe diarrhea.

777 824 245 Notions as to what is fortunate or unfortunate may also affect agricultural processes. The many ceremonies associated with culture and use of rice have been mentioned (p. 42). The idea that a papaya tree growing near the house was "unlucky" was attributed to Thai by a young Thai Moslem in Bang Chan. When we commented on the papaya tree near his front door, he said the papaya tree dies easily and does not like water, but his was planted on high ground. According to this informant few villagers would be willing to grow papaya trees near the house. He considered the non-specific threat of harm as unreasonable, though he said that if specific harm were said to [777] result, he would be concerned about it. The midwife at Minburi Health Center said that she urged each woman who came there for delivery to have more banana, mango and papaya trees planted for home use. Before raising of papayas can be successfully encouraged, however, the idea that papaya trees bring back luck must be overcome.

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from venders almost every day. They said [554] [922] "Some do not pay money to buy food, but pick or get it from the canal or gardens --this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

433 511 Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

243 [465] 256 [262] Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

244 [854] [845] Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chilies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

222 262 Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)sa-(5)noo flowers were used by 3 families on one day each;

294
295 Table 10. List of Edible Plants Grown by the Two Groups of Households Studied

Name of plant[1]	Number of Families	
	Group A	Group B
Green and leafy vegetables		
Basil	3	1
Bean, string	1	-
Chili	6	5
Coral[2]	-	1
(3)Khii-(2)leg[2]	1	1
(4)Khlyb[2]	-	1
(4)Ma-(1)dan[2]	2	1
Morinda	-	1
(2)Sa-(1)daw[2]	-	1
Other vegetables		
Bamboo	1	2
Calabash	3	1
Egg plant	2	1
Gourd	1	-
(2)Kha-(1)cauaun	1	-
Mushrooms, straw	1	1
West Indian pea tree[2]	1	1
Fruits		
Banana	6	5
Guava	1	1
Jujube	1	-
(4)Ma-(1)dan[2]	2	1
Mango	1	1
Manila tamarind	1	-
Star gooseberry	1	-
(2)Ta-(1)koo	-	1
Spice plants		
Bergamot	6	5
Galangal	6	5
Ginger	2	-
(2)Ka-(1)chaaj	1	2
Lemongrass	6	5

1. See list, Appendix C, p. 126 for botanical names.

2. Trees

*243
132
137 to the buffaloes will be gradually reduced by the process
231 of land preparation.

The homelot is usually surrounded on all sides,
244
245 except the one facing the canal, with bamboos which serve
351 to protect the farm home from strong wind. Within this compound there always is a kitchen garden where a variety of plants and vegetables for everyday use are grown. If the homelot is large, there may be enough room at the backyard for an orchard where fruit trees may be grown. In some cases, aquatic plants are cultivated in the canal in front of the house.

137 In addition to cultivated plants, there are to be seen also wild shrubs and vines which are more or less restricted to small strips of land along the banks of the canals. Wild aquatic vegetables, especially the morning glory, are always seen in these canals, making them appear narrower than they actually are.

Livestock

231 Buffaloes: As in most of the rice producing areas of the country, so in Bangchan buffaloes are used in all kinds of farm work where the help of draft animals is needed. Since the village is without land which can be grazed the year-round, buffaloes are not locally bred but are brought in from the northeast and other parts of the kingdom. To be sure, there are some local-born buffaloes, and these are considered to be stronger and to live longer than the imported

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 buffaloes heretofore undreamt of and will have to bear
231 the consequent burden of increased cost of producing rice.
311

Some description of the homelots which constitute
311 almost five per cent of the land area of Bangchan has already
351 been given in the section on vegetation, Chapter II. From
[231] the standpoint of land utilization, functions of the homelot
[235] other than providing standing room for the living quarters
[244] may be mentioned as follows:
[245]
[226]

1. It provides space for threshing and for storage of rice and farm equipment including buffaloes.
2. It provides room for chicken or duck raising.
3. It provides land for a kitchen garden, and for fruit and vegetable growing.
4. It provides space for fish trapping by the draining method.

To serve these functions, homelots in any rice growing village, where the fields are submerged under water during the entire life of the rice plant, must be high above water level during the flood season, must be well drained, and must have pools with ample shade.

243 Rice land in its natural state does not meet these
311 requirements for a homelot. In the first place its level is too low. Second, the impervious layer of clay characteristic of rice land does not permit soil drainage. To make a homelot out of rice land, it is necessary that the prospective site be mounded up to a level two or three feet higher than the level of the surrounding fields. The hole from which

262 averaging 174 kilograms annually per family. It should
244 be noted here, as will be elaborated in the section on
433 consumption in Part II of this study, that while most respondents could fairly well estimate their rates of consumption of such items as rice and fish sauce which were somewhat constant, they were not as good in estimating their consumption of vegetables. Furthermore, while admitting that they did buy some vegetables during the year, they were reluctant to give any estimate of the purchase for fear of too much inaccuracy. At most, they were willing only to say that the amount of vegetables purchased was only a small fraction of what they produced or acquired freely from the canals.

• 245 Fruit production was even more difficult to estimate
433 than vegetable production, and we had to be content with only qualitative information which appears in the section on vegetation on pages 42-43 of this study. Our records show that a few families reported nominal incomes of some forty or fifty baht annually from sale of fruit to neighbors.

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433 the farmer to know the exact amount of his crop, which condi-
*128 tion leads to our confidence in the accuracy of our estimate

[TEXT CONTINUED ON PAGE 129]

*243 requires much additional hand labor and reduces the possibil-
242 ities for mechanization to a minimum. On the other hand, the more labor intensive transplanting method would seem to be more suitable to a population pressure area like Thailand if it really gives as relatively higher a yield as it is claimed to give.

*243 Farm equipment

351 In Thai agriculture, it is very difficult to separate
[235] the farm from the home. In the chapter on the community it
[244] has already been indicated that the home lot not only is the
[245] living place for the farm family but also provides space for
[226] threshing and for storage of farm equipment, room for chicken raising, land for kitchen garden and for fruit and vegetable growing, and space for fish trapping by the draining method.

*243 In other words, all the material components of the farm, except
351 the rice fields, are located or stored on the home lot. Here,
422 items that are uniformly or frequently found include:

A. Household equipment

1. Buildings
2. Furniture
3. Bedding facilities
4. Kitchen accessories
5. Storing facilities
6. Lamps of various sizes
7. Ritual accessories

B. Farm equipment

1. Farm building: equipment and buffalo shed.
2. Implement: plow, harrow, yoke, roller, shovel, spade, hoe, weeding knife, noria, sickle, pitch-fork, rake, broom, winnowing machine, wooden winnowing spitula, basket, mat bin, box bin, home-mill.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

[243] [434] [433] income and operator's labor earnings lies in the value of farm produce consumed by the family. Earlier, five kinds of produce were listed -- rice, fish, eggs, fruit and vege-[235] tables. For technical reasons, we consider only rice and eggs as products of the farm, rice being the primary crop [226] and eggs the secondary crop. Fish is not considered a farm product because Bangchan villagers fish for consumption, not for sale. Besides, fishing is done by every resident of the village, farmers and non-farmers alike. It is thus [244] more of a way of life than an economic enterprise. The same [245] is true for fruit and vegetable growing which is done in a very small scale.

If we agree on considering only rice and eggs as the products of the farm, it is not difficult to estimate the amount and value of farm produce consumed by the family for Bangchan operators can readily give a rather accurate information on their rates of consumption of these two products. Thus, under Bangchan condition the figure for operator's earnings is not as difficult to obtain as it appears to be the case among most American farms. The frequency distribution of operator's labor earnings of our 104 sample-farms is given in Table 48. It is seen that only 17 farms produced negative remuneration for the operator computed by this method as against 47 farms by the labor income method. As Professor Warren has said, of these two, labor earnings is a better [171] measure of profits. It is especially so in Bangchan and perhaps in other agricultural regions in Southeast Asia

[TEXT CONTINUED ON PAGE 306]

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APPENDIX D

LIST OF FRUIT GROWN IN BANGCHAN

• 245

Thai name	English name	Season
Chompu	Rose apple	Mar. - April
Farang	Guava	Aug. - Sept.
Khanun	Jack fruit	Nov. - May
Kluay	Banana	all year round
Kraton	Santol	Oct. - Dec.
Lamud	Chico	Nov. - April
Mafai	Rambeh	Mar. - April
Makham	Tamarind	May -- Jan.
Makham-pom	. . .	Nov. - Feb.
Makham-ted	Manila tamarind	Dec. - Feb.
Makorg	Hog plum	Jun. - Sept.
Makrood	Kaffir lime	July - Oct.
Malakor	Papaya	all year round
Mamuang	Mango	April- June
Manao	Lime	July - Nov.
Maprao	Coconut	all year round
Maprang	Marian plum	Feb. - Mar.
Mapud	. . .	Mar. - Jun.
Matum	Bael fruit	July - Oct.
Ma-ug	. . .	all year round
Mawaeng	Sparrow's brinjal	July - Oct.
Mayom	Star gooseberry	Dec. - May
Noina	Custard apple	Nov. - Dec.
Phudsa	Jujube	Dec. - Jan.
Sapparod	Pineapple	May - Jun.
Som-khiewwan	Tangerine	Nov. - Dec.
Som-o	Pummelo	Sept.- Jan.
Som-sa	Sour orange	all year round
Tabtim	Pomegranate	all year round
Wa	Java plum	April
Yor	Morinda	all year round

(. . .) Not available.

244 Vegetables and Fruit. - Although kitchen-gardening has been encouraged by the Thai government, vegetables and fruit were grown in Bang Chan to a limited extent only. Every family had some sort of kitchen garden, but many edible plants which can be grown in the village were grown by relatively few families. The list of fruits grown in Bang Chan in 1948-49 (Sharp et al., 1953) included four times as many items as were grown by one or more of the 11 families that participated in the dietary study. The list of vegetables and spice plants grown or gathered by these families included 27 items, as compared to 41 listed by Sharp et al. Spices and chili were more commonly grown than vegetables and fruit.[1]

244 One affluent household whose food expenditures for 1949
245 were reported by Sharp et al., (1953, pp. 214-215) produced
433 for home use, 125 kg. of palm sugar valued at 200 baht and 500 coconuts, valued at 450 baht. Home production of both of these was unusual. Few families in Bang Chan grew either sugar palms or coconut palms and expenditures for coconuts and palm sugar were usual. During the major flood of 1942, villagers noted that coconut palms survived whereas all other fruit trees were destroyed. After this, a number of farmers planted coconut palms, but they had not yet begun to produce.

361 In 1954, about 120 acres (300 rai) of the total of about
311 2800 acres (7000 rai) of land in the village were used for
350 home sites and home gardens for 336 households. Individual home sites usually varied in area from about one-quarter to one acre, and were occupied by buildings, threshing floor and space for poultry as well as trees and garden space. Portions of this might be under water for several months of the year. Increased home production of fruit and vegetables would in many cases necessitate increasing the size of the home site by purchase, mounding or both. Ordinarily, increased land for the kitchen garden was obtained at the expense of some of the

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245 1. In a typical farm garden in Bang Chan one would find
249 bananas growing, and a number of plants used for seasoning curry. Various kinds of chilies, lemongrass, bergamot, of which both rind and leaves are used, and galangal were grown by all families who participated in the dietary study. Both sweet and holy basil were commonly grown. Many families grew
262 one or more varieties of gourds and of eggplant, some of which can be trained to grow on a tree or trellis. The inflorescence of the banana was also used as a vegetable. Leafy vegetables were not commonly cultivated but some families grew
262 (2)phag (2)ka-(2)cheed, a green water plant, in gardens staked
262 out at the edge of the canal, or in a pool, and some had trees,
262 the leaves of which were edible. Swamp cabbage or (2)phag
262 (3)bung grew wild along the edge of the canals and was the most commonly used green leafy vegetable. A few families
245 grew guava, jujube, star gooseberry, Manila tamarind, mango and pineapple.

364 garbage was customarily fed to animals. As previously reported (Hauck, 1956) "Each family seemed to have its own pattern for disposal of garbage which was not fed to stock. Those who threw it in the canal, did so consistently, except when the nearby canal was dry, and those who threw garbage elsewhere, did this consistently. No one was observed to burn or bury garbage."

The Kitchen Area

354 In the larger houses, the kitchen was usually a small separate room with a wooden floor and at least one window for ventilation. A low table or wooden case with sides built up several inches, and filled with clay, served as the "fireplace." On this stood the clay stove, and hot pans and pots were set there when removed from the fire. In homes with an earthen floor, the fireplace might be built directly on the ground. The clay stove was several inches high, shaped so that rice pots and curved frying pans would fit into the large segment of a circle which was its top. An open space was left in front to facilitate building and maintaining the fire. Firewood was kept nearby. Most families also had a portable clay stove in which charcoal was burned. This might be used as an auxiliary unit, for outdoor cooking on a hot day or when traveling by boat.

Matches, although available, were hard to protect from dampness. Kerosene filled cigarette lighters of a cheap and efficient type were commonly used. As kindling, one might use coconut husks or purchase resinous bits of wood that would hold a flame for sometime.

Although only a small amount of firewood was needed, as it was used for cooking only, local supplies were inadequate. In all seasons, some was brought in from other areas. One family participating in the survey planted trees each year for firewood. The wife in another household used to return to her parents' home to gather a boatload of wood as needed. Because charcoal was more expensive than wood, and none was produced in the village, it was used for home cooking by only about 10 per cent of the village families, primarily those such as storekeepers and venders who did not have time to cut firewood.

352 In many kitchens clean dishes were placed upside down on
• 251 a slatted wooden rack. The other common item of furniture was a free standing ventilated cupboard or food safe. At its best, this was screened, and the legs antproofed in some way, as by putting them into small containers partially filled with kerosene, or rubbing them with powdered pitch; but relatively few
251 village families had such well constructed food safes. Families that did not own a food safe often kept leftover cooked foods in a basket, or covered with large dishes on a tray. Fish and sugar must be kept away from ants, but cooked rice,

251 which did not attract them could be left anywhere out of reach of dogs. Raw rice was stored in a large jar or oil can while salt, fermented fish, shrimp paste[1] and fishsoy[1] were kept in smaller jars or bottles. Such containers were customarily covered. Dried food materials such as onions, garlic, chili peppers and other seasonings were often kept in a basket hung from the roof. Paddy, i.e. unhusked rice, was kept in a large bin of matting or wood, the excess sometimes simply piled on an uncovered mat on the floor.

128 Descriptions of two kitchens, one in a relatively prosperous household and one in a poorer home in Bang Chan, are included in excerpts from field notes, Appendix A, p. 93.

312 In a few homes, a clay water jar was kept in the kitchen or nearby, but more frequently foods were washed, and cooking water obtained at the canal or fish pond.

The water level varied between heavy flood and threatened drought. There were no deep wells in the whole area. Rainwater was collected from the roofs and stored in jars, but during the dry season, the canal or fishpond, although low, must supply the needs of the household. In some, drinking water drawn from the fishpond was preferred, and an effort might be made to keep buffalo from wallowing in it, and to avoid contaminating it with fecal or food wastes or by bathing. Others considered the moving water of the canal preferable to pond water.

General Social Factors Affecting Nutritional Level

462 In Bang Chan, most farm and household tasks were shared by men and women. Both sexes plowed, planted, harvested and dealt with rice buyers; managed buffaloes, boats, and children; cooked, fished and cut wood for fuel; hired out as labor hands, "living in" if desired.

554 Though there were clear differences in socio-economic status, the daily life of the people was much alike: whether owners of land or renters, whether farming large or small acreages, the rich and the poor worked in the fields at the same tasks, produced or gathered much of their sustenance, and ran out of cash periodically. Socio-economic status was roughly defined in terms of food: a poor man "had one meal only to forego another;" a rich man "had or could get what he wanted to eat." (Sharp et al. 1953, p. 264.)

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1. Description of these products will be found on pp. 17-18.

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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1. In some large houses, two related family groups lived together but maintained separate kitchens.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

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1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

Killing
fish was apparently regarded more lightly by many Buddhists than killing of larger animals, but fishing on (1)wan (4)phra, the weekly holy day, was forbidden. Fish were caught from the canal with nets, traps, spears and hooks. Some were trapped in trenches in the rice fields. Techniques varied with the varieties of fish mature and plentiful at different seasons.[1] Moreover, every house had a fish pond. It was usually the hole from which earth had been removed for mounding the home site, and was connected by a ditch to the canal. Fish were lured from the canal into the pond by clearing it of injurious undergrowth, planting appropriate fish-feeding plants, of

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Smaller fish were preserved as fermented fish. The fish with bones left in, were salted overnight. This product was called (1)plaa (1)raa. For fermented fish to be used as seasoning, in various dishes, the liquid was drained off, then the fish were washed and mixed with salt and specially prepared rice. This had been soaked overnight, fried and pounded. The mixture was allowed to ferment in a small jar for from 2 weeks to 2 or 3 months, depending on the product desired. Large bones were removed by putting the product through a colander before use. Fermented fish had the advantage that it could be eaten without further preparation, and the flavor was generally liked.

Small shrimp, which were caught in quantity during only about 3 weeks in February, were made into shrimp paste as follows: the shrimp were washed, mixed with salt and allowed to stand overnight. The liquid was drained off, and the shrimp were spread out on trays and exposed to the sun for a day or so. Larger ones might then be beaten to loosen the shells, which could be winnowed away. For very small shrimp, this step was omitted. The shrimp were then pounded thoroughly in a mortar, and stored in a jar for about a month before use. Very small fish were sometimes made into fish paste in the same way. The yield was about 2 kg. of the tannish or grayish colored shrimp paste from 4 baskets (4/5 tang) of shrimp. Shrimp paste or (2)ka-(2)pi was an essential ingredient of Thai hot dishes.

The liquid which was drained off from the mixture of fish or shrimp and salt in the first stage of preparing fermented fish or shrimp paste was used by some villagers to prepare (4)nam (1)plaa or fishsoy. The liquid was boiled with certain green leaves such as mango leaves, onion, garlic and salt for from 30 minutes to an hour, then it was strained. The resulting red-brown liquid was bottled and was ready for use as a condiment.

1. Sharp et al. (1953, pp. 185-196) described some common fishing techniques and listed 32 varieties of fish known to be found in Bang Chan in 1948-49.

235 Eggs and poultry. - Every household which took part in the survey raised chickens, and 3 of the 11 households had ducks also. In both groups of families, most of the eggs produced were sold. Home consumption of eggs on survey days was small.

228 Fish. - Each family studied had a fish pool. One family only, Household 25 in Group B raised tilapia. They began tilapia culture during the third round of the study, too late to ascertain how this might affect fish consumption in the family.

251 Preservation of Foods at Home. - Home food preservation was practiced to a very limited extent only, fish products being the principal ones produced.

Dried fish. - Families in both groups salted and dried fish throughout the year whenever they were available in excess of immediate needs.

Fermented fish. - In 10 of the 11 households, fermented fish was prepared. The 6 families in Group A had prepared a total of 30 kg., and 4 of the 5 families in Group B, a total of 29 kg. The largest amount prepared in one household, for one year was 10 kg.

Shrimp paste. - Because shrimp were caught in insufficient quantity, shrimp paste was prepared by only 6 of the 11 families. Four families in Group A prepared a total of 26 kg., and 2 families in Group B prepared a total of 7 kg. These amounts were insufficient for their needs.

Fishsoy. - One family only, in Group A, prepared fishsoy. All others in both groups purchased this product.

Buffalo meat. - During the survey year, the buffalo belonging to one family died. Some of the meat was used fresh for curry, and the remainder was salted, dried and sold.

Comparison of Caloric and Nutrient Intakes of the Two Groups With Each Other and With the Estimated Allowances.

128 146 In Table 11, the estimated calories and nutrients available to the two groups of families, are shown together with the estimated allowances.

146 On the average, the number of calories, and amounts of protein, iron, niacin and ascorbic acid in the diets of persons in Group B, the apparently better nourished group, approximated or exceeded the conservative allowances. For Group A, this was true for niacin and ascorbic acid only, the calories being 11%, protein 15% and iron 21% below the allowances.

117 takes it down the steps to the fish pond, where she swishes
252 the basket around to wash the fish, and rinses her hands at the same time.

[231] There are some hazards to the food--chickens trying to get at the edible part of fish while the niece cleans it (she leaves the scales, etc. for them to eat); cat and kittens in the kitchen, having to be driven away from the grated coconut and coconut milk, and getting an occasional unweighed nip. Whether we start to weigh food for the evening meal or a.m. meal, some cooked foods are apt to be used, either left over
[262] from a previous meal, or cooked in advance. This a.m., for
[126] example, buffalo meat, already cooked (but not weighed before cooking) was used, and (3)khii-(2)leg leaves, which SS weighed last night. These latter were cooked last night, to reduce bitterness, then put into curry today.

Description of Food Preparation Area in a Relatively Poor Household

Wednesday, May 27, 1953

117 Arrived about 5:45 a.m. While other food was being pre-
[262] pared, the 11-year old son came in with a package of salted white radish and a small milk tin with some coconut oil which had just been bought. This is the house which we found flooded when they sent for us to see the baby last fall. The roof seems to be well thatched. The floor is not wet after last
[352] night's downpour. The bed platform, in one corner, is about
[354] 8 x 10 feet. The baby's cradle hangs above it. In the oppo-
[352] site corner is a shelf where utensils are kept. Some food,
[25] in paper bags, is in a basket hung from the roof. Fresh fish
[354] is kept in a jar of water until needed. The stove is on a small mound of earth, and further elevated on a small box (just big enough for the stove) filled with earth.

[352] We sit on a mat, spread on the mud floor, with the
[355] scales, plastic bowls and waxed paper ready for weighing food. The children lie on a mat nearby. In the house is a fresh mound of earth, a small straw bin with rice, and various pieces of equipment.

Equipment Used For Food Preparation

252 Equipment used for food preparation by 11 families par-
41 ticipating in the dietary study: clay stove; pots and covers
[251] of clay, light weight aluminum, and enameled iron; frying pans, curved, of sheet iron, with home-made wooden handle on one side, or metal handles on opposite sides (shallow clay pans were also used for frying); basins, pails, chopping boards; grater for coconut: a metal, toothed instrument mounted on one end of a low wooden stool (often called a "wooden rabbit" because the seat of the stool might be shaped like a rabbit); mortar of pottery or stone; wooden pestle; fiber strainers usually with rigid handles, to hold them in place on top of a pot; a large-bladed all-purpose knife; in some households, one or more smaller knives; metal turner, with home-made wooden handle; spoons, with bowls of coconut shell, gourd or wood; tin cans for dipping, measuring rice, etc.; fiber trays used for winnowing rice, for drying food, storing dried chilies, onions, etc.; metal tray for serving food to priests, and for household use; baskets for storing food; (5)faa-(1)chii, or fiber cover, to keep flies and insects off cooked food; large earthenware water jars.

[184] Other items less often used, and owned by relatively few families in Bang Chan, included: steamer; a perforated clay pot or metal pan with cover, designed to fit tightly into another pot in which water was boiled; large wooden mortar, made of a hollowed tree trunk; spring-type egg beater (a strong spiral spring attached to a stick); scale; glass water jars.

Equipment Used in Serving Food and Eating

264 The equipment for serving and eating food might include:
412 flat bottomed bowls with a deep edge, similar to Western-
415 style soup plates, used as individual rice bowls; plates; small bowls for "with-rice" dishes; sauce dishes with stand, for chili sauce; enameled iron or china spoons (Chinese type) used for serving moist foods; forks, used by some families on special occasions;[1] teapot and cups; large rice bowl for ceremonial use (silver or aluminum); large brass spoon with serpent-tail handle, for serving rice; drinking glasses; tiered lunch pail; canteen; thermos bottle.

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1. A relatively poor family (Sharp et al. 1953, p. 223) had one pair of fork and spoon for eating.

BANG CHAN

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Sanitation

364 Disposal of Garbage. - Of the 6 categories for disposal of garbage listed on the schedule (Appendix A), 3 only were used by the families who took part in the dietary study (Table 18).

Table 18

Disposal of Garbage in 11 Households, Bang Chan

	Number of Families Using Each Method			
Round[1] of dietary study	I	II	III	IV
[231] Garbage fed to animals	10	10	10	10
Garbage thrown into canal	2	6	3	4
Garbage thrown elsewhere	5	5	5	5

1. Each family was visited 4 times during the year. Each series of visits to the 11 households was called a round.

Ten of the 11 families fed some garbage to animals, and for 4 families, on 10 survey days, (i.e. 1 to 4 days per family), this was the only manner of garbage disposal. One family had no animals other than chickens, and these were not fed garbage on the survey days.

Each family seemed to have its own pattern for disposal of garbage which was not fed to stock. Those who threw it in the canal, did so consistently, except when the nearby canal was dry, and those who threw garbage elsewhere, did this consistently. No one was observed to burn or bury garbage.

• 251 Protection of Food From Contamination by Insects and Other Animals. - Large oil tins, with covers, were commonly used to store dry rice and other non-perishable foods in the kitchen area. One family covered the container with a plate.

In 8 of the 11 households of the dietary study some provision was made for storage of left-over and perishable foods. None of the households had screened cupboards, but two used some means to ant-proof the legs of the cupboard such as rubbing them with powdered pitch, or setting them in bowls of water.

A 2 [see p. 63 - Analyst]

251 One family stored cooked food in a basket which was hung from the ceiling. One homemaker frequently covered such foods with a basket, and in one instance a homemaker, who usually took no precautions to protect cooked foods, used a basin to cover food left on a table.

271 312 Source and Treatment of Water For Drinking and Culinary Purposes. - From the time the dietary survey was begun, on May 26, 1953, through January 18, 1954, all families used rain water for drinking.

Of the 14 survey days, spaced at about weekly intervals, between January 28, 1954 through May 8, 1954, canal water was used for drinking on 7 days, water from fish ponds on 4, and rain water on 3 days. No distinction was made in source of drinking water for children and adults.

312 744 [846] All families used canal water for washing vegetables, cooking, and washing dishes, on the survey days from May 26, 1953 through March 18, 1954. On the 6 survey days between March 24 and May 8, 1954, 4 families used water from the fish pond for these purposes. In no instance was the water treated in any way before being used, although alum is known to be used, at times, in the village, to settle or clear water, and boiled water is given mothers and infants to drink during the post partum rest period.

514 Disposal of Excreta. - Of 30 families from whom information was obtained, 20 had pits for toilet use, only one of which was equipped with a cover. One other family had a flush latrine. Of the 8 families who had no special place which was used for toilet purposes, 4 reported that family members urinated on the compound, 3 that they used the fields, and 1 that either compound or field might be used for urination. One reported that the compound was used for defecation as well as urination; the remaining 7 said they went to the field to defecate.

Six families with pit latrines covered feces in some way: 3 used earth, 2 ashes, and 1 either earth or ash. A majority of those who used either an uncovered pit or had no designated place, reported that no attempt was made to cover feces. From six families, no information was obtained on this point. Various materials were mentioned as being used in the manner in which western peoples use toilet paper. Cocoanut husks were mentioned most frequently (25 times), and other materials in this order: paper (newspaper 9 times, straw paper once), wood (4 times) and water (3 times).

From the information available, custom and convenience rather than sanitary considerations appear to determine practices that are followed. If improved practices are

Diet in Body Maintenance and Curing

261 262 753 Because food created fire, the daily diet could be a source of illness or a therapeutic means. Every food had known properties for heating or cooling, and for other effects as well. Guava fruit, alcohol, and turtle or cobra curry were heating. Eggs were cooling. Depending on the occasion, ice and iced concoctions were over-heating or over-cooling. They were always "dangerous during menstruation." Banana varied according to the variety: kluāi hōm (fragrant banana) was undesirably cooling and caused either diarrhea or constipation (Hauck, 1959:27); kluāi nam wā was less deleterious (salāeng) while kluāi nam was good for the sick or for parturients (Boonlong).

252 262 Properties in food changed in cooking. Boiling made rice "ripe" (auk) and so available as nourishment (Anuman Rajadhon:77). Even the method of cooking varied the properties. For the sick and for parturients, the banana [758] variety called kluāi hak muk was good if baked, but not if [846] cooked in syrup (Boonlong).

262 753 827 Some foods were "incompatible" with, and so aggravated, certain illnesses. Air-borne food in the form of smell was incompatible with, and compounded, a condition of wind excess. Death or blindness ensued. On the other hand, asafetida might be tied to the wrist of a new-born baby so that the smell, an established carminative, might cure the excess wind in his stomach manifested as flatulence.

262 Beneficial foods were encouraged. Of all these none surpassed rice, the main sustenance of the body, "the only true food" (Yong Chutima, in Hauck, 1959:27) and source of "strength" to the farmer. Rice was a safe food. It never disturbed elements. Eating rice, as compared with meat, [774] had no overtone of taking life. One could eat one's fill without any sin. Most of all, rice nourished the human khwan, for each grain contained a part of the khwan of the [782] divine Rice Mother. Furthermore, any food offered ritually to a spirit or to make merit acquired strengthening properties, and was afterwards given to priests, children, or to the sick.

Foods with known dangers were avoided. "Kluāi tānī [776] banana, a variety full of seeds, was never eaten because it contained a female ghost (phī)." Jackfruit was avoided by lactating women as a direct source of wind-excess. Fruit in general was not dangerous but "did not give enough strength for a rice farmer. It was all right for an orchardist."

562 delivery, "her blood was purified to a white color to become
[827] the milk of the breast."[48] Nursing a child was the essence
[853] of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 In a wider context, not only all their household members
462 but people anywhere were the objects of women's nurture:
252 women were in charge of the cooking even if occasionally
264 helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor houshold, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry
[082] any more." She construed this as proof that she had ample
[431] merit, but it also meant that she was a great donor who gave
[796] continuously and took little. Women usually offered the early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When
593 age pushed women past their mature capacities, they returned
888 to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 A desire to give tender care and nourishment was deemed
857 inborn in all women. Although sex was not strongly
[291] differentiated in babyhood,[49] by age 3 a hard-to-handle
[593] skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phūm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[856] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

In addition, strengthening foods like rice and fish, the staples for stout farmers, were stressed. Fruit, "which gave no strength," and vegetables (except for the nursing curry mentioned below) were avoided.

The holy fire also transformed a woman into a better nourisher. It gave her new, lasting beneficial nursing habits. As one man explained, "the very nature of water is changed by boiling over a fire. It becomes suk (ripe)." Similarly, a woman's body, her very nature, was permanently changed to suk by the fire's heating. The fire, in fact, made suk all the food she ate beside it. Since this food was turned into milk, her breast milk became suk and so more nourishing, and did not disturb elements.[52] "Food eaten while lying by the fire, when eaten later on (during lactation) by the mother, does not cause diarrhea in the baby." Jackfruit ordinarily caused wind-trouble during lactation, but one woman ate it during the fire-rest, and at once "got used to it, so she could eat it all the time." To make themselves better nourishers, some women spoke of the desirability of "eating a bit of every kind of food." The "nursing curry" (kaeng lIeng) was a mixture of vegetables.

Finally, the consecrated fire strengthened a woman's own khwan. She could better withstand convulsion if attacked by a spirit.[53] She was able thereby to handle a khwan even without the special magic that existed for it.

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52. To be nourishing even the daily rice had to be made suk by boiling (Anuman Rajadhon:77). It may be that no food was considered nourishing unless suk, either naturally (like ripe fruit) or by cooking.

53. "...when 'involuntarily' entered by ghosts...maidens in the 17-25 age bracket tend to convulse more violently than do women of more advanced years"(Textor:406). "Maidens" were presumably not married and so not suk.

What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the families, living in tiny separate cottages.[1] Usually with inadequate or no land, they earned an irregular income by hiring themselves out for farm or other work. At the other extreme, in a hamlet-like cluster of dwellings, lived a closely affiliated group of kin. A senior couple more or less headed the married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying home from school to do so. Where the adult cooperative group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

Plowing could be done by a man and wife, but for both transplanting and harvesting which had to be done within a few days, large groups were necessary. Two patterns of auxiliary group labor prevailed: reciprocal cooperative work, and hiring of labor.

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1. Janlekha, 1955, categorized families as 5% "one-person," 59% nuclear, 8% limited extended (including one or more parents of a spouse), 27% extended (including dependent married couples or other collateral relatives), and the temple residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

was given away fresh to selected kin and friends, including those who helped to butchar, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

listed on 10 or more of the 24-hour dietary records obtained. For items which were major ingredients, the number of records on which the item appeared, is given.[1] Thus (1)plaa (1)thuu, which is bought by residents of Bang Chan during the busy work seasons, was used more often than any other single variety of fish named. Of the varieties caught locally, climbing perch, serpenthead, and silurus were most commonly used. Fermented fish, not included in the calendar, appeared on 53 records, and fish with kind not specified, on 180. Eggs were used more often than any animal food other than fish. Among green vegetables, swamp cabbage and (2)phag (2)ka-(2)cheed were commonly used. Bamboo shoots and lotus stalks were prominent among the non-leafy vegetables. Bananas which are grown in every garden and are available all year round were much the most common fruit, although other seasonal fruits were eaten more often in 6 of the 9 months in which school children submitted records.

Some idea may be obtained of peak seasons for use of various common foods by noting the months designed by x. Thus in January and May, serpentheads were listed on about 1/3 of the records, and were frequently served at more than one meal. Sweet potato, usually fried and eaten as a snack, was listed on 35 of 52 records obtained from school children in September. Flowers of the West India pea tree were listed on 10 of 55 records in October, and 12 of 88 in November, with occasional mention on records obtained in 4 other months.

Fruits were eaten much less often than one might expect in a tropical area where many varieties are available and fruit can be grown the year round. They were most often eaten by children as snacks, although pineapple and papaya were usually, and banana occasionally cooked in "with-rice" dishes such as curry. In September, fruit was included in the diets of less than 1/3 of the children. An average of more than one serving of fruit per child per day was recorded in 5 months only, May, June, October, November and February. In May, when (4)ma-(1)faj or rambai was in season 46 of 76 children reported having eaten it. Pineapple, listed by 35 of 61 children in June, was most often served in curry at one or more of the family meals. In October, oranges were eaten by 30 of 55 children who submitted records. Bananas (mostly of the (4)nam-(4)waa variety) topped the list in November and February.

Items mentioned on fewer than 10 records, and hence arbitrarily omitted from the chart, are worth noting as they

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1. No figures are given for sweet basil, garlic, onions, chili or limes, which were so often used in small amounts as seasoning that the count obtained would give no clear idea of the extent of their use. Some common spice plants were not mentioned on the records.

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

contaminated drinking water, but the traditional use of boiled water for newborn infants and their mothers, and its occasional use for sick persons, might provide the starting point for a desirable change.

Meal Preparation and Service

Processes and Equipment

252 The principal processes involved in food preparation for which equipment was required are: cutting solid food into bite-size pieces, pounding spices and flavoring materials, grating coconut, straining, boiling, sauteing in a small amount of fat, steaming, and roasting on a stick or metal support over the fire. Although foods were steamed or roasted only occasionally, the processes were familiar to all.

358 The Thai kitchen had no oven. When the term "baked" was used, it might mean cooking with dry heat on a rack over the fire (as banana baked in the skin) or without fat in the frying pan (as small dried fish toasted in this way).

128 Equipment used during meal preparation by the 11 families observed on 44 survey days is listed in Appendix A, p. 96, that used in serving and eating food, on p. 96.

252 The type of food preparation and service was much the same in the relatively well-to-do and the poorer households in Bang Chan. The chief difference in equipment for food preparation and service in families of different economic status was in the number of items of one kind which were owned. Thus a poor family might own one knife and one clay water jar, whereas an affluent family would probably own several knives and a number of water jars. Equipment used on special occasions, as in preparation of food for large numbers of people, was owned by well-to-do families only. Some had enough equipment for large cooperative work parties.

Persons Responsible for Food Preparation

252 Food was usually prepared by the homemaker and/or older daughter, if one were at home, but all members of the family who were old enough to help, had some knowledge of food preparation and did prepare food as the occasion demanded. While preparing, cooking and serving food were more frequently carried out by women than by men, adults and school-age children of both sexes had some competence in this area. While certain activities are normally assigned to men and others to women, the Thai maintain no rigid compartmentalization and are unembarrassed when a woman does a man's job or a man does

a woman's" (Sharp et al., 1953, p. 88). For instance, the husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was sick or resting after childbirth. The ability of boys as well as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had (Hauck, 1953). Responsibility for food preparation increased with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

Certain men of eminence, e.g. headmen and elders, would not be asked to cook at all, but as they aged, they might return to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for 2 months because his wife had back trouble. Some dishes were cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

A premium was put on good cooking, and certain women who were noted for their cooking were in great demand for large scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

Food was commonly prepared twice a day, in the morning and late afternoon. The meal pattern was the same for breakfast

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1. Suvarnakich (1950) described the Thai diet in a general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

252 and dinner, either meal taking an hour or two to prepare.
264 Snacks might be eaten at any time. Adults often ate just the two principal meals, but children, especially the small ones who were not in school, might eat whenever hungry. The school children often purchased snacks from venders on the
[illegible] school grounds. If food was to be offered to the priests,
853 who went around the village about seven o'clock in the morning, breakfast preparation was begun early, between 4:30 and 5:30 a.m., although family members might eat at various times during the morning: the husband before he went to the field, older children, before school time, babies and small children when the mother had time to feed them, and so on (Appendix A, p. 95). Preparation of supper usually took place sometime between 2:30 and 6 p.m. Whenever possible, family members ate together at the evening meal, but many exceptions were noted.

252 Rice is the principal item in every Thai meal. In Thai
262 the general term meaning "to eat" is translated literally "to eat rice." All food items are divided into two classes: - rice and "with rice," or (2)kab (3)khaw. Among the families studied three or four "with-rice" dishes were usually prepared during the day, i.e. for the two main meals, but the number varied in different families, and according to season. One or two of these dishes would usually be "hot" i.e. highly seasoned with fresh or dried chili peppers. Fish was the food item second in importance to rice, but the typical "with rice" preparation, whether hot or mild, contained more than one food item in addition to a variety of spices and flavoring materials (Appendix C, p. 118).

262 Between meal snacks might be any available leftover
264 food,[1] fruit, or items purchased from a vender.[2] Such snacks were not regarded as meals, however, as no Thai considers that he has eaten a meal unless he has eaten liberally of rice.

252 The general method of cooking rice was the same throughout the village. The rice was washed two times in water from the canal or fish pond, and was then boiled in a large volume of unsalted water for about 24 minutes. The rice pot was

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1. Leftover foods from breakfast were eaten later that day with or without reheating. "With-rice" was seldom left over from the evening meal, but rice was frequently kept over night.

252 2. Deep fat frying of bananas, sweet potato slices and
264 the like was commonly observed, both among venders who sold their wares on the school ground, and those who travelled by boat. This method of cooking was never observed in ordinary home food preparation probably because fat was in relatively short supply.

252 usually covered. A common practice was to remove the cover and stir the rice once, toward the end of the cooking process. When the rice was almost done, surplus cooking water was drained off, and often after a lapse of time, the covered pot was put back onto the fire which had been allowed to die down, for about 6 minutes.[1] Thus the final cooking was essentially a process of steaming. Total cooking time varied from a little over 20 minutes to three-quarters of an hour, depending primarily on the amount of rice cooked. The finished product was moist enough to form a ball when pressed between the fingers. Left-over rice, if not eaten cold as a snack, was reheated by being added to the hot rice at the next meal. Rice water was commonly given to pets if there were any. In 4 families which participated in the dietary study, rice water was given to infants, one 11-year old boy served himself liberally to it, and one adult man was observed to drink rice water before meals.

231 212 353

The many recipes for preparation of "with-rice" dishes may be grouped into two categories, hot and mild. Hot dishes always contain chili and varieties of spices which are hot tasting. One type of hot dish is curry which may be designated as either "hot" or "sour". Thai curry consists chiefly of fish or any available kind of meat, with or without vegetables. To make curry, shrimp paste, chili and spices were pounded thoroughly and then mixed with the meat and condiments and frequently with coconut milk. All were boiled together. Vegetables, if used, were added when the mixture was nearly done. Both vegetables and meat were cut into small pieces and washed before cooking. With the exception of dried chilies and tamarind, foods were not ordinarily left to soak in water. Sour curry differs from hot curry in that it contains less chili and spices and has a mixture of tamarind ((4)ma-(1)dan might be substituted) crushed with water added to it.

The other type of hot dish is (4)nam (3)phrig or chili sauce. It is made of shrimp paste, chili, garlic and other spices ground together in the mortar and then mixed with lime juice, sugar and salt or fishsoy. (4)Nam (3)phrig was always served with either raw or cooked vegetables. One informant commented that (4)nam (3)phrig was the everyday food among the villagers.

Preparation of mild dishes varied. These included panned vegetables, meat or eggs cooked with small amount of fat and a variety of spices and condiments including black pepper but not chili. Fish were sometimes roasted or boiled. Vegetables might be eaten either raw or cooked in coconut milk without seasoning. If vegetables were simply boiled in water,

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1. Median times for a series. In 15 instances cooking time before draining ranged from 18 to 38 minutes and rice was steamed from 2 to 12 minutes after draining.

252 cooking water was discarded. In Bang Chan, foods were not usually cooked a long time.

In most village homes, one fire only was built for ordinary meal preparation. Rice was cooked first, then "with-rice" dishes, no attempt being made to serve the rice and accompanying foods hot. Indeed, with the frequent use of chilies, one might have the sensation of eating hot foods, no matter when they were taken from the fire. Notes on the preparation of a meal in one household that participated in the dietary study, are included in Appendix C, p. 119.

Meal Service and Techniques of Eating

264 Food was generally served in the kitchen area. When possible, family members ate together at the evening meal, sitting on the floor, each one old enough to feed himself having a bowl of rice before him. The "with-rice" dishes were placed in the center of the group. Family members helped themselves to portions of the "with-rice," using the right hand to take solid foods, and a serving spoon for fluid foods. Enough rice for a bite was pressed together with the fingers of the right hand, so that grains would not be scattered as the rice was conveyed to the mouth. "With-rice" of semi-fluid consistency was eaten by dipping the ball of rice into it, or more exactly, touching one side of the ball of rice to it. The amount of "with-rice" was generally small, and to take more than one spoonful onto the plate at a time would appear greedy.

264 593 When families did not sit down to eat together, those who ate first were expected to take no more than their share. The wife saw to it that her husband had a liberal serving of the best food available. She also gave generously to the children, holding back, eating last or what was left, herself. In a well-to-do household, where food was ample, the mother would be as well fed as others; in a poor household she might be short-rationed day after day.

When priorities in serving were observed,[1] young children, "not old enough to know better" were not expected to wait until the elders had been served. A frequent pattern at both breakfast and dinner was for older children to feed the younger ones before their own meal; elders in the family then ate, and husband and wife ate together if possible, or as convenient to their separate schedules. In the morning if food was to be offered to priests, family members did not ordinarily eat until after the priests had been served. If necessary, however, the priests' food could be served onto a tray, then others might eat. The observer often had

1. See footnote 1, p. 49.

796 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the
[716] time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives
[782] and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A
764 big cremation might require planning in detail for years ahead:
796 invitations to priests and relatives in distant parts of the
574 country; hiring an orchestra and obtaining ceremonial gear.
535 For the largest events, when the guest lists ranged upward to
[928] 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person,
[258] usually one of the "professional" cooks of the village. The
[476] day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

[262] The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables; for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an
262 annual homage-to-the-teacher rite. It is the nearest approxi-
796 mation to a quantitative record of food for a ceremony that
815 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either
796 at 7 a.m. or 11 a.m., or both, always at least in part by the
792 host, who sat and chatted with them. No one else ate until

In Bang Chan when donations for a new school
264 building warranted buying the foundation materials, so that
476 volunteer labor was solicited for their installation, some of
346 the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

782 The spirit-offering, or the portions eaten by a partic-
264 ipant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests.
262 The pork was cut up and eaten with a hot sauce, or put into a
• 262 "with-rice" dish. It was especially appropriate with liquor.

262 The use of food ritually was not limited to the ceremon-
755 ial season nor to big events. The same purposes underlay the
852 use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

43 The benefits of a (l)ngaan accrued to every participant
554 down to the last worker and contributor according to the degree
796 of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

796 One assistance in the financing was that every invited
476 guest made a contribution, customarily 5 to 10 baht, which
435 helped defray the costs. In 1952, household heads reported these contributions as totalling from 30 to 1,000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (l)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

252 One other aspect of (1)ngaan which should be mentioned
796 in connection with food and health is the opportunity for con-
781 tamination of food. The villagers did not associate sanitation
[753] with health, hence the hazards of a community meal which many persons helped to prepare were many. Two incidents observed the day before an ordination in early April, will illustrate. In the final stage of making Chinese noodles, rice flour paste was extruded through a perforated disk into an enormous pot of boiling water. When done, the product was removed with a fish net, and plunged into the canal to cool, after which women helpers spread it out on banana-leaf covered trays. Dishes were also washed before use in the canal, which was then too low for boats. Since, however, many people drank untreated canal water at this season (see p. 28), the added hazards for the participants caused by these procedures may have been slight.

262 In summary, food plays a major role in ceremonies and
792 festivities, which are concentrated in the 3 months' dry season. Proposals for dietary improvement in Bang Chan must take into account not only the possible effects of the (1)ngaan season on the total nutrient intake, and on opportunity for exposure to contaminated food, but also the importance of these affairs from the standpoint of merit and prestige, and the relatively great financial burdens which villagers therefore undertake because of them.

QUANTITATIVE DIETARY STUDY: FOODS EATEN AND ESTIMATED NUTRIENT INTAKE OF SELECTED FAMILIES IN BANG CHAN

Procedure

121 125 146 Selection of the Sample

Medical inspection designed primarily to discover possible signs of nutritional deficiency was carried out in advance of the family dietary study. The suggestion of Grant (1948) that matched groups, of contrasting economic or other status be studied, appeared to be appropriate to the situation in Bang Chan. Our hope was to be able to select from the random sample of families given medical inspection (Hauck, 1956) a group of families (A) in each of which several members had clinical signs which might be evidence of malnutrition, and a group of families similar in age and sex distribution (B) in each of which the members were largely or wholly free from such signs.

125 146 When the medical inspection of the random sample was complete, however, too few of the families were found to meet our criteria for inclusion in Group A, i.e. the group of apparently less well nourished families. Additional families for

[146] Eggs were eaten occasionally; pork and beef were bought in-
[262] frequently and in small amounts by some families. One family only, ate chicken; other meats eaten on survey days included buffalo, frogs, eels and field rats.

Vegetables. - More than three quarters of the estimated vitamin A value of these diets was provided by green and leafy vegetables, although the pale yellow sweet potatoes, eaten in quantity by one family in Group A increased the vitamin A from other vegetables substantially. The greater use of swamp cabbage, a wild aquatic plant by families in Group A, may be explained by the fact that more visits to this group occurred when the water level in the canals was relatively high. Families in Group B, however, used a greater variety
[263] of greens, especially leaves from a number of trees. For families in Group A, sweet basil contributed substantially to the vitamin A and riboflavin content of the diets, whereas families in Group B used this herb in trivial amounts for flavoring. No nutrient values were found for lemongrass, which was used regularly in substantial amounts for flavoring. Persons in Group B got a greater percentage of their calcium and iron from green than from other vegetables, whereas those in Group A obtained as much or more of these nutrients from other vegetables.

Nearly 3/5 of the ascorbic acid intake of Group A was provided by other vegetables as compared to 1/4 from green vegetables, whereas Group B obtained about equal amounts of ascorbic acid from green and other vegetables. Egg plants[1], calabash and white radish were most commonly used in quantity. Onion, garlic and dried chilies were used daily, but in smaller amounts. With the exception of one family which ate a large amount of sweet potato on one survey day, consumption of tubers, i.e. sweet potato and taro, was small and usually in the form of snacks eaten by children. Legumes were seldom eaten in Bang Chan. Two families had bean sprouts on survey days, and children occasionally ate mungbeans and peanuts as snacks.

Fruit. - Although technically a fruit, the coconut does not resemble fruits as a group in its contributions to the diet, hence coconut and other fruits are treated here as two sub-groups. Coconut meat, and its products, coconut milk and coconut cream (Appendix C, p.128), were used almost daily in the participating households. These coconut products contributed about 1/5 of the total fat of the diet, for Group A,

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[244] [252] 1. Many varieties of eggplant are grown in Thailand. Three were used on survey days: the pea-size variety which was frequently put in hot curry, a round type which was served raw with chili sauce and a long variety which was either panned with a small amount of fat or used in curry.

146 For items used less frequently, the figures are correspond-
262 ingly less than the usual amount eaten. Thus, sweet potato, which is represented as 18 grams per day per person in Group A, actually appeared on 3 records only. One family of 8 persons ate 1200 grams of sweet potato at one meal and a substantial amount later the same day. Most items appear on the lists for both groups, but sweet potato, sweet basil and bananas were included on the list for Group A only, and glutinous rice which is used as a sweet in this area, appears on the list for Group B only. Note that a few common foods account for most of the nutrients in the diets of both groups. These common foods account for only about 80% of the calcium and vitamin A value and slightly less of the ascorbic acid in the diets of Group A. The list for Group B accounts for about 70% of the calcium and 60% of the ascorbic acid in the diets of this group. The variety of green leaves used once or twice only on survey days by Group B, and the number of different seasonal fruits used by both groups in small amounts as snacks, probably account for this.

264 Contribution of Snacks to the Nutrient Content of Diets. -
[355] On the average, 4 out of 5 children had one snack per day,
262 whereas only one adult in 6 did so. The following items appeared most commonly: various kinds of fruit, 40 times (orange 7, banana 6, pineapple, watermelon and mango each 5 times, guava, jujube and Manila tamarind each 2 times, olives, rambutan, rambai, star gooseberry, (2)ta-(1)koo and Thai nutmeg each once,) coconut and bread each 13 times, glutinous rice 8, mung bean 7, truffles 6, products made of rice flour 6 times, and a variety of other items including rice noodles, sweet potato, taro, bean sprouts, lotus stalks, lotus seeds, popcorn, products made of cassava flour, sugar cane, pork and milk from 1 to 4 times each. Salt, and/or palm sugar were
[146] eaten with a number of the snacks. Although they contributed only about 2% of the total calories, and from 1 to 3% of most nutrients, snacks contributed 16% of the total ascorbic acid for Group A and 11% for Group B.

Seasonal Variation in Food Preparation, Meal Patterns, Food Costs and Calorie and Nutrient Value of Foods Eaten

128 In Table 14, a summary including the number of meals
• 258 prepared, time spent in meal preparation, number of "with-
264 rice" dishes, and cash expenditures for food is given by
435 rounds, for families in each group.

252 Number of Meals Prepared. - Food was cooked twice on
512 each survey day in 3 of 6 households in Group A and 3 of 5 households in Group B. Heavy farm work or vending which kept the mother away from the house sometimes accounted for once-
[443] a-day food preparation. One housewife who took food to market in Bangkok, cooked food twice a day only during the period shortly before the birth of a child, when she was not vending.

[Text conntinues on page 79 --- Analyst]

Table 14. Summary Concerning Meal Preparation, by Rounds[1] for Two Groups

Description of Items	Group A				
	Round I	Round II	Round III	Round IV	Round I
No. of meals prepared - 2	5	4	4	4	4
- 1	1	2	2	2	1
Range of cooking time, hrs.	0.8-6.0[2]	1.0-2.6	1.3-2.7	1.3-4.0	1.7-3.2
Average cooking time, hrs.	3.7	2.0	1.8	2.4	2.5
Range of no. of dishes prepared	2-8	2-5	1-4	1-4	2-5
Average no. of dishes prepared[3]	5	3	3	3	3
Range of no. of hot dishes	0-3	0-2	0-2	1-3	0-2
Average no. of hot dishes	1	1	1	2	1
Range of no. of mild dishes	2-7	0-3	0-3	0-3	1-3
Average no. of mild dishes	4	2	2	1	2
Range of cash expenditure for meals/day (bahts)[4]	1.53-4.45	0.61-6.30	0.12-4.52	0.66-2.88	0.71-16.24
Average cash expenditure for meals/day (bahts)	3.01	2.96	2.39	1.70	4.85

1. For dates, see Table 7, p. 58.

2. If time waiting for a vender was not counted, the range of cook 0.8-4.1 and the average would be 3.2 hours.

3. "With-rice" dishes only. Rice is always cooked whenever a Thai

4. One baht was equal to 5 cents at the time of studies.

useholds Studied

	Group B	
d	Round III	Round IV
	5 0	3 2
4.1 3.1	2.2-3.3 2.8	1.0-3.2 2.0
2-7	2-6 3	2-5 3
1-2	1-2 1	0-2 1
1-5	1-4 2	1-3 2
- .86	1.12- 4.13	0.45- 3.47
.11	2.61	1.36

time would be

is prepared.

252 262 264 512 [525] Another, who had time during Round IV to prepare food twice a day, preferred to prepare more in the morning when she expected to offer food to her son who had just been ordained. In two instances an evening meal was not prepared because the father and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

262 435 511 Cost of Food Purchased. - The lowest cash expenditure for food by any household on a survey day was 0.12 baht, for a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year progressed was apparent. Most of the rice was sold at the end of Round III. The cash went for capital investments, not food, during Round IV. With time to drain ponds and to fish intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

262 432 [221]

146 221 [28] Calorie and Nutrient Value of Foods Eaten. - The seasonal variation in calorie and nutrient intake of the two groups of families is shown in Table 15. As one would expect, the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 --- Analyst]

000 First steps toward a better diet are suggested by the best dietary practices observed. Although the calculated intake of no family on any survey day approximated or exceeded the estimated allowances for all nutrients, sharp contrasts were evident in individual records. Two sample calculations in Appendix C (pp. 121-122) represent one of the better and one of the poorer records obtained. The food for Household 12, on Jan. 14, 1954 consisted chiefly of polished rice, fish, and non-leafy vegetable, with seasonings. In contrast, on July 23, 1953, Household 16 used home-milled rice, and about 60 gm. per person of swamp cabbage, with other vegetables and fish. These choices enhanced the potential nutritive value of the diet markedly without increasing its cash cost. Family labor was involved, however, in gathering greens and milling rice.

000 Since rice is the chief solid food for all ages, improving this major item will be considered first. An important step would be to teach the people to cook rice with just enough water so that all would be absorbed. The Thai government has sought to encourage this. So long as the practice of cooking rice in excess water persists, much of its vitamin and mineral content will be discarded, and efforts to improve the nutrient content of rice will be largely nullified. Some rice water could be used as a beverage, and for cooking certain vegetables which are commonly served with a thickened sauce. This would be preferable to discarding the rice water, but encouraging its use must be considered as an alternative to cooking rice without excess water, since the two practices are mutually exclusive.

Use of under-milled and processed rice, and of the rice polishings, has the advantage that a large part of the original B-complex content is conserved, whereas vitamins for enrichment are at present imported, and are apt to be for years to come. Since home milling persisted to some extent in Bang Chan, it might be encouraged, in some families. One highly respected headman continued to mill rice at home, hence the "prestige value" of white rice may not be so important in Bang Chan as it is among city Thai, who sometimes regard undermilled rice as "prisoner's food." The time and effort involved in home milling, however, may deter those who have given it up from returning to it; and since deepening the main canal has made the mill accessible to more families the year round, a program based on the assumption that commercial milling of rice will increase is probably more realistic than an attempt to encourage the return to home milling where it has been abandoned.

256 At present, no processed rice is made in Thailand. A plan to buy and install a Malekizing plant to process rice for the Royal Thai Navy was announced in 1953, but the plan has not materialized. Enriched rice has been sold by the Thai Rice Company for some years, but the best grades only,

APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children. . . . . The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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1. In reproducing these notes, slight changes have been made such as substitution of descriptive terms for personal names which appeared in the original.

94

117 takes it down the steps to the fish pond, where she swishes
252 the basket around to wash the fish, and rinses her hands at the same time.

[231] There are some hazards to the food--chickens trying to get at the edible part of fish while the niece cleans it (she leaves the scales, etc. for them to eat); cat and kittens in the kitchen, having to be driven away from the grated coconut and coconut milk, and getting an occasional unweighed nip. Whether we start to weigh food for the evening meal or a.m. meal, some cooked foods are apt to be used, either left over [262] from a previous meal, or cooked in advance. This a.m., for [126] example, buffalo meat, already cooked (but not weighed before cooking) was used, and (3)khii-(2)lag leaves, which SS weighed last night. These latter were cooked last night, to reduce bitterness, then put into curry today.

Description of Food Preparation Area in a Relatively Poor Household

Wednesday, May 27, 1953

117 [262] Arrived about 5:45 a.m. While other food was being prepared, the 11-year old son came in with a package of salted white radish and a small milk tin with some coconut oil which had just been bought. This is the house which we found flooded when they sent for us to see the baby last fall. The roof seems to be well thatched. The floor is not wet after last [352] night's downpour. The bed platform, in one corner, is about [354] 8 x 10 feet. The baby's cradle hangs above it. In the oppo- [352] site corner is a shelf where utensils are kept. Some food, [251] in paper bags, is in a basket hung from the roof. Fresh fish [359] is kept in a jar of water until needed. The stove is on a small mound of earth, and further elevated on a small box (just big enough for the stove) filled with earth.

[352] We sit on a mat, spread on the mud floor, with the scales, plastic bowls and waxed paper ready for weighing food. [355] The children lie on a mat nearby. In the house is a fresh mound of earth, a small straw bin with rice, and various pieces of equipment.

Equipment Used For Food Preparation

252 41 [251] Equipment used for food preparation by 11 families participating in the dietary study: clay stove; pots and covers of clay, light weight aluminum, and enameled iron; frying pans, curved, of sheet iron, with home-made wooden handle on one side, or metal handles on opposite sides (shallow clay pans were also used for frying); basins, pails, chopping boards; grater for coconut: a metal, toothed instrument mounted on one end of a low wooden stool (often called a "wooden rabbit" because the seat of the stool might be shaped like a rabbit); mortar of pottery or stone; wooden pestle; fiber strainers usually with rigid handles, to hold them in place on top of a pot; a large-bladed all-purpose knife; in some households, one or more smaller knives; metal turner, with home-made wooden handle; spoons, with bowls of coconut shell, gourd or wood; tin cans for dipping, measuring rice, etc.; fiber trays used for winnowing rice, for drying food, storing dried chilies, onions, etc.; metal tray for serving food to priests, and for household use; baskets for storing food; (5)faa-(1)chii, or fiber cover, to keep flies and insects off cooked food; large earthenware water jars.

[184] Other items less often used, and owned by relatively few families in Bang Chan, included: steamer; a perforated clay pot or metal pan with cover, designed to fit tightly into another pot in which water was boiled; large wooden mortar, made of a hollowed tree trunk; spring-type egg beater (a strong spiral spring attached to a stick); scale; glass water jars.

Equipment Used in Serving Food and Eating

269 412 415 The equipment for serving and eating food might include: flat bottomed bowls with a deep edge, similar to Western-style soup plates, used as individual rice bowls; plates; small bowls for "with-rice" dishes; sauce dishes with stand, for chili sauce; enameled iron or china spoons (Chinese type) used for serving moist foods; forks, used by some families on special occasions;[1] teapot and cups; large rice bowl for ceremonial use (silver or aluminum); large brass spoon with serpent-tail handle, for serving rice; drinking glasses; tiered lunch pail; canteen; thermos bottle.

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1. A relatively poor family (Sharp et al. 1953, p. 223) had one pair of fork and spoon for eating.

Food Preparation and Consumption — Sept. 25, 1953 — Household No. 21

Menu 1	Raw Ingredients: Kind 2	Wt. A.P. 3	Cost 4: Bt.	Cost 4: Stg.	Ined. Ref. 5	E.P. 6	Cooked Foods: Dish 7	Dish + Food 8	Food 9
Meal Time 4:30 a.m.		2180-800					800	2990	2190
		= 1380					120	1280	1160
Cooked rice	Polished						190	850	660
									4010T[1]
(1) Banaun stew	(leftover)						450	915	465
(2) Sa-(5)noo stew	Coconut meat (to make milk)	700-180 = 520		50		520			
	Dried chilies	24		15		24			
	Onion	8		4		8			
	Galangal (HG)[2]	8				8			
	Garlic	4		2		4			
	Lemongrass (HG)	12				12			
	Bergamot rind (G)[2]	4				4	490	1390	940
	Salt	30				30	130	312	182
	Serpenthead (C)[2]	320-120=200				200	130	300	170
	Shrimp paste	6		3		6	130	260	130
									1422T
	(2)Sa-(5)noo flowers (G)	550			580-520 = 60	640-150 = 490			
	Coconut milk					1220-450 = 770			
	Palm sugar	240-200= 40		24		40			
Cooked rice	(leftover)						520	800	280
Fried duck egg	1 Duck egg	76			21	240-185 = 55			
	Coconut oil	16		8		16			
	Onion	4		2		4			
	Fishsoy	10		5		10	180	260	80

1. T equals total weight.
2. HG, G and C stand for home grown, gathered and caught, respectively.

2nd Heath et al. B.E.S (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

125 252 262 264

Use of Cooked Foods						
Given away 10	Fed to Stock 11	Ed. Waste 12	Left Over 13	Eaten 14	Persons Eating 15	Method of Preparation
Cooked rice 890-190=660 (to 3 priests)			0	3350	4	Rice, 4:30 a.m. She washes rice two times and lights the fire. Then she puts rice pot on fire at 4:35. Rice water is drained off at 5:00. Rice pot is put on fire again from 5:15 to 5:25.
			(1)Bauaun stew (leftover) 0	465		(1)Bauaun stew is reheated from 5:00 to 5:15 a.m.
(2)Sa-(5)noo stew 312-130=182 300-130=170 260-130=130 482T (to 3 priests)			0	960		(2)Sa-(5)noo stew, 5:20 a.m. Dried chilies (after soaking in water for a while), onion, garlic, galangal, lemongrass, berganot rind, and salt all pounded together. 5:25 She crushes coconut meat with water five times over colander. Shrimp paste is mixed with (4)nam (4)phrig at 5:40. The pot of coconut milk is put on fire at 5:42. (4)Nam (4)phrig is mixed with boiled coconut milk at 5:55. Fish is put into the pot and water from crushed tamarind at 6:00, (2)sa-(5)noo flowers at 6:05. The pot is put down at 6:12 a.m.
			Cooked rice (leftover) 0	280		
			Fried duck egg 0	80		Fried duck egg. The pan is put on fire at 6:15 a.m. Duck egg is mixed with pieces of onion and fishsoy. Coconut oil is put into the pan at 6:20. Stirred egg is fried from 6:20 to 6:25.

2: Hauck et al. D,E-5 (1952-1954) 1956 AO7 Central Thai AO7 Bang Chan

[illegible] 262 [illegible] 425

K. Snacks

Person eating 1	Time 2	Kind and description 3	Weight (or approx. wt.) A.P. 4	Ined. ref. 5	E.P. 6	Cost 7 Bt.	Stg.
June 4/53			g.	g.	g.		
Girl, 8 yrs.	12:00m	She ate a half fruit of pineapple at home. It was bought from the selling boat.	(375)	(195)	(180)		20
June 5/53							
Girl, 8 yrs. Boy, 10 yrs. Girl, 13 yrs.	All day	7:40 - The pot of truffles (gathered from the fields) is put on fire. It is boiled with water and salt. Truffles: 525-72 = 453 gm. Salt: 35 gm. It is finished at 8:28.	453				
Boy, 10 yrs.	8:46	He eats boiled banana (NC)	48				
Girl, 13 yrs.	Early a.m.	She drinks coffee which is bought from the store near the Wat.					40
Father	10:13	He drinks one glass of milk which is bought from the store near Wat.					50

2: Haack et al. D.E-3 (1952-1954) 1958 AOT Central Thai AOT Bang Chan

NOTES ON THE PREPARATION AND NUTRITIVE VALUE OF COCONUT MILK AND COCONUT CREAM

The term coconut cream ((5)hua (2)ka-(4)thi), as it was used in Thailand, referred to the product which was made by squeezing grated coconut with little or no addition of water. Coconut milk ((4)naam (2)ka-(4)thi) was made by squeezing grated cocomut repeatedly with water. Coconut cream might be made first, and the residue extracted one or more additional times to obtain coconut milk. The terms coconut milk and coconut cream apparently are not used consistently. Losee (1952) commented on this when he described the preparation of coconut cream in Samoa, and said that it was sometimes called coconut milk. Miller et al. (1936), in describing the preparation of coconut milk said "If a thick coconut milk to serve over puddings, taro leaves, etc. is desired, 1/2 to 3/4 cup of coconut water or boiling water should be poured over 3 cups of grated coconut. . . . If the milk is to be used in curry sauce for chicken, eggs, shrimps, or in cornstarch pudding, a larger quantity of water (1 to 2 cups of water to 3 cups of grated coconut) may be used."

In carrying out the dietary study, the observer weighed the grated coconut meat, the residue and the final products, coconut milk or cream, or both. She did not weigh the water as it was added in successive portions, but the amount of added water could be calculated.

The ratio of coconut milk to meat varied considerably, but on the average, households in Group A obtained coconut milk which weighed more than eight times as much as the coconut meat from which it was made. Households in Group B obtained less than 2½ times as much milk by weight as coconut meat. The number of extractions made varied from 2 to 6, with a mode of 3. Obviously, the products made by Groups A and B, although both called coconut milk, had markably different percentage composition, and neither was similar to "coconut milk" for which values could be found. These values were as follows:

Authors	Location	Coconut milk grams per 100 gm. E. P. Prot	Fat	Carbo.
Bocobo et al.	Philippine Islands	3.6	33.2	38.4
Food and Drug Division	Thailand	3.52	34.75	1.52
Miller et al.	Hawaii	4.0	27.0	18.91

1. Personal communication

A small, rather flavorless banana was given to young babies, 853
sometimes before they were put to the breast. This type of
banana and soupy rice were the only supplementary foods given
before 6 months of age. Protein-rich foods, chiefly fish and
egg, were generally introduced in small amounts during the second
half of the first year. Few infants were given vegetables
before one year of age, and even then none had them daily. At
two years of age, some children had not yet been given green
vegetables. Late introduction of vegetables into the child's
diet may be due to the fact that vegetables were often prepared
as hot curries which were considered unsuitable for young children.

A child was usually allowed foods commonly eaten by adults
by the time he was weaned, although a few informants specified
that the child could have anything but "hot tasting" foods, i.e.
foods containing chili. A minority of informants mentioned
other foods as not good for younger babies.

Except for dietary restrictions while the mother was lying 846
by the fire, postpartum, no well established dietary taboos 853
connected with the feeding of mothers or babies were encountered. 262
The concept that a good choice of food is important to the health
of both mother and child seemed to be entirely lacking.

Many of the young children in Bang Chan failed to gain, or 145
even lost, weight in the intervals between observations. Almost
all infants appeared to gain steadily up to 6 months of age,
but stationary weight or weight loss for periods of from 1 to 7
months was observed in most children at some time. These periods
were noted more frequently among children from 2 to 3 years old
than among younger ones. Such experiences were not more common
after weaning than at other times, but the cause or causes of
growth failure could not be determined from the information
available.

Some approaches to improvement in the diet of Thai mothers 252
and children are suggested. Improvement in the diets of mothers
and small children would probably parallel any improvement in
the general family dietary, since food is prepared at one time
for all members of the family.

but additions of rice water, coconut milk, and salt[1] were more common from 3 to 6 months. A few infants less than 6 months old were given rice from the family pot cooked in the usual manner.[2] No other foods were introduced before 6 months of age.

A majority of infants from 6 to 8 1/2 months[3] of age were given ordinary rice, although for some, excess water was not drained off and special mashed soupy rice was still given to others. Fishsoy, (4)nam (1)plaa, might be added for both salt and flavor. Several mothers said that when the baby had teeth he could begin to eat ordinary rice. At this time also the infant was given some other items which were considered as adult food (Table 2).[4] A few were fed protein-rich foods, i.e. fresh, dried, or salted fish, egg, meat, or poultry, between the sixth and ninth months. One child in this age group was given banana other than (3)kluaj (4)nam-(4)waa (kind not specified), and four infants had fruit other than banana frequently or occasionally. Orange, mango, guava, roseapple, and rambutan were mentioned according to season. Some kinds of (2)kha-(5)nom, which included purchased crackers, biscuits, or cookies as well as some sweet items which we would call desserts,[4] were given also, at least occasionally, to many babies over 6 months of age.

Among infants from 9 to 11 1/2 months of age increasing use of protein-rich foods, primarily fish and egg, was noted. Fruits other than the small (4)nam-(4)waa banana and (2)kha-(5)nom were also given to more infants. A few were given vegetables before one year of age, but none had them daily (Table 3).

Diet During the Second Year of Life.

For most of these babies breast feeding was continued into the second year. By this time almost all were given ordinary rice, and more than half had fish daily with fresh fish being fed more often than dried or salted fish. A few babies between

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1. In Thailand rice is not salted during cooking.

2. See (3)khaaw (5)suaj, glossary p. 51.

3. The nearest half month marked the dividing point between age groups. Thus an infant 8 months 20 days old would be considered as 8 1/2 months old and one 8 months 23 days old would be considered as 9 months old.

4. Neither such (2)kha-(5)nom nor fruit were included in the usual family meals, but school children often bought them as snacks to eat at noon recess (Hauck et al., 1958; Hauck and Hanks, 1959).

[1] [see p. 19- Analysis] [3] [see p. 20- Analysis]

853 3 and 6 months soupy rice was a common addition to the infant's diet, and after the first teeth appeared many had rice from the family pot. Between 6 and 9 months, also, fish was given regularly to many babies and egg at least occasionally. Crackers, cookies, and various items designated as (2)kha-(5)nom were frequent additions at this age.

863 Seasonal fruit such as mango and orange was given to some
855 infants from 6 months on, but most children had fruits other
262 than the (4)nam-(4)wa banana infrequently even at two years of age. As the feeding of rice increased, banana was given less often, so that for the 2-year old child even banana was eaten only occasionally. A minority of babies were fed vegetables by one year of age, and some had not begun to eat them by two years. Only about half the children from 2 to 4 1/2 years old had vegetables frequently.

Avoidance of hot tastes, rather than reluctance to give vegetables, may have been responsible for late introduction of vegetables into the diet of many children. In Bang Chan vege-
• [252] tables were often combined with other foods, as in curries. They were usually added toward the end of the cooking time after the mixture had been seasoned. Vegetables from such a "hot dish" would not be offered to a small child unless the parents considered him old enough to eat "hot-tasting" foods. Among the mild "with-rice" dishes were vegetables panned with a small amount of fat and seasonings other than chili, as well as vegetables cooked in coconut milk or in water (Hauck et al., 1958; Hauck and Hanks, 1959). In this connection the suggestion of a Thai co-worker that one might encourage eating more vegetables by discouraging the use of "hot" dishes seems promising, since a larger amount of mild than of "hot" "with-rice" food is eaten at one time. To promote more frequent, and earlier, feeding of vegetables to babies, one would need to encourage either more frequent preparation of mild "with-rice" dishes containing vegetables or special preparations of vegetables for the baby. The latter is rather impractical when foods are cooked one at a time over the same fire as in Bang Chan.

[252] Perhaps one reason why most infants in Bang Chan had fish
[263] daily after 6 or 7 months of age is that in making curries fish was often cooked in a little fat or coconut milk before seasonings were added. Thus, a little fish could then be set aside for the baby before chili and other spices went into the pot. (Note, also, that rice and fish were the foods considered safe to eat
121 during (3)juu (1)faj by all mothers interviewed). Changes in
262 food preparation suggested for improvement of the family diet in general (Hauck, 1958) could automatically help to improve the feeding of young children who are gradually introduced to adult foods. At the same time, a better family diet would probably help to improve the quality and quantity of mother's milk, since during lactation mothers tended to eat as usual. In deciding whether the more effective approach would be through teaching

Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended to live in proximity. Around the houses were kitchen gardens and threshing floors, and behind them, the fields. Bananas grew abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, while fish were plentiful. Water sources were the rain, kept in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

General Nutritional Level

The population was physically well-formed with few physical deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. Food at the not-infrequent festivals was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The change-over, some decades ago, from home pounding of rice to steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community.

2. Dr. H.M. Hauck, personal communication, 1959.

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

261 701 731 133 226 146 145 141 As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

262 256 251 [26] Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 73 in minor part, and 199 not at all.

221 256 505 256 In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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[292] 1. In some large houses, two related family groups lived together but maintained separate kitchens.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

Table 5. Diet Classifications for 75 School Children in Bang Chan, and Percentage of Children with Each Diet Classification who Missed Lunch

(Adapted from Thorangkul, 1957)

Diet classification[1]	Percentage of children	Percentage of children who missed lunch	
Class I	8	Boys	46
		Girls	45
Class II	61	Boys	73
		Girls	68
Class III	31	Boys	81
		Girls	98

1. See text for basis of classification.

vegetables eaten, since items from these two food groups were not commonly eaten as snacks. Note, in the illustrative records presented in translation (Appendix A, p. 98), that the child whose diet was considered to be in Class III did not eat a regular lunch on any of the six days for which records were available, whereas the child whose diet was classified as I ate a regular lunch six times out of seven.

Family Food Shared With Others

Throughout the year families prepared especially good meals for persons who came to work cooperatively with them. Every rice-grower entertained his cooperative harvest crew, some the transplanters. Hired laborers were not usually served such feasts, but the conviviality of the harvest season called for a round of liquor even for them. One harvest dinner for 48 cost 50 baht, plus eels (60 baht) and rice. Cooperative home pounding of rice was still practiced in some households and thought to be fun. In one day enough rice to produce 40 tang (640 kg.) was pounded by groups of 15 to 20 workers; in an evening 20 tang were done. If 40 tang were milled, workers were served a full meal; if 20 tang, a dessert only. Other occasions were fish-pond draining, house raising and repair. Each participant in the fish-pond draining at Household 21 was fed (3)khaaw (3)tom (soupy rice) for lunch and "an enormous supper," in addition to receiving the traditional pot of fish. If good food were not served at these functions people

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from venders almost every day. They said [857] [867] "Some do not pay money to buy food, but pick or get it from the canal or gardens --this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

433 511 Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

243 [465] Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one 256 [262] to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

844 [856] [845] Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chilies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

[872] 262 Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)sa-(5)noo flowers were used by 3 families on one day each;

Table 9. Use of Home-milled and Polished Rice by Households Participating in the Dietary Study

Group and Code No.	Round of Dietary Study[1]							
	I		II		III		IV	
	HM[2]	P[2]	HM	P	HM	P	HM	P
Group A								
2		x		x		x		x
12		x		x		x		x
67	x			x		x		x
103	x		x			x	x	
215		x		x		x		x
222		x		x		x		x
Total No.	2	4	1	5	0	6	1	5
Group B								
16	x		x			x		x
20		x		x		x		x
21		x		x		x		x
23		x		x		x		x
25	x			x		x		x
Total No.	2	3	1	4	0	5	0	5

1. For dates, see Table 7, p. 58.

2. HM and P stand for home-milled and polished rice respectively.

truffles were used as snacks on 2 occasions, and (1) bauaun, (2)phag (2)tob, lotus stems and lotus seeds, the latter as a snack, were used once each. The two groups of families appeared to grow fruits and vegetables and to gather edible wild plants to about the same extent. Two families, one in each group, raised mushrooms during the period when farm work was slack.

146 most significant source of phosphorus, iron, thiamine, ribo-
262 flavin and niacin in these diets. Although the calcium content of rice is lgw[1], about 23 and 16% of the estimated calcium content[2] of diets of Groups A and B respectively came from the cereal groups. Glutinous rice and various products such as noodles made of rice flour were eaten occasionally in small amounts. These and other cereals and cereal products, such as wheat bread and popcorn contributed little to the total nutritive value of the diets.

Animal products other than pork fat. - Fish and other foods of animal origin furnished about 2/5 of the protein in the diets of both groups. From 20 to 30% of the riboflavin and niacin and substantial amounts of phosphorus and iron were provided by this food group, also. For families in Group A, these animal products provided substantially more fat than the group of fats and oils as such, whereas Group B obtained about the same amount of fat from these two food groups. The estimated contribution of vitamin A from this group was small. Specific analyses for most of the varieties of fish used in Bang Chan were not available, however, hence many calculations were made on the basis of average values for "fat fish," "lean fish," and "dried fish."

Although a substantial part of the calculated calcium content of the diets came from animal products, the amounts were only about 8 and 9% of the estimated allowances for Groups A and B respectively. Fermented fish are reported to contain 1126 mg. per cent of calcium (Knudson, 1955) but the amounts eaten were relatively small. Two families only in Group A used a total of 217 grams of fermented fish on survey days, and two families in Group B used a total of 608 grams. These amounts, though they represented servings of only 20 grams per person for the two families in Group A, and of 36 grams per person for those in Group B, nevertheless increased the estimated average calcium intakes substantially, so that 43% of the calcium in diets of Group A, and 34% in diets of Group B, were provided by animal products. The tiny dried fish which are eaten whole, were not used by the families studied on any of the 44 survey days.

On the average, the contribution of animal products other than fish to the nutrient content of these diets was small.

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[256] 1. According to Knudson (1955), addition of calcium carbonate to rice during the milling process was not practiced in Thailand.

[ ] 2. No attempt was made to estimate calcium intake from betel chewing, although this might be considered a dietary source of calcium. Six of 15 persons twenty years of age or older, in Group A, were betel chewers, whereas among 14 persons over twenty in Group B, 9 chewed betel regularly and one occasionally.

000 First steps toward a better diet are suggested by the best dietary practices observed. Although the calculated intake of no family on any survey day approximated or exceeded the estimated allowances for all nutrients, sharp contrasts were evident in individual records. Two sample calculations in Appendix C (pp. 121-122) represent one of the better and one of the poorer records obtained. The food for Household 12, on Jan. 14, 1954 consisted chiefly of polished rice, fish, and non-leafy vegetable, with seasonings. In contrast, on July 23, 1953, Household 16 used home-milled rice, and about 60 gm. per person of swamp cabbage, with other vegetables and fish. These choices enhanced the potential nutritive value of the diet markedly without increasing its cash cost. Family labor was involved, however, in gathering greens and milling rice.

262 592

000 Since rice is the chief solid food for all ages, improving this major item will be considered first. An important step would be to teach the people to cook rice with just enough water so that all would be absorbed. The Thai government has sought to encourage this. So long as the practice of cooking rice in excess water persists, much of its vitamin and mineral content will be discarded, and efforts to improve the nutrient content of rice will be largely nullified. Some rice water could be used as a beverage, and for cooking certain vegetables which are commonly served with a thickened sauce. This would be preferable to discarding the rice water, but encouraging its use must be considered as an alternative to cooking rice without excess water, since the two practices are mutually exclusive.

[252] [146]

[146] [256] Use of under-milled and processed rice, and of the rice polishings, has the advantage that a large part of the original B-complex content is conserved, whereas vitamins for enrichment are at present imported, and are apt to be for years to come. Since home milling persisted to some extent in Bang Chan, it might be encouraged, in some families. One highly respected headman continued to mill rice at home, hence the "prestige value" of white rice may not be so important in Bang Chan as it is among city Thai, who sometimes regard undermilled rice as "prisoner's food." The time and effort involved in home milling, however, may deter those who have given it up from returning to it; and since deepening the main canal has made the mill accessible to more families the year round, a program based on the assumption that commercial milling of rice will increase is probably more realistic than an attempt to encourage the return to home milling where it has been abandoned.

[256] [554]

256 At present, no processed rice is made in Thailand. A plan to buy and install a Malekizing plant to process rice for the Royal Thai Navy was announced in 1953, but the plan has not materialized. Enriched rice has been sold by the Thai Rice Company for some years, but the best grades only,

90 to 100% unbroken grains, are used. To benefit rice farmers, enrichment should either be done at the nearby mills, or premix sold locally, and farmers taught to mix it with their own rice. Because the premix used and marketed by the Thai Rice Company contains riboflavin as well as thiamine, niacin and iron, the treated grains can be readily distinguished from ordinary rice. Enrichment at the mill would be convenient, but would probably entail some government supervision and would not automatically ensure a better nutrient intake unless people learned the value of the conspicuous yellow grains. From this standpoint, separate purchase of premix might have advantage, at least in the initial stages of the program.

As far as we know, use of rice polishings in preparing "with-rice" dishes has not been explored in Thailand. Incorporation of rice polishings into a variety of soups and other "with-rice" dishes which would be acceptable to the Thai palate should not be difficult for the Thai home economist interested in experimental cookery. Nutrients usually lost in milling could thus be returned to the human diet. If adopted this procedure could be effective even in families that cling to the customary method of cooking rice in excess water. One old lady with beriberi, whose doctor had prescribed rice polishings, said she found them tasty. Information on the health value of rice polishings would probably be received more favorably if homemakers were shown acceptable ways of using them. A watery extract of the polishings might be used as a stop-gap preventive of thiamine deficiency while the slow process of changing food habits is going on. Such an extract could be used as a strengthening medicine for women during pregnancy and lactation, for infants and young children, and for those doing heavy field work, i.e. for vulnerable groups. The "second class doctors" at Minburi, the priests who practice healing, other traditional practitioners and midwives, because of their basic desire to help, would provide natural centers of information for this purpose.

Efforts being made by Thai government agencies to encourage eating more "with-rice" and less rice should be continued. A Thai co-worker suggested that "an educational program enjoining less peppery forms of with-rice would have the effect of encouraging consumption of a larger proportion of with-rice" (Sharp et al. 1953, p. 278). Various food items including those with a hot taste, were sometimes said to be bad for children, pregnant women, sick persons, etc., but seldom was any food mentioned as being good to eat under these circumstances. The concept that hot tasting foods are not healthful might be coupled with the idea that more generous amounts of mild dishes, especially those including green and yellow vegetables, should be used instead. The most widely used vegetables in Bang Chan were the wild swamp cabbage, and (2)phag (2)ka-(2)cheed, both leafy aquatic plants. Planting more (2)phag (2)ka-(2)cheed, and liberal use of both of these plants while they are available should be encouraged.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 Although private rice millers in Bangkok operate
256 with a rather high degree of collusion, in the countryside
472 the many small millers compete actively on the basis of price charged for their services or price paid for paddy or both. The comparatively high capital investment of the enterprise has rendered inter-mill competition in the countryside very intense, and it is obvious that the farmer gains economically from such competition. If somehow the government could, by a carefully conceived gradual program, induce a large number of smaller mills to move from Bangkok to the countryside, the farmer will benefit all the more. Already, the trend has been for gradual business decline for Bangkok mills and business upswing for the countryside mills.[8]

243 It is rather unfortunate, however, that the government has explicitly taken the view that small rice mills
256 (capacity of five tons and under) in the countryside are
656 detrimental to the interest of the farmer. It is officially
44 held that small rice mills would bring about a large number of middlemen who would then combine to suppress the farm price. Actually, more middlemen tend to produce correspondingly keener competition in the marketing process which is beneficial, not detrimental, to rice growers.

243 Small rice mills, which may be more conveniently
256 erected in the villages and perhaps with local capital, will
433 reduce the cost of transporting rice by a third, for about two-thirds of the weight of paddy is head rice, the other

8. The Economic Yearbook, edited by Luan Pannoi, Bangkok, 1951.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 256 433 comprising the by-products of milling -- broken rice, bran, and husk. There is still a further saving when paddy is milled where it is produced, for bran would not have to be moved away from the farm as part of paddy to distant mills and then moved back again to the farm where it is bought back to be utilized as feed.

If not hampered by unnecessary government restriction, small rice mill industry will provide opportunity for local investment to which internal savings among affluent farmers may be channelized. The relatively low capital requirement and the simplicity of operation of small movable rice mills have made it possible for many Thai farmers in the northern part of the country to become successful rice millers, and there is no reason to believe that farmers in the Central Plain cannot do likewise.

Scarcity of Cash and Credit

434 4-57 An important factor contributing to the acuteness of the basic economic problem of Bangchan is the scarcity of both cash and credit in the village. Bangchan farmers receive cash from the sale of paddy in two periods -- from January to March, and from July to October. Most sales are expedited in the first period, when rentals and credit accounts are expected to be settled. Farmers also need cash for the purchase of goods they have forgone during the previous work season when they had little or no cash. Since there will be no sale of paddy during April - June when paddy cannot be moved through the shallow water level

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

APPENDIX C

REGISTERED RICE MILLS IN THAILAND

• 256 I. Number of registered rice mills in Thailand by changwad.

Changwad*	Number	Changwad*	Number
Angthong (C)	16	Patalung (S)	14
Ayuthia (C)	61	Pattani (S)	2
Bangkok (C)	49	Patumtani (C)	29
Buriram (NE)	5	Pichit (C)	26
Chacherngsao (C)	42	Prachuab (C)	4
Chainat (C)	4	Petchabun (C)	8
Chaipua (NE)	2	Petchaburi (C)	12
Chantaburi (C)	15	Pisnulok (C)	6
Chiengmai (N)	28	Prae (N)	6
Chiengrai (N)	12	Puket (S)	6
Cholburi (C)	25	Rajburi (C)	38
Chumporn (S)	8	Rayong (C)	9
Dhonburi (C)	45	Roi-ed (NE)	2
Kambaengpet (C)	5	Sakonnakorn (NE)	1
Kanburi (C)	3	Saraburi (C)	23
Khonkaen (NE)	12	Satul (S)	1
Krabi (S)	1	Singburi (C)	6
Lampang (N)	14	Samdprakarn (C)	26
Lampoon (N)	1	Samdsakorn (C)	14
Lopburi (C)	19	Samdsongkram (C)	11
Maehongsorn (N)	1	Songkla (S)	7
Mahasarakam (NE)	1	Srisaked (NE)	3
Nakornnayok (C)	16	Sukhotai (C)	6
Nakornpanom (NE)	4	Supanburi (C)	40
Nakornpatom (C)	38	Surin (NE)	6
Nakornsawan (C)	29	Tag (C)	4
Nakornsritamraj (S)	21	Trad (C)	3
Nonburi (C)	15	Trang (S)	1
Nongkai (NE)	2	Ubonrajtani (NE)	14
Pang-nga (S)	3	Udorntani (NE)	10
		Utaitani (C)	10
		Uttradit (C)	6

* Abbreviation immediately following each changwad indicates the geographical region: C, Central; N, North; NE, Northeast; S, South.

• 256 II. Number of registered rice mills in Thailand by region.

Region	Number
Central	663
North	62
Northeast	62
South	64
Total	851

III. Bangkok rice mills and their capacities (only those in operation)

Name of mill	Capacity tons/24 hrs.
Thai Rice Mill, 1	500
Thai Rice Mill, 2	350
Kwang Heng Lee	300
Kwang Hong Lee	250
Kiang Lee	230
Tai Sae	230
Chin Heng Lee	210
Nguan Hong Lee	200
Nguan Chiang Lee	185
Kwang Sun Thai	180
Chin Seng Lee	176
Long Heng Lee	165
Thai Rice Mill, 10	160
Chiang Seng Huad	160
Long Heng	160
Kwang Heng Thai	150
Kwang Sun Lee	150
Liang Huad Lee	130
Yong Chiang Thai	130
Thai Rice Mill, 7	110
Long Seng	90
Lee Heng	88
Hua Heng	84
Yu Heng Lee	80
Thai Rice Mill, 8	65
Chiang Seng Hong	60

Source: Economic Yearbook, 1954

SUMMARY

A general description is given of conditions in a Siamese rice village, 1952-54, as they relate to food supply and food habits. Activities at various seasons of the year are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

Food was mostly home produced and an important factor in the standard of living was the number of productive hands available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods were used. Nearly all of the families in Bang Chan raised chickens, and some raised ducks, but about 3/5 of all eggs produced were sold. Every family had some sort of kitchen garden, including banana trees and other plants, but spices and chili were much more commonly grown than vegetables and fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, cocomut, palm sugar and small amounts of vegetables.

Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

Preparation of some typical dishes, meal service and techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 50% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

Diet in Body Maintenance and Curing

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Because food created fire, the daily diet could be a source of illness or a therapeutic means. Every food had known properties for heating or cooling, and for other effects as well. Guava fruit, alcohol, and turtle or cobra curry were heating. Eggs were cooling. Depending on the occasion, ice and iced concoctions were over-heating or over-cooling. They were always "dangerous during menstruation." Banana varied according to the variety: kluai hòm (fragrant banana) was undesirably cooling and caused either diarrhea or constipation (Hauka, 1959:27); kluai nam wa was less deleterious (salêng) while kluai nak was good for the sick or for parturients (Boonlong).

252 262 [758] [846]

Properties in food changed in cooking. Boiling made rice "ripe" (suk) and so available as nourishment (Anuman Rajadhon:77). Even the method of cooking varied the properties. For the sick and for parturients, the banana variety called kluai hak suk was good if baked, but not if cooked in syrup (Boonlong).

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Some foods were "incompatible" with, and so aggravated, certain illnesses. Air-borne food in the form of smell was incompatible with, and compounded, a condition of wind excess. Death or blindness ensued. On the other hand, asafetida might be tied to the wrist of a new-born baby so that the smell, an established carminative, might cure the excess wind in his stomach manifested as flatulence.

262 [774] [782]

Beneficial foods were encouraged. Of all these none surpassed rice, the main sustenance of the body, "the only true food" (Yong Chutima, in Hauka, 1959:27) and source of "strength" to the farmer. Rice was a safe food. It never disturbed elements. Eating rice, as compared with meat, had no overtone of taking life. One could eat one's fill without any sin. Most of all, rice nourished the human khwan, for each grain contained a part of the khwan of the divine Rice Mother. Furthermore, any food offered ritually to a spirit or to make merit acquired strengthening properties, and was afterwards given to priests, children, or to the sick.

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Foods with known dangers were avoided. "Kluai tani banana, a variety full of seeds, was never eaten because it contained a female ghost (phi)." Jackfruit was avoided by lactating women as a direct source of wind-excess. Fruit in general was not dangerous but "did not give enough strength for a rice farmer. It was all right for an orchardist."

People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauck, et al: 42-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny kluai nam, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" kluai nam wā. Here orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plus--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (wisaj:powerful) or natural (tām thammachāt) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "khun"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paroxysm, flatulence, convulsion,

16. Phillips (p. 65) reported that parents did not give their child a disliked medicine because "it offends him.... It is better not to give it to him than hurt his feelings."

17. This small skin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely pained (cf. Textor:116-127). Suspected khun was one of the few reasons why a family would authorize so grave a violation of the body of a deceased member as an autopsy.

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to be reborn as men. All women were eager to undergo the post-partum fire at least once. After that modifications might be entertained.[57] Whether the baby lived or died was not pertinent, for the benefits of the fire were for the mother.

Comparison of Male and Female Maturation Rites

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The parallel ritual that fitted men to perform their masculine role was ordination into the Buddhist priesthood. The well-documented Buddhist ends should not be permitted to eclipse this other personal goal. Just as the fire prepared a woman for motherhood, so ordination changed an immature youth into a man ready for marriage and fatherhood. He too was transformed from raw (dip) to ripe (suk). Men gained compassion through denial and suffering. Since their natures were seen as hard (khaeng), strong, bent on gain, influence, and power, possibly destructive and concupiscent, the severest deprivations were invoked: the renouncement of the gratifications of sex and food. Of the 2, the deprivation of food involved the greatest break with previous habits, for since babyhood, food had been a symbol of maternal care. Hence, a man was cast on his own. His only refuge and support was the Buddha, the law, and the Brotherhood. This self-denial induced the suffering that, coupled with knowledge gained from study of the scriptures, led to compassion. The suffering in no way

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57. The fire-rest though desirable was not obligatory. In 1865, Bradley said it could be "dispensed with in times of civil commotion, for fear of the enemy" and "no damages whatever were suffered whatever to mother or child" (p.79). Like other life cycle rites it was postponed if not convenient (saduak). Also in times of peace, "a few mothers here and there cannot lie by the fire," and a few say, "they will not" (ibid:p.79). Bang Chan would accept this viewpoint freely as reflecting an individual, constitutional set of elements, or as an autonomous decision of an individual. The woman would never feel herself as competent as a ritually mature person though.

844 178 122 412 this rust is believed to cause tetanus--and they are unsuitable for the ritual objective at the moment of cutting. It will be remembered that cutting the cord on a rhizome of phlai or soil with a bamboo sliver from the housepost guarantees that a child will not roam away from home. Could the bamboo sliver be dipped in "heating" alcohol, or passed over the flame of a holy fire? Could the old family kitchen-knife--long associated with the household--be substituted and dipped in the beneficial heat of boiling water? Such a knife once was substituted on the winnowing tray. Might the phlai or soil be covered with a boiled, clean, old cloth? If modern science succeeds in coming up with an acceptable substitute, one sees the possibility of a very small change making a big difference in the amount of tetanus poisoning observed (Hauck, 1956:41). One should then ask the midwives to watch as to whether the new method reduced the infection called "death because of a red or green face and clenched fists."

262 In diet "the concept that a good choice of food is important to the health of both mother and child" (Hauck, 1959:2) was very much shared by modern science and by traditional ideas but the basis of choice was entirely different.[77] Modern science has ascertained that certain foods are [261] beneficial because of certain nutrients, while old beliefs have set up certain foods as desirable because of properties of heating, cooling, compatibilities with the elements, etc. The nature of these properties should be collected and listed. If dietary deficiencies in Bang Chan are noted, the foods that combine the needed beneficial qualities in both systems should be stressed. A hot-tasting tonic (yā) with appropriate dietary supplements, to be taken daily during pregnancy, and another kind during the post-partum period, might be acceptable. The period of the fire-rest is the best 372 846 place to initiate dietary changes for whatever is done by the fire becomes a habit beneficial to mother and child. The use of boiled water should be encouraged as "making for [illegible]th." Again, disturbance of customs is minimized, and the presence or absence of "increased strength" and healthiness can be observed experientially.

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77. Hauck felt the concept was lacking, but it appears only that the grounds of choice were different.

village offers of regular service, the holiday offerings, home invitations and sporadic gifts so that all priests had places to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut[1] or hardship.

About mid-July, Buddhist Lent changed the food habits somewhat. This three-month period corresponded with the height of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering and thereafter the priests went regularly on their appointed rounds.

On Buddhist holidays, the people did not usually eat any of the food brought to the temple, but on (3)thaunud (2)ka-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bounteously.

Residing at Wat Bang Chan in 1954 were 22 boys, aged 10 to 16, sent to serve the priests, get their living and attend school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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1. Amounts of food given usually exceeded the actual needs of the priests and temple boys. One instance was noted in which food was sent by the priests to a needy old person nearby. Leftover rice was dried and sold for chicken feed.

2. The transcription used throughout this report is that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

261 101 As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in 731 diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be ra- 193 tioned. People still ate their fill. Even floods had their 226 advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the 146 school children (Hauck, 1956). "On the average . . . Bang 145 Chan children could not be considered as markedly under- weight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American 141 standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

262 Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for [25] home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely [26] used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

221 In households where home-milled rice was used, during 256 June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and 505 home pounding was impossible. At the time when data for the 256 present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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[292] 1. In some large houses, two related family groups lived together but maintained separate kitchens.

252 462 a woman's" (Sharp et al., 1953, p. 88). For instance, the husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was 252 867 sick or resting after childbirth. The ability of boys as well as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had 252 (Hauck, 1953). Responsibility for food preparation increased 383 with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a 597 daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 554 881 Certain men of eminence, e.g. headmen and elders, would not be asked to cook at all, but as they aged, they might return to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for 252 562 2 months because his wife had back trouble. Some dishes were cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 261 868 A premium was put on good cooking, and certain women who were noted for their cooking were in great demand for large scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 264 Food was commonly prepared twice a day, in the morning and late afternoon. The meal pattern was the same for breakfast

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114 262 1. Suvarnakich (1950) described the Thai diet in a general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

The observer often had
126 opportunity to make notes on foods eaten by various family
262 members. Two examples of these are included in Appendix A, p. 97.

Snacks

262 We have noted that various family members ate the morn-
264 ing meal, in particular, at different times, and that children
855 especially might eat leftover food between meals. Most Bang
Chan school children[1] ate snacks, which were usually different
from foods eaten at a regular meal. Doubtless most of them
were purchased from one of the venders who were to be seen on
the school grounds daily. Fruits and "desserts" were most
commonly eaten, although a variety of other foods, not a part
of the usual Thai meal, were also listed. Sweets were listed
about 450 times on the 539 records obtained. Many of them had
a base of rice, rice flour or glutinous rice with sugar, and
included coconut, banana or other fruit. Some were made with
legumes, and a few contained egg. Fried bananas, fried sweet
potato slices, bananas or beans cooked in syrup, and bananas
cooked in sweetened coconut milk were also listed. A few
items such as ices, flavored syrup poured over shaved ice, and
candies, had little nutrient value other than caloric content.

272 A glass of milk, and milk with coffee, were each listed
once. These might have been obtained at the store adjoining
the school grounds. These instances are worth noting primar-
ily because, although dried and tinned milks were obtainable,
milk was seldom given to village children after weaning.

262 Many children were given a bit of cash each day, and
437 Janlekha (1955) commented that some children who did not have
855 any might barter an egg for snacks. One could tell fairly
261 well from the children's records what the venders offered for
sale on a given day. Some influence of season was apparent;
thus ices and syrup over shaved ice were eaten more often dur-
ing the hot dry season, and cooked foods such as fried Chinese
noodles appeared primarily in the cool season.

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1. With the cooperation of teachers of the third and fourth grades in the Bang Chan elementary school, records of food eaten during 24-hour periods were obtained from children in these grades at intervals of about one month during the school year. This was a regular activity in the health class. A total of 539 records (from 1 to 8 for each child) were obtained from 75 boys and 72 girls. To facilitate recording, each child was given a sheet of paper, with spaces for his name, the date, and kinds of food other than rice, eaten at the morning, noon and evening meals, and as snacks. These records were collected primarily for information on meal patterns of village families for comparison with the limited sample in the dietary survey, and on seasonal use of various foods.

Attitudes Toward Food

To older Bang Chan residents, to lack rice was to starve even though fish or vegetable fare were at hand. Since rice was the staff of life, many important customs clustered about it. Ceremonies to the Rice Goddess accompanied the raising, selling, and storing of rice. When the unhusked rice was in the bin, it could not be withdrawn at any time as needed, but astrological charts had to be consulted to make sure the day was auspicious. Paddy could never be withdrawn on Friday, a day sacred to the Rice Goddess. After cooking, the best rice was said to be at the mouth of the pot, so this was offered on ceremonial occasions. Important rules were that when cooking rice, the cover of the pot must never be laid in a mortar and it must be inverted, never laid down flat; otherwise one would be short of rice. One must never scrape the top of the rice with the cover, or the "soul" of the rice would be scraped out of the pot. Moslem residents murmured an Arabic prayer every time the rice was put into the pot, and every time the pot was put onto the fire, as well as before eating.

Rice has been generally regarded as the strength-giving food par excellence. A portion of Chutima's (1939) description of the "old system" follows:

> Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal. Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply.

The quotation indicates first that in the past, rice was considered much more important as food than the "with-rice" dishes. Since the Food and Drug Division of the Ministry of Public Health has been attempting to encourage the eating of more "with-rice," the attitudes found in Bang Chan are of interest. One informant stated that only rice can make children fat, and that the "hot taste" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish, and was weak; he refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk (evaporated or dried milk, diluted with boiled water) expressed the opinion that the ancient belief was based on thrift. He said that thrifty

262 people did not want to spend much on a baby, therefore they
261 said that if a child ate too much "with-rice" he would be potbellied but thin in the upper part of the body, and that eating eggs would cause dental caries. This grandfather said he believed the truth to be just the opposite, but that goods things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice," one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

262 Secondly, Chutima suggests that particular foods were associated with, or suitable for, particular age levels, and a given sex. Data obtained in Bang Chan indicate that certain foods were associated with conditions such as pregnancy, lactation, and the puerperium, with occupation, and even
653 socio-economic levels. For infants, breast milk was considered most suitable. The newborn infant was not usually put to the mother's breast for about 3 days after birth, and if a relative or neighbor did not nurse the infant, the small banana called (3)kluaj (4)nem-(4)waa (see p. 46), raw or baked, was crushed and fed to him before his mother's milk was available. This banana and rice, as (3)khaaw (3)tom and (3)khaaw (2)piag (two watery preparations), sometimes crushed with (3)kluaj (4)nam-(4)waa, were always the first solid foods introduced while the infant was breast fed. No other foods were introduced early. Some infants received fish and egg by 6 months of age, and a majority ate these foods by the time they were a year old. Some two year olds had not yet been given vegetables, and very few infants ate them before they were one year old.

855 Giving of "holy food"[1] to children suggests concern for
[716] strengthening children through dietary as well as other ritual means.

262 At the other end of life, as old age approached, the
883 diet was supposed to change, ideally to a completely vegetarian one. Since one was soon to face death, one gave up eating meat and even fish, if possible, so as to avoid taking life. It was considered pitiful or wrong for an old person to fish. Being able to go without food was associated with merit. Those who stayed overnight at the temple on the Buddhist holy day went without solid food from before noon until the next morning as the priests did. One elderly woman remarked that when she stayed overnight at the temple she did not feel hungry, and did not eat anything at night, but other women, feeling hungry, drank coffee or milk at night. She

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1. See p. 50.

understood that her merit helped her not to be hungry. Once she asked an eminent layman about eating at night. He said, "If you are not hungry, do not eat. If you feel hungry, it is better to eat. If someone invites you to eat, it is sinful to refuse."

Even young adults had a strong revulsion against gluttony. One of the symptoms of a man who went mad and had to be committed to an institution was that "he ate too much." A woman was despised because "she ate in secret. She stole eggs from her husband, sold them in the market, and then spent the cash on food which she ate there, instead of bringing it home." Definitions of a glutton were, "A 'with-rice' eater," or simply as "one who eats alone." These comments highlight the counsels of eating in moderation and in company. On the other hand, a full stomach was valued for "home is where one eats one's fill."

At maturity, when farm and other tasks were shared as equals, men and women ate almost the same food. The old proscription against animal food for women was somewhat relaxed, but not entirely. To sustain farmers during the seasons of hard work, however, extra quantities of rice and rice alone, were considered essential. "With-rice" was pleasant but not so necessary. Any shift away from a diet of rice as ordinarily cooked in Bang Chan was construed as a shift either in occupation or in health. For example an eminent citizen who gave up farming took to eating (3)khaaw (3)tom often. This soupy rice, a staple dish for infant feeding, had interesting socio-economic connotations. It was served as a light lunch to cooperative farm-workers to be followed at the day's end by a real meal. It was also "delicate" food, suitable for the sick, for city-people, for those who did not toil with their hands and backs. Consequently, when this man ate this "delicate food" more often, he was consciously or unconsciously serving notice on the community that he was not going to do farm work any more, for (3)khaaw (3)tom could not possibly have sustained a farmer's strength. Caustic villagers hinted that he was putting on airs.

Among conditions in which some change from the usual diet was found were pregnancy, post parturition and lactation. Relatively few foods were generally considered to be tabooed under any of these conditions, but many women preferred to limit intake to "safe" foods if there were any possibility that certain foods might cause harm.

Information was obtained from 42 mothers about the food they ate during the post-partum rest period. Two said they ate as usual, but for the remainder, the diet was considerably

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1. Literally "beautiful rice." For method of cooking, see p. 33.

443 she wanted to spend more time collecting debts."

It should be noted that A's brief duration of peddling started in the harvesting season. During this time the village cash supply was high, resulting in demand for such a delicacy as pork which normally constituted a negligible fraction of the diet of Bangchan people. This is a good business period for the peddlers. Another good business period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this latter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

Five families were classified as investors in 1953. All these families lived on rents from land, interest on loans, and income from speculative sources such as buying paddy when the price was low and selling it at high prices. Actually, most of these five families were not among large land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

262 family sit at the table while "with-rice" are placed at
264 the center and each person must partake of a small bit of these, just enough to properly go with a spoonful of rice taken each time. This table etiquette is generally observed throughout the country by all classes of people. A story had it that a Thai student of an aristocrat family wrote home objecting to the proposed marriage between his sister and one of his Thai friends in America. One count against the man was that he had been observed to have taken too much "with-rice" while dining out at a Chinese restaurant in New York!

511 Among the factors affecting variability of the rate
182 of consumption of various items of goods, the following may be mentioned:

261 a. Relative price of the food in relation to its
511 ability to mollify hunger when taken with rice. When Bangchan
182 farmers were questioned why they did not consume eggs produced at home but instead sold them and bought the inferior platoo fish (Rastrelliger chrysozonus), the answer was that an egg barely induced them to take a plate of rice whereas one platoo fish bought with half the money obtained from the sale of an egg could induce them to take three or four plates of rice and thus satisfying a hearty meal.

511 b. Homogeneity of quantitative need for certain
182 products like rice, fish, clothing, tobacco, and garlic. Consumption per consuming unit of these goods has been observed to be more or less constant regardless of the prices and the family's purchasing power.

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511 c. The family's purchasing power. Certain goods considered as luxuries -- medicine, eggs, pork and beef, and white sugar -- were not consumed by poor families.

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261 d. Individual taste and preference. The Moslems would not consume any pork although they had enough money to buy it. Some poor farmers spent more money on curry
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511 essence than their more affluent neighbors because they preferred highly flavored dishes, and some tobacco smokers did not spend a cent on tobacco binder because they preferred the home-grown banana leaf binder to the thatch leaf binder which had to be purchased.

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[184] e. Producing ability of the family. It was observed that those who caught more fish tended to consume more fish regardless of their financial conditions.

f. Health affected the consumption of medicine.

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[554] g. Prestige affected the amount of cash contributions to neighbors.

h. Personal habits -- thrift, fun loving, indulgence, like or dislike of liquor -- affected the amount of personal expense.

i. Presence or absence of children of school age in the family affected the consumption of cookies.

Special Expenses

511 By special expenses we mean major items of expenses which do not occur regularly but which may arise in one time or another. Examples: purchases of land, gold and

262 826 All food was also made up of the 4 elements. Here rice was of particular importance. The body was seen as built and maintained by rice. Flesh in fact was rice, an image probably derived from Buddhist scriptures. 11

82 Each element carried with it its substantive aspect of heat, flowing, etc., and its astrological nature and relations. Elements could be compatible or incompatible with each other. Earth, water, wind, iron, and wood for instance were compatible. Gold "got along" with all elements. Fire, though, was incompatible with wind, water, and wood for it could destroy their proper proportion.

828 787 The effect of astral and planetary relationships at the moment of birth on one's constituent elements induced qualities of character.12 Mind and body were a continuum. Because family members were born at different moments of time, intrafamilial temperamental differences were expected.13 Persons made up of incompatible elements quarreled. Thus, friction might occur between parents and children. For a husband and wife, who lived in especially close proximity, the constitutional elements were of special importance. Through marital relationships their elements were in physical contact. Consequently, in the old days, a couple contemplating marriage ascertained through their horoscopes the compatibility of their natal elements to determine whether they could live together without destroying each other. For instance, a girl with much fire in her make-up was easily angered and prone to fevers. She could not make a successful marriage with a boy with much wood.

Physiology

753 826 [827] A single physiological process controlled the functioning of the body and the mind; i.e., the equilibrium of its elements. If the elements were in proper balance, proportion or harmony, a person was healthy; if an element were excessive or deficient,

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11. "This, my formed body, is composed of the 4 Elements, generated by Father and Mother, built up from rice, porridge and sour gruel," says the Buddha (Suriyabongse 1981:11).

12. Merit, the other determinant of character, is discussed in "Influences on Health" below.

[539] 13. Cf. the proverb "The joints (knots) on the same stem are nevertheless unequally spaced, so even brothers are of different minds," (Gerini 1884:14).

a condition which also affected the functioning of the others, he was ill or emotionally disturbed.[14] For example, dropsy, swelling, and yellow eyes came from excess water; cholera and constipation from earth mists. Wind and fire were the great trouble-makers. 753 826

Wind "was stronger than the other three elements." Either blowing wind or still air easily penetrated the skin and caused difficulties all the way from flatulence, stomach-ache and diarrhea to a minor head-ache and dizziness ("if wind whirls inside the body, the house swims around"); from incessant crying to serious interference with breathing, hence fainting and death. An accident, such as a cut or broken bone, disturbed, and might "let out," the air. Acute pain ensued if "rigidity" of earth, fire, or water interfered with the proper movements of the internal winds.

Anger and fever were both in the category of excess fire. Since fire was particularly implicated in disturbed social relations, coolness was emphasized as the desirable state of body and mind. The blessings for both sexes at birth and at the marriage ceremonies enjoined the individual to be "cool and happy." There was some evidence that cool natures were tender (on) natures. Since women by nature were assumed to be "tender," and men not, a difference in element constitution may have been sex-linked. However, everyone knew of women who were not tender. For persons abundantly endowed with fire, temper control through temperature control was a constant preoccupation, for the allowable margin of fluctuation was especially narrow. 828 826

Food occupied an especially important place in a person's welfare because food controlled the fire element.[15] The following material on diet is the background for some of the dietary injunctions during pregnancy and lactation. 262 826

14. In view of Thailand's ancient Indian contacts, the parallels (and differences) between Bang Chan, and Hindu Ayurveda as described by Opler (1963:32-36), are noteworthy. [177]

15. "What was drunk or eaten by its decaying created the fire element in the body" (Suriyabongse 1964:12).

Diet in Body Maintenance and Curing

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Because food created fire, the daily diet could be a source of illness or a therapeutic means. Every food had known properties for heating or cooling, and for other effects as well. Guava fruit, alcohol, and turtle or cobra curry were heating. Eggs were cooling. Depending on the occasion, ice and iced concoctions were over-heating or over-cooling. They were always "dangerous during menstruation." Banana varied according to the variety: kluai hŏm (fragrant banana) was undesirably cooling and caused either diarrhea or constipation (Hauck, 1959:27); kluai nam wā was less deleterious (salāeng) while kluai nam was good for the sick or for parturients (Boonlong).

252 262 [758] [846]

Properties in food changed in cooking. Boiling made rice "ripe" (suk) and so available as nourishment (Anuman Rajadhon:77). Even the method of cooking varied the properties. For the sick and for parturients, the banana variety called kluai hak suk was good if baked, but not if cooked in syrup (Boonlong).

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Some foods were "incompatible" with, and so aggravated, certain illnesses. Air-borne food in the form of smell was incompatible with, and compounded, a condition of wind excess. Death or blindness ensued. On the other hand, asafetida might be tied to the wrist of a new-born baby so that the smell, an established carminative, might cure the excess wind in his stomach manifested as flatulence.

262 [774] [782]

Beneficial foods were encouraged. Of all these none surpassed rice, the main sustenance of the body, "the only true food" (Yong Chutima, in Hauck, 1959:27) and source of "strength" to the farmer. Rice was a safe food. It never disturbed elements. Eating rice, as compared with meat, had no overtone of taking life. One could eat one's fill without any sin. Most of all, rice nourished the human khwan, for each grain contained a part of the khwan of the divine Rice Mother. Furthermore, any food offered ritually to a spirit or to make merit acquired strengthening properties, and was afterwards given to priests, children, or to the sick.

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Foods with known dangers were avoided. "Kluai tānī banana, a variety full of seeds, was never eaten because it contained a female ghost (phī)." Jackfruit was avoided by lactating women as a direct source of wind-excess. Fruit in general was not dangerous but "did not give enough strength for a rice farmer. It was all right for an orchardist."

People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauck, et al: 42-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny kluai nam, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" kluai nam wā. Here orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plus--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (wisēt:powerful) or natural (tām thammachāt) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "khun"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paroxysm, flatulence, convulsion,

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16. Phillips (p. 65) reported that parents did not give their child a disliked medicine because "it offends him.... It is better not to give it to him than hurt his feelings."

17. This small skin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely pained (cf. Textor:116-127). Suspected khun was one of the few reasons why a family would authorize so grave a violation of the body of a deceased member as an autopsy.

828 or fainting, and also such localized trauma as abcesses.
753 Similar behavior followed the influence of malevolent magical amulets, incantations, and love magic. Natural intrusions may be exemplified by the seasonal influences of rain, which brought on too much water element; of heat, which increased fire; and of wind, which cooled too much or brought in certain fevers, e.g. north fever (khai nüa). An accident was a natural cause of disequilibrium. A cut might let out the air or a soul.

774 Any lost soul, if not restored, meant death. Souls were
[761] lost from falls or frights or from spirit attack, a condition
[753] recognized by persistent crying, hysteria, and unconsciousness. The exits were at the top of the head, the palms of the hands, and the soles of the feet, the latter 2 sometimes localized at the 2 thumbs and the 2 great toes. One of the old beliefs associated an element with one of the four chăttaphŭt souls (Textor:130). When one of these souls was lost one whole element was gone. Loss of the khwan soul was more frequent than any other, especially during childhood. Its care
[844] throughout life was very much in mind. The khwan[18] played an especially prominent part during childbirth.

765 If a person were only slightly sick, he might first try
[262] to overcome his physical complaint by attention to diet.
[757] Very rarely did he by himself buy some medicine at a drug store. If it were a case of a child's lost khwan, women performed the rite for its recovery. When the khwan of an adult was affected, man performed a strengthening rite (than khwan), or a priest gave a holy water bath. If the person were very ill, holy cotton thread (sai sin) was tied at wrist, ankle, and neck so as to shut off the soul exits. An elder relative or spouse might also "bon," i.e. vow food or liquor in return for the help of supernatural beings; or, with Buddhist "sacred things" in mind, promise the ordination of the afflicted person, or oneself, or some interested relative. In this case, the relatives had long since turned for help from the arts of medicine.

278 The Arts of Medicine
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Medical knowledge comprised on the one hand a pharmacology of materia medica, and on the other, the far more important

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18. The conceptualization of this soul was Brahmanic in source, rather than Buddhist (cf. Martinie, 1952:370).

On the other hand, pregnancy was a period of uncertainty when a woman was easily upset emotionally. Because childbirth was "like a war" when a woman might die, "defeated by her pregnancy"(phaethông), she felt uneasy.[24] If she were frightened, her child's khwan would fly off in terror. The baby died in the womb if its khwan did not return. Because of increased sensitivity and vulnerability her elements and those of the baby were frequently thrown off balance. Wind easily entered through the thin skin of her stomach where she carried the unborn child. It caused pre-natal disorders all the way from queasiness and minor vomiting in early pregnancy to miscarriage and death. "A woman felt dizziness and numbness because of wind in the fetus. In a month she suffered a miscarriage."

A pre-natal pain that did not seem to be a labor-pain was diagnosed as the very dangerous naem, "a thick lump of blood and wind that moved quickly." As in other illnesses, element harmony was restored by medicines, holy water, and by modifications of diet.

Women knew of possible supernatural invasions of the womb during pregnancy. If a woman had beforehand lost a baby at birth or through miscarriage, and the body had not been properly buried, she might be seriously troubled by its restless ghost, fully as powerful, it must be remembered, as an adult's.

24. The image of battle was traditional (cf. Anuman Rajadhon: 108). Phaethông (McF: 599), a combination of food craving and vomiting (Anuman Rajadhon:115) paralleled the dola-duka of Ceylon (cf. Obeyesekere), but without the hostilities built in by the Sinhalese.

843 [775] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phi tai thang klom, caused "the worst of all possible deaths." The phi krasu spirit,[25] entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). The supernatural disease missile called "khun" might also strike. [753] "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extre pain occurring just before the baby comes out." [751] [30] To protect themselves, women wore extra talismans or had 2 dots tattooed under the arm.

843 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 2 visible teeth, which indicated it was a non-human, iak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of women giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (McF.46). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb sat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

843 farmers brought to the fields an offering of two kinds of
782 bananas (kluai hom and kluai namwa), sugar cane, taro,
776 young coconut and cakes; and "fresh earth burned and offered with oranges and other kinds of fruit."[27] She was also given the things "dear to women": new clothing, perfume, face-powder, hair lotion and a mirror. In the
843 annual harvest ritual, when some woman (never a man)
776 escorted the Goddess from the field to the rice bin,
784 participation was forbidden to a pregnant woman because "the Goddess-Mother might be jealous of the woman's heightened beauty" and so be malevolent. Also, "being now emotionally weak and easily upset, a woman might be frightened by seeing the Goddess, who, after all, is close to being a spirit (phi).

843 The prominence of food cravings in this traditional
•262 description leads to a consideration of diet in pregnancy.

Diet in Pregnancy[28]

As long as everything went well, pregnant women "ate as usual." The underlying premise was that each woman early in childhood had established a regular diet suitable to her individual make-up of elements, and eliminated foods that because they did not agree with her or were disliked, were judged "not compatible." A woman could eat as usual because the ordinary daily foods, rice, coconut, etc., were "safe." The modifications introduced to beautify and protect the mother and baby were made on the basis of the properties and

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27. The goddess was following traditional "defeated by one's pregnancy" (phaethong [Mc.F: 599]) symptoms of desiring sour, salty, or strange things such as burnt earth." Like any woman, her craving for sweets indicated that a heavenly creature was to be born; for fruits, that she would bring forth an animal; for burnt earth, that the god Brahma would be born (Anuman Rajadhon 1961:115-116).

[114] 28. This section does not purport to present a dietary study in modern nutritional terms. Hauck's study (1959) of maternal and child health gives information on foods eaten, craved, disliked, or viewed as "good for" or "not good for" women during child-bearing, and also on illnesses found among pregnant women, including beri-beri, nausea, cramps, and fainting. The data here add to her information on behavior and stress traditional views as to the purpose of the dietary injunctions.

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qualities of foods. Chili peppers were avoided because they "burned the baby's skin." The cooling kluai namwa banana ensured a [illegible]-tempered child. The fact that one woman ate cobra curry and suffered heat, while another took it comfortably, indicated, however, that what was bad for one might not be bad for another. Individuality of constitutional make-up explains why views varied considerably on proper diet in pregnancy and lactation (cf. Hauck 1959:2,16). Those who were eying urban ways added to the variety by occasionally following modern medical advice. A schoolteacher, for instance, ate eggs regularly and during pregnancy----not the "old way."

Women were urged to eat a great deal for they were eating for 2.[29] Cravings were not compelling, but to increase food intake, preferences were indulged, even when involving out-of-season fruits, expensive, or "dangerous" items (Hauck, 1959:14).[30] "A pregnant woman can eat any kind of food because she is sailing on a tremendous ocean [a traditional phrasing, cf. Anuman Rajadhon:108]. No one can predict whether she will live or die. One wants to eat chicken and kills it herself. Another has dreams and nightmares about craving certain food." She who flouted the Buddhist prohibition on taking life and killed a chicken to eat was not criticised. She was shouldering

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29. "To increase the appetite" was of frequent concern (cf. Hauck, 1959:27, and Sharp et al., 1953:256-260). Food in quantity and the appetite to consume it was one of the main props of social relationships and of personal security (L.M. Hanks, 1963). [571]

30. Some of the likes and dislikes mentioned turned out to be a recitation of the traditional food injunctions set down in the old "textbook," Promcindas, quoted by Phya Anuman Rajadhon (116). That fresh fish tastes and odors were the most frequent dislikes (Hauck, 1959:14) should be seen alongside the following "symptom of pregnancy sickness: if the mother desires to eat meat and fish and raw things----a creature of hell has come to be born" (ibid:116). Such an idea might well discourage the eating of fresh fish and underlie Yong Chutima's statement that "women were supposed to eat less meat than men" (quoted in Hauck, et al.,1958:42), and found as a prevalent attitude in Cha Chung Sao (H.M.H.). The out-of-season fruits, Chinese noodles (an expensive or party fare) and hot foods (dangerous) fit certain craving-categories of Obeyesekere (pp. 338-339).

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sin for the sake of nourishing the child. Some Thai village women followed a local Chinese belief that eating a female chicken gave strength during pregnancy. Eating a rooster, though, caused miscarriage through "estopic gestation." Thai Muslims recommended chicken whole-heartedly.

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Medicines

Beginning early in pregnancy, one or more kinds of medicine (yā) were taken. These hot-tasting medicines of ginger, galanga, pepper, and such in 28 per cent alcohol were either bought from the big selection at a Chinese drugstore, or were made up at home from alcohol or water and an envelope of ingredients. A woman made the choice herself with the advice of experienced persons. Even the Muslims who ordinarily frowned on alcohol permitted their women to take it at this time. A few women, though, said they "did not like to get drunk," so took their medicines in hot water. The quantity varied from two to six spoonfuls per day, with big increases as delivery approached, e.g. "two big cups a day of it during the ninth month."

The primary purpose of medicine was to increase the appetite, but there were other reasons. Fragrant Medicine (yā hauaum) cured wind. One Muslim midwife's mixture "stimulated the amniotic fluid." Other preparations had more general objectives. One label advertised "strength and good blood to men and beauty to women;" another promised to "maintain the mother's body and make the inner organs do their work properly" (M.M.H.).

In the last months, the reason for the medicines was to build up the body's heat. This purpose was not affected by hot tastes, which burned but did not necessarily raise the heat, but rather by alcohol, cobra, and specific decoctions. A label cautioned, though, "Not to be used by pregnant women with fever," lest the increment of heat be excessive. Snake Brand medicine, an exceedingly hot concoction used primarily post-partum, was occasionally taken in mild dosage during pregnancy. (Used full strength it caused miscarriage, so was rumored to induce abortion). The heat raised the body's temperature far above the ordinarily desired coolness so as to implement birth.

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The Physiology of Birth

At parturition the body's usual needs were reversed. The child could not be ejected under the normal, cool condition of the body. The pushing and pulling winds inside the body that ordinarily circulated slowly had to be

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speeded up with heat to the point of blasts. The strength of the contractions of labor was in direct proportion to the speed of the winds' circulation. The great pushes of the expulsive lom beng "broke down" the sac with the amniotic fluid (nam thūn hua: water-that-supports-the-head-of-the-child), and forced out the child, water, and the placenta.

After the child was out, the mother was cold, weak, and exhausted. Her uterus was full of harmful fluids. Heat was needed more than ever not only to warm her but to give the winds "the power and push" to drive out three undesirable birth-waters: "The blood that looks like ordinary blood but is bad,"; the amniotic and abdominal body water (nām khram:refuse water); and the pale, viscous, repugnant "fish-water" (nam khāo plā). Therefore, a hot fire was built, close to which the mother lay (yu fai), turning all sides of her body towards the flame. She bathed in or drank hot or warm boiled water (nam suk: cooked, or ripe, water). She ate safe foods like rice and dried fish,[31] and kluai nam bananas, continued to take alcoholic medicines of the hottest sort, such as Snake Brand, and occasionally might be given cobra or other hot curries to eat. For a first-born, a woman stayed eleven or nine days by the fire (always an odd number), with stays shorter for each successive child, but never less than five days.

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Complications sometimes developed because of inadequate control of the heat. A "headache and a hot body" indicating "stagnation of the blood and the fishy-smelling-water," was cured by a heat-producing decoction. Rashes often occurred, causing small boils that might develop into sores. To soothe these, turmeric was painted on. In the most dangerous cases the heat "drove the bad blood to the heart, to the face or belly" where it was recognized by serious swelling, with resulting madness or death. In fact, one mō felt that the

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31. The reasons for rejecting fresh fish during pregnancy ("lest a creature of hell be born") would not hold after parturition. Yet fresh fish was rejected then too "as bad for the womb." One suspects that the less odorous dried fish was substituted so that the odor of fresh fish, like air-borne, incompatible food, would not affect adversely the "fish-smelling" post-partum discharge (nam khāo plā). In Hauck's list of foods "bad for mother during the post-partum rest," the reasons are apparent: Sour tastes did not dry out the body, but built up water; egg was too cooling; jackfruit brought in wind; glutinous rice and the sugar of sweets "wet the uterus;" fruits did not give strength and were excessively cooling (cf. Hauck,1959:15).

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843 278 many kinds she hardly knew which to choose. He also had all-purpose kits for mother and baby, even one with 14 different kinds of medicine "to control the body's temperature and keep the organs functioning"(H.M.H.). She decided on one of the favorites, pickled medicine (jaa daunung), and from then on took a spoonful twice a day. She avoided all peppery-hot foods which would "damage the delicate complexion of the infant in the womb, burn off its hair, and maybe even kill it." Some women said they craved sweet, hot, or sour foods, but Dūan did not. A friend who had never eaten cobra curry so longed for its hot taste during her pregnancy that her mother gave her a small dish. She could not resist secretly finishing the whole pot! What heat and sleeplessness! To cool herself, she had sat in the canal. The baby, saved only because its mother drank the water from a young coconut fruit, "could resist the cobra heat because it was 6 months along, but even so, it shed its skin at birth." But another woman, pregnant 7 months with her third child, also craved cobra curry, ate a lot, and said she did not feel hot. Nothing at all happened! The second woman was nearer to delivery, so stood the heat better, but more important, each individual was different. Because of virtue and sin in former lives each woman--and man, too--was born under different astral confluences and had lived and suffered differently.

843 759 About the seventh month, Dūan pondered who should help her at her delivery. Some of her friends were delivered by their own mothers, but Lek had undertaken the delivery of another daughter's child, and the baby had died in an hour. Dūan suspected that her mother, therefore, would prefer not to do it, and knew that she herself would feel uneasy. So she decided for safety's sake to ask a midwife. She and Song could well afford the ceremonial offering with its customary 20 or so baht, even though the midwife said it was "as you please." A great many women never consulted with a midwife beforehand at all, but just sent word to the nearest one when the pains started or when trouble was encountered. Midwives varied in their capabilities, however, and Dūan wanted not only a good one but someone she knew well. Muslim midwives were said to be skilled, but they happened to live too far from her. Dūan decided to ask her elder aunt, Sāi, who was a well known midwife. Everything was right about Sāi She had experienced hands, a true desire to help, and effective magic; and she was a relative. Best of all, her own babies had eaten and slept well, had cried little, and now were grown to maturity. With such proof of merit, capabilities, and fortunate relations with supernatural powers, what better person to help Dūan start her baby on its earthly existence? Actually, if something happened, and Sāi could not come, Dūan knew she would not be alone or unassisted. Almost every woman, and quite a few men, had

846 789 782 Now that the fire was going nicely and Dūan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sāi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dūan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaichiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dūan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

846 [757] [853] As Dūan was resting quietly, Sāi made three "taping fruits" (lūk prakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dūan's legs to cure the birth wound (phlāe). The other two were set aside for use on subsequent days. Sāi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dūan, on the side away from the fire.

787 827 With satisfaction of a job well done, Sāi and Lek sat together for a quiet chew of betel. "Lek," said Sāi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that best

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[273] [262] 36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

[263] [776] 37. The deities addressed were mǣ phra phlōeng and mǣ phra phai. Another Pali-Thai magic formula to control fire was: "Phra Mōk Khan Lā Nō will extinguish the fire from hell, na mō phut tha ya." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mō...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Textor 1960:483-485).

854 mosquitos, but then Song bought in Minburī a bamboo frame with be-flowered netting. He also bought little mits to tie onto the baby's hands, so the fingers would not be sucked. Not every baby got these! Most of the time the baby lay naked, but was wrapped when nursed. One cool day they put over him a thick blanket. Lek, Dūan, or Song bathed him in boiled water 3 times a day and always after his excretions, which were wiped off with cloths. Then fresh cloth was put under him. On the seventh day since he was thriving [856] he was bathed in ordinary rain water. Every day Lek vigorously squeezed his fingers and legs "to make them straight," which made him yell each time. To speed the drying of the [278] cord, a charred leaf of betel pepper was applied for a while to his navel on which Dūan spit saliva several times a day.

853 Dūan's milk supply was only fair. For milk stimulation they pressed her nipples and kept the fire hot. She was [262] also taking daily a special nursing curry of banana flower and vegetables (khaēng liang). One day she ate a cobra curry. A neighbor offered to help nurse the baby but Duan [854] refused. "It is a pitiful sight to see one's child at another's breast." Whenever the baby wailed he was given boiled water but was not necessarily at once picked up. If his crying continued, however, Dūan washed her breasts with warm water, pressed out and threw away a little milk, moistened the baby's lips with water, then lifted him on the pillow to her plank. She laid him beside her and leaned over him to nurse, though occasionally took him in her arms. He was nursed about 10 times a day, and also received honey, boiled water, and a bit of banana, too. [278] One day the baby cried a lot, so they painted him with turmeric and gave him baked cobra tail in alcohol to warm him up.

846 As to her own diet, Dūan followed the usual practice
262 of limiting herself rigidly to rice with salt, dried fish, and baked klūai namwā banana. Egg was too cooling: "like glutinous rice, it brought pus to the unhealed cord and the vaginal wound." Dūan also avoided "jam" bean which caused madness, fruit, and sweets. Whatever she ate affected her child by secreting into her milk. If she were sick, he would be so too. If he alone became ill, she must watch the foods both he and she ate. All these food instructions would stop only when nursing stopped a year or two later.

846 Duan decided to stay only 11 days by the fire, though Sāi had said 13 and she would have liked to stay longer. However, she wanted to get back to work because the transplanting season was approaching. Besides, the

846 [787] Seven days after the end of the fire period, Dūan sent a message to the mō to look in his book as to what direction from the house she should bury the phlai, the bamboo knife, and the pot with the now dried placenta and cord. She already knew some of the procedure: burying should take place on a Monday or a Friday; south was right during the first three months of the lunar calendar, November, December, January; and the full moon of the twelfth month (October) was especially good, for the moon waned thereafter. Chāi had been born in October, so north was right for him, but for a girl it would have been east. Song or Lek or anyone could bury the pot, but most mothers did it themselves. If it were buried in the wrong direction, the baby would die, and if not under a tree, he would leave them and their home, and roam. The instructions came. With the things in her hand, she walked toward a big jackfruit tree. Beside it was a sakae. Either was good, so she chose the sakae which, being nearer the house, might strengthen by that much the roots that would keep her boy at home. After burying the pot and all, she returned directly to the house, remembering to pick, as she came, a fruit, a vegetable, a leaf, and then a piece of wood, all useful things. In the house she added them to the usual household stores. By doing so, and by using them up shortly, she ensured that her new son would be a good worker, who on returning home would always bring something to add to the requirements and wealth of the household. Once buried, the placenta, "like ashes," was ignored and the spot forgotten.

846 262 [461] [753] [757] 862 Within a month after childbirth, Dūan was back at farm work, even to the back-straining pounding of rice in the big mortar. For three months she avoided fruits, particularly guava and jackfruit. Then, since the baby was thin, she gave up vegetables, especially gourds, corn, and the green plants that grew in the canal. One day, because she carelessly ate some salted field crabs, the baby got thrush on its tongue. They cured him by smearing the milky juice of a peel of kluai nam banana on the cloth sheet covering his cushion, then wiping this on his tongue (cf. Anuman Rajadhon 1961:153). So the year passed, and then another. Not long after his third birthday, Dūan realized she was pregnant again, so took steps to wean him. She painted her nipples with "black medicine" (yā dam), a bitter and hot tasting ointment made from the boraphed rhizome (McF; 474). Then she sent the child over to her mother's older sister's house for four nights. To make quite sure, she followed an old ritual way, too. She boiled an egg hard and peeled it. Holding the egg behind her back, she turned her face away from her son, and handed it to him behind her so that she could not see his face. "Henceforth, you shall not nurse any more," she said. Without looking at him, she walked

153 of making poor milk. Any woman whose milk flowed early and
853 well needed no example, for she was seen as having the habit as an in-born characteristic so deeply ingrained that it came through from a previous incarnation.[43] After nursing was established by the mother, babies were not often given over to another woman's breast because they were reputed to refuse it, "being not used to it."

In sum, the nursing patterns in Bang Chan varied with the previous lactating experience (if any) of the mother, and the ordinal position of her children.

Hauck shows the old way of establishing good eating
[262] habits in a baby. "If a mother ate small amounts of many
[846] different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time" (1959:14). Through the beneficial effects of the fire, any deleterious qualities of the foods were eliminated (as we shall see in "The Fire of Maturity") and the child had his first experience with these foods in the breast milk.

153 Bang Chan's life was full of secondary opportunities for starting new habits. Every rice crop, every boat purchased, every house built, and all the rites of the life cycle could, if handled properly, start a fresh and fortunate sequence on its way. We shall have more to say of this in discussing maturity.

789 Imitation
844

The familiar principle of imitation (Anuman Rajadhon: 154), the influence of like making for like, operated throughout daily life in Bang Chan. An action, event or presence emanated an analogous influence on its surroundings. A woman returned from a visit to the midwife with all possible speed in order to achieve a speedy delivery of her child a few weeks hence. Another pregnant woman visited the temple on the final day of the rainy-season Buddhist

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[829] 43. Bradley's informants gave an example of a deeply ingrained habit: "European and American mothers can better dispense [with the fire-rest] because their own mothers from time immemorial have never been in the practice of the custom, and consequently their constitutions do not at all require it (p.79)."

In addition, strengthening foods like rice and fish, the staples for stout farmers, were stressed. Fruit, "which gave no strength," and vegetables (except for the nursing curry mentioned below) were avoided.

The holy fire also transformed a woman into a better nourisher. It gave her new, lasting beneficial nursing habits. As one man explained, "the very nature of water is changed by boiling over a fire. It becomes nuk (ripe)." Similarly, a woman's body, her very nature, was permanently changed to nuk by the fire's heating. The fire, in fact, made nuk all the food she ate beside it. Since this food was turned into milk, her breast milk became nuk and so more nourishing, and did not disturb elements.[52] "Food eaten while lying by the fire, when eaten later on (during lactation) by the mother, does not cause diarrhea in the baby." Jackfruit ordinarily caused wind-trouble during lactation, but one woman ate it during the fire-rest, and at once "got used to it, so she could eat it all the time." To make themselves better nourishers, some women spoke of the desirability of "eating a bit of every kind of food." The "nursing curry" (kaeng liang) was a mixture of vegetables.

Finally, the consecrated fire strengthened a woman's own khwan. She could better withstand convulsion if attacked by a spirit.[53] She was able thereby to handle a khwan even without the special magic that existed for it.

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52. To be nourishing even the daily rice had to be made nuk by boiling (Anuman Rajadhon:77). It may be that no food was considered nourishing unless nuk, either naturally (like ripe fruit) or by cooking.

53. "...when 'involuntarily' entered by ghosts...maidens in the 17-25 age bracket tend to convulse more violently than do women of more advanced years"(Textor:406). "Maidens" were presumably not married and so not nuk.

562
156 (riak khwan). Theire was an augmented personal potency[55] in nurture not unlike the mana so widespread in the Asian-Pacific area.[56] The best midwives were liang dī, though not all liang
[059] dī were midwives. This societal peak was not an unattainable ideal. In the community, certain women were pointed out as liang dī and some of them recognized in themselves the validity of this title.

562 The association of rice, motherhood, and khwan now stands
774 clear. Rice made suk by cooking over a fire, was the essential
776 food not only for the body but for the khwan. Growth and life
• 262 depended on the nourished khwan. Rice came from a maternal figure, the Rice Goddess, Mae Phōsop (cf. J.R. Hanks, 1960). Human mothers, too, when made suk, gave suk nourishment: the milk of the breast was merely transformed rice. Whenever rice was eaten throughout human adulthood, the Rice Mother continued her nourishment, for in each grain was a bit of her khwan, nourishing to the human khwan. The rice-bowl and ladle, used in many a ceremony, stood for the maternal care given a human khwan, and by extension, personal care throughout life. Whenever the rice bowl with offerings (khwan khao: soul-[of]-rice)
[782] was presented by a parturient or by a sick person, loving care comparable to maternal care was being requested.

182 The idea of re-birth, of a fresh start within the pure
885 area encircled by the holy cord, with auspicious words and
846 consecrated fire, was deep in every life-cycle rite. The
562 particular circumstance of the fire of parturition was a
372 forthright cooking to bring out and increase a woman's essential femaleness, to transform her from a youthful, partial giver into a complete, mature donor of nourishment. Such was the satisfaction of women in this female role that many said they would like to be reborn as woman. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:375) for a quick run-down on a definition of mana.

844 178 177 412 this rust is believed to cause tetanus--and they are unsuitable for the ritual objective at the moment of cutting. It will be remembered that cutting the cord on a rhizome of phlai or soil with a bamboo sliver from the housepost guarantees that a child will not roam away from home. Could the bamboo sliver be dipped in "heating" alcohol, or passed over the flame of a holy fire? Could the old family kitchen-knife--long associated with the household--be substituted and dipped in the beneficial heat of boiling water? Such a knife once was substituted on the winnowing tray. Might the phlai or soil be covered with a boiled, clean, old cloth? If modern science succeeds in coming up with an acceptable substitute, one sees the possibility of a very small change making a big difference in the amount of tetanus poisoning observed (Hauck, 1956:41). One should then ask the midwives to watch as to whether the new method reduced the infection called "death because of a red or green face and clenched fists."

• 262 In diet "the concept that a good choice of food is important to the health of both mother and child" (Hauck, 1959:2) was very much shared by modern science and by traditional ideas but the basis of choice was entirely different.77 Modern science has ascertained that certain foods are [261] beneficial because of certain nutrients, while old beliefs have set up certain foods as desirable because of properties of heating, cooling, compatibilities with the elements, etc. The nature of these properties should be collected and listed. If dietary deficiencies in Bang Chan are noted, the foods that combine the needed beneficial qualities in both systems should be stressed. A hot-tasting tonic (yā) with appropriate dietary supplements, to be taken daily during pregnancy, and another kind during the post-partum period, might be acceptable. The period of the fire-rest is the best 372 place to initiate dietary changes for whatever is done by 846 the fire becomes a habit beneficial to mother and child. The use of boiled water should be encouraged as "making for [illegible]th." Again, disturbance of customs is minimized, and the presence or absence of "increased strength" and healthiness can be observed experientially.

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77. Hauck felt the concept was lacking, but it appears only that the grounds of choice were different.

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mo, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mo gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mo. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the thaa khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7
Bang Chan

SUMMARY

A general description is given of conditions in a Siamese rice village, 1952-54, as they relate to food supply and food habits. Activities at various seasons of the year are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

Food was mostly home produced and an important factor in the standard of living was the number of productive hands available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods were used. Nearly all of the families in Bang Chan raised chickens, and some raised ducks, but about 3/5 of all eggs produced were sold. Every family had some sort of kitchen garden, including banana trees and other plants, but spices and chili were much more commonly grown than vegetables and fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, coconut, palm sugar and small amounts of vegetables.

Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

Preparation of some typical dishes, meal service and techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

105 Sweets and fruit were the items most commonly eaten. Fruits were seldom eaten except as
262 snacks.

271 The customary beverage with meals was untreated water.
105 Rain water was preferred for drinking, but for 3 or 4 months of the year, water from the canal or fish pond was used.

105 Attitudes toward food, and foods considered appropriate
262 for the very young, the old, for the pregnant or nursing woman and for use during illness, are briefly discussed.

105 Quantitative food intake for 11 families was recorded
126 on a total of 44 survey days distributed throughout the year.
146 Two groups of families, in which individuals were matched so far as possible as to age and sex, were selected on the basis of apparent difference in nutriture. The sample was not stratified with respect to economic conditions, but those in Group B, chosen for apparently better nutriture proved to be, in general, more prosperous than those in Group A, chosen because of signs of poor nutrition.

105 Food values were calculated on the basis of published
146 analyses. Conservative nutrient allowances were estimated for residents of Bang Chan. On the average, calories, protein, iron, niacin and ascorbic acid in the diets of persons in Group B approximated or exceeded these allowances. For Group A, this was true for niacin and ascorbic acid only. Average intakes of riboflavin were estimated to be about 1/3 or less of the allowances, and estimates of calcium intake were about 20% of the allowance for Group A and 30% of that for Group B. Vitamin A values of diets for both groups appeared to be low, and thiamine intakes marginal or low. The signs observed among persons in these families were generally those associated with low intakes of thiamine, riboflavin and vitamin A.

Rice contributed about 4/5 of the calories and over half the protein in diets of both groups. Animal foods, chiefly fish, furnished about 2/5 of the protein. Intake of fats and sugar was small. Snacks of fruit contributed about 1/6 of the total ascorbic acid for Group A, and about 1/9 for Group B.

Seasonal variations in food preparation, meal patterns, food costs and caloric and nutrient values of foods eaten are discussed. Higher caloric intake during heavy work seasons was largely accounted for by larger amounts of rice eaten. The highest intake of protein for both groups occurred in the post-harvest season, when fish ponds were drained.

Questions for further study are proposed, and possible approaches to improving food habits and nutritional status in Bang Chan are suggested.

426 Because of scattered farms and frequent shortage of cash, borrowing food and other items, and many exchanges of service were necessary. Blood-kin were easier to approach, and in the larger social unit, nearer. Borrowing from a non-kin neighbor was supposed to be less frequent, and the favor had to be returned more promptly and exactly.

434 Most opportunities for increasing cash income such as hiring out as temporary farm labor, digging canals, marketing eggs, mushrooms, or cooked snacks, took one out of the home, often overnight. In the small family, one partner was left at home. Both could not go because fear of theft forbade leaving a home unoccupied for any length of time.

The Buddhist Priesthood

792 At the temple lived twenty or thirty priests under the abbot, with a group of boys to serve them. The priesthood was maintained by daily voluntary offerings of food, with larger donations of food and commodities at certain times. Persons who thus "made merit," by supporting the priesthood, by giving to the needy, and adhering to the ethical tenets of the Buddhist religion, reaped a reward of health, happiness, wealth and eventually, freedom from rebirth. The immediacy of these beliefs must not be underestimated. Men only were ordained. They might resign at any time after three months, but some spent their lives in the priesthood.

792 262 431 In Bang Chan, throughout the year, the priests set out at dawn to receive cooked food for the day. They appeared at houses by more or less specific arrangement and were given a generous share of the food prepared by the family for its own use, sometimes with the addition of fruit and other delicacies. Each priest stopped at two or more houses. The food then was brought to the temple to be eaten at 8 and 11. For the rest of the day the priests fasted, i.e. they ate no solid food, but drank liquids such as tea, soft drinks, and recently, tinned milk and a fortified malted milk drink. Priests were also invited to eat in homes not only at large ceremonies, but at small merit-making occasions. Sporadic special food offerings were also received. If a buffalo died, much of the meat was usually given to the temple. Traditional practitioners, mid-wives, and ceremonialists always gave the priests a portion of the fees from their practice which consisted in 1 or 2 liters of milled rice, a bunch of bananas, and perhaps cash. On the numerous Buddhist holidays and at specially organized temple convocations, quantities of cooked, preserved and raw foods were brought to the temple and apportioned among the priests. From this bounty a meal was served to the priests, who ate while the villagers looked on in satisfaction.

One of the duties of the abbot was to coordinate the

792 262 431 village offers of regular service, the holiday offerings, home invitations and sporadic gifts so that all priests had places to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut[1] or hardship.

792 794 262 About mid-July, Buddhist Lent changed the food habits somewhat. This three-month period corresponded with the height of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering, and thereafter the priests went regularly on their appointed rounds.

796 261 On Buddhist holidays, the people did not usually eat any of the food brought to the temple, but on (3)thaauad (2)ka-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bountsously.

792 857 262 Residing at Wat Bang Chan in 1954 were 22 boys, aged 10 to 16, sent to serve the priests, get their living and attend school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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792 262 737 235 1. Amounts of food given usually exceeded the actual needs of the priests and temple boys. One instance was noted in which food was sent by the priests to a needy old person nearby. Leftover rice was dried and sold for chicken feed.

114 104 2. The transcription used throughout this report is that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

22 132 241 512 871 562 [33] The year starts with May, the beginning of the rice-year. At this time the rains began to soften the parched ground, and the heat slackened. School re-opened. Farmers turned to plowing, harrowing, raising the seedlings. Both sexes worked about equally in field labor, boys from 14 and girls from about 15 years of age performing tasks according to skill and strength. Everyone was in the field at dawn. The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

264 [262]

221 132 [501] [44] [24] With the rains, the canals had filled, so that by June buyers with big rice boats could return. The few farmers who could afford to hold onto a portion of their last year's crop sold it for a better price at this time. Vegetables and fruits which had died in the long drought were replaced, and trees were planted.

24 221 132 In July the heavy transplanting season began. Because of cooperative work habits or hiring out, people worked solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly controllable. [312] Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School [871] vacation was scheduled at this time so both teachers and [857] children could help. Older children might work in the fields, [887] while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food [433] for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

221 132 243 244 245 262 434 503 496 871

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ←WET→							←COOL→		←HOT→		
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	→heavy	moderate	←heavy→		←light→				←negligible→			
Canals	rising			high	(floods)				lowering fast		low,dry	
Cultivation of Rice	plowing→ seedbed grown		TRANSPLANTING		growing	early var. mature		←HARVEST→				
School	vacation							vacation			vacation	
Cash available Source	cash in hand rice				cash jobs→	←cash shortage→			main rice sale		cash in hand	
Fruit;vegetables	→	←new planting→							←annuals die→			
Fish: Supplies	ponds drained→								←ponds drained→			
Maturation			←many varieties→						←best varieties→			
Preserving	←much→		←moderate→						←most→			
Ceremonies	ceremonies→			←Buddhist Lent→						←ceremonies→		
Dietary survey	→	←Round I→		←Round II→			←Round III→			←Round IV→		

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 18°F (10°C) in April and 22°F (12°C) in January.

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

1. In some large houses, two related family groups lived together but maintained separate kitchens.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

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1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

262 fish was apparently regarded more lightly by many Buddhists Killing
226 than killing of larger animals, but fishing on (1)wan (4)phra,
[184] the weekly holy day, was forbidden. Fish were caught from the
226 canal with nets, traps, spears and hooks. Some were trapped
in trenches in the rice fields. Techniques varied with the
varieties of fish mature and plentiful at different seasons.[1]
227 Moreover, every house had a fish pond. It was usually the
hole from which earth had been removed for mounding the home
site, and was connected by a ditch to the canal. Fish were
lured from the canal into the pond by clearing it of injurious
undergrowth, planting appropriate fish-feeding plants, of

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251 Smaller fish were preserved as fermented fish. The fish
with bones left in, were salted overnight. This product was
[269] called (1)plaa (1)raa. For fermented fish to be used as
seasoning, in various dishes, the liquid was drained off, then
the fish were washed and mixed with salt and specially pre-
pared rice. This had been soaked overnight, fried and pounded.
The mixture was allowed to ferment in a small jar for from 2
weeks to 2 or 3 months, depending on the product desired.
Large bones were removed by putting the product through a col-
ander before use. Fermented fish had the advantage that it
could be eaten without further preparation, and the flavor was
generally liked.

Small shrimp, which were caught in quantity during only about 3 weeks in February, were made into shrimp paste as follows: the shrimp were washed, mixed with salt and allowed to stand overnight. The liquid was drained off, and the shrimp were spread out on trays and exposed to the sun for a day or so. Larger ones might then be beaten to loosen the shells, which could be winnowed away. For very small shrimp, this step was omitted. The shrimp were then pounded thoroughly in a mortar, and stored in a jar for about a month before use. Very small fish were sometimes made into fish paste in the same way. The yield was about 2 kg. of the tannish or grayish colored shrimp paste from 4 baskets (4/5 tang) of shrimp. Shrimp paste or (2)ka-(2)pi was an essential ingredient of Thai hot dishes.

The liquid which was drained off from the mixture of fish or shrimp and salt in the first stage of preparing fermented fish or shrimp paste was used by some villagers to prepare (4)nam (1)plaa or fishsoy. The liquid was boiled with certain green leaves such as mango leaves, onion, garlic and salt for from 30 minutes to an hour, then it was strained.
[263] The resulting red-brown liquid was bottled and was ready for use as a condiment.

[136] 1. Sharp et al. (1953, pp. 185-196) described some common fishing techniques and listed 32 varieties of fish known to be found in Bang Chan in 1948-49.

228 which the leafy vegetable (2)phag (2)ka-(2)cheed is one, and digging a deep hole at its entry. At the proper time the opening was plugged. The fish grew in the pool and were taken as needed, sometimes, for convenience, several at a time, to be kept alive in a large pot near the house. By draining the pond fish were "harvested" (p. 12). Yields varied, but villagers had the impression that they had de-
654 clined considerably over a period of years.[1] In 1952, at the suggestion of FAO, the Thai government tried to increase the supply by introducing tilapia culture. During the first three years of the experiment about one-third of the families in Bang Chan had tried to raise tilapia, but in the summer of 1957 members of the research group were told that no one had persisted (see Appendix A, p. 101).

235 Eggs. - Chickens were raised by about 90% of the families in Bang Chan, and over 70% owned 10 or more. In contrast, only 37% of the households had ducks, and only 13% had 10 or more (Goldsen and Ralis, 1957, p. 56). Ducks were regarded as trouble makers. Moreover, chickens could feed "naturally" and certainly helped themselves to paddy from the bin, whereas ducks did not eat paddy, but had to be provided with bran and broken rice.

235 443 433 262 Most of the eggs produced were sold. Janlekha (1955) estimated the annual production of chicken eggs in Bang Chan as 366,540, and that of duck eggs as 268,200 eggs. According to the information which Janlekha obtained from 106 households in 1953, about 4/5 of the chicken eggs were sold as a secondary source of farm income whereas more than 3/4 of the duck eggs were home consumed. Slightly over 2/5 of all eggs produced in the village were consumed there. On a per capita basis, the average annual consumption of 708 eggs for an average family size of 5.7 persons (Janlekha, 1955) amounted to a little over 1/3 of an egg per day. Home consumption of eggs might be less in households in which enough chickens were raised to make regular sale of eggs possible. Thus in 5 of the 31 households studied by Sharp et al. (1953, p. 197) all hen's eggs produced were consumed at home.[2] For these families, an average of 452 eggs per family per year or about 1-1/4 egg per family per day, were thus available. Home consumption in the 26 families which sold eggs amounted to an average of 215 per year or about 0.6 egg per family per day. One informant commented that a rich man could eat an egg every day, but she could not afford to do so. She said she sold eggs, when she had them, and bought foods to eat with rice.

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1. Sharp et al., 1953, pp. 191-192.

2. This probably means that eggs were not sold in quantity, not that none were used in barter (cf p. 5); thus the number of eggs available may be overestimated.

244 Vegetables and Fruit. - Although kitchen-gardening has been encouraged by the Thai government, vegetables and fruit were grown in Bang Chan to a limited extent only. Every family had some sort of kitchen garden, but many edible plants which can be grown in the village were grown by relatively few families. The list of fruits grown in Bang Chan in 1948-49 (Sharp et al., 1953) included four times as many items as were grown by one or more of the 11 families that participated in the dietary study. The list of vegetables and spice plants grown or gathered by these families included 27 items, as compared to 41 listed by Sharp et al. Spices and chili were more commonly grown than vegetables and fruit.[1]

244 245 433 One affluent household whose food expenditures for 1949 were reported by Sharp et al., (1953, pp. 214-215) produced for home use, 125 kg. of palm sugar valued at 200 baht and 500 coconuts, valued at 450 baht. Home production of both of these was unusual. Few families in Bang Chan grew either sugar palms or coconut palms and expenditures for coconuts and palm sugar were usual. During the major flood of 1942, villagers noted that coconut palms survived whereas all other fruit trees were destroyed. After this, a number of farmers planted coconut palms, but they had not yet begun to produce.

361 311 351 In 1954, about 120 acres (300 rai) of the total of about 2800 acres (7000 rai) of land in the village were used for home sites and home gardens for 336 households. Individual home sites usually varied in area from about one-quarter to one acre, and were occupied by buildings, threshing floor and space for poultry as well as trees and garden space. Portions of this might be under water for several months of the year. Increased home production of fruit and vegetables would in many cases necessitate increasing the size of the home site by purchase, mounding or both. Ordinarily, increased land for the kitchen garden was obtained at the expense of some of the

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[245] 1. In a typical farm garden in Bang Chan one would find bananas growing, and a number of plants used for seasoning [249] curry. Various kinds of chilies, lemongrass, bergamot, of which both rind and leaves are used, and galangal were grown by all families who participated in the dietary study. Both sweet and holy basil were commonly grown. Many families grew one or more varieties of gourds and of eggplant, some of which [262] can be trained to grow on a tree or trellis. The inflorescence of the banana was also used as a vegetable. Leafy vegetables were not commonly cultivated but some families grew (2)phag (2)ka-(2)cheed, a green water plant, in gardens staked out at the edge of the canal, or in a pool, and some had trees, [262] the leaves of which were edible. Swamp cabbage or (2)phag [262] (3)bung grew wild along the edge of the canals and was the most commonly used green leafy vegetable. A few families [245] grew guava, jujube, star gooseberry, Manila tamarind, mango and pineapple.

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361 rice land. Water-ways, however, were public areas, and any
[505] convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

262 Mushroom culture as a side line activity of rice far-
344 mers developed during the period when this study was in
433 progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

[438] As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

262 Relatively few foods were purchased, but some of these,
438 such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

262 Estimates of mean annual consumption and cost of pur-
435 chased foods, for 106 households in Bang Chan are shown in
128 Table 1.

262 The list of purchased foods presented by Janlekha (1955)
432 was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)ma-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23 -- Analyst]

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Table 1. Mean Annual Consumption and Cost of Purchased Foods, for 106 Households[1] in Bang Chan, 1953 (Adapted from Janlekha, 1955, p. 316)

Foods purchased	Estimated Amount	Estimated Cost baht[2]
Raw fish	16.6 kg.	83
Fish sauce (fishsoy)	36 bottles	54
Shrimp paste	6 kg.	27
Pork and beef	8.4 kg.	84
Vegetables	1 kg.	1
Onion[3]	11.3 kg.	34
Garlic[3]	11.3 kg.	34
Coconut[4]	196 fruit	292
Chilies, dried	7.6 kg.	53
Limes[4]	80 fruit	16
Tamarind[4]	6.3 kg.	19
Palm sugar[3]	71.4 kg.	152
White sugar	4 kg.	16
Total		865
Average cost per day		2.53
Average cash expenditure per person per day for food		0.44

1. Average size, 5.7 persons.

2. At the time of the study, one baht equaled about 5 cents.

3. Not produced in Bang Chan (Sharp et al., 1953, pp. 295 and 299).

4. Little production in Bang Chan.

262 preserved vegetables which were purchased and used frequently
432 by families participating in the dietary study.

262 The food costs reported by Janlekha (1955) were esti-
435 mates recorded from memory at relatively frequent intervals. The average per capita cost, 0.44 baht per day, was similar to the average cash expenditure of 0.47 baht per person among 11 families participating in the dietary study (based on the average of 4 survey days for each family). Thus, in Bang Chan, cash expenditure for food appeared to be relatively small, i.e. farm families produced a large share of all food consumed. If money were not available to buy, they would still have enough to eat, but it might lack variety. One informant said, for instance, that he usually bought a coconut every other day, but during October, when cash was short, he bought none. Janlekha (1955) considered the estimates obtained for expenditures for fruits and vegetables less reliable than for items purchased more regularly.

262 In Table 2, the percentage distribution of food
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Table 2. Division of Food Expenditures by Food Groups, for Eleven Families that Participated in the Dietary Study, 1953-54

	A 6 families[1] %	B 5 families[1] %
Animal foods	30.8	39.3
Fruits[2]	30.3	26.3
Vegetables[3]	28.7	17.0
Fats and Oils	3.3	8.4
Sugar	3.6	3.5
Pulses, nuts	--[4]	0.9
Spices, etc.	2.7	--[4]
Miscellaneous	0.7	4.5

1. Based on 4 days per family.

2. Primarily coconut.

3. Chiefly non-leafy

4. The dash indicates no purchase or a value of less than 0.1%.

262 511 expenditures by food groups is shown for the 11 families that participated in the dietary study.

Consumption of canned foods was negligible. Some canned fish and fruits were on sale at stores in the village, in 1952-54, but were seldom seen in homes.

262 272 854 855 Sweetened condensed milk, which was served in coffee sold at the stores, was occasionally bought for the children. On one occasion, a woman was seen buying milk diluted with hot water as a beverage. Among 526 records of food eaten by school children during 24 hour periods, milk appeared twice only, once with coffee. Dried milk, for infant feeding, was used occasionally. During 1952-54, several instances were noted in which dried milk, mixed with water, was used to feed an infant while the mother was at work in the field or engaged in vending, but we encountered one case only of an infant who was not breast fed. This was an infant whose mother died when he was five days old, and who was reared by grandparents.

262 443 [271] Relatively few items of food were available at the village stores. In the inventory of the largest of the three stores in the village in 1948-49 (Sharp et al., 1953, pp. 211-212) the following items of food were listed: big dried chilies, shrimp paste, onion, garlic, fish sauce (fishsoy), salted fish, fresh chilies, limes, coconut, coconut oil[1], brown (palm)sugar, tea, coffee, condensed milk, orangeade and lemonade (carbonated), sweets, liquor, ingredients (including a lime paste) used together in betel chewing.[2]

New stock received in December by a local vender who kept a few items for sale at her house included mature green beans, black beans, peanuts, sweet potatoes, salted turnip, pickled garlic and tomato sauce.

272 443 515 Larger stores served as informal men's clubs where tea, coffee with condensed milk, and carbonated beverages were sold primarily for consumption on the premises. The proprietor of a new store, built in December 1952, sold no liquor.

273 443 We have no estimate of the amount of liquor sold in Bang Chan, although for those who drank it, its caloric value might be of significance.[3] About 9% of the householders interviewed

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[354] 1. Listed by Sharp et al. with non-food items, as much of it was burned in lamps.

2. Included here as food since some calcium may be obtained from this source.

3. One observer estimated the intake of certain village men who drank regularly as at least 2 oz. of rice liquor (28-35% alcohol) per day, representing about 100 calories. The estimated intake of women who drank regularly was about 1 oz. per day.

273 in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

433 434 443 Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary [462] study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

121 In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

221 262 122 [123] From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953, and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

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1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 29 -- Analyst]

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Chart 2. Annual Calendar of Fresh Foods Commonly Used in Bang Chan[1]

	No. Records[1]	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Fish													
Climbing perch	114	x[3]	x	x		x	x	x	x	x	x		
Eels	27	x	x	x		x	x	x		x	x		
Field crab (salted before use)	16	x					x	x		x			
Oysters	22		x	x			x			x			
Notopterus notopterus	10	x						x	x		x		
Serpent head	99	x	x	x		x	x	x	x	x	x		
Silurus	66	x	x	x		x	x	x	x	x	x		
(1)plaa (1)thuu	163	x	x	x		x	x	x	x	x			
Other Animal Foods													
Beef	30	x				x	x	x	x	x	x		
Chicken	72	x	x	x		x	x	x		x			
Eggs	142	x	x	x	x	x	x	x	x	x	x	x	x
Frogs	18	x	x	x				x		x			
Pork	51	x	x	x		x	x	x	x	x	x		

1. Based on 539 records obtained from school children, and observations in 11 households on 44 survey days. Figures in the column headed No. Records indicate the number of 1-day records on which the item appeared.

2. No records were obtained from school children during March, April or August, hence absence of the item from these columns means simply that the 4 households visited in each of these months did not use the item.

3. x indicates that the item appeared frequently on records obtained in this month. Note that frequency of use may be influenced by farm work and circumstances other than relative availability.

Chart 2. (continued)

	No. Records[1]	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Green and Yellow Vegetables													
Basil, sweet		x	x	x	x	x	x	x	x	x	x	x	x
Chili, fresh		x	x	x	x	x	x	x	x	x	x	x	x
(3)Khii-(2)lag	10			x		x	x	x		x			
Lettuce	49	x	x	x		x	x	x		x	x		
(2)Phag (2)ka-(2)chaed[4]	138	x	x	x	x	x	x	x	x	x	x		
Pumpkin	19	x	x	x				x		x	x		
Snap beans	12	x	x	x	x				x	x	x	x	x
Swamp cabbage	147	x	x	x	x	x	x	x	x	x	x	x	
Sweet potato	72			x	x	x	x	x			x		
Other Vegetables													
Bamboo shoots	53	x	x	x	x	x	x	x	x				
Banana, inflorescence	25	x	x	x		x	x	x		x	x		
Calabash	31	x	x	x		x		x					
Cucumber	10		x	x							x		
Egg plants[5]	29	x	x	x	x	x	x	x	x	x	x	x	x
Garlic		x	x	x	x	x	x	x	x	x	x	x	x
Gourds, bitter	11			x	x					x			
Gourds, towel	11	x				x	x	x					
Lotus stalks	48	x		x		x	x	x	x				
Mushrooms	25	x	x	x	x	x	x	x	x	x	x	x	x
Onions		x					x	x					
West India pea tree flowers	39	x					x	x	x	x	x		

4. Thai names are given when English equivalents are not known. For scientific names see Appendix C, pp. 126-127.

5. Several varieties of egg plant were used. On many records the variety used was not indicated.

listed on 10 or more of the 24-hour dietary records obtained. For items which were major ingredients, the number of records on which the item appeared, is given.[1] Thus (1)plaa (1)thuu, which is bought by residents of Bang Chan during the busy work seasons, was used more often than any other single variety of fish named. Of the varieties caught locally, climbing perch, serpenthead, and silurus were most commonly used. Fermented fish, not included in the calendar, appeared on 53 records, and fish with kind not specified, on 180. Eggs were used more often than any animal food other than fish. Among green vegetables, swamp cabbage and (2)phag (2)ka-(2)cheed were commonly used. Bamboo shoots and lotus stalks were prominent among the non-leafy vegetables. Bananas which are grown in every garden and are available all year round were much the most common fruit, although other seasonal fruits were eaten more often in 6 of the 9 months in which school children submitted records.

Some idea may be obtained of peak seasons for use of various common foods by noting the months designed by x. Thus in January and May, serpentheads were listed on about 1/3 of the records, and were frequently served at more than one meal. Sweet potato, usually fried and eaten as a snack, was listed on 35 of 52 records obtained from school children in September. Flowers of the West India pea tree were listed on 10 of 55 records in October, and 12 of 88 in November, with occasional mention on records obtained in 4 other months.

Fruits were eaten much less often than one might expect in a tropical area where many varieties are available and fruit can be grown the year round. They were most often eaten by children as snacks, although pineapple and papaya were usually, and banana occasionally cooked in "with-rice" dishes such as curry. In September, fruit was included in the diets of less than 1/3 of the children. An average of more than one serving of fruit per child per day was recorded in 5 months only, May, June, October, November and February. In May, when (4)ma-(1)faj or rambai was in season 46 of 76 children reported having eaten it. Pineapple, listed by 35 of 61 children in June, was most often served in curry at one or more of the family meals. In October, oranges were eaten by 30 of 55 children who submitted records. Bananas (mostly of the (4)nam-(4)waa variety) topped the list in November and February.

Items mentioned on fewer than 10 records, and hence arbitrarily omitted from the chart, are worth noting as they

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1. No figures are given for sweet basil, garlic, onions, chili or limes, which were so often used in small amounts as seasoning that the count obtained would give no clear idea of the extent of their use. Some common spice plants were not mentioned on the records.

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

252 a woman's" (Sharp et al., 1953, p. 88). For instance, the
462 husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was
252 sick or resting after childbirth. The ability of boys as well
857 as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had
252 (Hauck, 1953). Responsibility for food preparation increased
[983] with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a
[597] daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 Certain men of eminence, e.g. headmen and elders, would
554 not be asked to cook at all, but as they aged, they might re-
887 turn to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for
252 2 months because his wife had back trouble. Some dishes were
562 cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 A premium was put on good cooking, and certain women
261 who were noted for their cooking were in great demand for large
[868] scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 Food was commonly prepared twice a day, in the morning
264 and late afternoon. The meal pattern was the same for breakfast

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114 1. Suvarnakich (1950) described the Thai diet in a
262 general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

252 and dinner, either meal taking an hour or two to prepare.
264 Snacks might be eaten at any time. Adults often ate just the two principal meals, but children, especially the small ones who were not in school, might eat whenever hungry. The school children often purchased snacks from venders on the
192 school grounds. If food was to be offered to the priests,
853 who went around the village about seven o'clock in the morning, breakfast preparation was begun early, between 4:30 and 5:30 a.m., although family members might eat at various times during the morning: the husband before he went to the field, older children, before school time, babies and small children when the mother had time to feed them, and so on (Appendix A, p. 95). Preparation of supper usually took place sometime between 2:30 and 6 p.m. Whenever possible, family members ate together at the evening meal, but many exceptions were noted.

252 Rice is the principal item in every Thai meal. In Thai
262 the general term meaning "to eat" is translated literally "to eat rice." All food items are divided into two classes: (1)khaaw rice and "with rice," or (2)kab (3)khaaw. Among the families studied three or four "with-rice" dishes were usually prepared during the day, i.e. for the two main meals, but the number varied in different families, and according to season. One or two of these dishes would usually be "hot" i.e. highly seasoned with fresh or dried chili peppers. Fish was the food item second in importance to rice, but the typical "with rice" preparation, whether hot or mild, contained more than one food item in addition to a variety of spices and flavoring materials (Appendix C, p. 118).

262 Between meal snacks might be any available leftover
264 food,[1] fruit, or items purchased from a vender.[2] Such snacks were not regarded as meals, however, as no Thai considers that he has eaten a meal unless he has eaten liberally of rice.

252 The general method of cooking rice was the same throughout the village. The rice was washed two times in water from the canal or fish pond, and was then boiled in a large volume of unsalted water for about 24 minutes. The rice pot was

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1. Leftover foods from breakfast were eaten later that day with or without reheating. "With-rice" was seldom left over from the evening meal, but rice was frequently kept over night.

252 2. Deep fat frying of bananas, sweet potato slices and the like was commonly observed, both among venders who sold their wares on the school ground, and those who travelled by boat. This method of cooking was never observed in ordinary home food preparation probably because fat was in relatively short supply.

The observer often had opportunity to make notes on foods eaten by various family members. Two examples of these are included in Appendix A, p. 97.

Snacks

We have noted that various family members ate the morning meal, in particular, at different times, and that children especially might eat leftover food between meals. Most Bang Chan school children[1] ate snacks, which were usually different from foods eaten at a regular meal. Doubtless most of them were purchased from one of the venders who were to be seen on the school grounds daily. Fruits and "desserts" were most commonly eaten, although a variety of other foods, not a part of the usual Thai meal, were also listed. Sweets were listed about 450 times on the 539 records obtained. Many of them had a base of rice, rice flour or glutinous rice with sugar, and included coconut, banana or other fruit. Some were made with legumes, and a few contained egg. Fried bananas, fried sweet potato slices, bananas or beans cooked in syrup, and bananas cooked in sweetened coconut milk were also listed. A few items such as ices, flavored syrup poured over shaved ice, and candies, had little nutrient value other than caloric content.

A glass of milk, and milk with coffee, were each listed once. These might have been obtained at the store adjoining the school grounds. These instances are worth noting primarily because, although dried and tinned milks were obtainable, milk was seldom given to village children after weaning.

Many children were given a bit of cash each day, and Janlekha (1955) commented that some children who did not have any might barter an egg for snacks. One could tell fairly well from the children's records what the venders offered for sale on a given day. Some influence of season was apparent; thus ices and syrup over shaved ice were eaten more often during the hot dry season, and cooked foods such as fried Chinese noodles appeared primarily in the cool season.

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1. With the cooperation of teachers of the third and fourth grades in the Bang Chan elementary school, records of food eaten during 24-hour periods were obtained from children in these grades at intervals of about one month during the school year. This was a regular activity in the health class. A total of 539 records (from 1 to 8 for each child) were obtained from 75 boys and 72 girls. To facilitate recording, each child was given a sheet of paper, with spaces for his name, the date, and kinds of food other than rice, eaten at the morning, noon and evening meals, and as snacks. These records were collected primarily for information on meal patterns of village families for comparison with the limited sample in the dietary survey, and on seasonal use of various foods.

262 Some snacks, i.e. seasonal fruits, may have been picked from the home garden, and items such as lotus seeds were probably gathered wherever the children found them.

Comments on Foods Eaten by School Children

126 264 955 In addition to the high percentage of school children who ate snacks, a conspicuous observation was that many ate no regular lunch (Table 3). We did not ask the children to record when they ate snacks, but only what they ate. The number of snacks recorded by individual children did not, however, appear to be related to whether or not they had eaten lunch. For example, among the 76 children who provided 24-hour food records during May, 1953, the average number of snacks recorded by the 39 children who ate a regular lunch and the 37 who did not, was about the same, i.e. a little over three per child.

Table 3. Number and Percentage of Children Who Ate Snacks, and Who Missed Lunch, Arranged by Months in Which Records Were Obtained

Month[1]		No. of Records	Children who ate snacks		Children who missed lunch	
			No.	Percentage	No.	Percentage
May	1953	76	73	96	37	49
June	1954	61	56	92	32	53
July	1953	79	77	98	53	67
Sept.	1953	52	49	94	36	69
Oct.	1953	55	50	91	22	40
Nov.	1953	88	81	92	57	65
Dec.	1952	18	14	78	10	56
Jan.	1954	69	64	93	41	59
Feb.	1953	41	39	95	33	81
	Total	539	503	93%	321	60%

1. Note that although the figures are arranged by month, the records were obtained over a period extending from December 1952 through June 1954.

264 Most of the children who ate lunch regularly brought
855 rice and some of the "with-rice" dishes prepared for a family
[262] meal in a lunch pail. Menus for breakfast and noon meals were often identical. Children who lived at a distance may have found it harder to carry lunch, especially when they had to walk to school, but the month by month record of the percentage of children who missed lunch (Table 3) does not indicate any clear seasonal trend. Even children who lived nearby might neither bring lunch nor return home during the noon recess. We were at the home of a school teacher, a short distance on foot from the school, when his two children returned in the afternoon. The mother said that they usually waited until after school to eat, but were having no snack on that day because for the first time, they had carried lunch to school.

126 Thorangkul (1957) scanned all of the dietary records to
262 note the frequency with which the following food groups occurred: protein-rich food, carbohydrate-rich food other than plain boiled rice, vegetables and fruits. She considered the records of each child as a unit; thus if a boy for whom 5 daily records were available, had recorded protein-rich food such as fish, eggs, or beans 16 times, he was regarded as having more than 3 "servings"[1] of such food per day. The frequency with which various food items occurred in the daily diets of these children is shown in Table 4.

Considering the day's record as a whole, some protein-rich food, usually fish, was included in the records of 97% of the children. Such protein-rich food appeared two or more times per day in the records of over 80% of the boys and about 90% of the girls. In contrast, no fruit was mentioned in the records of about 10% of the children, although fruit was one of the commonest snacks. Vegetables were not mentioned in the records of 10% of the boys and 3% of the girls. Only about one-fourth of the vegetables recorded were green or yellow.

For 75 children for whom we had 4 or more records, Thorangkul (1957), to obtain a rough estimate of the adequacy of the children's diets, grouped the records into three categories, based on the number of times protein-rich foods, vegetables and fruits appeared. On the average, children whose diets were placed in Class I had at least 3 "servings" of protein-rich food, 3 "servings" of vegetables and 2 of fruits. Diets in Class II included some from each of the food groups each day, but the items were recorded less frequently than in diets in Class I. Diets in Class III did not include foods from each of the food groups emphasized, each day. On this

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[104] 1. The term serving is used here to designate each time an item appeared in the daily food record. Thai do not have "servings" as the term is used in Western countries.

Table 4. Frequency of Occurrence of Various Food Groups in the Daily Diet of 147 School Children in Bang Chan

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(Adapted from Thorangkul, 1957)

Number of servings[1]	Protein-rich food	Carbohydrate-rich food[2]	Vegetables	Fruit
	Percentage, based on records of 75 boys[3]			
3 or more	47	8	28	8
2 to 2.9	36	15	23	18
1 to 1.9	13	40	30	37
0.1 to 0.9	3	37	9	26
None	1	-	10	11
	Percentage, based on records of 72 girls[3]			
3 or more	68	13	21	10
2 to 2.9	21	17	38	27
1 to 1.9	4	22	34	38
0.1 to 0.9	3	48	4	15
None	4	-	3	10

1. The term serving is used here to designate each time an item appeared in the daily food record.

2. Other than plain boiled rice, which is an essential part of every Thai meal.

3. Average frequency of occurrence was computed, considering the records of each child as a unit.

basis, nearly a third of the children who provided diet records had diets which were classed as III (Table 5). Almost all of the girls and about 4/5 of the boys in this group missed lunch. Indeed the common habit of eating just two main meals, with snacks, was probably one important determinant of the number of servings of protein-rich foods and

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Table 5. Diet Classifications for 75 School Children in Bang Chan, and Percentage of Children with Each Diet Classification who Missed Lunch

(Adapted from Thorangkul, 1957)

Diet classification[1]	Percentage of children	Percentage of children who missed lunch	
Class I	8	Boys	46
		Girls	45
Class II	61	Boys	73
		Girls	68
Class III	31	Boys	81
		Girls	98

1. See text for basis of classification.

vegetables eaten, since items from these two food groups were not commonly eaten as snacks. Note, in the illustrative records presented in translation (Appendix A, p. 98), that the child whose diet was considered to be in Class III did not eat a regular lunch on any of the six days for which records were available, whereas the child whose diet was classified as I ate a regular lunch six times out of seven.

Family Food Shared With Others

Throughout the year families prepared especially good meals for persons who came to work cooperatively with them. Every rice-grower entertained his cooperative harvest crew, some the transplanters. Hired laborers were not usually served such feasts, but the conviviality of the harvest season called for a round of liquor even for them. One harvest dinner for 48 cost 50 baht, plus eels (60 baht) and rice. Cooperative home pounding of rice was still practiced in some households and thought to be fun. In one day enough rice to produce 40 tang (640 kg.) was pounded by groups of 15 to 20 workers; in an evening 20 tang were done. If 40 tang were milled, workers were served a full meal; if 20 tang, a dessert only. Other occasions were fish-pond draining, house raising and repair. Each participant in the fish-pond draining at Household 21 was fed (3)khaaw (3)tom (soupy rice) for lunch and "an enormous supper," in addition to receiving the traditional pot of fish. If good food were not served at these functions people

Attitudes Toward Food

262 To older Bang Chan residents, to lack rice was to starve
[261] even though fish or vegetable fare were at hand. Since rice
262 was the staff of life, many important customs clustered about
243 it. Ceremonies to the Rice Goddess accompanied the raising,
[187] selling, and storing of rice. When the unhusked rice was in the bin, it could not be withdrawn at any time as needed, but astrological charts had to be consulted to make sure the day
[188] was auspicious. Paddy could never be withdrawn on Friday, a day sacred to the Rice Goddess. After cooking, the best rice was said to be at the mouth of the pot, so this was offered on ceremonial occasions. Important rules were that when cooking rice, the cover of the pot must never be laid in a mortar and it must be inverted, never laid down flat; otherwise one would be short of rice. One must never scrape the top of the rice with the cover, or the "soul" of the rice would be scraped
[184] out of the pot. Moslem residents murmured an Arabic prayer
[565] every time the rice was put into the pot, and every time the pot was put onto the fire, as well as before eating.

261 Rice has been generally regarded as the strength-giving
262 food par excellence. A portion of Chutima's (1939) description of the "old system" follows:

> Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal. Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply.

The quotation indicates first that in the past, rice was considered much more important as food than the "with-rice" dishes. Since the Food and Drug Division of the Ministry of
[657] Public Health has been attempting to encourage the eating of more "with-rice," the attitudes found in Bang Chan are of interest. One informant stated that only rice can make children fat, and that the "hot taste" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish, and was weak; he refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk (evaporated or dried milk, diluted with boiled water) expressed the opinion that the ancient belief was based on thrift. He said that thrifty

262 261 people did not want to spend much on a baby, therefore they said that if a child ate too much "with-rice" he would be potbellied but thin in the upper part of the body, and that eating eggs would cause dental caries. This grandfather said he believed the truth to be just the opposite, but that goods things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice," one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

262 653 Secondly, Chutima suggests that particular foods were associated with, or suitable for, particular age levels, and a given sex. Data obtained in Bang Chan indicate that certain foods were associated with conditions such as pregnancy, lactation, and the puerperium, with occupation, and even socio-economic levels. For infants, breast milk was considered most suitable. The newborn infant was not usually put to the mother's breast for about 3 days after birth, and if a relative or neighbor did not nurse the infant, the small banana called (3)kluaj (4)nam-(4)waa (see p. 46), raw or baked, was crushed and fed to him before his mother's milk was available. This banana and rice, as (3)khaaw (3)tom and (3)khaaw (2)piag (two watery preparations), sometimes crushed with (3)kluaj (4)nam-(4)waa, were always the first solid foods introduced while the infant was breast fed. No other foods were introduced early. Some infants received fish and egg by 6 months of age, and a majority ate these foods by the time they were a year old. Some two year olds had not yet been given vegetables, and very few infants ate them before they were one year old.

855 [778] Giving of "holy food"[1] to children suggests concern for strengthening children through dietary as well as other ritual means.

262 888 At the other end of life, as old age approached, the diet was supposed to change, ideally to a completely vegetarian one. Since one was soon to face death, one gave up eating meat and even fish, if possible, so as to avoid taking life. It was considered pitiful or wrong for an old person to fish. Being able to go without food was associated with merit. Those who stayed overnight at the temple on the Buddhist holy day went without solid food from before noon until the next morning as the priests did. One elderly woman remarked that when she stayed overnight at the temple she did not feel hungry, and did not eat anything at night, but other women, feeling hungry, drank coffee or milk at night. She

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1. See p. 50.

262 understood that her merit helped her not to be hungry. Once
883 she asked an eminent layman about eating at night. He said, "If you are not hungry, do not eat. If you feel hungry, it is better to eat. If someone invites you to eat, it is sinful to refuse."

261 Even young adults had a strong revulsion against gluttony. One of the symptoms of a man who went mad and had to be committed to an institution was that "he ate too much." A woman was despised because "she ate in secret. She stole eggs from her husband, sold them in the market, and then spent the cash on food which she ate there, instead of bringing it home." Definitions of a glutton were, "A 'with-rice' eater," or simply as "one who eats alone." These comments highlight the counsels of eating in moderation and in company. On the other hand, a full stomach was valued for "home is where one eats one's fill."

262 At maturity, when farm and other tasks were shared as
562 equals, men and women ate almost the same food. The old pros-
262 cription against animal food for women was somewhat relaxed,
220 but not entirely. To sustain farmers during the seasons of hard work, however, extra quantities of rice and rice alone, were considered essential. "With-rice" was pleasant but not so necessary. Any shift away from a diet of rice as ordinarily cooked in Bang Chan[1] was construed as a shift either in occupation or in health. For example an eminent citizen who gave
955 up farming took to eating (3)khaaw (3)tom often. This soupy rice, a staple dish for infant feeding, had interesting socio-economic connotations. It was served as a light lunch to cooperative farm-workers to be followed at the day's end by a real meal. It was also "delicate" food, suitable for the sick, for city-people, for those who did not toil with their hands and backs. Consequently, when this man ate this "delicate food" more often, he was consciously or unconsciously serving notice on the community that he was not going to do farm work any more, for (3)khaaw (3)tom could not possibly have sustained a farmer's strength. Caustic villagers hinted that he was putting on airs.

262 Among conditions in which some change from the usual
843 diet was found were pregnancy, post parturition and lactation.
846 Relatively few foods were generally considered to be tabooed under any of these conditions, but many women preferred to limit intake to "safe" foods if there were any possibility that certain foods might cause harm.

126 Information was obtained from 42 mothers about the food they ate during the post-partum rest period. Two said they ate as usual, but for the remainder, the diet was considerably

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192 1. Literally "beautiful rice." For method of cooking, see p. 33.

262 curtailed. About half ate soupy rice rather than rice as
843 usually prepared. All ate fish, but over half ate salted
846 fish only, and about one-fourth ate fresh fish only. Rice and fish were apparently the only foods considered safe by all of these mothers. The only other food eaten by half or more of them was banana of the (4)nam-(4)waa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaoaeng (1)liang, a broth made with dried fish, and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some. When asked what foods they considered good for a woman who had recently borne a child, no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the post-partum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

262 Fear of illness from eating incompatible foods after
846 child birth was rather strongly expressed by many informants,
753 even by some who knew of Chinese customs which were different
829 from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home in the village, were not forbidden at the government health and maternity center at Minburi.

126 The 45 mothers who were interviewed during lactation,
262 but after work had been resumed, ate more nearly the usual
846 diet than was the case during the post-partum rest period. As in pregnancy, the mothers apparently had no notion of special dietary needs during lactation, but foods considered undesirable during lactation were mentioned 27 times. The list included 12 kinds of food, and four attributes of food, i.e. sour and hot tastes, fermented foods and raw foods. No food was considered harmful by a majority of mothers, the one which occurred most frequently, jackfruit, being mentioned by 8 only of the 45 informants.

262 Reasons were seldom advanced for considering various
753 foods unsuitable for mothers or children. During pregnancy,
853 the hot-tasting foods, i.e. those made with chili, were said by one informant to injure the baby's complexion. When asked at what age a child could have adult food, mothers might say at one or two years, but often specified without giving a reason, that the child could have anything but the hot-tasting foods. A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby, 1 or 2 months old, ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana"[1] caused

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1. The type of banana most familiar to people in the United States.

262 753 855 constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

The belief that eggs would cause dental caries, and should therefore be omitted from children's diets, was expressed by the mother in a poorly nourished family. The possibility that such ideas arose from unwillingness to spend much money on food for a child has already been noted (see p. 42).

262 753 758 Information on food suitable in illness was obtained only incidentally. The Thai did not appear to have a consistent theory as to the cause of disease (Sharp et al. 1956, p. 489), and residents of Bang Chan did not seem to associate any of their illnesses with contaminated food or water. Choice of food in illness was probably associated in some instances with the idea that the body is composed of the four elements: wind, water, fire and earth, and that sickness results from or is a symptom of imbalance in the proportions or arrangement of these elements. Thus the "fragrant banana" and eggs, because of their "cooling effect," were said to be forbidden in measles. A child who was getting measles was restricted to rice and dried fish. In contrast the small, rather flavorless banana, designated (3)kluaj (4)nam-(4)waa, was said to have "no cooling effect" and was considered an acceptable food in illness, as well as for newborn infants.

262 758 984 In one instance, when a patient had been taken to the hospital with severe diarrhea, a nurse instructed other family members not to eat ices, syrup (see p. 36), or raw vegetables, nor to drink unboiled water. The informant who told us about this offered no reason for these precautions. These foods were simply "forbidden" to the family of a patient with severe diarrhea.

777 824 245 Notions as to what is fortunate or unfortunate may also affect agricultural processes. The many ceremonies associated with culture and use of rice have been mentioned (p. 42). The idea that a papaya tree growing near the house was "unlucky" was attributed to Thai by a young Thai Moslem in Bang Chan. When we commented on the papaya tree near his front door, he said the papaya tree dies easily and does not like water, but his was planted on high ground. According to this informant few villagers would be willing to grow papaya trees near the house. He considered the non-specific threat of harm as unreasonable, though he said that if specific harm were said to result, he would be concerned about it. The midwife at Minburi Health Center said that she urged each woman who came there for delivery to have more banana, mango and papaya trees planted for home use. Before raising of papayas can be successfully encouraged, however, the idea that papaya trees bring back luck must be overcome.

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

262 796 A discussion of food habits in Bang Chan would be incomplete without some description of ceremonies ((1)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

796 The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-
527 teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion
264 of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

[782] Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could
[554] afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and
527 at festivities. Thus, there was reason to make a (1)ngaan
796 as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

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[194] [461] 1. Significantly the same Thai word is used for work and for ceremony.

[302] [881] [355] 2. Topknots, formerly worn by all Thai children, used to be cut ritually at the time of puberty. In Bang Chan, the growing of a topknot had become primarily an attempt to improve a child's health. Few school age children wore topknots. They were usually cut earlier than puberty.

[875] 3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

796 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the [476] time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives [782] and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A 764 big cremation might require planning in detail for years ahead: 796 invitations to priests and relatives in distant parts of the 574 country; hiring an orchestra and obtaining ceremonial gear. [533] For the largest events, when the guest lists ranged upward to [426] 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person, [252] usually one of the "professional" cooks of the village. The [476] day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (l)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

[262] The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an 262 annual homage-to-the-teacher rite. It is the nearest approxi- 796 mation to a quantitative record of food for a ceremony that 895 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either 796 at 7 a.m. or 11 a.m., or both, always at least in part by the 192 host, who sat and chatted with them. No one else ate until

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)deeseng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chauaun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

In Bang Chan when donations for a new school
264 building warranted buying the foundation materials, so that
476 volunteer labor was solicited for their installation, some of
946 the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

782 The spirit-offering, or the portions eaten by a partic-
864 ipant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests.
262 The pork was cut up and eaten with a hot sauce, or put into a
782 "with-rice" dish. It was especially appropriate with liquor.

262 The use of food ritually was not limited to the ceremon-
755 ial season nor to big events. The same purposes underlay the
852 use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

43 The benefits of a (l)ngaan accrued to every participant
554 down to the last worker and contributor according to the degree
796 of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

796 One assistance in the financing was that every invited
476 guest made a contribution, customarily 5 to 10 baht, which
435 helped defray the costs. In 1952, household heads reported these contributions as totalling from 20 to 1,000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (l)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

435 Some information as to the cost in baht of the larger
796 ceremonies held in 1954, and their scale, was obtained from
[124] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[714] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000.
Guests gave 2300.
[583] B: Rite of forgiveness after elopement: a meal, with 5 bottles of liquor.
[184] C: Moslem: 2 buffalo slaughtered. 400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
[583] sugar cane, fruits, sweetmeats and other things. At more modest weddings and the rite of forgiveness for a couple who had eloped, food might differ from the usual fare only by including the three essentials of a wedding: pork, chicken and alcohol.

273 Increased consumption of alcoholic beverages during the
796 ceremonial season was indicated by the sales of one local
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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[974] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

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262
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Chart 2. (continued)

	No.[1] Records	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Fruits[6]													
Banana[7]	129	x	x	x	x	x	x	x	x	x	x	x	x
Chico	17						x	x					
*Guava	14						x	x		x			
*Jujube	18							x	x	x			
Longan	41			x									
*Limes		x	x	x		x	x	x		x			
*Mango	25		x								x		x
*Orange	48					x	x	x	x				
*Papaya	11			x		x	x	x		x			
*Pineapple	63	x	x	x						x	x		
Rambai	46	x		x								x	
Sandorica	18	x	x										
Singharanut	22						x	x	x	x			
*Star gooseberry	28	x				x					x		
Source of water[8]													
For drinking:													
Rain		x	x	x	x	x	x	x	x	x	x	x	x
Canal										x	x	x	x
Fishpond		x	x									x	x
For food preparation:													
Canal		x	x	x	x	x	x	x	x	x	x	x	x
Fishpond		x										x	x

6. Good sources of ascorbic acid have been marked with an asterisk.

7. Bananas of the (4)nam-(4)wa variety were most commonly used.

8. Data for households participating in the dietary study.

storekeeper: about 800-900 liter bottles per month during the 3 months dry season as compared to about 350 bottles per month during the 9 months of the rice season.

Moslems never served liquor at their weddings, cremations, and other auspicious events. Moslem residents occasionally attended Buddhist (l)ngaan in spite of dietary proscriptions that Buddhists did not observe.[1] A medium (spiritualist) commented however that because pig's head was essential for her homage-to-the-teacher rites, some Moslem sick persons preferred to go to the Buddhist temple for treatment. There the priest-practitioner could afford to set up a separate kitchen for his Moslem patients, and so spare them the distress of confronting pork. To one big ordination Moslem guests brought their own food. Buddhists came somewhat more often to Moslem ceremonies.

We do not have enough information to appraise the nutritional significance of food eaten at ceremonies. Some individuals got a great deal of it, others very little. One must remember that the (l)ngaan was not a public but a private event at home, to which guests came on invitation. Although cremations and the teacher-rites of priest-practitioners were held at the temple, and so had a semi-public character, no one who was not invited presented himself for food. Of the participants, the working group undoubtedly received the most food; they were there the longest time, had regular meals, tastings and snacks throughout the (l)ngaan meal itself. This group comprised the host, co-sponsors and their immediate kin; other relatives and friends who were asked or who volunteered to help. The feeling was, if one were "very fond" of the host, one volunteered to cook. If less close, one was invited as a guest, but made the usual cash donation. Sociable persons combining skill and energy were invited often and volunteered often, hence spent many days at ceremonies. Young unmarried men and women were asked and liked to be asked to work, for such occasions offered a great chance for fun and flirting.

Different degrees of participation may be estimated from Janlekha's (1955) figures for reported contributions ranging from 30 to 1000 baht in a year. Since a contribution of 5 to 10 baht per (l)ngaan was customary, the villager with the lowest reported contribution probably attended from 3 to 6 ceremonial occasions. Attendance at 100 or more (l)ngaan is unlikely, hence the villager who gave as much as 1000 baht probably made larger contributions per (l)ngaan.

What sort of persons or groups in the village were invited as guests? Every host's list included his older

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1. Moslems were said to resist army service because they were afraid they would have to eat pork.

196 relatives, his other kin and friends according to bonds of
574 affection and respect. Certain priests of pleasing personalities, wide acquaintance or kinship in the community, or of valued skills, were invited more often than others, as were prominent elders and hamlet headmen. An invitation usually went only to the elder couple in a family. It did not automatically include the children. If married sons or daughters were invited, they were asked separately. Poor individuals were included only in the festivities of their close kinfolk, their immediate neighbors, maybe their own hamlet headman, or persons to whom they were obligated. Unless they were aged, their presence was validated only by hard work. Reciprocity was a factor, for one who could not reciprocate presumably would not be asked, nor would he volunteer. The few who were "anti-social" for whatever personal reason rarely attended.

268 Most members of the working group and guests left at
574 home their children of such age as to require watching.
196 Nursing babies might be there, hung in a hammock. Though
858 the children who ran excitedly about seemed numerous, most of them were the children, grandchildren, nieces and nephews of host, co-sponsors and relatives, so could not be excluded.

To sum up, those who shared least in the diet of the ceremonial season were the dependent children, i.e. up to the age of 6 or so, the less gregarious, and the poor who had no way to reciprocate. Children from 7 to adolescence shared in a limited way, attending (l)ngaan of their own close kin or of a geographically close neighbor. Parents sometimes took snacks from the feast home to the children. On the other hand, persons of prestige and popularity, especially if aged, were asked frequently.

242 Doubtless for those who attended many (l)ngaan, the
796 food eaten during the ceremonial season differed considerably from the usual family fare. We have no way of knowing whether it was better than usual because of a larger intake, for instance, of pork and meat in general, or whether the total nutritive value was less satisfactory because of increased consumption of "empty calories" in the form of sugar and alcohol.

242 During the (l)ngaan season the home meal schedule was
264 frequently disrupted in the families of the participants.
796 The main cook might be absent, too tired, or too full to feel like cooking a big meal at home. In anticipation of a feast, preparation of the usual breakfast or dinner or both might be abandoned, with reliance on a few snacks for the stay-at-homes to add to their rice. Thus the food intake of family members who did not attend the ceremonials might be adversely affected.

000 One other aspect of (l)ngaan which should be mentioned

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One other aspect of (1)ngaan which should be mentioned
952 in connection with food and health is the opportunity for con-
796 tamination of food. The villagers did not associate sanitation
751 with health, hence the hazards of a community meal which many
[753] persons helped to prepare were many. Two incidents observed the day before an ordination in early April, will illustrate. In the final stage of making Chinese noodles, rice flour paste was extruded through a perforated disk into an enormous pot of boiling water. When done, the product was removed with a fish net, and plunged into the canal to cool, after which women helpers spread it out on banana-leaf covered trays. Dishes were also washed before use in the canal, which was then too low for boats. Since, however, many people drank untreated canal water at this season (see p. 28), the added hazards for the participants caused by these procedures may have been slight.

262 In summary, food plays a major role in ceremonies and
792 festivities, which are concentrated in the 3 months' dry season. Proposals for dietary improvement in Bang Chan must take into account not only the possible effects of the (1)ngaan season on the total nutrient intake, and on opportunity for exposure to contaminated food, but also the importance of these affairs from the standpoint of merit and prestige, and the relatively great financial burdens which villagers therefore undertake because of them.

QUANTITATIVE DIETARY STUDY: FOODS EATEN AND ESTIMATED NUTRIENT INTAKE OF SELECTED FAMILIES IN BANG CHAN

Procedure

121 Selection of the Sample
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Medical inspection designed primarily to discover possible signs of nutritional deficiency was carried out in advance of the family dietary study. The suggestion of Grant (1948) that matched groups, of contrasting economic or other status be studied, appeared to be appropriate to the situation in Bang Chan. Our hope was to be able to select from the random sample of families given medical inspection (Hauck, 1956) a group of families (A) in each of which several members had clinical signs which might be evidence of malnutrition, and a group of families similar in age and sex distribution (B) in each of which the members were largely or wholly free from such signs.

125 When the medical inspection of the random sample was
146 complete, however, too few of the families were found to meet our criteria for inclusion in Group A, i.e. the group of apparently less well nourished families. Additional families for

124 On the basis of experience during the pretest, the ob-
125 server began the 24-hour period of observation with an unannounced visit in the afternoon, in time to see the preparation for the evening meal. This proved to have several advantages. A householder whose home had been visited at the evening meal, and who anticipated the observer's return before breakfast, could restrain the dog, if necessary; or the homemaker might postpone washing the rice until the observer arrived to weigh it. Without such cooperation on the part of the homemaker, our records would have been much less complete [408] than they were. Since few village families had clocks, the time when the homemaker said she would start breakfast was always approximate.

125 Foods were weighed in both the raw and cooked states,
• 262 and foods given to priests, fed to animals, left over, etc. were weighed so that the actual amount eaten by the family could be calculated. Previously cooked foods included in the survey meals were weighed and raw weights estimated from information obtained in other observations. If possible, snacks were weighed. School children and others who ate snacks away from home were asked to report them to the obser-
128 ver, and weights were estimated. The guides prepared for
262 the observer are included in Appendix C, pp. 110-111. Data were recorded on the schedule, shown in Appendix C, pp. 116-120. and essential information such as the weights of food, after allowing for weight of containers, was later transferred to the shorter form shown in Appendix C, p. 121. As examples some of the data obtained on 3 of the 44 survey days are shown. Examples of notes on procedures in food preparation are included with these records. For examples of notes on the food intake of individuals see Appendix A, p. 97.

Calculation of Nutritive Value of the Diets

Figures from the original records were transferred to the Form for Calculating Raw Weights of Foods Eaten (Appendix C, p. 121), and the edible portion of each raw ingredient consumed was calculated by adjusting the gross amounts according to the use made of the cooked food and the number of family members present. Procedures followed are outlined in Appendix C, pp. 113-115.[1]

Few analyses of Thai foods had been made in Thai laboratories, and most of these were for proximate composition only. Therefore, data from other available sources were used. Since Handbook No. 34 of the United States Department of Agriculture "Composition of Foods Used in Far Eastern Countries" (Leung

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[114] 1. Many of the calculations were checked by Mrs. Mary Barkley Campbell, who made independent use of the data.

et al. 1952) included more of the foods used than any other table, it was used as the primary source of information. Other food value tables (p. 92) were used to supplement it. When two or more values were found for a given food, the more suitable one was selected on the basis of the nature of the food and the method of preparation for sampling, i.e. whether this method was similar to procedures used in Bang Chan. While this study was in progress Tables Showing Food Values for Calculation of Diet Records compiled by the Food and Drug Division, Department of Health (1953) and intended for use in Thailand, were published. These tables, however, included few analyses made in Thailand, and references were not given to the sources from which the values were compiled. For these reasons, the Thai table was used as a supplement only when values could not be found elsewhere.

For convenience in calculation, a table was compiled which contained the most appropriate values available for all items of food eaten on the survey days (Sudsaneh, Campbell and Hauck, 1954). A list of foods for which no nutritive values were calculated, for lack of available information, is given in Appendix C, p. 124. Foods for which values were found elsewhere than in tables, or for which values were imputed by the authors, are listed in Appendix C, pp. 124-125.

Although values for coconut milk were found, they did not seem to be appropriate for the product as prepared in Bang Chan. Coconut milk, (4)naam (2)ka-(4)thi, is a product made at home from fresh coconuts, and used frequently in preparing curries and other dishes. Families in Group A used considerably more water in proportion to coconut meat in making coconut milk than families in Group B, hence a single set of figures was not appropriate for both groups. Since "expressed coconut milk" which had been analyzed in Hawaii (Hawaii Agr. Expt. Sta. Bull. 77, 1936) appeared to be similar to coconut cream, (5)hua (2)ka-(4)thi, as prepared in the village, the composition of coconut milk was estimated by assuming it to contain carbohydrate, protein and fat in the same proportions as "expressed coconut milk" but to be more dilute (Appendix C, pp. 128-129)

Division of food into various food groups, and foods included in each, is shown in Appendix C, p. 126. For each survey day, the adjusted consumption of like foods was added together and the calculated total intake of each food item for each household during one 24-hour period was transferred to the Form for Calculating Nutrients in Foods Eaten. The nutrient content was then calculated. Two such calculations are shown (Appendix C, p. 122). Nutrients available[1] per capita

1. Figures used were for the edible portion of raw food, or the food as used in food preparation, i.e. dry salted radish, shrimp paste, etc., with no allowance for cooking losses.

128 per day were calculated for Groups A and B by Round and for
262 all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

124 General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

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184 Although our semple was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more
[934] prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the
[935] main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive
[897] fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

125 From the viewpoint of parents, the "peak of life" was
511 the time when children were no longer dependent, but produc-
592 tive, unmarried workers whose earnings stayed within the
734 family. Household 16 was such a family, forward looking,
463 progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analyst]

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from venders almost every day. They said [555] [822] "Some do not pay money to buy food, but pick or get it from the canal or gardens --this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

433 511 Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

243 [665] 256 [262] Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

244 [554] [245] Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chilies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

222 262 Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)sa-(5)noo flowers were used by 3 families on one day each;

256 Table 9. Use of Home-milled and Polished Rice by Households
262 Participating in the Dietary Study

Group and Code No.	Round of Dietary Study[1]							
	I		II		III		IV	
	HM[2]	P[2]	HM	P	HM	P	HM	P
Group A								
2		x		x		x		x
12		x		x		x		x
67	x			x		x		x
103	x		x			x	x	
215		x		x		x		x
222		x		x		x		x
Total No.	2	4	1	5	0	6	1	5
Group B								
16	x		x			x		x
20		x		x		x		x
21		x		x		x		x
23		x		x		x		x
25	x			x		x		x
Total No.	2	3	1	4	0	5	0	5

1. For dates, see Table 7, p. 58.

2. HM and P stand for home-milled and polished rice respectively.

222 truffles were used as snacks on 2 occasions, and (1) bauaun,
262 (2)phag (2)tob, lotus stems and lotus seeds, the latter as a snack, were used once each. The two groups of families appeared to grow fruits and vegetables and to gather edible
244 wild plants to about the same extent. Two families, one in each group, raised mushrooms during the period when farm work was slack.

146 absent, and in 6 of these, ankle jerk was absent also. In
164 Group B, the apparently better nourished group, one adult and two school boys had knee jerk only absent. In Group A, Household 12, the father, mother and 21 year old son all had both knee jerk and ankle jerk absent. The son was diagnosed by the examining physician as having frank beriberi at the time of the medical inspection. In Household 2, the father and 23 year old son had both knee jerk and ankle jerk absent, but the mother had no signs of thiamine deficiency. In Household 67, mother and father had both knee jerk and ankle jerk absent. The mother had lost 3 of her 6 children when they were 3 or 4 months old, with symptoms such as convulsions and voiceless crying, suggestive of infantile beriberi. When the third child died, the mother had symptoms of beriberi, and the physician who conducted the medical inspection considered the death of this child to be due to infantile beriberi. Clearly the thiamine content of diets of some of the families studied was inadequate to meet their needs under varying conditions of activity and stress. Beriberi was the one frank deficiency disease observed while these studies were underway in Bang Chan (Hauck, 1956).

146 Fat provided only about 9 to 10% of the calories. Coconut oil contains only about 0.5% of linoleic acid (Anantakrishnan, et al., 1949), but the essential fatty acid content of the diet as a whole was not estimated.

146 In summary, although the estimated nutrient intakes of
164 Group B were in general more favorable than those of Group A, the contrast between the two groups was not striking. Perhaps we should have anticipated this from the fact that the groups did not present a clear contrast in apparent nutriture. In Group A, 19 of the 30 persons examined had a total of 36 possible signs of nutritional deficiency. In Group B, 8 persons had a total of 9 such signs. Judging by both the apparent nutriture of the household members, and by their estimated nutrient intakes, the diets of both groups were in need of improvement.

146 Contribution of Food Groups and Certain Common Foods to the Nutritive Values of the Diets

[128] Contribution of Food Groups and Individual Foods. - The percentages of the total calorie and nutrient intakes provided by various food groups for households in Group A and B are shown in Table 12.

146 Rice and other cereals. - Rice was the staple food,
262 which provided over 4/5 of the calorie intake and more than half of the protein for both groups. Much of the difference in calorie and protein intake of the two groups was due to the greater rice consumption of Group B. Rice was also the

[Text continues on page 72--- Analyst]

Table 12. Percentage[1] of Total Caloric and Nutrient Intakes Provided by Each Food Group

Food Group	Family group[2]	Calories	Protein	Fat	Carbohydrate	Minerals			Vitamins				
						Ca	P	Fe	A	B1	Ribo.	Niacin	C
Rice and other cereal	A	85	57	23	92	23	75	52	1	82	38	66	-
Home-milled rice		20	14	7	21	8	24	16	-	26	13	25	-
All other		65	43	16	71	15	51	36	-	56	25	41	-
	B	82	54	16	93	16	75	46	-	84	51	64	-
Home-milled rice		9	6	2	10	3	12	7	-	14	9	13	-
All other		73	48	14	83	13	63	39	-	70	42	51	-
Fish and other animal foods	A	7	37	40	-	34	18	15	4	7	21	28	-
	B	7	40	29	-	43	19	15	10	8	29	29	-
Green and leafy vegetables	A	1	2	1	-	14	1	8	79	2	31	1	25
	B	1	2	1	1	23	1	17	76	2	10	2	38
Other vegetables	A	3	3	3	3	15	5	13	15	7	8	3	58
	B	2	3	4	2	8	4	7	5	5	8	4	37
Coconut and products (other than oil)	A	2	1	18	1	-	-	-	-	-	-	-	-
	B	3	1	21	1	-	-	-	-	-	-	-	-
Fruit	A	1	-	1	1	3	1	2	2	2	2	1	17
	B	-	-	-	-	2	1	1	9	1	2	-	23
Fats and oils	A	1	-	14	-	-	-	-	-	-	-	-	-
	B	3	-	29	-	-	-	-	-	-	-	-	-
Sugar	A	1	-	-	2	4	-	9	-	-	-	1	-
	B	2	-	-	3	4	-	14	-	-	-	1	-
Miscellaneous and spices	A	-	-	-	1	7	-	1	-	-	-	-	-
	B	-	-	-	-	4	-	-	-	-	-	-	-

1. Figures rounded to nearest whole number. The dash indicates value less than 0.5%. Analyses for a number of common foods were incomplete (see Table 13, p. 75).

2. Group A included apparently less well nourished families, Group B, apparently better nourished families.

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

146 most significant source of phosphorus, iron, thiamine, ribo-
• 262 flavin and niacin in these diets. Although the calcium content of rice is low[1], about 23 and 16% of the estimated calcium content[2] of diets of Groups A and B respectively came from the cereal groups. Glutinous rice and various products such as noodles made of rice flour were eaten occasionally in small amounts. These and other cereals and cereal products, such as wheat bread and popcorn contributed little to the total nutritive value of the diets.

Animal products other than pork fat. - Fish and other foods of animal origin furnished about 2/5 of the protein in the diets of both groups. From 20 to 30% of the riboflavin and niacin and substantial amounts of phosphorus and iron were provided by this food group, also. For families in Group A, these animal products provided substantially more fat than the group of fats and oils as such, whereas Group B obtained about the same amount of fat from these two food groups. The estimated contribution of vitamin A from this group was small. Specific analyses for most of the varieties of fish used in Bang Chan were not available, however, hence many calculations were made on the basis of average values for "fat fish," "lean fish," and "dried fish."

Although a substantial part of the calculated calcium content of the diets came from animal products, the amounts were only about 8 and 9% of the estimated allowances for Groups A and B respectively. Fermented fish are reported to contain 1126 mg. per cent of calcium (Knudson, 1955) but the amounts eaten were relatively small. Two families only in Group A used a total of 217 grams of fermented fish on survey days, and two families in Group B used a total of 608 grams. These amounts, though they represented servings of only 20 grams per person for the two families in Group A, and of 36 grams per person for those in Group B, nevertheless increased the estimated average calcium intakes substantially, so that 43% of the calcium in diets of Group A, and 34% in diets of Group B, were provided by animal products. The tiny dried fish which are eaten whole, were not used by the families studied on any of the 44 survey days.

On the average, the contribution of animal products other than fish to the nutrient content of these diets was small.

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[256] 1. According to Knudson (1955), addition of calcium carbonate to rice during the milling process was not practiced in Thailand.

[276] 2. No attempt was made to estimate calcium intake from betel chewing, although this might be considered a dietary source of calcium. Six of 15 persons twenty years of age or older, in Group A, were betel chewers, whereas among 14 persons over twenty in Group B, 9 chewed betel regularly and one occasionally.

[146-262] Eggs were eaten occasionally; pork and beef were bought infrequently and in small amounts by some families. One family only, ate chicken; other meats eaten on survey days included buffalo, frogs, eels and field rats.

Vegetables. - More than three quarters of the estimated vitamin A value of these diets was provided by green and leafy vegetables, although the pale yellow sweet potatoes, eaten in quantity by one family in Group A increased the vitamin A from other vegetables substantially. The greater use of swamp cabbage, a wild aquatic plant by families in Group A, may be explained by the fact that more visits to this group occurred when the water level in the canals was relatively high. Families in Group B, however, used a greater variety [263] of greens, especially leaves from a number of trees. For families in Group A, sweet basil contributed substantially to the vitamin A and riboflavin content of the diets, whereas families in Group B used this herb in trivial amounts for flavoring. No nutrient values were found for lemongrass, which was used regularly in substantial amounts for flavoring. Persons in Group B got a greater percentage of their calcium and iron from green than from other vegetables, whereas those in Group A obtained as much or more of these nutrients from other vegetables.

Nearly 3/5 of the ascorbic acid intake of Group A was provided by other vegetables as compared to 1/4 from green vegetables, whereas Group B obtained about equal amounts of ascorbic acid from green and other vegetables. Egg plants[1], calabash and white radish were most commonly used in quantity. Onion, garlic and dried chilies were used daily, but in smaller amounts. With the exception of one family which ate a large amount of sweet potato on one survey day, consumption of tubers, i.e. sweet potato and taro, was small and usually in the form of snacks eaten by children. Legumes were seldom eaten in Bang Chan. Two families had bean sprouts on survey days, and children occasionally ate mungbeans and peanuts as snacks.

Fruit. - Although technically a fruit, the coconut does not resemble fruits as a group in its contributions to the diet, hence coconut and other fruits are treated here as two sub-groups. Coconut meat, and its products, coconut milk and coconut cream (Appendix C, p.128), were used almost daily in the participating households. These coconut products contributed about 1/5 of the total fat of the diet, for Group A,

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[244-252] 1. Many varieties of eggplant are grown in Thailand. Three were used on survey days: the pea-size variety which was frequently put in hot curry, a round type which was served raw with chili sauce and a long variety which was either panned with a small amount of fat or used in curry.

146 more than fats and oils as such.
262

Bananas were grown by all families that participated in the study, but were eaten only occasionally, primarily as snacks. Tamarind and lime were used often in small amounts in making sour curry and chili sauce, and bergamot rind was used for seasoning. Papaya and mango, both of which are good sources of vitamin A and C, were each eaten once only during the survey. The green papaya was used in curry. Fruits are relatively abundant in Thailand, the year round, yet fruit made minor contributions to the diets of families studied in Bang Chan.

Fats and oils. - Fats were used in small amounts to pan fish, meat, eggs and vegetables, and provided about 1/7 of the total fat in the diet of Group A, and 2/7 for Group B. Coconut oil, which was less expensive than pork fat, was more often used in Group A.

Sugar. - Palm sugar was used in small amounts in the preparation of many "with-rice" dishes, and occasionally in snacks, i.e. guava dipped in a mixture of sugar, salt, chili, mung beans cooked in palm syrup and the like. The amounts used were small, and the contribution to nutritive value was slight. By Western standards, the consumption of sugar in Bang Chan was almost negligible.

146 263 Spices. - Spices were commonly used in food preparation, particularly in hot dishes (i.e. those made with chilies) but little information on their nutritive value is available.

146 273 Alcoholic beverages. - In the families surveyed, all men except the elderly father in Household 21 drank occasionally, but most of the women did not. The husbands in Households 12 and 67 drank heavily at times. No estimate can be made of the contribution of alcoholic beverages to caloric intake in these households.

146 262 [128] Summary of Nutrient Contributions of Foods Commonly Eaten in Two Groups of Households. - The contribution in terms of calories and nutrients of certain foods used by 25% or more of the families studied, i.e. by 3 or more of the families on at least one survey day is shown in Table 13. Items selected for inclusion in this table are those which either made significant contributions to the nutrient content of the diets of Groups A and B respectively, or were major items in terms of amounts used or frequency of use. For certain items used frequently for seasoning, information on nutritive value was too scant to warrant inclusion in this table. Figures given are for average consumption per capita per day, based on all persons in the specified groups, and all survey days. For items used by all or most families every day, such as rice, fresh fish, chili, coconut products, and sugar, the figures represent approximately the usual daily per capita consumption.

Table 13. Contributions in Terms of Calories and Nutrients of Selected Foods Commonly[1] Eaten by Groups A and B

Foods	Frequency[1] of Use	Average values per person per day												
		Wt.	Calories	Protein	Fat	Carbohydrates	Ca	P	Fe	Vit. A	B_1	Ribo.	Niacin	Vit. C
		gm		gm	gm	gm	mg	mg	mg	I.U.	mg	mg	mg	mg
Group A														
Rice		399	1440	28	3	316	28	634	3.5	(0)[2]	0.54	0.14	7.5	(0)
Eggs	9	4	8	1	1	0	3	8	0.1	48	0.01	0.01	0	0[2]
Fish, fresh	31	57	58	10	2	0	19	124[2]	0.6	0	0.03	0.04	2.4	0
Fish, dried	8	6	12	3	0	0	4		0.2	0	0	0.02	0.2	0
Fish, fermented	2	2	2	0	0		19			0	0	0.01	0	
Fishsoy		5	2	0	0					0	0	0	0.1	
Shrimp paste	33	3	3	1	0					0	0	0	0.2	
Swamp cabbage	4	20	3	0	0	1	9	6	0.3	750	0.01	0.01	0.1	4
(2)Phag (2)ka-(2)cheed	4	3	1	0	0		6		0.1	204	0	0.01	0	2
Sweet basil		4	4	0	0	1	3	2	0.1	504		0.09		0
Calabash	3	11	2	0	0	0	1	2	0.1	8	0	0.01	0.1	1
Chili, fresh	17	4	1	0	0	0	0		0	126	0	0	0	8
Eggplants	10	13	3	0	0	1	2	5	0.1	4	0.01	0.01	0.1	1
Radish, white	5	7	2	0	0	0	0	6	0	1	0	0	0	1
Sweet potato	1	18	22	0	0	5	5	9	0.1	74	0.02	0.01	0.1	4
Banana	2	3	3	0	0	1	0	1	0	14	0	0	0	0
Coconut milk[3]	22	144	30	0	2	2								
Coconut oil		2	15	0	2	0	0	0	0	0	0	0	0	0
Lard		-	4	0	0	0	0	0	0	0	0	0	0	0
Sugar, palm		6	22	0	0	5	5	2	0.6	0			0	
Total			1637	43	10	332	104	799	5.8	1733	0.62	0.36	10.8	21
Total from all foods			1731	50	14	342	129	847	6.9	2047	0.68	0.37	11.3	27

See footnotes p. 76.

Table 13, cont.

Foods	Frequency of Use[1]	Wt.	Calories	Protein	Fat	Carbohydrates	Ca	P	Fe	Vit. A	B_1	Ribo.	Niacin.	Vit. C
		gm		gm	gm	gm	mg	mg	mg	I.U.	mg	mg	mg	mg
Group B														
Rice		438	1579	30	3	345	29	654	3.7	(0)	0.56	0.15	7.4	(0)
Glutinous rice		8	30	1	0	7	1	12	0.1	(0)	0.01	-	-	(0)
Eggs	7	5	9	1	1	0	3	10	0.1	58	0.01	0.01	0	0
Fish, fresh	32	72	75	13	2	0	25	158	0.7	0	0.04	0.05	3.0	0
Fish, dried	10	12	22	5	0	0	7		0.3	0	0.01	0.03	0.5	0
Fish, fermented	2	4	5	1	0		46			0	0	0.01	0	
Fishsoy		3	2	0	0					0	0	0	0.1	
Shrimp paste	28	2	3	1	0					0	0	0	0.1	
Swamp cabbage	5	9	2	0	-	1	6	4	0.2	542	0.01	0.01	0.2	3
(2)Phag (2)ka-(2)cheed	2	3	1	0	0	0	6		0.1	198	0	0.01	0	2
Calabash	1	10	2	0	0	0	1	2	0.1	7	0	0.01	0.1	1
Chili, fresh	8	3	0	0	0	0	0		0	48	0	0	0	6
Eggplants	3	5	1	0	0	0	1	2	0	2	0	0	0	0
Radish, white	2	12	3	0	0	0	4	3	0.1	3	0	0	0	2
Coconut milk[3]	16	76	52	1	4	3								
Coconut oil		3	27	0	3	0	0	0	0	0	0	0	0	0
Lard		3	30	0	3	0	0	0	0	0	0	0	0	0
Sugar, palm		11	43	0	0	11	9	4	1.3	0			0.1	
Total			1886	53	16	367	138	849	6.7	858	0.64	0.28	11.4	14
Total from all foods			2009	59	22	384	194	895	8.4	1340	0.76	0.28	11.5	23

1. All items were eaten by 25% or more of the participating families. Under "frequency of use," the number of times the item was used as a main ingredient of a "with-rice" dish is indicated for 24 survey days for Group A and 20 survey days for Group B.
2. ( ) means imputed value; 0 means none or insignificant amount; - means no values available, but probably contains measurable amount; blank space means that no information was found.
3. Different values were used for the calculation of nutrient content of coconut milk for Groups A and B (see Appendix C, pp. 128-129).

106 For items used less frequently, the figures are correspond-
262 ingly less than the usual amount eaten. Thus, sweet potato, which is represented as 18 grams per day per person in Group A, actually appeared on 3 records only. One family of 8 persons ate 1200 grams of sweet potato at one meal and a substantial amount later the same day. Most items appear on the lists for both groups, but sweet potato, sweet basil and bananas were included on the list for Group A only, and glutinous rice which is used as a sweet in this area, appears on the list for Group B only. Note that a few common foods account for most of the nutrients in the diets of both groups. These common foods account for only about 80% of the calcium and vitamin A value and slightly less of the ascorbic acid in the diets of Group A. The list for Group B accounts for about 70% of the calcium and 60% of the ascorbic acid in the diets of this group. The variety of green leaves used once or twice only on survey days by Group B, and the number of different seasonal fruits used by both groups in small amounts as snacks, probably account for this.

264 Contribution of Snacks to the Nutrient Content of Diets. -
[355] On the average, 4 out of 5 children had one snack per day,
262 whereas only one adult in 6 did so. The following items appeared most commonly: various kinds of fruit, 40 times (orange 7, banana 6, pineapple, watermelon and mango each 5 times, guava, jujube and Manila tamarind each 2 times, olives, rambutan, rambai, star gooseberry, (2)ta-(1)koo and Thai nutmeg each once,) coconut and bread each 13 times, glutinous rice 8, mung bean 7, truffles 6, products made of rice flour 6 times, and a variety of other items including rice noodles, sweet potato, taro, bean sprouts, lotus stalks, lotus seeds, popcorn, products made of cassava flour, sugar cane, pork and milk from 1 to 4 times each. Salt, and/or palm sugar were
[146] eaten with a number of the snacks. Although they contributed only about 2% of the total calories, and from 1 to 3% of most nutrients, snacks contributed 16% of the total ascorbic acid for Group A and 11% for Group B.

Seasonal Variation in Food Preparation, Meal Patterns, Food Costs and Calorie and Nutrient Value of Foods Eaten

128 In Table 14, a summary including the number of meals
252 prepared, time spent in meal preparation, number of "with-
269 rice" dishes, and cash expenditures for food is given by
[439] rounds, for families in each group.

252 Number of Meals Prepared. - Food was cooked twice on
512 each survey day in 3 of 6 households in Group A and 3 of 5 households in Group B. Heavy farm work or vending which kept the mother away from the house sometimes accounted for once-
[443] a-day food preparation. One housewife who took food to market in Bangkok, cooked food twice a day only during the period shortly before the birth of a child, when she was not vending.

[Text continues on page 79 --- Analyst]

252 Another, who had time during Round IV to prepare food twice a
262 day, preferred to prepare more in the morning when she expected
264 to offer food to her son who had just been ordained. In two
572 instances an evening meal was not prepared because the father
[525] and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

262 Cost of Food Purchased. - The lowest cash expenditure
435 for food by any household on a survey day was 0.12 baht, for
311 a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year pro-
242 gressed was apparent. Most of the rice was sold at the end
432 of Round III. The cash went for capital investments, not
[221] food, during Round IV. With time to drain ponds and to fish intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

146 Calorie and Nutrient Value of Foods Eaten. - The
221 seasonal variation in calorie and nutrient intake of the two
[218] groups of families is shown in Table 15. As one would expect, the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 -- Analyst]

000 First steps toward a better diet are suggested by the best dietary practices observed. Although the calculated intake of no family on any survey day approximated or exceeded the estimated allowances for all nutrients, sharp contrasts were evident in individual records. Two sample calculations in Appendix C (pp. 121-122) represent one of the better and one of the poorer records obtained. The food for Household 12, on Jan. 14, 1954 consisted chiefly of polished rice, fish, and non-leafy vegetable, with seasonings. In contrast, on July 23, 1953, Household 16 used home-milled rice, and about 60 gm. per person of swamp cabbage, with other vegetables and fish. These choices enhanced the potential nutritive value of the diet markedly without increasing its cash cost. Family labor was involved, however, in gathering greens and milling rice.

000 Since rice is the chief solid food for all ages, improving this major item will be considered first. An important step would be to teach the people to cook rice with just enough water so that all would be absorbed. The Thai government has sought to encourage this. So long as the practice of cooking rice in excess water persists, much of its vitamin and mineral content will be discarded, and efforts to improve the nutrient content of rice will be largely nullified. Some rice water could be used as a beverage, and for cooking certain vegetables which are commonly served with a thickened sauce. This would be preferable to discarding the rice water, but encouraging its use must be considered as an alternative to cooking rice without excess water, since the two practices are mutually exclusive.

Use of under-milled and processed rice, and of the rice polishings, has the advantage that a large part of the original B-complex content is conserved, whereas vitamins for enrichment are at present imported, and are apt to be for years to come. Since home milling persisted to some extent in Bang Chan, it might be encouraged, in some families. One highly respected headman continued to mill rice at home, hence the "prestige value" of white rice may not be so important in Bang Chan as it is among city Thai, who sometimes regard undermilled rice as "prisoner's food." The time and effort involved in home milling, however, may deter those who have given it up from returning to it; and since deepening the main canal has made the mill accessible to more families the year round, a program based on the assumption that commercial milling of rice will increase is probably more realistic than an attempt to encourage the return to home milling where it has been abandoned.

256 At present, no processed rice is made in Thailand. A plan to buy and install a Malekizing plant to process rice for the Royal Thai Navy was announced in 1953, but the plan has not materialised. Enriched rice has been sold by the Thai Rice Company for some years, but the best grades only,

2569 0 to 100% unbroken grains, are used. To benefit rice farmers, enrichment should either be done at the nearby mills, or premix sold locally, and farmers taught to mix it with
[196] their own rice. Because the premix used and marketed by the Thai Rice Company contains riboflavin as well as thiamine, niacin and iron, the treated grains can be readily distin-
000 guished from ordinary rice. Enrichment at the mill would be convenient, but would probably entail some government supervision and would not automatically ensure a better nutrient intake unless people learned the value of the conspicuous yellow grains. From this standpoint, separate purchase of premix might have advantage, at least in the initial stages of the program.

As far as we know, use of rice polishings in preparing "with-rice" dishes has not been explored in Thailand. Incorporation of rice polishings into a variety of soups and other "with-rice" dishes which would be acceptable to the Thai palate should not be difficult for the Thai home economist interested in experimental cookery. Nutrients usually lost in milling could thus be returned to the human diet. If adopted this procedure could be effective even in families that cling to the customary method of cooking rice in excess water. One old lady with beriberi, whose doctor had prescribed rice polishings, said she found them tasty. Information on the health value of rice polishings would probably be received more favorably if homemakers were shown acceptable ways of using them. A watery extract of the polishings might be used as a stop-gap preventive of thiamine deficiency while the slow process of changing food habits is going on. Such an extract could be used as a strengthening medicine for women during pregnancy and lactation, for infants and young children, and for those doing heavy field work, i.e. for vulnerable
[198] groups. The "second class doctors" at Minburi, the priests who practice healing, other traditional practitioners and midwives, because of their basic desire to help, would provide natural centers of information for this purpose.

Efforts being made by Thai government agencies to encourage eating more "with-rice" and less rice should be continued. A Thai co-worker suggested that "an educational program enjoining less peppery forms of with-rice would have the effect of encouraging consumption of a larger proportion
[200] of with-rice" (Sharp et al. 1953, p. 278). Various food items including those with a hot taste, were sometimes said to be bad for children, pregnant women, sick persons, etc., but seldom was any food mentioned as being good to eat under these circumstances. The concept that hot tasting foods are not healthful might be coupled with the idea that more generous amounts of mild dishes, especially those including green and
[202] yellow vegetables, should be used instead. The most widely used vegetables in Bang Chan were the wild swamp cabbage, and (2)phag (2)ka-(2)cheed, both leafy aquatic plants. Planting more (2)phag (2)ka-(2)cheed, and liberal use of both of these plants while they are available should be encouraged.

000 Growing other kinds of green and yellow vegetables should be fostered. Although vitamin A value and riboflavin content appear to be critical, in choosing vegetables to be stressed, specialists in agriculture should consider greens [P62] with high calcium and low oxalic acid content also. A variety of edible leaves of trees were used by a few families; some used sweet basil as a vegetable rather than just a seasoning; pumpkin and sweet potato were familiar, but less often used than would be desirable. More green or yellow vegetables which mature when canals are low and aquatic plants no longer available, would be especially good. If increased production by most households[1] is not practicable, a few of the more successful gardeners might be persuaded to produce vegetables and fruits which would help to bridge the gap between rainy seasons. Mushrooms, which can be grown readily, would provide a good source of ribo- [P64] flavin when leafy vegetables are in short supply. The boom-and-bust experience in mushroom culture (See Appendix A, pp. 101-102) might, however, make its revival as a source of healthful food for home use more difficult than if the villagers did not think of mushrooms as a cash crop for which the market failed.

Eating more fruit would help to tide over the dry 262 season. Fruits were commonly used as snacks, not at meal- [P24] time, hence snacks of fruit should be encouraged for adults as well as children. Bananas grew in all gardens and were available the year round. The (4)nam (4)waa variety, which 000 was used in ceremonies, and considered safe for all, should be stressed. More families could grow pineapple, which is [777] relished both raw and in curries. Mango and papaya, fruits of outstanding value for both vitamin A and ascorbic acid, would be excellent, but the idea that growing papayas is "unlucky" must be taken into account. If a few of the more thoughtful and forward-looking farmers could be persuaded to start papaya trees, even though they were not willing to plant them near the house, the practice might spread in time.

146 On the average, the Bang Chan diet did not seem to be [D64] very deficient in protein, but distribution is not proportional to need, and protein deficiency may be in part responsible for periods of weight loss, or failure to gain, so 000 common among infants and children. The presence of other [134] essential nutrients in animal foods is important also. If, the local supply of fish is indeed diminishing, efforts to [222] increase it through pond culture should be continued. Abandonment of tilapia culture in Bang Chan, after about one-third of the families had tried it, (Appendix A, p. 101) suggests that not enough of the right kind of help was given

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1. Tenant farmers may not be permitted to enlarge gardens by mounding at the expense of rice fields.

000 concerning its culture and use. Tilapia culture was learned [434] largely by trial and error, and was considered primarily as a [224] source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been [262] different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

262 More home consumption of eggs would be desirable, but [432] their ready sale and acceptability for barter may present an [431] obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak [432] season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented [266] as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

272 Milk, as canned, dried or malted milk preparations, was [732] considered an appropriate gift for the priests, who are for- [788] bidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to in- 000 clude milk among them. People gladly bought food for the [ ] priests and would probably accept on the authority of the head [ ] priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headmen were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

[796] The importance of merit making and the relatively large [982] cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children. . . . . The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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1. In reproducing these notes, slight changes have been made such as substitution of descriptive terms for personal names which appeared in the original.

117 takes it down the steps to the fish pond, where she swishes
252 the basket around to wash the fish, and rinses her hands at the same time.

[231] There are some hazards to the food--chickens trying to get at the edible part of fish while the niece cleans it (she leaves the scales, etc. for them to eat); cat and kittens in the kitchen, having to be driven away from the grated coconut and coconut milk, and getting an occasional unweighed nip. Whether we start to weigh food for the evening meal or a.m. meal, some cooked foods are apt to be used, either left over
[182] from a previous meal, or cooked in advance. This a.m., for
126 example, buffalo meat, already cooked (but not weighed before cooking) was used, and (3)khii-(2)leg leaves, which SS weighed last night. These latter were cooked last night, to reduce bitterness, then put into curry today.

Description of Food Preparation Area in a Relatively Poor Household

Wednesday, May 27, 1953

117 Arrived about 5:45 a.m. While other food was being pre-
262 pared, the 11-year old son came in with a package of salted white radish and a small milk tin with some coconut oil which had just been bought. This is the house which we found flooded when they sent for us to see the baby last fall. The roof seems to be well thatched. The floor is not wet after last
358 night's downpour. The bed platform, in one corner, is about
355 8 x 10 feet. The baby's cradle hangs above it. In the oppo-
352 site corner is a shelf where utensils are kept. Some food,
251 in paper bags, is in a basket hung from the roof. Fresh fish
359 is kept in a jar of water until needed. The stove is on a small mound of earth, and further elevated on a small box (just big enough for the stove) filled with earth.

[52] We sit on a mat, spread on the mud floor, with the
355 scales, plastic bowls and waxed paper ready for weighing food. The children lie on a mat nearby. In the house is a fresh mound of earth, a small straw bin with rice, and various pieces of equipment.

Notes on Meal Service

In a Relatively Prosperous Household

Friday, May 22, 1953

117 262 Before breakfast is served, the six-year old girl comes with a piece of jack fruit. SS weighs it and tells her to bring back what she does not eat. Later she comes with hands full of stones (14 of them). She has eaten this much as a "snack" before the regular meal. The grandmother finishes the piece (7 stones) and gives the rind to SS to weigh.

[264] At breakfast the family sits in a circle on the kitchen floor. Each person except the baby has his own bowl of rice before him. In the center of the circle, within reach of all, are four small dishes of "with-rice" which has been prepared for breakfast: sour curry of buffalo meat, curry of (3)khii-(2)leg leaves, bean sprouts and one small fried fish. [853] The mother takes a very small bit of fish on a spoon with [555] rice, and feeds baby. During breakfast baby has 6 bites of rice with fish, nine small spoonfuls of rice with sour curry. The mother herself eats one bite of fish. She takes four spoonfuls of sour curry on plate with rice. This is shared with baby. Mother and baby eat mainly rice, fish and sour curry of buffalo meat, whereas grandmother and the six-year old girl have curry of (3)khii-(2)leg leaves and bean sprouts with their rice.

In a Relatively Poor Household

117 853 [553] Wednesday, May 27, 1953

While the mother finishes the meal preparation, the seven-year old girl feeds the baby, first rice with some chopped egg, then rice with the "water" from the egg. The mother remarks that she cannot cook unless someone looks after the baby.

117 264 Technique of eating -- A tray with the "with-rice" is set out, also a bowl with water, for rinsing the hand, and a basin or bowl with drinking water. There are spoons in the "with-rice," but these seem to be used for taking some of the juice, which may be eaten directly or put on the individual's bowl of rice. Solid pieces are taken from the serving dish by hand, and mixed with some of the rice, which is then picked up in the right hand. Occasionally the person eating will rinse his hand with water. When finished, each person rinses his bowl (using either water from the bowl nearby, or from the general supply -- in this case the canal). Dishes are turned upside down on the platform near the stove to dry.

Examples of Notes on Food Eaten by Individuals

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264 Household 16 July 23, 1953

Family members observed at meal-time: All, as they ate breakfast at various times.

Notes re kind and amount of food eaten:

Breakfast: Girl aged 12 and boy aged 7 start eating at 7:20 a.m. Each one has one dish of rice and stew of swamp cabbage and salt fish for breakfast. They are through eating at 7:40 a.m.

9:10-9:30 a.m. Father eats two dishes of rice with stew and mother does also.

10:10-10:20 a.m. Son, 18 yrs. old, returns home and eats two dishes of rice mixed with stew.

10:40-11:00 a.m. Sons aged 25 and 20 have breakfast. The older one eats two dishes of rice but the younger one eats three.

11:30 a.m. Daughter aged 22 has two dishes of rice and stew. She is through eating at 11:45 a.m.

Household 67 May 26, 1953

Family members observed at meal-time: Mother and children.

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262 Notes re kind and amount of food eaten:

Dinner: Girl aged 7 seems to be fond of fish but dislikes vegetables. Boy aged 11 likes to eat the vegetables from the curry. Each one eats two dishes of rice mixed with small amount of hot curry (5:02-5:17 p.m.)

[853] One year old baby is fed by his older sister, eating two spoonfuls of rice mixed with boiled coconut milk. Whenever he refuses to eat, his mother nurses him.

5:40-5:55 p.m. Mother eats 3 dishes of rice with 2 dishes of hot curry, containing a small amount of fish.

Father begins eating at dark so we can't see him.

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Examples of Diet Records Submitted by School Children

Date	Breakfast	Lunch	Dinner	Snack
	Diet Record[1] of 10-year Old Girl: Diet Class I[2]			
May 19, '53	Sour curry of (2)phag (2)ka-(2)cheed Curry of swamp cabbage Boiled vegetables Fried mushrooms Roasted pilot fish Chili sauce		Cooked fish (sour) (2)phag (2)ka-(2)cheed Chili sauce	Star gooseberry Jack fruit seeds Fruit of egg tree Sweet made of flour, sugar, coconut milk Sweet made of flour, sugar, sugar palm
July 7, '53	Curry of (2)phag (2)ka-(2)cheed Boiled swamp cabbage	Boiled fish Boiled fermented fish	Boiled egg Roasted fish	(1)lam-(1)jaj (Fruit of Euphoria longana) Jack fruit seeds Sweet made of flour and sugar
Sept. 13, '53	Cooked climbing perch and other fish (sour)	Fried towel gourd with pork Fried serpenthead	Boiled climbing perch and silurus	Sweet made of flour, sugar and coconut milk Hog plum
Oct. 29, '53	Sour curry of katurai flowers with (2)phag (2)ka-(2)cheed Fried pork with swamp cabbage	Hot curry of serpenthead (2)phag (2)ka-(2)cheed Chili sauce	Sour curry of lotus stalks	Jack fruit seeds Fried banana Jambean

Examples of Diet Records Submitted by School Children (cont.)

Date	Breakfast	Lunch	Dinner	Snack
Nov. 25, '53	Curry of lotus stalks Fried salted fish (2)phag (2)ka-(2)cheed Chili sauce	Curry of swamp cabbage Fried salted fish	Roasted salted fish Curry of (2)phag (2)ka-(2)cheed	Orange Fried banana Sweet made of flour, sugar, cocomut and corn Sweet made of flour, sugar, egg and coconut
Jan. 30, '54	Sour curry of (2)phag (2)ka-(2)cheed with katurai flowers	Sour curry of green papaya	Fried sweetened fish	Jack fruit seeds Rice flour chips Sweet made of flour, sugar, coconut, corn
June 4, '54	Fried fermented fish Curry of egg plant Cooked salted pork	Fried egg Salted crabs	Curry of pineapple Curry of chicken Curry of bamboo shoots	Star gooseberry Ice Sweet made of flour, sugar and coconut milk Sweet made of flour, sugar and coconut
	Diet Record of 12-year Old Girl: Diet Class III			
Feb. 14, '53	Hot curry of fish Fried dried meat with sugar		Sour curry of swamp cabbage	Sweet made of rice, banana and coconut milk
July 7, '53	Curry of chicken		Curry of white gourd	Longan

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Examples of Diet Records Submitted by School Children (cont.)

Date	Breakfast	Lunch	Dinner	Snack
Sept. 13, '53	Curry of (3)khii-(2)leg		Curry of chicken	Fried sweet potato Star gooseberry Hog plum
Oct. -- '53	Sour curry of green papaya Fried swamp cabbage		Hot curry of fish	Guava Sweet made of dried beans and sugar
Nov. 28, '53	Fried Chinese noodles Boiled vegetables Chili sauce		Fried fish Boiled vegetables Chili sauce	Fried banana Fried Chinese noodles Sweet made of rice, banana and coconut milk
Jan. 30, '54	Beef curry		Sour curry of swamp cabbage	Chinese cake Jujube Sweet made of flour, sugar, coconut and corn Sweet made of dried beans and sugar

1. "With-rice" dishes only are listed for breakfast, lunch and dinner.

2. Adapted from Thorangkul (1957).

177 244 cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

243 244 234 177 At the height of the boom, the demand for rice straw swept many of the fields clean of the stubble usually left there after harvest, thereby decreasing food for the roaming buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralis (1957) were 1) the cash outlay required was small, 2) returns were realized quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralis made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

262 435 796 [431] [792] [875]

Food for Homage-to-the-Teacher Rite Performed by a Buddhist Priest Who Was a Traditional Practitioner

Item	Amount	Cost in Baht	Item	Amount	Cost in Baht
Cereals and Legume Seeds:			Fish and Meat (cont.):		
Rice noodles		10.	Dried fish	6	gift
Soybeans & fermented vegetables	25 kg.	12.	Roasted fish	3 kg.	gift
Mung beans	10 lit.	25.	Shrimp paste	2 kg.	18.
Cassava flour		2.25	Lobsters		15.
Sugar and dessert:			Lobsters (for soup)		7.50
Palm sugar	1 pail	67.	Pig's skin (for soup)		10.
Cane sugar	14 kg.	85.	Beef[1]	15 kg.	150.
(2)Kha-(5)nom (3)tuaj-(1)foo	500 cups	35.	Ingredients for Mussel-man curry[1]		27.
Fish and Meat:			Boiled chickens[2]	2	22.
Fish ((1)plaa (2)myk) for soup		6.	Pig's head[2]	4 heads	222.
Silurus and serpenthead	60 kg.	gift	Pork[2]	4 kg.	40.

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[315] Food for Homage-to-the-Teacher Rite (cont.)

Item	Amount	Cost in Baht
Fruit:		
Bananas ((3)klua; (4)nam-(4)waa)	5 bun.	from father
Chico[2]		5.
Coconut	150	180.
Coconut (young, to make dessert)	30	30.
Job's tears	1 lit.	3.
Plums, yellow[2]		5.
Pomelos[2]		6.
Rose apples[2]		2.
Tamarind		7.50
Tomato sauce		8.
Young palm fruit[5]	7 bun.	3.
Vegetables (non leafy):		
Bamboo shoots, cooked	1 pail	28.
[272] Cucumber		--[3]
[273] Egg plants		--[3]
[274] Garlic	5 kg.	26.50
Gourd, white		1.
Onion, fragrant[5]		6.
Onion[5]	4 kg.	4.
Onion, welsh[5]		--[3]
Mushrooms		3.
Radish, white		--[3]
[354] **Vegetables (leafy green and yellow):**		
Cabbages		--[3]
Chinese kale		--[3]
Chili, green		7.50
Vegetables (leafy green & yellow) cont.:		
Lettuce		--[3]
Parsley		--[3]
Pumpkin	3 fruits	12.
Sweet basil leaves		1.
Sweet potatoes	6 kg.	6.
(3)Tang-(5)oo		--[3]
Seasonings etc.:		
Vinegar	1 bottle	1.
Fishsoy	1 jar	10.
(2)Ka-(1)chaa;	2½ kg.	12.50
Sodium glutamate		5.
Pepper		14.
Agar	400 gms.	36.
Miscellaneous:		
Cola beverage	72 bottles	72.
Liquor	16 bottles	80.[6]
Ice		30.
Cigarettes	2 pkgs.	--[6]
Tobacco	1 heap	--[6]
Betel pepper		9.
Fresh areca nut		10.
Dried areca nut		8.
Dried palm leaves	1 big bundle	2.
Firewood		50.
	Total	1577.75

[184]
1. For Moslem guests.
2. Food items placed on a tray and used in the ceremony proper.
3. Items so marked cost a total of 140 baht.
4. Not identified.
5. Several kinds of onions, both fresh and dried, are commonly used.
6. Prices not stated; estimate for liquor.

Food Preparation and Consumption — Sept. 25, 1953 — Household No. 21

Menu 1	Raw Ingredients: Kind 2	Wt. A.P. 3	Cost 4: Bt.	Cost 4: Stg.	Ined. Ref. 5	E.P. 6	Cooked Foods: Dish 7	Dish + Food 8	Food 9
Meal Time 4:30 a.m.							800	2990	2190
		2180-800					120	1280	1160
Cooked rice	Polished	= 1380					190	850	660
									4010T[1]
							450	915	465
(1) Bauaun stew	(leftover)								
(2) Sa-(5)noo stew	Coconut meat (to make milk)	700-180 = 520		50		520)			
	Dried chilies	24		15		24)			
	Onion	8		4		8)			
	Galangal (HG)[2]	8				8)			
	Garlic	4		2		4)			
	Lemongrass (HG)	12				12)			
	Berganot rind (G)[2]	4				4)	450	1390	940
	Salt	30				30)	130	312	182
	Serpenthead (C)[2]	320-120=200				200)	130	300	170
	Shrimp paste	6		3		6)	130	260	130
	(2)Sa-(5)noo flowers (G)	550			580-520 = 60	640-150 = 490)			1422T
	Coconut milk					1220-450 = 770)			
						40)			
	Palm sugar	240-200= 40		24					
							520	800	280
Cooked rice	(leftover)								
Fried duck egg	1 Duck egg	76			21	240-185 = 55			
	Coconut oil	16		8		16			
	Onion	4		2		4			
	Fishsoy	10		5		10	180	260	80

1. T equals total weight.
2. HG, G and C stand for home grown, gathered and caught, respectively.

125 252 242 244 [illegible]

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

Food Preparation and Consumption (continued) Sept. 25, 1953 Household No. 21

Use of Cooked Foods						Method of Preparation
Given away 10	Fed to Stock 11	Ed. Waste 12	Left Over 13	Eaten 14	Persons Eating 15	
Cooked rice 850-190=660 (to 3 priests)			0	335	4	Rice, 4:30 a.m. She washes rice two times and lights the fire. Then she puts rice pot on fire at 4:35. Rice water is drained off at 5:00. Rice pot is put on fire again from 5:15 to 5:25.
			(1)Bausun stew (leftover) 0	465		(1)Bausun stew is reheated from 5:00 to 5:15 a.m.
(2)Sa-(5)noo stew 312-130=182 300-130=170 260-130=130 482r (to 3 priests)			0	940		(2)Sa-(5)noo stew, 5:20 a.m. Dried chilies (after soaking in water for a while), onion, garlic, galangal, lemongrass, bergamot rind, and salt all pounded together. 5:25 She crushes coconut meat with water five times over colander. Shrimp paste is mixed with (4)nam (4)phrig at 5:40. The pot of coconut milk is put on fire at 5:42. (4)Nam (4)phrig is mixed with boiled coconut milk at 5:55. Fish is put into the pot and water from crushed tamarind at 6:00, (2)sa-(5)noo flowers at 6:05. The pot is put down at 6:12 a.m.
			Cooked rice (leftover) 0	280		
			Fried duck egg 0	80		Fried duck egg. The pan is put on fire at 6:15 a.m. Duck egg is mixed with pieces of onion and fishsoy. Coconut oil is put into the pan at 6:20. Stirred egg is fried from 6:20 to 6:25.

RES 268 264

K. Snacks

Person eating 1	Time 2	Kind and description 3	Weight (or approx. wt.) A.P. 4	Ined. ref. 5	E.P. 6	Cost 7 Bt.	Stg.
June 4/53			g.	g.	g.		
Girl, 8 yrs.	12:00m	She ate a half fruit of pineapple at home. It was bought from the selling boat.	(375)	(195)	(180)		20
June 5/53							
Girl, 8 yrs. Boy, 10 yrs. Girl, 13 yrs.	All day	7:40 - The pot of truffles (gathered from the fields) is put on fire. It is boiled with water and salt. Truffles: 525-72 = 453 gm. Salt: 35 gm. It is finished at 8:28.	453				
Boy, 10 yrs.	8:46	He eats boiled banana (MG)	48				
Girl, 13 yrs.	Early a.m.	She drinks coffee which is bought from the store near the Wat.					40
Father	10:13	He drinks one glass of milk which is bought from the store near Wat.					50

Hauck et al. D.E-5 (1952-1954) 1959 AO7 Central Thai AO7 Bang Chan

[121] 262 294 405

Form for Calculating Raw Weights of Foods Eaten

Dietary Survey, Bang Chan — Household No. 12 — Date Jan. 14, 1954

Amounts of foods prepared and eaten — No. persons in household 3

Meal - menu	Raw ingredients				Cooked food	Use of cooked foods					Adjustments-raw wt.		
1	2[1]	3	5	6	9	10	11	12	13	14	For amt. eaten	15	For No. people
4:00 p.m.													
Cooked rice	Polished	610			1640				500	1140		3	
Baked egg plants	3 egg plants	370		370	240				0	240			
Fish "salad"	Lemongrass (HG)[2]	36		36									
	Holy basil (HG)	44	20	24	115				0	115			
	1 fish (cooked)	52	12	40									
	Lime (1/2 fruit)	30	12	18									
Cooked rice	(Leftover)				250				0	250			
6:55 a.m.													
Cooked rice	Polished	950			2390				800	1590		3	
Roasted fish	2 fish	112			96				0	96			
Cooked rice	(Leftover)				500				0	500			
Chili sauce	Bird pepper (HG)	12		12									
	Shrimp paste	10		10									
	Garlic	8		8	45				20	25			
	Palm sugar	10		10									
	Lime	12	4	8									

1. For identification of column numbers, see the original schedule, pp. 118-119 and pp. 113-114 121
2. HG stands for home grown.

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Dietary Study, Bang Chan - Nutritive Value of Total Foods Eaten in 24 Hours — Household No. 16 — Date: July 23, 1953 — Persons Eating: 8

Raw Ingredient	Adj. cons.	Calories	Protein gm.	Fat gm.	Carb. gm.	Ca mg.	P mg.	Fe mg.	Vit. A I.U.	B_1 mg.	Ribo. mg.	Niacin mg.	Vit. C mg.
Rice, home milled	3877	14074	295	43	3036	426	8568	46.5	(0)[1]	7.37	1.94	120.2	0[1]
Dried fish	450	864	189	7	0	293		11.3	0	0.27	1.40	20.7	0
Bottle gourd	1535	261	9	3	58	184	276	9.2	1075	0.61	0.77	15.4	154
Swamp cabbage	480	139	14	1	26	350	245	12.0	30240	0.34	0.58	3.4	154
(2)Phag (2)ka-(2)cheed	40	11	1	0	2	66		1.2	2400	0.04	0.08	0.3	28
Coconut milk[2]	1010	735	8	59	42								
Pork fat	36	325	0	36	0	0	0	0	0	0	0	0	0
Fishsoy	48	23	2	2					0	0.01	0.04	1.1	
Shrimp paste	16	19	4	0					0	0	0.02	1.0	-
Chilies, dried	20	49	3	1	6	32	74	0.5	115	0	0	0	10
Garlic	16	15	1	0	4	7	21	0.2	0	0.04	0.01	0.1	2
Bird pepper	10	3	0	0	1	2	-	0.1	600	0.01	0	0	20
Onion	4	1	0	0	0	1	2	0	2	0	0	0	1
Lime	4	2	0	0	1	(2)	(1)	(0)	0	(0)	(0)	(0)	1
Palm sugar	25	96	0	0	24	20	10	2.9	0	0	0	0.3	0
Salt	20	0	0	0	0	46	0	0.1	0	0	0	0	0
Total		16617	526	152	3200	1429	9197	84.0	34432	8.69	4.84	162.5	370
Average/cap.		2077	66	19	400	179	1150	10.5	4304	1.09	0.60	20.3	46

1. ( ) means imputed value; 0 means none or insignificant amount; - means no values available, but probably contains measurable amount; blank space means no information found.
2. See Appendix C, pp. 128-129.

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

Dietary Study, Bang Chan - Nutritive Value[1] of Total Foods Eaten in 24 Hours — Household No. 12 — Date: Jan. 14, 1954 — Persons Eating:

Raw Ingredient	Adj. cons.	Calories	Protein gm.	Fat gm.	Carb. gm.	Ca mg.	P mg.	Fe mg.	Vit. A I.U.	B_1 mg.	Ribo. mg.	Niacin mg.	Vit. C mg.
Rice, polished	1335	4806	91	9	1053	80	1869	10.7	(0)	1.60	0.40	20.0	(0)
Egg plant	370	89	4	1	20	56	137	1.5	111	0.15	0.19	2.2	19
Fat fish	152	275	28	18	0	56	321	1.5	0	0.09	0.06	6.1	0
Lemongrass	36												
Holy basil	24	23	2	0	4	19	2	0.7	3024	-	0.55	-	1
Lime	22	8	0	0	3	9	5	0.1	0	(0.01)	0	0	6
Bird pepper	7	2	0	0	0	1	-	0.1	402	0	0	0	13
Shrimp paste	6	6	1	0	0				0	0	0.01	0.3	
Palm sugar	6	21	0	0	5	4	2	0.6	0			0.1	
Garlic	4	4	0	0	1	2	6	0	0	0.01	0	0	1
Total		5234	126	28	1086	227	2342	15.2	3537	1.86	1.21	28.7	40
Average/cap.		1745	42	9	362	76	781	5.1	1179	0.62	0.40	9.6	13

1. ( ) means imputed value; 0 means none or insignificant amount; - means no values available, but probably contains measurable amount; blank space means no information found.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7
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Foods for Which Values Were Obtained from Miscellaneous Sources, or Imputed by the Authors

Name of Food	Source or Basis for Imputed Values
Cereals	
Rice, glutinous, black	Values for glutinous rice
Animal Foods	
Fermented fish	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche, Ca value from Knudson (1955).
Shrimp paste	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche.
Fishsoy	Values from Thai table; vitamin analysis for FAO by Hoffman-La Roche.
Field rats	Values from Chatfield et al. for mammals, dressed.
Fruits	
(2)Ma-(1)dan, fruit	Leung et al. Unspecified fruits, tropical areas.
Manila tamarind	Leung et al. Unspecified fruits, tropical areas.
Rambai	Willimott
Thai nutmeg	Values for persimmon
Vegetables	
(1) Bauaun	Values for eggplant
Bergamot rind	Aykroyd et al., values for lime peel.
Celery leaves, Chinese	Values for celery leaves and stalks, Chinese.
Coral	Leung et al., values for dark green leaves
Cucumber	Watt et al., for figures for Fe and Vitamin A in cucumber with skin.

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146 Galangal — Leung et al., values for ginger root.
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(1)Jauau — Leung et al., values for dark green leaves.

(3)Khii-(2)leg — Leung et al., values for dark green leaves.

(4)Khlyb — Leung et al., values for dark green leaves.

Lotus stalk — Leung et al., values for lotus root.

(2)Ma-(1)dan leaves — Leung et al., values for dark green leaves.

(4)Ma-(5)khya (2)khaj (2)taw — Values for eggplant.

Morinda — Leung et al., values for dark green leaves.

(2)Phag (2)ka-(2)cheed — Leung et al., values for dark green leaves.

Sweet potato — Chatfield, values for vitamin A in pale variety.

Foods for Which Nutritive Values Were Not Calculated and the Total Amounts Eaten by Two Groups of Households Throughout the Survey

Name of food	Amounts Eaten	
	Group A	Group B
	g	g
Bergamot leaves	5	15
(2)Ka-(1)chaaj	15	71
(2)Kha-(1)cauaun flowers	25	0
Lemongrass	135	154
(2)Sa-(5)noo flowers	216	1078

262 List of Foods[1] Included in Each Food Group

I. Rice and other cereals

Popcorn
Rice flour
Rice, glutinous
Rice, glutinous, black
Rice, home-milled
Rice, noodles
Rice, polished
Wheat bread

II. Fish and other animal foods

Beef
Chicken
Crab, salted field
Eel
Eggs, duck
Eggs, hen
Fish, canned
Fish, dried salted
Fish, fermented
Fish, fresh
Fishsoy
Frogs
Milk
Oysters, dried
Pork
Rats, field
Shrimp paste
Water buffalo

III. Green and leafy vegetables

Beans, string
"Bergamot" leaves (Citrus hystrix)[2]
Chilies, fresh, green and red (Capsicum annuum)
Chilies, small, or bird-pepper (Capsicum frutescens)
Chinese celery (Brassica pekinensis)
Coral (Erythrina fusca)
(2)Kha-(1)cauaun leaves (Telosma cordata)
(3)Khii-(2)leg (Cassia siamea)
(4)Khlyb (see footnote p. 30.)
Leeks
Lemongrass (Cymbopogon citratus)[2]
Lettuce, head
(4)Ma-(1)dan leaves (Garcinia schomburgkiana)
Morinda, (1)jaunu (Morinda citrifolia)
Onion leaves
(2)Phag (2)ka-(2)cheed (Neptunia prostrata)
(2)Sa-(1)daw (Melia indica)
(2)Sa-(5)noo, leaves and flowers (Sesbania roxburghii)[2]
Swamp cabbage, (2)phag (3)bung
Sweet basil (Ocimum basilicum)

IV. Other vegetables

(1)Bauaun - a member of the Araceae (arum family) perhaps a species of Alocasia)
Bamboo shoots
Bean, mung
Bean, sprouts
Calabash
Cassava
Chili, dried
Cucumber
Egg plants
Garlic
Gourd, bitter (Momordica charantia)
Gourd, bottle (Lagenaria leucantha)
(2)Kha-(1)cauaun flowers (Telosma cordata)[2]
Leeks, flowers
Lotus stems (Nelumbo nucifera)
Mushrooms, straw
Onion, mature or bulbs
(2)Phag (2)tob (Eichhornia crassipes)
Peanuts
Radish, white
Radish, salted
Sweet potato (pale yellow)

262 Other vegetables (continued)

Taro
Turmeric, white
Water chestnut, Chinese or black truffle (Eleocharis dulcis)
West Indian pea tree, (1)Khaeae flowers, (Sesbania grandiflora)

V. Fruits

Coconut and its products
Coconut meat
Coconut sport
Coconut milk
Coconut cream

Fruits other than coconut

Banana, (3)kluaj (4)nam-(4)waa
Guava (Psidium guajava)
Hog plum (a species of spondias)
Jack fruit (Artocarpus heterophyllus)
Jujube (Zizyphus jujuba)
(2)Ka-(4)tauaun (Sandoricum indicum)
Limes
Lotus seeds (Nelumbo nucifera)
(4)Ma-(1)dan fruit (Garcinia schomburgkiana)
Mango
Manila tamarind (Pithecellobium dulce)
Muskmelon
Olive
Orange, sour
Orange, sweet
Papaya
Pineapple
Rambai, (4)ma-(1)faj (Baccaurea sapida)
Rambutan (Nephelium lappaceum)
Star gooseberry (Cicca acida)
(2)Ta-(1)koo (a species of Diospyros)
Tamarind (Tamarindus indicus)
Thai nutmeg (a species of Diospyros)
Watermelon

VI. Fats and oils

Coconut oil
Pig's skin
Pork fat

VII. Sugar

Palm sugar
Sugarcane

VIII. Miscellaneous and spices

Agar
Bergamot, rind
Cardamom
Cinnamon
Coriander seeds
Fennel
Galangal (Alpinia officinarum)
Ginger (Zingibor officinale)
Holy basil (Ocimum sanctum)
(2)Ka-(1)chaaj (Boesenbergia pandurata)[2]
Nutmeg
Pepper, black
Salt
Vinegar

[104]

1. English names, where known, are given first. Thai terms are given where no common English name was known. Both Thai terms and scientific names are given for plants which may be unfamiliar to many Western readers.

2. Foods for which no nutritive values were found nor imputed.

NOTES ON THE PREPARATION AND NUTRITIVE VALUE OF COCONUT MILK AND COCONUT CREAM

252 The term coconut cream ((5)hua (2)ka-(4)thi), as it
262 was used in Thailand, referred to the product which was made by squeezing grated coconut with little or no addition of water. Coconut milk ((4)naam (2)ka-(4)thi) was made by squeezing grated coconut repeatedly with water. Coconut cream might be made first, and the residue extracted one or more additional times to obtain coconut milk. The terms coconut milk and coconut cream apparently are not used consistently. Losee (1952) commented on this when he described
[114] [171] the preparation of coconut cream in Samoa, and said that it was sometimes called coconut milk. Miller et al. (1936), in describing the preparation of coconut milk said "If a thick coconut milk to serve over puddings, taro leaves, etc. is desired, 1/2 to 3/4 cup of coconut water or boiling water should be poured over 3 cups of grated coconut. . . . If the milk is to be used in curry sauce for chicken, eggs, shrimps, or in cornstarch pudding, a larger quantity of water (1 to 2 cups of water to 3 cups of grated coconut) may be used."

126 In carrying out the dietary study, the observer weighed the grated coconut meat, the residue and the final products, coconut milk or cream, or both. She did not weigh the water as it was added in successive portions, but the amount of added water could be calculated.

184 The ratio of coconut milk to meat varied considerably,
262 but on the average, households in Group A obtained coconut milk which weighed more than eight times as much as the coconut meat from which it was made. Households in Group B obtained less than 2½ times as much milk by weight as coconut meat. The number of extractions made varied from 2 to 6,
146 with a mode of 3. Obviously, the products made by Groups A
171 and B, although both called coconut milk, had markably differ-
262 ent percentage composition, and neither was similar to "coconut milk" for which values could be found. These values were as follows:

Authors	Location	Coconut milk grams per 100 gm. E. P. Pro.	Fat	Carbo.
Bocobo et al.	Philippine Islands	3.6	33.2	38.4
Food and Drug Division	Thailand	3.52	34.75	1.52
Miller et al.	Hawaii	4.0	27.0	18.9[1]

1. Personal communication

128 In calculating values to be used in our estimates of
146 nutrient content of diets in Bang Chan, we made two assump-
262 tions: 1) that the "expressed coconut milk" described by Miller et al. was similar to coconut cream as made in Bang Chan, and 2) that coconut milk as made in Bang Chan differed from coconut cream primarily by dilution. When coconut milk was made by successive extractions after coconut cream had been prepared, the combined weights of cream and milk were taken to represent the yield of coconut milk from the weight of meat used.

The ratio of coconut cream to coconut meat was approximately the same, 0.30 for households in Group A and 0.33 for those in Group B, but Group A used more water in making coconut milk than Group B. By calculation, we obtained the following figures for the percentage of protein, fat and carbohydrate in coconut milk as made in the two groups of households.

Estimated Composition of Coconut Milk as Made in Two Groups of Households, Bang Chan

	Grams per 100 gm. E. P.		
	Protein	Fat	Carbo.
Group A	0.15	1.0	0.7
Group B	0.5	3.6	2.4

The need for a guide for calculating composition of various coconut milks, based on actual analysis of the products as made at home is apparent. Since coconut milk was used almost daily in Bang Chan, use of the figures which we found in the literature would have introduced a major error into our calculations. Using figures from the table designed for use in Thailand (Food and Drug Division, Bangkok, 1953), the average per capita caloric intake per day, from this source for the families studied would have been over 300 calories, as compared to about 45 calories, using the figures calculated on the basis of observed precedures in the village.

/Pp. 130-139 contain no data on Bang Chan and the Central Thai and were not processed for the AO7 Central Thai file./

A small, rather flavorless banana was given to young babies, sometimes before they were put to the breast. This type of banana and soupy rice were the only supplementary foods given before 6 months of age. Protein-rich foods, chiefly fish and egg, were generally introduced in small amounts during the second half of the first year. Few infants were given vegetables before one year of age, and even then none had them daily. At two years of age, some children had not yet been given green vegetables. Late introduction of vegetables into the child's diet may be due to the fact that vegetables were often prepared as hot curries which were considered unsuitable for young children. 853

A child was usually allowed foods commonly eaten by adults by the time he was weaned, although a few informants specified that the child could have anything but "hot tasting" foods, i.e. foods containing chili. A minority of informants mentioned other foods as not good for younger babies.

Except for dietary restrictions while the mother was lying by the fire, postpartum, no well established dietary taboos connected with the feeding of mothers or babies were encountered. The concept that a good choice of food is important to the health of both mother and child seemed to be entirely lacking. 846 853 262

Many of the young children in Bang Chan failed to gain, or even lost, weight in the intervals between observations. Almost all infants appeared to gain steadily up to 6 months of age, but stationary weight or weight loss for periods of from 1 to 7 months was observed in most children at some time. These periods were noted more frequently among children from 2 to 3 years old than among younger ones. Such experiences were not more common after weaning than at other times, but the cause or causes of growth failure could not be determined from the information available. 145

Some approaches to improvement in the diet of Thai mothers and children are suggested. Improvement in the diets of mothers and small children would probably parallel any improvement in the general family dietary, since food is prepared at one time for all members of the family. 252

Exposure of Infants to Sunlight.

854 Even during the rainy season sunshine was usually abundant in Bang Chan, but taking a baby out of doors at an early age was generally thought to involve some risk. Many houses had low or wide eaves, and an infant was usually kept in a cradle in the house where sunlight could not penetrate. When old enough to hold up its head while sitting astride an older person's hip, the infant might be carried about the compound by parents or older siblings. As the question was worded ("When did you take the baby outside the house?" or "At what age did you take the baby with you when you went out for pleasure?") the answer did not mean that the baby was taken out with any degree of regularity at the specified age. Most of the babies in this series had been taken outdoors by the time they were 3 months old, but 4 were a year or older when first exposed to [124] sunshine. Nevertheless, the physician found no evidence of rickets among the infants he examined.

One informant, a school teacher's wife, said she thought that taking the baby into the sunshine was not harmful; in fact she believed it made the baby stronger than usual. She thought, however, that too much exposure to sunshine might "bring cold into the baby" and she spoke of the beret as a protection against this.[1] In Bang Chan, an otherwise naked infant might wear a beret when being taken out of doors.

MATERNAL DIET

Diet During Pregnancy.

843 Of 31 mothers who furnished some information on diet during 262 pregnancy, 17 were pregnant when interviewed, and the remainder [125] had young infants, in most cases under 3 months of age. Eighteen of the interviews were based on schedule 4 (Appendix p. 83) and provided fairly detailed information on the kinds of foods eaten. Other informants gave more general information, such as foods craved or disliked.

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[171] 1. Wellin (1956) mentioned the small woolen cap made or bought by mothers in the Valley of Ica, Peru, for the infant to wear. The cap was put on soon after birth and was worn, off and on, for many months. The function of the cap was to prevent the entrance of cold via the fontanel, which was defined as a particularly vulnerable point of entry. Wellin noted that all infants he saw in maternity wards in the Valley of Ica wore woolen caps.

In general, the diet during pregnancy seemed to be about the same as at other times. Rice cooked in the usual way (see glossary, Appendix p. 51) and fish of some kind formed the basis of the diet. A majority had green vegetables[1] either daily or frequently. Foods which seemed to be generally acceptable, although they were eaten less often, included vegetables other than green ones, pork, bananas, coconut, other fruit, fresh beef, and egg.

Eight women spoke of foods which they craved during pregnancy. Fruit in general, or specific fruits such as oranges, pomelo, guava, rambutan, and mangosteen, were most often mentioned. One woman said she craved Chinese noodles, and one, chilies.

When asked whether they disliked any foods during pregnancy, 5 women mentioned fish or the odor of fish, but in 2 instances the objection was limited to early pregnancy when the informants experienced some nausea. Three said they disliked vegetables, and one, hot tasting foods.

Four informants said that hot tasting foods (i.e. foods containing chili peppers) were bad for a pregnant woman; one considered dried and salted fish harmful "because of their fishy odor." One informant thought eggs were bad for a woman during pregnancy. Eggs were, however, the only food mentioned by anyone in Bang Chan as being good for pregnant women. The informant, a woman school teacher, said she ate them often anyway, hence did not alter her intake during pregnancy.

Diet During the Postpartum Rest Period.

Of the 42 mothers from whom we obtained information about the food they ate during the postpartum rest period, only 2 said they ate as usual. One of these said she believed that if a mother ate small amounts of many different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time. This woman worked outside the community and may not have acquired her belief about eating a variety of foods within the village. In any event, since her child died at five days of age, one would not expect this mother's eating behavior to have a liberalizing effect on the custom in

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1. Most of the pregnant women were interviewed toward the end of the rainy season when swamp cabbage and (2)phag (2)ka-(2)cheed, the most popular leafy vegetables, were available. From our subsequent experience with the family dietary survey, one would expect that when canals were low, green vegetables would be eaten infrequently by pregnant women as well as by other members of the family.

Bang Chan. The only other woman in this series who did not restrict her diet postpartum was the wife of a school teacher. She said that women were supposed to eat rice with salt or salt fish at this time but that she ate all kinds of food.

As a rule, a woman's diet was considerably curtailed during the postpartum rest period. Rice and fish were apparently the only foods considered safe by all of the mothers interviewed. About half ate fish, but over half of these ate salted fish only, and about one-fourth ate fresh fish only. The only other food eaten by half or more of the mothers was banana of the (4)nam-(4)wa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeaeng (1)liang, a broth made with dried fish and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some.

When asked what foods they considered good for a woman who had recently borne a child no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the postpartum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

Fear of illness from eating incompatible foods after childbirth was rather strongly expressed by many informants, even by some who knew of Chinese customs which were different from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home were not forbidden at the government Health and Maternity Center at Nisburi.

Diet During Lactation.

The term "diet during lactation" as used here refers to foods eaten when the mother had resumed her usual work following the postpartum rest period. The majority of nursing infants were under a year old when the records were obtained. All of the mothers ate rice everyday cooked in the usual way, and almost all had fresh, dried, or salted fish. About two-thirds had vegetables of some kind daily, but 6 women reported that vegetables of any kind were eaten only occasionally. Coconut, which as coconut milk is the basis for many curries, was used often. One nursing mother ate bananas daily, and about two-thirds of these women had bananas either occasionally or frequently. Only five women mentioned eating other fruits.

Three reported eating eggs daily,[1] and about two-thirds of the women had them either occasionally or frequently. Animal foods other than fish or eggs were eaten infrequently by most nursing women.

Our questions about ideas concerning foods during lactation did not uncover any firmly established traditional behavior. No food was considered harmful by a majority of informants. In response to the question as to foods which should not be eaten during lactation, however, 12 kinds of food and 4 attributes of food (sour, hot tasting, raw, fermented) were mentioned 37 times. Jackfruit, the item which occurred most frequently, was mentioned 8 times, corn, 3 times, swamp cabbage and pork, twice each; other items such as legumes, beef, poultry, egg, pineapple, and chico, once only. When asked if they disliked any foods at this time 4 women mentioned a dislike for vegetables. One mother said that cooked foods (in contrast to raw ones) were good for a lactating woman. Our question about foods craved during lactation brought little response.

To sum up, the mother's diet during pregnancy and lactation often approximated the usual diet in Bang Chan. A few women said they craved certain foods during pregnancy and some mentioned foods disliked at that time. A number of food items and attributes of food were considered by some informants to be undesirable during pregnancy and lactation, but no item was mentioned so frequently as to be considered tabooed. During the postpartum rest period, however, a greatly restricted diet was common. Mothers apparently had no idea of special dietary needs during pregnancy or lactation.

FEEDING PRACTICES FROM BIRTH TO TWO YEARS OF AGE

This description of feeding practices is based on 356 interviews concerning 57 infants and small children. The majority of them were visited from 5 to 7 times each. Since, insofar as possible, we saw the babies at 3-month intervals, changes in feeding practices will be described by 3-month periods or multiples thereof. If each visit to a child is considered as unity, the 8 age groups from birth to two years included from 17 to 41 children each with 6 of the age groups including more than 30 individuals. Thus the data obtained may be assumed to provide a reasonable picture of baby feeding practices in Bang Chan, 1952-54, and of significant deviations therefrom.

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1. This does not mean that the mother ate a whole egg at one meal. Frequently one or two eggs might be used to prepare food for the entire family.

but additions of rice water, coconut milk, and salt[1] were more common from 3 to 6 months. A few infants less than 6 months old were given rice from the family pot cooked in the usual manner.[2] No other foods were introduced before 6 months of age. 353

A majority of infants from 6 to 8 1/2 months[3] of age were given ordinary rice, although for some, excess water was not drained off and special mashed soupy rice was still given to others. Fishsoy, (4)nam (1)plaa, might be added for both salt and flavor. Several mothers said that when the baby had teeth he could begin to eat ordinary rice. At this time also the infant was given some other items which were considered as adult food (Table 2). A few were fed protein-rich foods, i.e. fresh, dried, or salted fish, egg, meat, or poultry, between the sixth and ninth months. One child in this age group was given banana other than (3)kluaj (4)nam-(4)wan (kind not specified), and four infants had fruit other than banana frequently or occasionally. Orange, mango, guava, roseapple, and rambutan were mentioned according to season. Some kinds of (2)kha-(5)nom, which included purchased crackers, biscuits, or cookies as well as some sweet items which we would call desserts,[4] were given also, at least occasionally, to many babies over 6 months of age.

Among infants from 9 to 11 1/2 months of age increasing use of protein-rich foods, primarily fish and egg, was noted. Fruits other than the small (4)nam-(4)wan banana and (2)kha-(5)nom were also given to more infants. A few were given vegetables before one year of age, but none had them daily (Table 3).

Diet During the Second Year of Life.

For most of these babies breast feeding was continued into the second year. By this time almost all were given ordinary rice, and more than half had fish daily with fresh fish being fed more often than dried or salted fish. A few babies between

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1. In Thailand rice is not salted during cooking. [263] (151)

2. See (3)khaav (3)suaj, glossary p. 51.

3. The nearest half month marked the dividing point between age groups. Thus an infant 8 months 20 days old would be considered as 8 1/2 months old and one 8 months 23 days old would be considered as 9 months old. [175]

4. Neither such (2)kha-(5)nom nor fruit were included in the usual family meals, but school children often bought them as snacks to eat at noon recess (Hauck et al., 1958; Hauck and Hanks, 1959). [242]

1 [see p. 19 - Analyst] 2 [see p. 20 - Analyst]

Table 2. Food Intake Other Than Milk of 32 Infants From 6 to 8 1/2 months Old.[1]

No. of Infants	No. of Food Items	Number of Infants Fed Food Items Other Than Milk					
		Rice	Banana	Other Fruit	Fish	Egg, Meat or Poultry	(2)Kha-(5)nom
1	0						
10	1	9					1
10	2	10	10				
4	3	4	4			3	1
3	4	3	2		3	2	2
1	5	1	1	1	1		1
3	6	3	3	3	3	3	3
Total 32	D[2]	29	9		3	4	2
	F	1	6	1	1	3	3
	O		3	3	3	1	3

1. The nearest half month marked the dividing point between age groups. Thus an infant 8 months 20 days old would be considered as 8 1/2 months old and one 8 months 23 days old would be considered as 9 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

[262] 12 and 14 1/2 months of age were given egg daily, and almost all had egg either frequently or occasionally. About half the babies of this age were fed poultry or meat occasionally, but neither of these items was common in the family diets observed in Bang Chan (Hauck et al., 1958; Hauck and Hanks, 1959). At this age only 1 of 41 babies was given green vegetables daily, and less than one-third of them had vegetables of any kind even occasionally (Table 4).

[255] [262] As the children grew older they had vegetables more frequently, so that between 15 and 20 1/2 months of age almost half of the children ate vegetables at least occasionally (Tables 5 - 8). A few two-year old children had never had green vegetables; for many, even at this age or older, vegetables of any kind were occasional rather than frequent items of diet.

[271] Of the 23 children between 21 and 24 1/2 months of age for whom we had records, 5 were still being breast fed, and one (the orphaned child) continued to receive imported cow's milk diluted with boiled water. All drank untreated canal or rain water according to the available supply. All were fed rice cooked in the usual manner, but one still had soupy undrained rice at times.

[See p. 20 - Hanks] [See p. 21-22 - Hanks]

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Table 5. Food Intake Other Than Rice of 11 Weanling Babies From 15 to 17 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(3)nom
1	2		1	1			
6	4		6	6	6		6
4	5		4	4	4	4	4
Total 11		D[2]	10	2	3	1	3
		F		5	7		3
		O	1	4		3	5

1. The nearest half month marked the dividing point between age groups. Thus an infant 17 months 20 days old would be considered as 17 1/2 months old and one 17 months 13 days old would be considered as 18 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

Table 6. Food Intake Other Than Milk and Rice of 30 Babies 15 to 17 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk and Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(3)nom
1	1		1				
1	2		1				1
3	3		3	3	1		2
12	4		12	12	12	1	11
13	5		13	13	13	13	13
Total 30		D[2]	23	2	2	1	10
		F	4	11	18	2	9
		O	3	15	8	11	8

1. See Footnote 1, Table 5.

2. See Footnote 2, Table 5.

Table 7. Food Intake Other Than Rice of 14 Weanling Babies From 18 to 20 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Rice				
		Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(3)nom
2	3	2		2		2
4	4	4	2	4	1	4
8	5	8	8	8	8	8
Total 14	D[2]	11	2	1	2	8
	F	3	6	8	1	3
	O		3	5	6	1

1. The nearest half month marked the dividing point between age groups. Thus an infant 20 months 20 days old would be considered as 20 1/2 months old and one 20 months 23 days old would be considered as 21 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

Table 8. Food Intake Other Than Milk and Rice of 18 Babies From 18 to 20 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk and Rice			
		Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(3)nom
3	3	3	2	1		3
9	4	9	9	9		9
6	5	6	6	6	6	6
Total 18	D[2]	14	1	3		7
	F	3	11	5		7
	O	1	5	8	6	4

1. See Footnote 1, Table 7.

2. See Footnote 2, Table 7.

Table 9. Food Intake Other Than Rice of 17 Weanling Babies From 21 to 24 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
6	4		6	6	6	1	5
11	5		11	11	11	11	11
Total		D[2]	16	1	2	3	7
17		F	1	8	6	1	3
		O		8	9	8	6

1. The nearest half month marked the dividing point between age groups. Thus an infant 24 months 20 days old would be considered as 24 1/2 months old and one 24 months 23 days old would be considered as 25 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

Table 10. Food Intake Other Than Milk and Rice of 6 Babies From 21 to 24 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk and Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
6	6		6	6	6	6	6
Total		D[2]	5				3
6		F	1	4	3		2
		O		2	3	6	1

1. See Footnote 1, Table 9.

2. See Footnote 2, Table 9.

Fish, fresh, dried, or salted, depending on the family fare, was a regular part of their diet (Tables 9, 10). One had egg daily, and 10, frequently; but for more than half of them egg, as well as meat or poultry, was an occasional item of diet. All were fed (2)kha-(5)now, and almost half had something in this class of foods daily. Only three had green or other vegetables daily and 5 never ate them. Bananas of the (4)nam-(4)waa variety were eaten by all, but only one had banana daily while more than half had them only occasionally. Four were sometimes given bananas other than (4)nam-(4)waa, the variety which was considered safe for infants and invalids. Two had never had other fruit, but most children of this age were occasionally given other seasonal fruit. The variety of foods other than milk given to these children did not appear to depend on whether or not they had been weaned (Tables 5 - 10).

Weaning.

Some of the children in this series had been weaned before our observations were started, and 19 had not been weaned when last visited. For 30 children the period of observation included weaning (Table 11), and in most cases enough records were obtained so that the effect, if any, of weaning on the weight curve could be ascertained.

Table 11. Age at Weaning for 37 Babies and Number for Whom Weight Records Before and After Weaning were Obtained, Bang Chan, 1952-54.

Approximate Age At Weaning (months)[1]	Number of Babies: Total	Number of Babies: Weighed Before And After Weaning
5	1	0
9	1	1
11	1	1
12	8	4
13 - 14	5	5
16 - 17	2	2
18 - 19	8	7
20 - 22	7	6
25	2	2
28	1	1
36	1	1
Total	37	30

1. Because of the method of choosing children for study, the majority of those observed were under two years of age. We have no basis for judging what proportion of children in Bang Chan were breast fed beyond two years of age.

862 In Bang Chan infants less than a year old were seldom weaned. Of 3 such cases we encountered, the mother of one was ill with tuberculosis, and the other two mothers were again pregnant. Common answers to the question, "When should a baby be weaned?", were: "When it is a year old", or "At 1 1/2 years", or "When the mother is pregnant again." Mothers commonly nursed one infant until 3 to 7 months pregnant with the next. More than half of the children who were nursed longer than 18 months had no younger sibling during the period of this study.

Of 32 mothers who described the weaning procedure, 13 painted the nipples with boraphed or other bitter substance (lime or aloe), but an equal number said they did nothing. Six mothers gave other food instead of breast milk. In 4 cases cow's milk[1] was given; in one, bananas and (2)kha-(5)nom; and in one instance the food substitute was not specified.

Weaning in Bang Chan usually meant the end of milk feeding, but 5 babies in this series were given cow's milk feedings after weaning. These included the infant who was weaned at 5 months because of the mother's illness and two others who were weaned because of a pregnancy. The child who had been given cow's milk when the mother was away vending continued to have cow's milk at night, after weaning.

Beliefs About Foods for Babies.

853 Foods "Good For" Or "Not Good For" Babies. - In addition to
855 asking what foods were given the baby, we asked mothers (or
762 other informants) what foods they considered "good for" or "not good for" the baby. Informants were not prompted by asking about specific foods. The most usual answer was that the informant did not know or did not consider any food either especially suitable or unsuitable. Only 6 informants mentioned foods considered good for the baby (Table 12).[2] One of these named 3 such foods: egg, fish, and vegetables.

A larger number of informants reported that one or more foods were not good for a baby, but in a majority of instances (30 of 50 replies) the informant did not mention any food in this category. In all, 15 foods and 2 characteristics of foods

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1. No fresh milk of any kind was available in Bang Chan. Water buffaloes were ordinarily not bred in the village, and use of buffalo milk was unheard of. Among the light refreshments which could be bought at village stores, however, were coffee with condensed milk and diluted canned milk. Storekeepers stocked imported canned and dried milk including some brands designed for infant feeding. Directions for use were not in Thai, however, and the preparations actually fed to infants were often diluted more than recommended.

2 [see p. 26 - hunlyst]

("hot tasting" and "hard") were mentioned 39 times (Table 13) with jackfruit and chico being mentioned in connection with the same baby at both 6 and 9 months of age.

Table 12. Foods Considered Good for Babies.

Food	Number of Informants	Age of Baby at Time of Inquiry (months)
Rice	3	3, 15, 36
Egg	2	6, 15
Fish	2	15, 18
Vegetables	1	15

There was no indication that any food was considered harmful by most mothers. Although the list of foods considered not good for babies was considerably longer than the list of foods considered good for them, the item which occurred most frequently, jackfruit, was mentioned by only 6 informants. Eggs, vegetables, and fish were considered by some as good for the baby and by others as harmful (Tables 12 and 13).

Table 13. Foods Considered Not Good for Babies.

Food	Number of Informants	Age of Baby at Time of Inquiry (months)
Jackfruit	6	5, 6 and 9[1], 11, 18, 21, 22
"Hot tasting" foods	6	12, 14, 15, 24, 24, 27
Chico	4	6 and 9[1], 11, 21, 22
Egg	3	7, 11, 27
Sugar	3	9, 11, 12
Banana (ordinary "fragrant" type)	2	21, 22
Hard things	2	6, 10
Glutinous rice	2	9, 11
Fish	1	9
Fresh fish	1	15
Vegetables	1	6
Mango	1	6
Raw banana	1	6
Corn	1	18
Guava	1	18
Orange	1	15
"Ice"[2]	1	36

1. Mentioned for same child at both 6 and 9 months.

2. Either a frozen syrup or syrup over shaved ice.

262 843 Reasons were seldom advanced for considering certain foods unsuitable for mothers or children. During pregnancy the hot-tasting foods, i.e. those made with chili, were said by one informant to injure the baby's complexion. When asked at what 262 855 age a child could have adult food, mothers might say at one or two years but often specified, without giving a reason, that 953 they could have anything but the "hot-tasting" foods (foods seasoned with chili). Two mothers said the child could have "hot tastes" at one year, whereas one said not until the child was 3 years old. A majority did not specifically mention hot tasting foods either to include or to exclude them.

853 A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby 1 or 2 months old ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana", (3)kluaj (5)hauaum[1], caused constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

953 The belief that eggs would cause dental caries and should 262 therefore be omitted from children's diets was expressed by the 853 mother in a poorly nourished family of low economic status. 855

862 Opinions varied as to when children could be given "adult food". This was often, but not always, the age considered appropriate for weaning. As the question was worded it apparently implied that the child "could eat food as prepared for adults in the family" and did not necessarily exclude breast feeding, since children who "could have adult food" might still be nursing. The age at which a child could have adult food was sometimes related to stage of maturity as "when he can sit", "when he has teeth", or "when he can say (1)plaa (fish)".

262 Traditional and Modern Concepts of Rice Versus "With-Rice" in the Diet. - Rice is not only the basis of the adult diet in Thailand, but it has traditionally been regarded as the strength giving food par excellence. A portion of Chutima's (1939) description of the "old system" of diet follows:

> "Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal.

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1. The type of banana most familiar to people in the U.S.A.

Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply." 262

Note that not only has rice been considered much more important as food than "with-rice"[1], but that the diet was more limited for children and young women than for men. The Food and Drug Division of the Ministry of Public Health in Thailand has been trying to encourage people to eat more "with-rice" and less rice. The few comments we heard in relation to rice versus "with-rice" illustrate both the old and the new ideas. One informant stated that only rice can make children fat and that the "hot tasting" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish and was weak. He refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk[2], expressed the opinion that the ancient belief was based on thrift. He said that thrifty people did not want to spend much on a baby, therefore, they said that if a child ate too much "with-rice" he would be potbellied but thin in the upper part of the body and that eating eggs would cause dental caries. This grandfather said that he believed the truth to be just the opposite, but that good things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice", one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (a fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

Summary of Infant Feeding Practices in Bang Chan with Some Suggestions for Improvement.

To sum up the information obtained on baby feeding in Bang Chan, breast feeding was the rule. Some babies were nursed for two years or longer although about two-thirds of those we observed through the weaning period had been weaned by 18 or 19 months of age. Aside from honey which was given with medicine or hot water to newborn babies for a few days only, crushed banana of the (4)nam-(4)waa variety was usually the earliest dietary supplement. By 3 months of age about half the infants were being given banana, sometimes crushed with rice. Between 853 [862]

1. In Thai the general term meaning "to eat" is translated literally "to eat rice." Food items are divided into two classes: rice and "with-rice." [862]

2. See Footnote, page 25.

§53 3 and 6 months soupy rice was a common addition to the infant's diet, and after the first teeth appeared many had rice from the family pot. Between 6 and 9 months, also, fish was given regularly to many babies and egg at least occasionally. Crackers, cookies, and various items designated as (2)kha-(5)nom were frequent additions at this age.

§63 §55 Seasonal fruit such as mango and orange was given to some infants from 6 months on, but most children had fruits other than the (4)nam-(4)waa banana infrequently even at two years of age. As the feeding of rice increased, banana was given less often, so that for the 2-year old child even banana was eaten only occasionally. A minority of babies were fed vegetables by one year of age, and some had not begun to eat them by two years. Only about half the children from 2 to 4 1/2 years old had vegetables frequently.

Avoidance of hot tastes, rather than reluctance to give vegetables, may have been responsible for late introduction of vegetables into the diet of many children. In Bang Chan vegetables were often combined with other foods, as in curries. They were usually added toward the end of the cooking time after the mixture had been seasoned. Vegetables from such a "hot dish" would not be offered to a small child unless the parents considered him old enough to eat "hot-tasting" foods. Among the mild "with-rice" dishes were vegetables panned with a small amount of fat and seasonings other than chili, as well as vegetables cooked in coconut milk or in water (Hauck et al., 1958; Hauck and Hanks, 1959). In this connection the suggestion of a Thai coworker that one might encourage eating more vegetables by discouraging the use of "hot" dishes seems promising, since a larger amount of mild than of "hot" "with-rice" food is eaten at one time. To promote more frequent, and earlier, feeding of vegetables to babies, one would need to encourage either more frequent preparation of mild "with-rice" dishes containing vegetables or special preparations of vegetables for the baby. The latter is rather impractical when foods are cooked one at a time over the same fire as in Bang Chan.

Perhaps one reason why most infants in Bang Chan had fish daily after 6 or 7 months of age is that in making curries fish was often cooked in a little fat or coconut milk before seasonings were added. Thus, a little fish could then be set aside for the baby before chili and other spices went into the pot. (Note, also, that rice and fish were the foods considered safe to eat during (2)juu (1)faj by all mothers interviewed). Changes in food preparation suggested for improvement of the family diet in general (Hauck, 1958) could automatically help to improve the feeding of young children who are gradually introduced to adult foods. At the same time, a better family diet would probably help to improve the quality and quantity of mother's milk, since during lactation mothers tended to eat as usual. In deciding whether the more effective approach would be through teaching

better nutrition for all family members or whether to concentrate on the feeding of children or other vulnerable groups, the values of the society should be considered. The importance of a suitable variety of food for health needs to be taught to adults as well as children in Bang Chan. The concept that good choice of food is important in pregnancy and lactation and for the health and growth of children seemed to be entirely absent. Since few believed certain foods to be harmful at these times, however, teaching how to choose foods for health should be easier in Bang Chan than it is in areas where positive taboos are common. 124 262

Behavior different from the traditional one may sometimes lead the way to changed practices among those who observe or hear about it. For this reason, in certain instances an informant who had ventured to deviate from the traditional practice has been identified in this record. Thus, we noted that in a number of ways the women school teachers and the wife of a man teacher deviated from the traditional behavior in Bang Chan. For example, a school teacher's wife used the hot ashes chamber after her fifth child rather than lying by the fire. She was one of two women informants who "ate all kinds of food" at this time when most women in the community restricted their diets very markedly. She did not consider taking the baby out into the sunshine harmful; indeed, she believed it would make the child stronger. This same mother was 1 of 4 in our series who had taken the baby to be vaccinated against smallpox. She and three women school teachers were among those who continued to give their babies boiled water to drink much longer than was customary in Bang Chan. The one person who suggested a specific food (eggs) as being good for a woman to eat during pregnancy was a school teacher. The two women who planned to go to the Minburi Health Center for delivery were school teachers. For lack of time after labor began they did not carry out their plans; but the fact that they intended to do, by choice, what was usually the last resort when labor proved long or difficult, may be significant. 121 183 178

Along with these departures from traditional ways and acceptance of some "modern" practices, the same persons might cling to other sorts of traditional behavior. The wife of a school teacher for example, though she thought that taking the baby into the sunshine might be favorable rather than harmful, said that if the baby were to be out very long she would cover its head with a beret to avoid bringing "cold" into the baby. This same mother took her child to the Minburi Health Center for treatment for a skin infection, but when the condition did not clear up immediately after modern therapy was begun, she took the child to a traditional doctor who prepared a decoction of herbs with which she treated the baby. 143 278

The behavior of respected persons, such as some of the school teachers, should be influential in helping to bring about

clear evidence of a seasonal effect. If weight gain in Thai infants is related to season, this could be better defined by weighing groups of children at monthly intervals and determining when or if changes in rate of gain occur. 145

Although our records were not made for the purpose of correlating food intake with weight gain, and no quantitative information was obtained on the diets of mothers and babies, we attempted to see if any obvious relation existed between the variety of food eaten by the mother or the child and the child's growth. For this purpose, case studies were made of 7 infants whose records from birth onward were fairly complete. The age at last observation was from about 14 to 18 months. Four of these children had gained at each weighing and weighed more at one year of age than the average infant observed by Dr. Montri (1939). Three were chosen because they had lost weight or failed to gain at some time during the period of observation and weighed less at one year of age than the average infant observed by Dr. Montri. Infants of both sexes were included in each group. No illnesses or abnormalities were recorded in the clinical histories of any of these babies or their mothers. No evidence was obtained from the qualitative food records as to why some infants gained consistently and at a fairly "normal" rate, whereas others gained relatively slowly and failed to gain or lost weight at times (Smith, 1958). 145 262 [125]

Quantitative food records might have provided evidence on this point but our observations were inadequate for this purpose. Such quantitative records should include estimations of the amount of mother's milk obtained by the infants, based on the baby's weight before and after nursing, as well as records of supplementary food given. Analysis of the mother's milk, particularly for the content of the water soluble vitamins which are influenced by the mother's diet, should also help to shed light on the cause or causes of the common failure to gain weight among older infants and small children in Bang Chan. No cases of beriberi occurred among the infants we observed, but in two instances siblings had died of infantile beriberi. [164] [165]

Evidence of protein malnutrition has not been commonly recognized in rice eating areas, but one must consider the possibility that these children may be in a state analagous to pre-kwashiorkor. Development of the clinically recognizable protein deficiency disease may be forestalled when the child learned to feed himself and eats more liberally of rice with some fish and egg. Of the 54 children with kwashiorkor observed by Metrasiri and Metrasiri (1955) in Bangkok, many were weaned earlier than was usual in Bang Chan. Most of them, however, had been breast fed, and 4 were still being breast fed when the disease was diagnosed. 121 [162] [171]

b. IF YES: What various things do you do with the polishings? 125

1.	DA as will not used	3
2.	Used for feed	99
3.	Used for food	—
4.	They are sold	3
5.	Other, specify_____	3
6.	Unascertainable	2

[243]

c. ASK ALL: During this past year, did your family eat home-milled rice entirely, in major part, in minor part, or not at all? [262]

7.	Entirely	5
8.	For major part	51
9.	For minor part	78
X.	Not at all	199

20.a. As you know, some people have had plenty of chance to learn to read, while others have hardly had any chance. How about you yourself? Are you able to read the Thai language, or haven't you ever had the opportunity to do any reading? [212]

1.	Yes, can read	224
2.	No	109

b. IF R CAN READ: Would you say it is hard for you to read, or easy, or about medium?

3.	Hard	15
4.	Easy	85
5.	Medium	124
6.	Unascertainable	—

c. ASK ALL: Now how about writing? How is it with you yourself? Are you able to write Thai, or haven't you ever had the opportunity to do any writing?

7.	Yes, can write	227
8.	No	106

d. IF R CAN WRITE: How much writing do you do? Are you able to sign your name, or can you also write a letter?

9.	Sign name only	63
X.	Can write letter	163
O.	Unascertainable	1

21.a. Suppose there were a factory in Minburi paying 20 ticals per day. Would you apply for a job to work in this factory? [464]

7.	Yes	162
8.	No	159
9.	Unascertainable	12

b. Do you think that someone else from your house would apply for a job there?

X.	Yes	105
Y.	No	211
O.	Unascertainable	17

235 was slightly higher than that of chickens, averaging 155 eggs per laying duck.

178 231 Hogs: In 1949, two families were raising hogs which according to our observation did not seem to be well fed. When we returned to the village in 1952, not a single hog remained in Bangchan.

Fish

262 443 434 After rice, fish (and other marine animals) are by far the most important ingredient in the diet of Bangchan. More fish are bought from the outside than the very small amount that is exported from the village mainly by one or two very poor families who have availed themselves of this means of augmenting their income.

221 226 The villagers' annual cycle for fish-taking varies somewhat with the particular method used, and with the annual rice and ceremonial cycles: yet the maturation cycle of the principal types of fish is also a factor, and one which tends to give an overall orderliness to the annual cycle for fish in general. There is no time in the year when at least some fish are not available, nor is there any time in the year, even the busiest, when the family does not want fresh fish for its menu. For this reason, there is fishing the year round, at least in the form of the housewives simply setting nets in the canal and then tending them according to some schedule or whenever the noise of caught fish sloshing about in the water is heard. When a lull from the pressure of

443 she wanted to spend more time collecting debts."

It should be noted that A's brief duration of peddling started in the harvesting season. During this time the village cash supply was high, resulting in demand for such a delicacy as pork which normally constituted a negligible fraction of the diet of Bangchan people. This is a good business period for the peddlers. Another good business period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this latter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

Five families were classified as investors in 1953. All these families lived on rents from land, interest on loans, and income from speculative sources such as buying paddy when the price was low and selling it at high prices. Actually, most of these five families were not among large land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

235 433 434 Of the 46 families covered by the survey, 23 or one-half raised ducks with an average annual production of 155 eggs per duck, and an average of 11.7 ducks per family raising them. Egg production for each of these families thus averaged about 1,200 per year. Of these, 1,350 were consumed by the family and 450 sold at the same price as chicken eggs. It was estimated, then, that from duck eggs alone, the average cash income in 1949 was about 150 baht per family raising ducks.

226 262 433 [434] After rice, fish were by far the most important ingredient in the diet of Bangchan. In contrast to poultry, however, fish did not constitute a source of cash income of the villagers. As a matter of fact, more fish were bought from the outside than the negligible amount that was exported from the village mainly by one or two very poor families who had availed themselves of this means of augmenting [435] their income. From our consumption study of 106 families in 1953, it was found that of an aggregate amount of 17,786 kilograms consumed by these families in the previous year 16,027 kilograms were caught by the families while 1,759 kilograms were bought at five baht per kilogram. The rate of fish production may thus be estimated at 151 kilograms annually per family, or 44,998 kilograms for the entire village.

262 244 433 The same consumption study shows that the 106 families consumed in 1953 a total of 18,402 kilograms of vegetables all of which were produced or acquired by the families.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

On the other hand, there are scores of items that have to be bought for daily consumption. These are: (a) Food -- fish, fish sauce, shrimp paste, meat, coconut, onions, garlic, dried chili, curry essence, limes, tamarind, palm sugar, white sugar, salt, and cookies: (b) Stimulant -- dried areca, betel, lime, tobacco, tobacco binder, and liquor; (c) Clothing; (d) Medicine; (e) Soap; (f) Fuel -- Kerosine, matches, charcoal, and fire wood. The list includes only standard items appearing on our check list. Actually, there are more of such items as coffee, tea, lemonade, coca-cola, and pepsi-cola. Articles that are bought but do not appear on the check list for ordinary household expenses for certain technical reasons which will be discussed in the section on consumption later in this chapter are building materials, machinery, farm equipment, furniture and household utensils.

The Operator's Remuneration and Measures of Success

From almost the beginning of the study of farm management in the United States, much effort has been given to measuring the success of farming businesses, or of farm-family undertakings or enterprises, and then of correlating various factors with these, such as size of business, yields per acre or per animal, or work-efficiency measured perhaps as crop acres per man or per horse or per tractor, with a view to discovering some general farm management principles or rules for a farmer or farm family to follow in becoming more successful. Black, Clawson, Sayre and Wilcox give the

511 expenses (Table 53) and the Thai concept of food taking is somewhat different from the Western concept, an explanation of the food habit of Bangchan residents, which in no way differs from that of Thai farmers elsewhere in the country, is perhaps necessary at this juncture.

262 264 By far the most important single dietary item of the Thai is khao or rice, which is the basis for every meal. The general term for "eat" is kin khao which has the literal meaning "to eat rice". Other dietary items are considered as embellishments and are thus called keb-khao (lit., with-rice). Typically, the "with-rice" items contain high seasoning in the form of chili and various hot curries. It is inconceivable for a Thai to eat "with-rice" alone without any rice, for not only the "real food" would then be missing but also there would be nothing to neutralize the highly flavored taste of the "with-rice". Actually, "with-rice" and rice are fed to the mouth in one lump with spoon or hand as the case may be. Eating "with-rice" alone would be just like eating butter without any bread. Moreover, "with-rice" are relatively more expensive than rice. Since the general idea is that they serve only to induce the in-take of rice, for sheer economic reason they should be consumed as little as possible so long as the required amount of rice in-take can be maintained. Accordingly, proper proportion of "with-rice" to rice in each helping has become one of the strictly observed table manners. This is easily noticeable, for only rice is served individually when the

262 family sit at the table while "with-rice" are placed at
264 the center and each person must partake of a small bit of these, just enough to properly go with a spoonful of rice taken each time. This table etiquette is generally observed throughout the country by all classes of people. A story had it that a Thai student of an aristocrat family wrote home objecting to the proposed marriage between his sister and one of his Thai friends in America. One count against the man was that he had been observed to have taken too much "with-rice" while dining out at a Chinese restaurant in New York!

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182 Among the factors effecting variability of the rate of consumption of various items of goods, the following may be mentioned:

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182 a. Relative price of the food in relation to its ability to mollify hunger when taken with rice. When Bangchan farmers were questioned why they did not consume eggs produced at home but instead sold them and bought the inferior plateo fish (Rastrelliger chrysoronus), the answer was that an egg barely induced them to take a plate of rice whereas one plateo fish bought with half the money obtained from the sale of an egg could induce them to take three or four plates of rice and thus satisfying a hearty meal.

511
182 b. Homogeneity of quantitative need for certain products like rice, fish, clothing, tobacco, and garlic. Consumption per consuming unit of these goods has been observed to be more or less constant regardless of the prices and the family's purchasing power.

161
434 among these contributing factors is population pressure.

Disguised unemployment in the case of farm operators
243
161 and their family workers and actual unemployment in case of
434 farm laborers indicates a condition of over-population in
464 Bangchan in the sense that a certain part of its population can be removed without materially reducing total production in the area.

178 In view of a continually decreasing supply of fish,
226 it may be said that the situation has reached the point where
433 it not only affects the per capita income of Bangchan resi-
262 dents but actually exerts pressure on means of subsistence. There are several indications of decreasing supply of fish and other marine animals in the village. First, it is the consensus of opinion gathered by our daily informal talk with villagers non of whom was found to hold a contrary view. Second, a passage in our 1948 log, "X is very lazy. Everybody here in Bangchan catches shrimps and makes his own shrimp paste. He alone does not catch shrimps even though he is among the poorest," indicates that purchase of shrimp paste was in 1948 an exception rather than a rule. In 1952, however, it was found that a total of 22.7 kilograms of shrimp paste consumed in a year by an average family, 6 kilograms, or more than a quarter, was purchased. In this latter year, 83 baht worth of fish and 54 baht of fish sauce were purchased by an average family in addition to shrimp paste as against negligible amounts for the same items in 1948 (we did not conduct a systematic consumption

7: Janiekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

178 survey in 1948, the "negligible amounts" comes from daily
226 talk with Bangchan residents). Third, several informants
433 testified that the amount of fish caught from the same pool
[242] by the draining method had been decreasing each year. One of these gave the following comparative figures for fish caught from the same pool on April 8 - 10, 1953 and on approximately the same time of the year in 1952 as follows:

Kind of Fish	Number Caught in 1953	Number Caught in 1952
Pla Salid	400	800
Pla Salad	100	200
Pla Kasong	50	120
Pla Chado	6	15
Pla Krai	1	—
Pla Doog	50	50
Pla Mor	20	25
Pla Chorn	150	300
Large turtle	5	3
Small turtle	7	3
Eel	5	5

Others also gave the 1953 figures, but could not itemize the 1952 figures; they only said that they "got much more than this year."

226 There had been until 1952 no positive program for
654 fish conservation; only negative measures have been taken, such as the Ministry of Agriculture's ordinance against fishing by certain methods at certain times of the year. In 1952, however, the Government began an extensive program of introducing a new variety of fish, Pla Mor Thed, into rural areas of Thailand. This new variety has been claimed to grow faster than the native varieties. While this program cannot as yet be appraised, a point of observation may be

846 789 782 Now that the fire was going nicely and Dûan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sâi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dûan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaichiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dûan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

846 [757] [853] As Dûan was resting quietly, Sâi made three "taping fruits" (lûk prakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dûan's legs to cure the birth wound (phlêe). The other two were set aside for use on subsequent days. Sâi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dûan, on the side away from the fire.

787 827 With satisfaction of a job well done, Sâi and Lek sat together for a quiet chew of betel. "Lek," said Sâi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that best

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[273] [262] 36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

[263] [776] 37. The deities addressed were mâe phra phlêeng and mâe phra phai. Another Pali-Thai magic formula to control fire was: "Phra Môk Khan Lê Nô will extinguish the fire from hell, na mô phut thâ ya." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mô...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Texter 1960:483-485).

Killing
fish was apparently regarded more lightly by many Buddhists than killing of larger animals, but fishing on (1)wan (4)phra, the weekly holy day, was forbidden. Fish were caught from the canal with nets, traps, spears and hooks. Some were trapped in trenches in the rice fields. Techniques varied with the varieties of fish mature and plentiful at different seasons.[1] Moreover, every house had a fish pond. It was usually the hole from which earth had been removed for mounding the house site, and was connected by a ditch to the canal. Fish were lured from the canal into the pond by clearing it of injurious undergrowth, planting appropriate fish-feeding plants, of

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Smaller fish were preserved as fermented fish. The fish with bones left in, were salted overnight. This product was called (1)plaa (1)raa. For fermented fish to be used as seasoning, in various dishes, the liquid was drained off, then the fish were washed and mixed with salt and specially prepared rice. This had been soaked overnight, fried and pounded. The mixture was allowed to ferment in a small jar for from 2 weeks to 2 or 3 months, depending on the product desired. Large bones were removed by putting the product through a colander before use. Fermented fish had the advantage that it could be eaten without further preparation, and the flavor was generally liked.

Small shrimp, which were caught in quantity during only about 3 weeks in February, were made into shrimp paste as follows: the shrimp were washed, mixed with salt and allowed to stand overnight. The liquid was drained off, and the shrimp were spread out on trays and exposed to the sun for a day or so. Larger ones might then be beaten to loosen the shells, which could be winnowed away. For very small shrimp, this step was omitted. The shrimp were then pounded thoroughly in a mortar, and stored in a jar for about a month before use. Very small fish were sometimes made into fish paste in the same way. The yield was about 2 kg. of the tannish or grayish colored shrimp paste from 4 baskets (4/5 tang) of shrimp. Shrimp paste or (2)ka-(2)pi was an essential ingredient of Thai hot dishes.

The liquid which was drained off from the mixture of fish or shrimp and salt in the first stage of preparing fermented fish or shrimp paste was used by some villagers to prepare (4)nam (1)plaa or fishsoy. The liquid was boiled with certain green leaves such as mango leaves, onion, garlic and salt for from 30 minutes to an hour, then it was strained. The resulting red-brown liquid was bottled and was ready for use as a condiment.

1. Sharp et al. (1953, pp. 185-196) described some common fishing techniques and listed 32 varieties of fish known to be found in Bang Chan in 1948-49.

listed on 10 or more of the 24-hour dietary records obtained. For items which were major ingredients, the number of records on which the item appeared, is given.[1] Thus (1)plaa (1)thuu, which is bought by residents of Bang Chan during the busy work seasons, was used more often than any other single variety of fish named. Of the varieties caught locally, climbing perch, serpentheed, and silurus were most commonly used. Fermented fish, not included in the calendar, appeared on 53 records, and fish with kind not specified, on 160. Eggs were used more often than any animal food other than fish. Among green vegetables, swamp cabbage and (2)phag (2)ka-(2)cheed were commonly used. Bamboo shoots and lotus stalks were prominent among the non-leafy vegetables. Bananas which are grown in every garden and are available all year round were much the most common fruit, although other seasonal fruits were eaten more often in 6 of the 9 months in which school children submitted records.

Some idea may be obtained of peak seasons for use of various common foods by noting the months designed by X. Thus in January and May, serpentheads were listed on about 1/3 of the records, and were frequently served at more than one meal. Sweet potato, usually fried and eaten as a snack, was listed on 35 of 52 records obtained from school children in September. Flowers of the West India pea tree were listed on 10 of 55 records in October, and 12 of 88 in November, with occasional mention on records obtained in 4 other months.

Fruits were eaten much less often than one might expect in a tropical area where many varieties are available and fruit can be grown the year round. They were most often eaten by children as snacks, although pineapple and papaya were usually, and banana occasionally cooked in "with-rice" dishes such as curry. In September, fruit was included in the diets of less than 1/3 of the children. An average of more than one serving of fruit per child per day was recorded in 5 months only, May, June, October, November and February. In May, when (4)ma-(1)faj or rambai was in season 46 of 76 children reported having eaten it. Pineapple, listed by 35 of 61 children in June, was most often served in curry at one or more of the family meals. In October, oranges were eaten by 30 of 55 children who submitted records. Bananas (mostly of the (4)nam-(4)waa variety) topped the list in November and February.

Items mentioned on fewer than 10 records, and hence arbitrarily omitted from the chart, are worth noting as they

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1. No figures are given for sweet basil, garlic, onions, chili or limes, which were so often used in small amounts as seasoning that the count obtained would give no clear idea of the extent of their use. Some common spice plants were not mentioned on the records.

Average intakes of riboflavin were estimated to be about a third, or less, of the allowances. Estimates of calcium intake were, on the average, only 20% of the allowance for Group A, and 30% of that for Group B. Although the calcium allowances were thought to be conservative, estimated requirements based on calcium balance experiments are believed by some investigators to reflect usual intake rather than need, and the extent to which man may adapt to a low calcium diet is still undetermined. Among residents of Bang Chan, no evidence was noted other than short stature and small bones, which might suggest a calcium deficiency.

The vitamin A value of diets of both Groups A and B appeared to be low. Clinical signs possibly associated with vitamin A deficiency, i.e. xerosis and phrynoderma, occurred among residents of Bang Chan (Hauck, 1956), and as would be expected from the method of selection of the two groups, such skin signs were more prominent among members of Group A than Group B. On this basis one would expect the vitamin A intake of Group A to be less than that of Group B, whereas the reverse appeared to be the case on the survey days; but the higher estimated vitamin A value for the diets of Group A than Group B may not represent a real and consistent difference. The yellow (2)sa-(5)noo flowers, for which no nutrient values were found, were used rather liberally by some families in Group B at one season and may have contributed vitamin A value. Moreover, owing to unavoidable changes in the plan for alternating visits to the two groups of families, those in Group B were visited more often when the level of water in the canals was low and the leafy water plants were not available. The unusual intake of a large amount of yellow sweet potato by one family in Group A on one survey day may also have tended to distort the picture. Families in Group A, however, used substantial amounts of sweet basil leaves, whereas in Group B, this herb was used for seasoning only.

The estimated amount of thiamine available per capita, before cooking, was 73% of the estimated allowance for Group A and 79% for Group B. Since over four-fifths of the thiamine content of the foods used by each group came from rice, and the thiamine loss when rice is cooked as it was in Bang Chan has been estimated as 75% or more (Tuangraksatve and Srisukh, 1955) the actual per capita intake of thiamine must have been below the value of 0.23 mg. per 1000 calories which the Food and Nutrition Board, National Research Council (1953) considered to be the minimal requirement for adults. According to Nicholls (1951, p. 87), a ratio of Thiamine: Non-fat Calories of 0.3 - 0.35 is borderline and too low, and ratios below 0.3 are associated with beriberi-producing diets. That the diets of some of these people, as eaten, were in fact dangerously low in thiamine, is attested by the occurrence of beriberi and history of beriberi among them. Of the 15 persons, 20 years of age or older in Group A, 7 had knee jerk

[246] Eggs were eaten occasionally; pork and beef were bought in-
[252] frequently and in small amounts by some families. One family only, ate chicken; other meats eaten on survey days included buffalo, frogs, eels and field rats.

Vegetables. - More than three quarters of the estimated vitamin A value of these diets was provided by green and leafy vegetables, although the pale yellow sweet potatoes, eaten in quantity by one family in Group A increased the vitamin A from other vegetables substantially. The greater use of swamp cabbage, a wild aquatic plant by families in Group A, may be explained by the fact that more visits to this group occurred when the water level in the canals was relatively high. Families in Group B, however, used a greater variety [263] of greens, especially leaves from a number of trees. For families in Group A, sweet basil contributed substantially to the vitamin A and riboflavin content of the diets, whereas families in Group B used this herb in trivial amounts for flavoring. No nutrient values were found for lemongrass, which was used regularly in substantial amounts for flavoring. Persons in Group B got a greater percentage of their calcium and iron from green than from other vegetables, whereas those in Group A obtained as much or more of these nutrients from other vegetables.

Nearly 3/5 of the ascorbic acid intake of Group A was provided by other vegetables as compared to 1/4 from green vegetables, whereas Group B obtained about equal amounts of ascorbic acid from green and other vegetables. Egg plants[1], calabash and white radish were most commonly used in quantity. Onion, garlic and dried chilies were used daily, but in smaller amounts. With the exception of one family which ate a large amount of sweet potato on one survey day, consumption of tubers, i.e. sweet potato and taro, was small and usually in the form of snacks eaten by children. Legumes were seldom eaten in Bang Chan. Two families had bean sprouts on survey days, and children occasionally ate mung beans and peanuts as snacks.

Fruit. - Although technically a fruit, the coconut does not resemble fruits as a group in its contributions to the diet, hence coconut and other fruits are treated here as two sub-groups. Coconut meat, and its products, coconut milk and coconut cream (Appendix C, p.128), were used almost daily in the participating households. These coconut products contributed about 1/5 of the total fat of the diet, for Group A,

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[244] 1. Many varieties of eggplant are grown in Thailand.
[252] Three were used on survey days: the pea-size variety which was frequently put in hot curry, a round type which was served raw with chili sauce and a long variety which was either panned with a small amount of fat or used in curry.

more than fats and oils as such.

Bananas were grown by all families that participated in the study, but were eaten only occasionally, primarily as snacks. Tamarind and lime were used often in small amounts in making sour curry and chili sauce, and bergamot rind was used for seasoning. Papaya and mango, both of which are good sources of vitamin A and C, were each eaten once only during the survey. The green papaya was used in curry. Fruits are relatively abundant in Thailand, the year round, yet fruit made minor contributions to the diets of families studied in Bang Chan.

Fats and oils. - Fats were used in small amounts to pan fish, meat, eggs and vegetables, and provided about 1/7 of the total fat in the diet of Group A, and 2/7 for Group B. Coconut oil, which was less expensive than pork fat, was more often used in Group A.

Sugar. - Palm sugar was used in small amounts in the preparation of many "with-rice" dishes, and occasionally in snacks, i.e. guava dipped in a mixture of sugar, salt, chili, mung beans cooked in palm syrup and the like. The amounts used were small, and the contribution to nutritive value was slight. By Western standards, the consumption of sugar in Bang Chan was almost negligible.

Spices. - Spices were commonly used in food preparation, particularly in hot dishes (i.e. those made with chilies) but little information on their nutritive value is available.

Alcoholic beverages. - In the families surveyed, all men except the elderly father in Household 21 drank occasionally, but most of the women did not. The husbands in Households 12 and 67 drank heavily at times. No estimate can be made of the contribution of alcoholic beverages to caloric intake in these households.

Summary of Nutrient Contributions of Foods Commonly Eaten in Two Groups of Households. - The contribution in terms of calories and nutrients of certain foods used by 25% or more of the families studied, i.e. by 3 or more of the families on at least one survey day is shown in Table 13. Items selected for inclusion in this table are those which either made significant contributions to the nutrient content of the diets of Groups A and B respectively, or were major items in terms of amounts used or frequency of use. For certain items used frequently for seasoning, information on nutritive value was too scant to warrant inclusion in this table. Figures given are for average consumption per capita per day, based on all persons in the specified groups, and all survey days. For items used by all or most families every day, such as rice, fresh fish, chili, coconut products, and sugar, the figures represent approximately the usual daily per capita consumption.

but additions of rice water, coconut milk, and salt[1] were more common from 3 to 6 months. A few infants less than 6 months old were given rice from the family pot cooked in the usual manner.[2] No other foods were introduced before 6 months of age.

A majority of infants from 6 to 8 1/2 months[3] of age were given ordinary rice, although for some, excess water was not drained off and special mashed soupy rice was still given to others. Fishsoy, (4)nam (1)plaa, might be added for both salt and flavor. Several mothers said that when the baby had teeth he could begin to eat ordinary rice. At this time also the infant was given some other items which were considered as adult food (Table 2).[4] A few were fed protein-rich foods, i.e. fresh, dried, or salted fish, egg, meat, or poultry, between the sixth and ninth months. One child in this age group was given banana other than (3)kluaj (4)nam-(4)wan (kind not specified), and four infants had fruit other than banana frequently or occasionally. Orange, mango, guava, rose-apple, and rambutan were mentioned according to seasons. Some kinds of (2)kha-(5)nom, which included purchased crackers, biscuits, or cookies as well as some sweet items which we would call desserts,[4] were given also, at least occasionally, to many babies over 6 months of age.

Among infants from 9 to 11 1/2 months of age increasing use of protein-rich foods, principally fish and egg, was noted. Fruits other than the small (4)nam-(4)wan banana and (3)kha-(5)nom were also given to more infants. A few were given vegetables before one year of age, but none had them daily (Table 3).

Diet During the Second Year of Life.

For most of these babies breast feeding was continued into the second year. By this time almost all were given ordinary rice, and more than half had fish daily with fresh fish being fed more often than dried or salted fish. A few babies between

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1. In Thailand rice is not salted during cooking.

2. See (3)khaav (5)suaj, glossary p. 51.

3. The nearest half month marked the dividing point between age groups. Thus an infant 8 months 20 days old would be considered as 8 1/2 months old and one 8 months 23 days old would be considered as 9 months old.

4. Neither such (2)kha-(5)nom nor fruit were included in the usual family meals, but school children often bought them as snacks to eat at noon recess (Hauck et al., 1956; Hauck and Hanks, 1959).

[1] [see p. 19- Analyst] [3] [see p. 20- Analyst]

853 3 and 6 months soupy rice was a common addition to the infant's diet, and after the first teeth appeared many had rice from the family pot. Between 6 and 9 months, also, fish was given regularly to many babies and egg at least occasionally. Crackers, cookies, and various items designated as (2)kha-(5)nom were frequent additions at this age.

863 855 262 Seasonal fruit such as mango and orange was given to some infants from 6 months on, but most children had fruits other than the (4)nam-(4)waa banana infrequently even at two years of age. As the feeding of rice increased, banana was given less often, so that for the 2-year old child even banana was eaten only occasionally. A minority of babies were fed vegetables by one year of age, and some had not begun to eat them by two years. Only about half the children from 2 to 4 1/2 years old had vegetables frequently.

Avoidance of hot tastes, rather than reluctance to give vegetables, may have been responsible for late introduction of vegetables into the diet of many children. In Bang Chan vege- [252] tables were often combined with other foods, as in curries. They were usually added toward the end of the cooking time after the mixture had been seasoned. Vegetables from such a "hot dish" would not be offered to a small child unless the parents considered him old enough to eat "hot-tasting" foods. Among the mild "with-rice" dishes were vegetables panned with a small amount of fat and seasonings other than chili, as well as vegetables cooked in coconut milk or in water (Hauck et al., 1958; Hauck and Banks, 1959). In this connection the suggestion of a Thai co-worker that one might encourage eating more vegetables by discouraging the use of "hot" dishes seems promising, since a larger amount of mild than of "hot" "with-rice" food is eaten at one time. To promote more frequent, and earlier, feeding of vegetables to babies, one would need to encourage either more frequent preparation of mild "with-rice" dishes containing vegetables or special preparations of vegetables for the baby. The latter is rather impractical when foods are cooked one at a time over the same fire as in Bang Chan.

[252] [261] Perhaps one reason why most infants in Bang Chan had fish daily after 6 or 7 months of age is that in making curries fish was often cooked in a little fat or coconut milk before seasonings were added. Thus, a little fish could then be set aside for the baby before chili and other spices went into the pot. (Note, also, that rice and fish were the foods considered safe to eat 124 during (2)juu (1)faj by all mothers interviewed). Changes in 242 food preparation suggested for improvement of the family diet in general (Hauck, 1958) could automatically help to improve the feeding of young children who are gradually introduced to adult foods. At the same time, a better family diet would probably help to improve the quality and quantity of mother's milk, since during lactation mothers tended to eat as usual. In deciding whether the more effective approach would be through teaching

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

431
511 On the other hand, there are scores of items that have to be bought for daily consumption. These are:
[262] (a) Food -- fish, fish sauce, shrimp paste, meat, coconut,
[263] onions, garlic, dried chili, curry essence, limes, tamarind,
[273] palm sugar, white sugar, salt, and cookies: (b) Stimulant --
[276] dried areca, betel, lime, tobacco, tobacco binder, and
[372] liquor; (c) Clothing; (d) Medicine; (e) Soap; (f) Fuel --
[515] Kerosine, matches, charcoal, and fire wood. The list includes only standard items appearing on our check list. Actually, there are more of such items as coffee, tea, lemon-
* [128] ade, coca-cola, and pepsi-cola. Articles that are bought
[272] but do not appear on the check list for ordinary household expenses for certain technical reasons which will be discussed in the section on consumption later in this chapter are building materials, machinery, farm equipment, furniture and household utensils.

000 The Operator's Remuneration and Measures of Success

From almost the beginning of the study of farm management in the United States, much effort has been given to measuring the success of farming businesses, or of farm-family undertakings or enterprises, and then of correlating various factors with these, such as size of business, yields per acre or per animal, or work-efficiency measured perhaps as crop acres per man or per horse or per tractor, with a view to discovering some general farm management principles or rules for a farmer or farm family to follow in becoming more successful. Black, Clawson, Sayre and Wilcox give the

562 delivery, "her blood was purified to a white color to become
827 the milk of the breast."[8] Nursing a child was the essence
853 of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 In a wider context, not only all their household members
462 but people anywhere were the objects of women's nurture:
252 women were in charge of the cooking even if occasionally
224 helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor household, short rationing daily was probable (Hauck, et al.:35,[9]). One old lady expressed deep satisfaction that she "did not feel hungry
182 any more." She construed this as proof that she had ample
431 merit, but it also meant that she was a great donor who gave
776 continuously and took little. Women usually offered the early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When
593 age pushed women past their mature capacities, they returned
373 to the status of recipients. A son said of his senile
888 mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 A desire to give tender care and nourishment was deemed
857 inborn in all women. Although sex was not strongly
291 differentiated in babyhood,[9] by age 3 a hard-to-handle
593 skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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822 [8]. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phûm, and thaw khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

856 [9]. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:129).

SUMMARY

A general description is given of conditions in a Siamese rice village, 1952-54, as they relate to food supply and food habits. Activities at various seasons of the year are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

Food was mostly home produced and an important factor in the standard of living was the number of productive hands available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods were used. Nearly all of the families in Bang Chan raised chickens, and some raised ducks, but about 3/5 of all eggs produced were sold. Every family had some sort of kitchen garden, including banana trees and other plants, but spices and chili were much more commonly grown than vegetables and fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, coconut, palm sugar and small amounts of vegetables.

Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

Preparation of some typical dishes, meal service and techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

443 needles. Their prices were higher than in Minburi or Bangkok, but their service was such a convenience that many people rarely went to town. Some adults in Bang Chan had never been to Bangkok though almost all had visited Minburi, about 3 [431] miles from the temple. Venders often extended credit, and also accepted items such as fresh fish, fruit, and eggs on a barter basis, thus providing an outlet for small amounts of home products. When the subsidiary canals were dry, however, venders could not get to some parts of the village.

Home Sites and Houses

General Arrangement

361 Since the canals provided the chief means of local
487 transportation for much of the year, and also supplied water for many household uses, houses were built near the canal, usually within sight of a neighbor's. Home sites were mounded up to a level of two or three feet above that of the fields, but even so, water might cover the mound at the peak of the rainy season. Old wooden houses were set in a grove of bamboo, bananas and other fruit trees and vines, occa-
349 sionally betel and coconut palms. Nearby might be a shed for the water buffalo which were the draught animals used in farming. Rarely one saw a walled privy.[1] On the same mound might be a cottage built by parents for married children or by an affluent farmer for a hired hand. In this case, the threshing floor, firewood from trees on the mound, and area
342 for kitchen garden would be shared. Many houses were built on stilts to avoid flooding when the water level was high. If the house was elevated sufficiently, the area underneath provided a relatively cool shelter during the hot season for the buffalo, and even for family members for some of their daytime activities.

Depending on the resources of the family, houses were built of either thatch or wood, roofed with thatch, galvan-
352 ized iron or occasionally, tile. Split bamboo or matting might be used for dividing walls if the house had more than one room. Wooden flooring was usual, but in simpler thatched houses with dirt floors, the buffalo might be sheltered under the same roof with the family. In such a house, one or more low wooden platforms were built for sitting and sleeping. Wide cracks between floor boards conveniently permitted betel
364 chewers to spit without the need for a spittoon. Those who
• 267 were preparing food or clearing up after a meal could also thus discard refuse or dispose of leftover food that was to
369 be given to chickens, without leaving the kitchen. Some

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1. cf. Hauck, 1956, p. 45-6 for description of latrine facilities.

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

22 132 241 512 [illegible] [illegible] [illegible] The year starts with May, the beginning of the rice-year. At this time the rains began to soften the parched ground, and the heat slackened. School re-opened. Farmers turned to plowing, harrowing, raising the seedlings. Both sexes worked about equally in field labor, boys from 14 and girls from about 15 years of age performing tasks according to skill and strength. Everyone was in the field at dawn. The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

22 132 [illegible] [illegible] [illegible] With the rains, the canals had filled, so that by June buyers with big rice boats could return. The few farmers who could afford to hold onto a portion of their last year's crop sold it for a better price at this time. Vegetables and fruits which had died in the long drought were replaced, and trees were planted.

24 22 132 In July the heavy transplanting season began. Because of cooperative work habits or hiring out, people worked solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly controllable. Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School vacation was scheduled at this time so both teachers and children could help. Older children might work in the fields, while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food for the family and grass for the buffalo. People knew the crop was subject to dro[illegible] and flood, pests of rats and worms, destruction by b[illegible] or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

221 Despite the availability of fish and of vegetables in
435 the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

221 The two months of September and October during which
[512] the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit
[ ] and take trips. A few might go on a pilgrimage. Therefore,
26 in this season, all family members were less often together
22 at the evening meal. Fishing was a continuous occupation,
[ ] with some preserving and home craft. Jobs such as selling
[ ] food in the market were undertaken for ready cash; houses and
[ ] equipment were built or repaired. Finally the threshing floor was prepared.

[ ] High water caused time-consuming inconvenience only in
[31] earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

283 By November, the earliest varieties of rice matured.
221 Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could
[461] not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into
[226] the night. At this time also many varieties of fish matured
434 and men fished night after night. Just when the convenience
426 of purchased food was greatest, cash was exhausted. With
443 rice money in sight, venders might be generous with credit, but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

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[504] 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

252 462 a woman's" (Sharp et al., 1953, p. 88). For instance, the husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was 252 867 sick or resting after childbirth. The ability of boys as well as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had 252 (Hauck, 1953). Responsibility for food preparation increased 284 with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a 297 daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 559 881 Certain men of eminence, e.g. headmen and elders, would not be asked to cook at all, but as they aged, they might return to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for 2 months because his wife had back trouble. Some dishes were 252 562 cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 261 868 A premium was put on good cooking, and certain women who were noted for their cooking were in great demand for large scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 264 Food was commonly prepared twice a day, in the morning and late afternoon. The meal pattern was the same for breakfast

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114 262 1. Suvarnakich (1950) described the Thai diet in a general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

and dinner, either meal taking an hour or two to prepare. Snacks might be eaten at any time. Adults often ate just the two principal meals, but children, especially the small ones who were not in school, might eat whenever hungry. The school children often purchased snacks from venders on the school grounds. If food was to be offered to the priests, who went around the village about seven o'clock in the morning, breakfast preparation was begun early, between 4:30 and 5:30 a.m., although family members might eat at various times during the morning: the husband before he went to the field, older children, before school time, babies and small children when the mother had time to feed them, and so on (Appendix A, p. 95). Preparation of supper usually took place sometime between 2:30 and 6 p.m. Whenever possible, family members ate together at the evening meal, but many exceptions were noted.

Rice is the principal item in every Thai meal. In Thai the general term meaning "to eat" is translated literally "to eat rice." All food items are divided into two classes: rice and "with rice," or (2)kab (3)khaew. Among the families studied three or four "with-rice" dishes were usually prepared during the day, i.e. for the two main meals, but the number varied in different families, and according to season. One or two of these dishes would usually be "hot" i.e. highly seasoned with fresh or dried chili peppers. Fish was the food item second in importance to rice, but the typical "with rice" preparation, whether hot or mild, contained more than one food item in addition to a variety of spices and flavoring materials (Appendix C, p. 118).

Between meal snacks might be any available leftover food,[1] fruit, or items purchased from a vender.[2] Such snacks were not regarded as meals, however, as no Thai considers that he has eaten a meal unless he has eaten liberally of rice.

The general method of cooking rice was the same throughout the village. The rice was washed two times in water from the canal or fish pond, and was then boiled in a large volume of unsalted water for about 20 minutes. The rice pot was

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1. Leftover foods from breakfast were eaten later that day with or without reheating. "With-rice" was seldom left over from the evening meal, but rice was frequently kept over night.

2. Deep fat frying of bananas, sweet potato slices and the like was commonly observed, both among venders who sold their wares on the school ground, and those who travelled by boat. This method of cooking was never observed in ordinary home food preparation probably because fat was in relatively short supply.

252 cooking water was discarded. In Bang Chan, foods were not usually cooked a long time.

In most village homes, one fire only was built for ordinary meal preparation. Rice was cooked first, then "with-rice" dishes, no attempt being made to serve the rice and accompanying foods hot. Indeed, with the frequent use of chilies, one might have the sensation of eating hot foods, no matter when they were taken from the fire. Notes on the preparation of a meal in one household that participated in the dietary study, are included in Appendix C, p. 119.

Meal Service and Techniques of Eating

• 264 Food was generally served in the kitchen area. When possible, family members ate together at the evening meal, sitting on the floor, each one old enough to feed himself having a bowl of rice before him. The "with-rice" dishes were placed in the center of the group. Family members helped themselves to portions of the "with-rice," using the right hand to take solid foods, and a serving spoon for fluid foods. Enough rice for a bite was pressed together with the fingers of the right hand, so that grains would not be scattered as the rice was conveyed to the mouth. "With-rice" of semi-fluid consistency was eaten by dipping the ball of rice into it, or more exactly, touching one side of the ball of rice to it. The amount of "with-rice" was generally small, and to take more than one spoonful onto the plate at a time would appear greedy.

264 When families did not sit down to eat together, those 599 who ate first were expected to take no more than their share. The wife saw to it that her husband had a liberal serving of the best food available. She also gave generously to the children, holding back, eating last or what was left, herself. In a well-to-do household, where food was ample, the mother would be as well fed as others; in a poor household she might be short-rationed day after day.

When priorities in serving were observed,[1] young children, "not old enough to know better" were not expected to wait until the elders had been served. A frequent pattern at both breakfast and dinner was for older children to feed the younger ones before their own meal; elders in the family then ate, and husband and wife ate together if possible, or as convenient to their separate schedules. In the morning if food was to be offered to priests, family members did not ordinarily eat until after the priests had been served. If necessary, however, the priests' food could be served onto a tray, then others might eat. The observer often had

1. See footnote 1, p. 49.

The observer often had opportunity to make notes on foods eaten by various family members. Two examples of these are included in Appendix A, p. 97.

Snacks

We have noted that various family members ate the morning meal, in particular, at different times, and that children especially might eat leftover food between meals. Most Bang Chan school children[1] ate snacks, which were usually different from foods eaten at a regular meal. Doubtless most of them were purchased from one of the venders who were to be seen on the school grounds daily. Fruits and "desserts" were most commonly eaten, although a variety of other foods, not a part of the usual Thai meal, were also listed. Sweets were listed about 450 times on the 539 records obtained. Many of them had a base of rice, rice flour or glutinous rice with sugar, and included coconut, banana or other fruit. Some were made with legumes, and a few contained egg. Fried bananas, fried sweet potato slices, bananas or beans cooked in syrup, and bananas cooked in sweetened coconut milk were also listed. A few items such as ices, flavored syrup poured over shaved ice, and candies, had little nutrient value other than caloric content.

A glass of milk, and milk with coffee, were each listed once. These might have been obtained at the store adjoining the school grounds. These instances are worth noting primarily because, although dried and tinned milks were obtainable, milk was seldom given to village children after weaning.

Many children were given a bit of cash each day, and Janlekha (1955) commented that some children who did not have any might barter an egg for snacks. One could tell fairly well from the children's records what the venders offered for sale on a given day. Some influence of season was apparent; thus ices and syrup over shaved ice were eaten more often during the hot dry season, and cooked foods such as fried Chinese noodles appeared primarily in the cool season.

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1. With the cooperation of teachers of the third and fourth grades in the Bang Chan elementary school, records of food eaten during 24-hour periods were obtained from children in these grades at intervals of about one month during the school year. This was a regular activity in the health class. A total of 539 records (from 1 to 8 for each child) were obtained from 75 boys and 72 girls. To facilitate recording, each child was given a sheet of paper, with spaces for his name, the date, and kinds of food other than rice, eaten at the morning, noon and evening meals, and as snacks. These records were collected primarily for information on meal patterns of village families for comparison with the limited sample in the dietary survey, and on seasonal use of various foods.

262 Some snacks, i.e. seasonal fruits, may have been picked from the home garden, and items such as lotus seeds were probably gathered wherever the children found them.

Comments on Foods Eaten by School Children

126 In addition to the high percentage of school children
264 who ate snacks, a conspicuous observation was that many ate
855 no regular lunch (Table 3). We did not ask the children to record when they ate snacks, but only what they ate. The number of snacks recorded by individual children did not, however, appear to be related to whether or not they had eaten lunch. For example, among the 76 children who provided 24-hour food records during May, 1953, the average number of snacks recorded by the 39 children who ate a regular lunch and the 37 who did not, was about the same, i.e. a little over three per child.

Table 3. Number and Percentage of Children Who Ate Snacks, and Who Missed Lunch, Arranged by Months in Which Records Were Obtained

Month[1]	No. of Records	Children who ate snacks		Children who missed lunch	
		No.	Percentage	No.	Percentage
May 1953	76	73	96	37	49
June 1954	61	56	92	32	53
July 1953	79	77	98	53	67
Sept. 1953	52	49	94	36	69
Oct. 1953	55	50	91	22	40
Nov. 1953	88	81	92	57	65
Dec. 1952	18	14	78	10	56
Jan. 1954	69	64	93	41	59
Feb. 1953	41	39	95	33	81
Total	539	503	93%	321	60%

1. Note that although the figures are arranged by month, the records were obtained over a period extending from December 1952 through June 1954.

264 855 [262] Most of the children who ate lunch regularly brought rice and some of the "with-rice" dishes prepared for a family meal in a lunch pail. Menus for breakfast and noon meals were often identical. Children who lived at a distance may have found it harder to carry lunch, especially when they had to walk to school, but the month by month record of the percentage of children who missed lunch (Table 3) does not indicate any clear seasonal trend. Even children who lived nearby might neither bring lunch nor return home during the noon recess. We were at the home of a school teacher, a short distance on foot from the school, when his two children returned in the afternoon. The mother said that they usually waited until after school to eat, but were having no snack on that day because for the first time, they had carried lunch to school.

126 262 Thorangkul (1957) scanned all of the dietary records to note the frequency with which the following food groups occurred: protein-rich food, carbohydrate-rich food other than plain boiled rice, vegetables and fruits. She considered the records of each child as a unit; thus if a boy for whom 5 daily records were available, had recorded protein-rich food such as fish, eggs, or beans 16 times, he was regarded as having more than 3 "servings"[1] of such food per day. The frequency with which various food items occurred in the daily diets of these children is shown in Table 4.

Considering the day's record as a whole, some protein-rich food, usually fish, was included in the records of 97% of the children. Such protein-rich food appeared two or more times per day in the records of over 80% of the boys and about 90% of the girls. In contrast, no fruit was mentioned in the records of about 10% of the children, although fruit was one of the commonest snacks. Vegetables were not mentioned in the records of 10% of the boys and 3% of the girls. Only about one-fourth of the vegetables recorded were green or yellow.

For 75 children for whom we had 4 or more records, Thorangkul (1957), to obtain a rough estimate of the adequacy of the children's diets, grouped the records into three categories, based on the number of times protein-rich foods, vegetables and fruits appeared. On the average, children whose diets were placed in Class I had at least 3 "servings" of protein-rich food, 3 "servings" of vegetables and 2 of fruits. Diets in Class II included some from each of the food groups each day, but the items were recorded less frequently than in diets in Class I. Diets in Class III did not include foods from each of the food groups emphasized, each day. On this

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[104] 1. The term serving is used here to designate each time an item appeared in the daily food record. Thai do not have "servings" as the term is used in Western countries.

Table 4. Frequency of Occurrence of Various Food Groups in the Daily Diet of 147 School Children in Bang Chan

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(Adapted from Thorangkul, 1957)

Number of servings[1]	Protein-rich food	Carbohydrate-rich food[2]	Vegetables	Fruit
	Percentage, based on records of 75 boys[3]			
3 or more	47	8	28	8
2 to 2.9	36	15	23	18
1 to 1.9	13	40	30	37
0.1 to 0.9	3	37	9	26
None	1	-	10	11
	Percentage, based on records of 72 girls[3]			
3 or more	68	13	21	10
2 to 2.9	21	17	38	27
1 to 1.9	4	22	34	38
0.1 to 0.9	3	48	4	15
None	4	-	3	10

1. The term serving is used here to designate each time an item appeared in the daily food record.

2. Other than plain boiled rice, which is an essential part of every Thai meal.

3. Average frequency of occurrence was computed, considering the records of each child as a unit.

basis, nearly a third of the children who provided diet records had diets which were classed as III (Table 5). Almost all of the girls and about 4/5 of the boys in this group missed lunch. Indeed the common habit of eating just two main meals, with snacks, was probably one important determinant of the number of servings of protein-rich foods and

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Table 5. Diet Classifications for 75 School Children in Bang Chan, and Percentage of Children with Each Diet Classification who Missed Lunch

(Adapted from Thorangkul, 1957)

Diet classification[1]	Percentage of children	Percentage of children who missed lunch	
Class I	8	Boys	46
		Girls	45
Class II	61	Boys	73
		Girls	68
Class III	31	Boys	81
		Girls	98

1. See text for basis of classification.

vegetables eaten, since items from these two food groups were not commonly eaten as snacks. Note, in the illustrative records presented in translation (Appendix A, p. 98), that the child whose diet was considered to be in Class III did not eat a regular lunch on any of the six days for which records were available, whereas the child whose diet was classified as I ate a regular lunch six times out of seven.

Family Food Shared With Others

Throughout the year families prepared especially good meals for persons who came to work cooperatively with them. Every rice-grower entertained his cooperative harvest crew, some the transplanters. Hired laborers were not usually served such feasts, but the conviviality of the harvest season called for a round of liquor even for them. One harvest dinner for 18 cost 50 baht, plus eels (60 baht) and rice. Cooperative home pounding of rice was still practiced in some households and thought to be fun. In one day enough rice to produce 40 tang (640 kg.) was pounded by groups of 15 to 20 workers; in an evening 20 tang were done. If 40 tang were milled, workers were served a full meal; if 20 tang, a dessert only. Other occasions were fish-pond draining, house raising and repair. Each participant in the fish-pond draining at Household 21 was fed (3)khaaw (3)tom (soupy rice) for lunch and "an enormous supper," in addition to receiving the traditional pot of fish. If good food were not served at these functions people

264 would not come willingly to work. When a family with a repu-
476 tation for stinginess diluted the (3)khaaw (3)tom too much,
[574] the group refused to eat any, thereby reminding the host of his obligation for hospitality.

574 Guests to whom meals were served fell into four categories: 1) kin, 2) visiting dignitaries, 3) priests and 4) drinking companions. Kinfolk who came as guests were married children, or those who were away at school or work, or kinsmen from Bangkok or elsewhere. The older the relative or the greater the distance travelled, the greater the honor accorded him. Foods were exchanged. Two visiting ladies travelling in a large boat, made an annual round of all their relatives, bringing certain "city" foods and receiving substantial gifts of rice, fish and fruit. They stayed for several days as guests of one family, then moved on. Every person from Bang
[93] Chan who visited a relative in Bangkok carried big packages of food, usually rice or eggs, as gifts. With the inflated prices in Bangkok, it was advantageous to have a "country cousin" who might bring food. Visiting kinsmen always recognized the need for eventual reciprocity.

Visiting dignitaries were usually entertained by hamlet headmen. Meals served to visiting officials, policemen and others might be elaborate, involving cooperative help in preparation, but reciprocity, if any, rarely took the form of a return meal.

[792] Regular visits of the priests, as well as the invitation of priests to the house for special events, have been mentioned. Priests might also come from afar, usually staying at the temple but receiving generous offerings of food from people of the community.

[562] The custom of convivial get-togethers of either or both sexes was well established. Men traditionally enjoyed "stag" dinners of four up to twenty or more whenever the ingredients for a turtle, frog, cobra or other snake curry were available. Chicken curry might also be thus served, and once a catfish mash was prepared by a male visitor from the north. Those curries were cooked by men, and the host served liquor freely.
184 The all-male character of the occasion reflected the old re-
288 strictions on women's partaking of flesh foods (see p. 42),
213 but older women did not hesitate to join in the drinking.
524 Women also got together in drinking parties, sometimes to play cards.

In addition to sharing food with people in these four categories, the general rules of hospitality required that anyone who came to the house at meal time, should be offered food, or at least a drink of liquor, tea, or plain water.

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

262 796 A discussion of food habits in Bang Chan would be incomplete without some description of ceremonies ((1)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

796 The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-
527 teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion
• 264 of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

[782] Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could
[554] afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and
527 at festivities. Thus, there was reason to make a (1)ngaan
796 as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

[196 461] 1. Significantly the same Thai word is used for work and for ceremony.

[302 551 835] 2. Topknots, formerly worn by all Thai children, used to be cut ritually at the time of puberty. In Bang Chan, the growing of a topknot had become primarily an attempt to improve a child's health. Few school age children wore topknots. They were usually cut earlier than puberty.

[575] 3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

796 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the time and effort went into preparing and serving food. Even a [876] small celebration involved cooperative effort among relatives [782] and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A 764 big cremation might require planning in detail for years ahead: 796 invitations to priests and relatives in distant parts of the 574 country; hiring an orchestra and obtaining ceremonial gear. 535 For the largest events, when the guest lists ranged upward to [426] 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person, [252] usually one of the "professional" cooks of the village. The [876] day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

[262] The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an 262 annual homage-to-the-teacher rite. It is the nearest approxi- 796 mation to a quantitative record of food for a ceremony that 815 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either 796 at 7 a.m. or 11 a.m., or both, always at least in part by the 192 host, who sat and chatted with them. No one else ate until

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)daaaeng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chauaun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chickwn, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

In Bang Chan when donations for a new school
264 476 946 building warranted buying the foundation materials, so that volunteer labor was solicited for their installation, some of the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

182 264 The spirit-offering, or the portions eaten by a participant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests. 262 252 The pork was cut up and eaten with a hot sauce, or put into a "with-rice" dish. It was especially appropriate with liquor.

262 755 852 The use of food ritually was not limited to the ceremonial season nor to big events. The same purposes underlay the use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

43 554 796 The benefits of a (l)ngaan accrued to every participant down to the last worker and contributor according to the degree of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

796 476 435 One assistance in the financing was that every invited guest made a contribution, customarily 5 to 10 baht, which helped defray the costs. In 1952, household heads reported these contributions as totalling from 30 to 1,000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (l)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

443 storekeeper: about 800-900 liter bottles per month during
873 the 3 months dry season as compared to about 350 bottles per
796 month during the 9 months of the rice season.

184 Moslems never served liquor at their weddings, crema-
[273] tions, and other auspicious events. Moslem residents occa-
sionally attended Buddhist (l)ngaan in spite of dietary pro-
[262] scriptions that Buddhists did not observe.[1] A medium (spirit-
ualist) commented however that because pig's head was essen-
tial for her homage-to-the-teacher rites, some Moslem sick
persons preferred to go to the Buddhist temple for treatment.
There the priest-practitioner could afford to set up a separate
kitchen for his Moslem patients, and so spare them the dis-
tress of confronting pork. To one big ordination Moslem
guests brought their own food. Buddhists came somewhat more
often to Moslem ceremonies.

262 We do not have enough information to appraise the nutri-
574 tional significance of food eaten at ceremonies. Some indi-
476 viduals got a great deal of it, others very little. One must
• 264 remember that the (l)ngaan was not a public but a private
event at home, to which guests came on invitation. Although
cremations and the teacher-rites of priest-practitioners were
held at the temple, and so had a semi-public character, no one
who was not invited presented himself for food. Of the par-
ticipants, the working group undoubtedly received the most
food; they were there the longest time, had regular meals,
tastings and snacks throughout the (l)ngaan meal itself. This
group comprised the host, co-sponsors and their immediate kin;
other relatives and friends who were asked or who volunteered
to help. The feeling was, if one were "very fond" of the
host, one volunteered to cook. If less close, one was invited
as a guest, but made the usual cash donation. Sociable per-
sons combining skill and energy were invited often and volun-
[838] teered often, hence spent many days at ceremonies. Young un-
married men and women were asked and liked to be asked to
work, for such occasions offered a great chance for fun and
flirting.

114 Different degrees of participation may be estimated
476 from Janlekha's (1955) figures for reported contributions
796 ranging from 30 to 1000 baht in a year. Since a contribution
of 5 to 10 baht per (l)ngaan was customary, the villager with
the lowest reported contribution probably attended from 3 to
6 ceremonial occasions. Attendance at 100 or more (l)ngaan
is unlikely, hence the villager who gave as much as 1000 baht
probably made larger contributions per (l)ngaan.

574 What sort of persons or groups in the village were in-
796 vited as guests? Every host's list included his older

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[702] 1. Moslems were said to resist army service because they were afraid they would have to eat pork.

196 relatives, his other kin and friends according to bonds of
574 affection and respect. Certain priests of pleasing personalities, wide acquaintance or kinship in the community, or of valued skills, were invited more often than others, as were prominent elders and hamlet headmen. An invitation usually went only to the elder couple in a family. It did not automatically include the children. If married sons or daughters were invited, they were asked separately. Poor individuals were included only in the festivities of their close kinfolk, their immediate neighbors, maybe their own hamlet headman, or persons to whom they were obligated. Unless they were aged, their presence was validated only by hard work. Reciprocity was a factor, for one who could not reciprocate presumably would not be asked, nor would he volunteer. The few who were "anti-social" for whatever personal reason rarely attended.

262 Most members of the working group and guests left at
574 home their children of such age as to require watching.
196 Nursing babies might be there, hung in a hammock. Though
858 the children who ran excitedly about seemed numerous, most of them were the children, grandchildren, nieces and nephews of host, co-sponsors and relatives, so could not be excluded.

To sum up, those who shared least in the diet of the ceremonial season were the dependent children, i.e. up to the age of 6 or so, the less gregarious, and the poor who had no way to reciprocate. Children from 7 to adolescence shared in a limited way, attending (l)ngaan of their own close kin or of a geographically close neighbor. Parents sometimes took snacks from the feast home to the children. On the other hand, persons of prestige and popularity, especially if aged, were asked frequently.

262 Doubtless for those who attended many (l)ngaan, the
796 food eaten during the ceremonial season differed considerably from the usual family fare. We have no way of knowing whether it was better than usual because of a larger intake, for instance, of pork and meat in general, or whether the total nutritive value was less satisfactory because of increased consumption of "empty calories" in the form of sugar and alcohol.

262 During the (l)ngaan season the home meal schedule was
264 frequently disrupted in the families of the participants.
796 The main cook might be absent, too tired, or too full to feel like cooking a big meal at home. In anticipation of a feast, preparation of the usual breakfast or dinner or both might be abandoned, with reliance on a few snacks for the stay-at-homes to add to their rice. Thus the food intake of family members who did not attend the ceremonials might be adversely affected.

000 One other aspect of (l)ngaan which should be mentioned

106 For items used less frequently, the figures are correspond-
262 ingly less than the usual amount eaten. Thus, sweet potato, which is represented as 18 grams per day per person in Group A, actually appeared on 3 records only. One family of 8 persons ate 1200 grams of sweet potato at one meal and a substantial amount later the same day. Most items appear on the lists for both groups, but sweet potato, sweet basil and bananas were included on the list for Group A only, and glutinous rice which is used as a sweet in this area, appears on the list for Group B only. Note that a few common foods account for most of the nutrients in the diets of both groups. These common foods account for only about 80% of the calcium and vitamin A value and slightly less of the ascorbic acid in the diets of Group A. The list for Group B accounts for about 70% of the calcium and 60% of the ascorbic acid in the diets of this group. The variety of green leaves used once or twice only on survey days by Group B, and the number of different seasonal fruits used by both groups in small amounts as snacks, probably account for this.

264 Contribution of Snacks to the Nutrient Content of Diets. -
[355] On the average, 4 out of 5 children had one snack per day,
262 whereas only one adult in 6 did so. The following items appeared most commonly: various kinds of fruit, 40 times (orange 7, banana 6, pineapple, watermelon and mango each 5 times, guava, jujube and Manila tamarind each 2 times, olives, rambutan, rambai, star gooseberry, (2)ta-(1)koo and Thai nutmeg each once,) coconut and bread each 13 times, glutinous rice 8, mung bean 7, truffles 6, products made of rice flour 6 times, and a variety of other items including rice noodles, sweet potato, taro, bean sprouts, lotus stalks, lotus seeds, popcorn, products made of cassava flour, sugar cane, pork and milk from 1 to 4 times each. Salt, and/or palm sugar were
[146] eaten with a number of the snacks. Although they contributed only about 2% of the total calories, and from 1 to 3% of most nutrients, snacks contributed 16% of the total ascorbic acid for Group A and 11% for Group B.

Seasonal Variation in Food Preparation, Meal Patterns, Food Costs and Calorie and Nutrient Value of Foods Eaten

128 In Table 14, a summary including the number of meals
258 prepared, time spent in meal preparation, number of "with-
266 rice" dishes, and cash expenditures for food is given by
435 rounds, for families in each group.

252 Number of Meals Prepared. - Food was cooked twice on
512 each survey day in 3 of 6 households in Group A and 3 of 5 households in Group B. Heavy farm work or vending which kept the mother away from the house sometimes accounted for once-
[443] a-day food preparation. One housewife who took food to market in Bangkok, cooked food twice a day only during the period shortly before the birth of a child, when she was not vending.

[Text continues on page 79--- Analyst]

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435

Table 14. Summary Concerning Meal Preparation, by Rounds[1] for Two Groups of Households Studied

Description of Items	Group A				Group B			
	Round I	Round II	Round III	Round IV	Round I	Round II	Round III	Round IV
No. of meals prepared - 2	5	4	4	4	4	4	5	3
- 1	1	2	2	2	1	1	0	2
Range of cooking time, hrs.	0.8-6.0[2]	1.0-2.6	1.3-2.7	1.3-4.0	1.7-3.2	1.4-4.1	2.2-3.3	1.0-3.2
Average cooking time, hrs.	3.7	2.0	1.8	2.4	2.5	3.1	2.8	2.0
Range of no. of dishes prepared	2-8	2-5	1-4	1-4	2-5	2-7	2-6	2-5
Average no. of dishes prepared[3]	5	3	3	3	3	5	3	3
Range of no. of hot dishes	0-3	0-2	0-2	1-3	0-2	1-2	1-2	0-2
Average no. of hot dishes	1		1	2	1	2	1	1
Range of no. of mild dishes	2-7	0-3	0-3	0-3	1-3	1-5	1-4	1-3
Average no. of mild dishes	4	2	2	1	2	3	2	2
Range of cash expenditure for meals/day (bahts)[4]	1.53-4.45	0.61-6.30	0.12-4.52	0.66-2.88	0.71-16.24	1.07-11.86	1.12-4.13	0.45-3.47
Average cash expenditure for meals/day (bahts)	3.01	2.96	2.39	1.70	4.85	4.11	2.61	1.36

1. For dates, see Table 7, p. 58.

2. If time waiting for a vender was not counted, the range of cooking time would be 0.8-4.1 and the average would be 3.2 hours.

3. "With-rice" dishes only. Rice is always cooked whenever a Thai meal is prepared.

4. One baht was equal to 5 cents at the time of studies.

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7
Bang Chan

252 Another, who had time during Round IV to prepare food twice a
262 day, preferred to prepare more in the morning when she expected
264 to offer food to her son who had just been ordained. In two
512 instances an evening meal was not prepared because the father
[525] and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

262 Cost of Food Purchased. - The lowest cash expenditure
435 for food by any household on a survey day was 0.12 baht, for
511 a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year pro-
262 gressed was apparent. Most of the rice was sold at the end
432 of Round III. The cash went for capital investments, not
[221] food, during Round IV. With time to drain ponds and to fish intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

146 Calorie and Nutrient Value of Foods Eaten. - The
221 seasonal variation in calorie and nutrient intake of the two
[28] groups of families is shown in Table 15. As one would expect, the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 ··· Analyst]

000 Growing other kinds of green and yellow vegetables should be fostered. Although vitamin A value and riboflavin content appear to be critical, in choosing vegetables to be stressed, specialists in agriculture should consider greens [P82] with high calcium and low oxalic acid content also. A variety of edible leaves of trees were used by a few families; some used sweet basil as a vegetable rather than just a seasoning; pumpkin and sweet potato were familiar, but less often used than would be desirable. More green or yellow vegetables which mature when canals are low and aquatic plants no longer available, would be especially good. If increased production by most households[1] is not practicable, a few of the more successful gardeners might be persuaded to produce vegetables and fruits which would help to bridge the gap between rainy seasons. Mushrooms, which can be grown readily, would provide a good source of ribo- [P84] flavin when leafy vegetables are in short supply. The boom-and-bust experience in mushroom culture (See Appendix A, pp. 101-102) might, however, make its revival as a source of healthful food for home use more difficult than if the villagers did not think of mushrooms as a cash crop for which the market failed.

Eating more fruit would help to tide over the dry 268 season. Fruits were commonly used as snacks, not at meal- [P84] time, hence snacks of fruit should be encouraged for adults as well as children. Bananas grew in all gardens and were available the year round. The (4)nam (4)waa variety, which was used in ceremonies, and considered safe for all, should 000 be stressed. More families could grow pineapple, which is [777] relished both raw and in curries. Mango and papaya, fruits of outstanding value for both vitamin A and ascorbic acid, would be excellent, but the idea that growing papayas is "unlucky" must be taken into account. If a few of the more thoughtful and forward-looking farmers could be persuaded to start papaya trees, even though they were not willing to plant them near the house, the practice might spread in time.

146 On the average, the Bang Chan diet did not seem to be [P64] very deficient in protein, but distribution is not proportional to need, and protein deficiency may be in part responsible for periods of weight loss, or failure to gain, so 000 common among infants and children. The presence of other [134] essential nutrients in animal foods is important also. If, the local supply of fish is indeed diminishing, efforts to [P28] increase it through pond culture should be continued. Abandonment of tilapia culture in Bang Chan, after about one-third of the families had tried it, (Appendix A, p. 101) suggests that not enough of the right kind of help was given

1. Tenant farmers may not be permitted to enlarge gardens by mounding at the expense of rice fields.

concerning its culture and use. Tilapia culture was learned largely by trial and error, and was considered primarily as a source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

More home consumption of eggs would be desirable, but their ready sale and acceptability for barter may present an obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

Milk, as canned, dried or malted milk preparations, was considered an appropriate gift for the priests, who are forbidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to include milk among them. People gladly bought food for the priests and would probably accept on the authority of the head priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headmen were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

The importance of merit making and the relatively large cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children. . . . . The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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1. In reproducing these notes, slight changes have been made such as substitution of descriptive terms for personal names which appeared in the original.

Notes on Meal Service

In a Relatively Prosperous Household

Friday, May 22, 1953

117 262 Before breakfast is served, the six-year old girl comes with a piece of jack fruit. SS weighs it and tells her to bring back what she does not eat. Later she comes with hands full of stones (14 of them). She has eaten this much as a "snack" before the regular meal. The grandmother finishes the piece (7 stones) and gives the rind to SS to weigh.

[264] At breakfast the family sits in a circle on the kitchen floor. Each person except the baby has his own bowl of rice before him. In the center of the circle, within reach of all, are four small dishes of "with-rice" which has been prepared for breakfast: sour curry of buffalo meat, curry of (3)khii-(2)leg leaves, bean sprouts and one small fried fish. [265] The mother takes a very small bit of fish on a spoon with [266] rice, and feeds baby. During breakfast baby has 6 bites of rice with fish, nine small spoonfuls of rice with sour curry. The mother herself eats one bite of fish. She takes four spoonfuls of sour curry on plate with rice. This is shared with baby. Mother and baby eat mainly rice, fish and sour curry of buffalo meat, whereas grandmother and the six-year old girl have curry of (3)khii-(2)leg leaves and bean sprouts with their rice.

In a Relatively Poor Household

117 853 [591]

Wednesday, May 27, 1953

While the mother finishes the meal preparation, the seven-year old girl feeds the baby, first rice with some chopped egg, then rice with the "water" from the egg. The mother remarks that she cannot cook unless someone looks after the baby.

117 264 Technique of eating -- A tray with the "with-rice" is set out, also a bowl with water, for rinsing the hand, and a basin or bowl with drinking water. There are spoons in the "with-rice," but these seem to be used for taking some of the juice, which may be eaten directly or put on the individual's bowl of rice. Solid pieces are taken from the serving dish by hand, and mixed with some of the rice, which is then picked up in the right hand. Occasionally the person eating will rinse his hand with water. When finished, each person rinses his bowl (using either water from the bowl nearby, or from the general supply -- in this case the canal). Dishes are turned upside down on the platform near the stove, to dry.

Equipment Used For Food Preparation

252 Equipment used for food preparation by 11 families par-
41 ticipating in the dietary study: clay stove; pots and covers
[251] of clay, light weight aluminum, and enameled iron; frying pans, curved, of sheet iron, with home-made wooden handle on one side, or metal handles on opposite sides (shallow clay pans were also used for frying); basins, pails, chopping boards; grater for coconut: a metal, toothed instrument mounted on one end of a low wooden stool (often called a "wooden rabbit" because the seat of the stool might be shaped like a rabbit); mortar of pottery or stone; wooden pestle; fiber strainers usually with rigid handles, to hold them in place on top of a pot; a large-bladed all-purpose knife; in some households, one or more smaller knives; metal turner, with home-made wooden handle; spoons, with bowls of coconut shell, gourd or wood; tin cans for dipping, measuring rice, etc.; fiber trays used for winnowing rice, for drying food, storing dried chilies, onions, etc.; metal tray for serving food to priests, and for household use; baskets for storing food; (5)faa-(1)chii, or fiber cover, to keep flies and insects off cooked food; large earthenware water jars.

[284] Other items less often used, and owned by relatively few families in Bang Chan, included: steamer; a perforated clay pot or metal pan with cover, designed to fit tightly into another pot in which water was boiled; large wooden mortar, made of a hollowed tree trunk; spring-type egg beater (a strong spiral spring attached to a stick); scale; glass water jars.

Equipment Used in Serving Food and Eating

264 The equipment for serving and eating food might include:
412 flat bottomed bowls with a deep edge, similar to Western-
415 style soup plates, used as individual rice bowls; plates; small bowls for "with-rice" dishes; sauce dishes with stand, for chili sauce; enameled iron or china spoons (Chinese type) used for serving moist foods; forks, used by some families on special occasions;[1] teapot and cups; large rice bowl for ceremonial use (silver or aluminum); large brass spoon with serpent-tail handle, for serving rice; drinking glasses; tiered lunch pail; canteen; thermos bottle.

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1. A relatively poor family (Sharp et al. 1953, p. 223) had one pair of fork and spoon for eating.

Examples of Notes on Food Eaten by Individuals

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264 Household 16 July 23, 1953

Family members observed at meal-time: All, as they ate breakfast at various times.

Notes re kind and amount of food eaten:

Breakfast: Girl aged 12 and boy aged 7 start eating at 7:20 a.m. Each one has one dish of rice and stew of swamp cabbage and salt fish for breakfast. They are through eating at 7:40 a.m.

9:10-9:30 a.m. Father eats two dishes of rice with stew and mother does also.

10:10-10:20 a.m. Son, 18 yrs. old, returns home and eats two dishes of rice mixed with stew.

10:40-11:00 a.m. Sons aged 25 and 20 have breakfast. The older one eats two dishes of rice but the younger one eats three.

11:30 a.m. Daughter aged 22 has two dishes of rice and stew. She is through eating at 11:45 a.m.

Household 67 May 26, 1953

Family members observed at meal-time: Mother and children.

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262 Notes re kind and amount of food eaten:

Dinner: Girl aged 7 seems to be fond of fish but dislikes vegetables. Boy aged 11 likes to eat the vegetables from the curry. Each one eats two dishes of rice mixed with small amount of hot curry (5:02-5:17 p.m.)

[855] One year old baby is fed by his older sister, eating two spoonfuls of rice mixed with boiled coconut milk. Whenever he refuses to eat, his mother nurses him.

5:40-5:55 p.m. Mother eats 3 dishes of rice with 2 dishes of hot curry, containing a small amount of fish.

Father begins eating at dark so we can't see him.

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P62
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Examples of Diet Records Submitted by School Children

Date	Breakfast	Lunch	Dinner	Snack
Diet Record[1] of 10-year Old Girl: Diet Class I[2]				
May 19, '53	Sour curry of (2)phag (2)ka-(2)cheed Curry of swamp cabbage Boiled vegetables Fried mushrooms Roasted pilot fish Chili sauce		Cooked fish (sour) (2)phag (2)ka-(2)cheed Chili sauce	Star gooseberry Jack fruit seeds Fruit of egg tree Sweet made of flour, sugar, coconut milk Sweet made of flour, sugar, sugar palm
July 7, '53	Curry of (2)phag (2)ka-(2)cheed Boiled swamp cabbage	Boiled fish Boiled fermented fish	Boiled egg Roasted fish	(1)lam-(1)jaj (Fruit of Euphoria longana) Jack fruit seeds Sweet made of flour and sugar
Sept. 13, '53	Cooked climbing perch and other fish (sour)	Fried towel gourd with pork Fried serpenthead	Boiled climbing perch and silurus	Sweet made of flour, sugar and coconut milk Hog plum
Oct. 29, '53	Sour curry of katurai flowers with (2)phag (2)ka-(2)cheed Fried pork with swamp cabbage	Hot curry of serpenthead (2)phag (2)ka-(2)cheed Chili sauce	Sour curry of lotus stalks	Jack fruit seeds Fried banana Jambean

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Examples of Diet Records Submitted by School Children (cont.)

Date	Breakfast	Lunch	Dinner	Snack
Nov. 25, '53	Curry of lotus stalks Fried salted fish (2)phag (2)ka-(2)cheed Chili sauce	Curry of swamp cabbage Fried salted fish	Roasted salted fish Curry of (2)phag (2)ka-(2)cheed	Orange Fried banana Sweet made of flour, sugar, coconut and corn Sweet made of flour, sugar, egg and coconut
Jan. 30, '54	Sour curry of (2)phag (2)ka-(2)cheed with katurai flowers	Sour curry of green papaya	Fried sweetened fish	Jack fruit seeds Rice flour chips Sweet made of flour, sugar, coconut, corn
June 4, '54	Fried fermented fish Curry of egg plant Cooked salted pork	Fried egg Salted crabs	Curry of pineapple Curry of chicken Curry of bamboo shoots	Star gooseberry Ice Sweet made of flour, sugar and coconut milk Sweet made of flour, sugar and coconut
	Diet Record of 12-year Old Girl: Diet Class III			
Feb. 14, '53	Hot curry of fish Fried dried meat with sugar		Sour curry of swamp cabbage	Sweet made of rice, banana and coconut milk
July 7, '53	Curry of chicken		Curry of white gourd	Longan

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Examples of Diet Records Submitted by School Children (cont.)

Date	Breakfast	Lunch	Dinner	Snack
Sept. 13, '53	Curry of (3)khii-(2)leg		Curry of chicken	Fried sweet potato Star gooseberry Hog plum
Oct. -- '53	Sour curry of green papaya Fried swamp cabbage		Hot curry of fish	Guava Sweet made of dried beans and sugar
Nov. 28, '53	Fried Chinese noodles Boiled vegetables Chili sauce		Fried fish Boiled vegetables Chili sauce	Fried banana Fried Chinese noodles Sweet made of rice, banana and coconut milk
Jan. 30, '54	Beef curry		Sour curry of swamp cabbage	Chinese cake Jujube Sweet made of flour, sugar, coconut and corn Sweet made of dried beans and sugar

1. "With-rice" dishes only are listed for breakfast, lunch and dinner.

2. Adapted from Thorangkul (1957).

Food Preparation and Consumption — Sept. 25, 1953 — Household No. 21

Menu 1	Raw Ingredients: Kind 2	Wt. A.P. 3	Cost 4: Bt.	Cost 4: Stg.	Ined. Ref. 5	E.P. 6	Cooked Foods: Dish 7	Dish + Food 8	Food 9
Meal Time 4:30 a.m.							800	2990	2190
		2180-800					120	1280	1160
Cooked rice	Polished	= 1380					190	850	660
									4010T[1]
(1) Bauaun stew	(leftover)						450	915	465
(2) Sa-(5)noo stew	Coconut meat (to make milk)	700-180 = 520		50		520			
	Dried chilies	24		15		24			
	Onion	8		4		8			
	Galangal (HG)[2]	8				8			
	Garlic	4		2		4			
	Lemongrass (HG)	12				12			
	Bergamot rind (G)[2]	4				4	450	1390	940
	Salt	30				30	130	312	182
	Serpenthead (C)[2]	320-120=200				200	130	300	170
	Shrimp paste	6		3		6	130	260	130
									1422T
	(2)Sa-(5)noo flowers (G)	550			580-520 = 60	640-150 = 490			
	Coconut milk					1220-450 = 770			
	Palm sugar	240-200= 40		24		40			
Cooked rice	(leftover)						520	800	280
Fried duck egg	1 Duck egg	76			21	240-185 = 55			
	Coconut oil	16		8		16			
	Onion	4		2		4			
	Fishsoy	10		5		10	180	260	80

1. T equals total weight.
2. HG, G and C stand for home grown, gathered and caught, respectively.

125 253 252 247 [illegible]

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

Food Preparation and Consumption (continued) Sept. 25, 1953 Household No. 21

Use of Cooked Foods						
Given away 10	Fed to Stock 11	Ed. Waste 12	Left Over 13	Eaten 14	Persons Eating 15	Method of Preparation
Cooked rice 850-190= 660 (to 3 priests)			0	3350	4	Rice, 4:30 a.m. She washes rice two times and lights the fire. Then she puts rice pot on fire at 4:35. Rice water is drained off at 5:00. Rice pot is put on fire again from 5:15 to 5:25.
			(1)Bauaun stew (leftover) 0	465		(1)Bauaun stew is reheated from 5:00 to 5:15 a.m.
(2)Sa-(5)noo stew 312-130=182 300-130=170 260-130=130 482T (to 3 priests)			0	940		(2)Sa-(5)noo stew, 5:20 a.m. Dried chilies (after soaking in water for a while), onion, garlic, galangal, lemongrass, berganot rina, and salt all pounded together. 5:25 She crushes coconut meat with water five times over colander. Shrimp paste is mixed with (4)nam (4)phrig at 5:40. The pot of coconut milk is put on fire at 5:42. (4)Nam (4)phrig is mixed with boiled coconut milk at 5:55. Fish is put into the pot and water from crushed tamarind at 6:00, (2)sa-(5)noo flowers at 6:05. The pot is put down at 6:12 a.m.
			Cooked rice (leftover) 0	280		
			Fried duck egg 0	80		Fried duck egg. The pan is put on fire at 6:15 a.m. Duck egg is mixed with pieces of onion and fishsoy. Cocomut oil is put into the pan at 6:20. Stirred egg is fried from 6:20 to 6:25.

N25
262
264
1953

K. Snacks

Person eating 1	Time 2	Kind and description 3	Weight (or approx. wt.) A.P. 4	Ined. ref. 5	E.P. 6	Cost 7 Bt.	Stg.
			g.	g.	g.		
June 4/53							
Girl, 8 yrs.	12:00m	She ate a half fruit of pineapple at home. It was bought from the selling boat.	(375)	(195)	(180)		20
June 5/53							
Girl, 8 yrs. Boy, 10 yrs. Girl, 13 yrs.	All day	7:40 - The pot of truffles (gathered from the fields) is put on fire. It is boiled with water and salt. Truffles: 525-72 = 453 gm. Salt: 35 gm. It is finished at 8:28.	453				
Boy, 10 yrs.	8:46	He eats boiled banana (HG)	48				
Girl, 13 yrs.	Early a.m.	She drinks coffee which is bought from the store near the Wat.					40
Father	10:13	He drinks one glass of milk which is bought from the store near Wat.					50

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

125
262
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[126]

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7
Bang Chan

Form for Calculating Raw Weights of Foods Eaten

Dietary Survey, Bang Chan — Household No. 12 — Date Jan. 14, 1954

Amounts of foods prepared and eaten — No. persons in household 3

Meal - menu	Raw ingredients				Cooked food	Use of cooked foods					Adjustments-raw wt.		
1	2[1]	3	5	6	9	10	11	12	13	14	For amt. eaten	15	For No. people
4:00 p.m.													
Cooked rice	Polished	610			1640				500	1140		3	
Baked egg plants	3 egg plants	370		370	240				0	240			
Fish "salad"	Lemongrass (HG)[2]	36		36)									
	Holy basil (HG)	44	20	24)	115				0	115			
	1 fish (cooked)	52	12	40)									
	Lime (1/2 fruit)	30	12	18)									
Cooked rice	(Leftover)				250				0	250			
6:55 a.m.													
Cooked rice	Polished	950			2390				800	1590		3	
Roasted fish	2 fish	112			96				0	96			
Cooked rice	(Leftover)				500				0	500			
Chili sauce	Bird pepper (HG)	12		12)									
	Shrimp paste	10		10)									
	Garlic	8		8)	45				20	25			
	Palm sugar	10		10)									
	Lime	12	4	8)									

1. For identification of column numbers, see the original schedule, pp. 118-119 and pp. 113-114 121
2. HG stands for home grown.

*177 22
*178
207 Exposure to the media of mass communication seems to act, in
212 a sense, as a substitute for literacy. It may be that through
546 these means either an illiterate farmer can obtain information about the more complex agricultural tools and methods or motivation to try improvements, or both, even though he may not know how to read and write. One may infer that he tends to act on the information thus obtained, since he is more likely than his unexposed opposite number to try out these innovations.

*178
*177 Acceptance of Urban Patterns

369 The printed word and the mass media are, of course, not solely channels for the communication of knowledge. They are, at the same time a means whereby the farmers may establish some sort of contact with the more sophisticated world outside the community even with highly urban Bangkok.

[291] The survey indicates in a general way the extent to which
[416] the people of Bang Chan have accepted urban patterns. Their grow-
[207] ing acceptance of urban modes is readily apparent even to a casual
[493] visitor: many own shoes, flashlights, wrist watches, radios,
[413] bicycles, fountain pens, modern furniture.* Other urban behavior
[358] is likewise beginning to be noticeable.

One very simple indication of the degree to which urban influences have penetrated is the change in manners of taking food. The farmers traditionally eat with their hands rather than using a fork or spoon. In Bangkok, however, eating utensils are customarily served with the meals in restaurants and are widely
*197 adopted as well by the city population. Some Bang Chan inhabi-
*178 tants have picked up this simple urban custom and have substituted it for eating mainly with their hands. In Bang Chan of 1955, for
• 264 example, a sizeable minority (26 per cent) report that they use a spoon, fork or both for the evening meal.

369 That such a simple question can roughly measure exposure
[207] to urban influences, is indicated in the following table, which
[546] shows that respondents who report customarily eating with "urban utensils" are more likely to be exposed frequently to radio and motion pictures and are more likely to have visited in Bangkok.

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[412] * Survey respondents report that their households possess a flashlight (81 per cent); scissors (66 per cent); kerosene lamp (27 per cent); radio (14 per cent). About 41 per cent say they own at least one pair of shoes.

23

TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Pattern	
	With hands (342)	With fork and/or spoon (84)
Listens to radio		
Regularly (daily)	10%	23%
Occasionally	17	28
Seldom	31	35
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	13
2 - 4 times	29	23
5 or more times	28	55

When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive to urban influence are twice as likely as others to use fertiliser (21 per cent versus 9 per cent), one and a half times as likely to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per cent versus 61 per cent). There is no noticeable relationship, however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for those on high as well as low economic levels and also for the literate as well as illiterate farmers.

*178
369
241
244
402
• 264

TABLE 17. VILLAGERS RESPONSIVE TO URBAN PATTERNS ARE MORE LIKELY THAN OTHERS TO USE AGRICULTURAL INNOVATIONS

Agricultural innovations	Eat with fork and/or spoon	Eat with hands
Artificial fertilizer		
Tried it	21%	9%
Never did	79	91
Total cases*	(69)	(218)
Mushrooms		
Tried growing	57%	39%
Never did	43	61
Total cases	(84)	(242)
Small engine motor		
Own one or have used it	82%	61%
Never did	18	39
Total cases	(84)	(242)

* For farmers only; excludes all non-farmers

*178
369
212
244
402
434
264
556

TABLE 18. ACCEPTANCE OF URBAN PATTERNS IS LINKED TO ACCEPTANCE OF MOTOR AND MUSHROOM GROWING, IRRESPECTIVE OF ECONOMIC AND LITERACY LEVELS

	Economic Level				Literacy Level			
	Low		High		Illiterate		Literate	
Acceptance of urban patterns	(Proportion who used motor)							
Eat with hands	55%	(77)	76%	(73)	47%	(73)	83%	(76)
Fork or spoon	75	(20)	89	(34)	69%	(16)	90	(38)
	(Proportion who tried mushroom growing)							
Eat with hands	28%	(77)	58%	(73)	38%	(73)	47%	(76)
Fork or spoon	45	(20)	65	(34)	44	(16)	66	(40)
	(Proportion who used fertilizer)							
Eat with hands	11%	(77)	13%	(73)	10%	(73)	14%	(76)
Fork or spoon	19	(20)	26	(34)	3	(16)	23	(40)

32. Last night, when you ate at your own house, did you eat with your hands, with fork and spoon, or with spoon alone? [125] [264]

9.	Hands	242
X.	Fork and Spoon	11
Y.	Spoon alone	73
0.	Unascertainable	7

33.a. Have you ever been to a clinic or a hospital? [743]

1.	Yes	324
2.	No	119

b. IF YES: In what various places?

3.	Minburi	156
4.	Bangkok	135
5.	Other place	7
6.	Unascertainable what place.	

c. IF R HAS BEEN TO CLINIC OR HOSPITAL: For what various purposes did you go?

7.	Treatment or hospitalisation	123
8.	To bring a patient there	77
9.	Visit relatives or friends	45
X.	Other reason, specify_____	11
0.	Unascertainable	—

34.a. During the last year, did it occur to you frequently, sometimes, or never that you had difficulties falling asleep? [513]

1.	Frequently	73
2.	Occasionally	151
3.	Never	109

b. During the last year, did it occur to you frequently, sometimes, or never that you had a headache? [164]

4.	Frequently	50
5.	Occasionally	174
6.	Never	109

c. During the last year, did it occur to you frequently, sometimes, seldom or never that you lost your appetite?

7.	Frequently	50
8.	Occasionally	173
9.	Never	110

d. During the last year, did it occur to you frequently, sometimes, or never that your hands trembled so as to bother you? [164]

X.	Frequently	17
Y.	Occasionally	93
0.	Never	218
—	No Answer	5

e. During the last year, did it occur to you frequently, sometimes, or never that your heart beat so fast as to bother you?

1.	Frequently	36
2.	Occasionally	154
3.	Never	141
—	No Answer	2

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

The Family

592 Although the family is the smallest of social institutions, it occupies first rank in importance. For the purpose of this study family is defined as a group of persons who form a household under one head including parents, children, servants and other dependents. It is a social unit for both consumption and production. In Bangchan, members [264] [464] [463] of the same family, with the possible exception of piece-workers who have the privilege of eating with their employers only during periods of certain kinds of work, usually share the same meal although not necessarily at the same time. Physically able members are expected to contribute to family work although some may also do extra jobs for their own pocket money. In all cases family work has priority over the extra job, and in most cases members turn over all or part of the [354] [184] earning thus realized to the family head. Although most families have separate dwellings, there are instances of two families sharing the same dwelling but having separate cooking arrangement. Such cases are rare, however. According [464] [463] to our operational definition, then, a member of a biological family who has hired himself out as regularly hired laborer ceases to be a member of his own biological family and becomes a member of his employer's family. Piece workers, on the other hand, although they may occasionally eat with their employers, still retain membership of their biological family if they still live with them. Finally, people who live in the same dwelling may not belong to the same family if they

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

511 expenses (Table 53) and the Thai concept of food taking is somewhat different from the Western concept, an explanation of the food habit of Bangchan residents, which in no way differs from that of Thai farmers elsewhere in the country, is perhaps necessary at this juncture.

262 By far the most important single dietary item of
264 the Thai is khao or rice, which is the basis for every meal. The general term for "eat" is kin khao which has the literal meaning "to eat rice". Other dietary items are considered as embellishments and are thus called kab-khao (lit., with-rice). Typically, the "with-rice" items contain high seasoning in the form of chili and various hot curries. It is inconceivable for a Thai to eat "with-rice" alone without any rice, for not only the "real food" would then be missing but also there would be nothing to neutralize the highly flavored taste of the "with-rice". Actually, "with-rice" and rice are fed to the mouth in one lump with spoon or hand as the case may be. Eating "with-rice" alone would be just like eating butter without any bread. Moreover, "with-rice" are relatively more expensive than rice. Since the general idea is that they serve only to induce the in-take of rice, for sheer economic reason they should be consumed as little as possible so long as the required amount of rice in-take can be maintained. Accordingly, proper proportion of "with-rice" to rice in each helping has become one of the strictly observed table manners. This is easily noticeable, for only rice is served individually when the

262 family sit at the table while "with-rice" are placed at
• 264 the center and each person must partake of a small bit of these, just enough to properly go with a spoonful of rice taken each time. This table-etiquette is generally observed throughout the country by all classes of people. A story had it that a Thai student of an aristocrat family wrote home objecting to the proposed marriage between his sister and one of his Thai friends in America. One count against the man was that he had been observed to have taken too much "with-rice" while dining out at a Chinese restaurant in New York!

511 Among the factors affecting variability of the rate
182 of consumption of various items of goods, the following may be mentioned:

261 a. Relative price of the food in relation to its
511 ability to mollify hunger when taken with rice. When Bangchan
182 farmers were questioned why they did not consume eggs produced at home but instead sold them and bought the inferior platoo fish (Rastrelliger chrysozonus), the answer was that an egg barely induced them to take a plate of rice whereas one platoo fish bought with half the money obtained from the sale of an egg could induce them to take three or four plates of rice and thus satisfying a hearty meal.

511 b. Homogeneity of quantitative need for certain
182 products like rice, fish, clothing, tobacco, and garlic. Consumption per consuming unit of these goods has been observed to be more or less constant regardless of the prices and the family's purchasing power.

262 expenditures by food groups is shown for the 11 families that
511 participated in the dietary study.

Consumption of canned foods was negligible. Some canned fish and fruits were on sale at stores in the village, in 1952-54, but were seldom seen in homes.

262 Sweetened condensed milk, which was served in coffee
272 sold at the stores, was occasionally bought for the children.
854 On one occasion, a woman was seen buying milk diluted with
855 hot water as a beverage. Among 526 records of food eaten by school children during 24 hour periods, milk appeared twice only, once with coffee. Dried milk, for infant feeding, was used occasionally. During 1952-54, several instances were noted in which dried milk, mixed with water, was used to feed an infant while the mother was at work in the field or engaged in vending, but we encountered one case only of an infant who was not breast fed. This was an infant whose mother died when he was five days old, and who was reared by grandparents.

262 Relatively few items of food were available at the vil-
443 lage stores. In the inventory of the largest of the three
[277] stores in the village in 1948-49 (Sharp et al., 1953, pp. 211-212) the following items of food were listed: big dried chilies, shrimp paste, onion, garlic, fish sauce (fishsoy), salted fish, fresh chilies, limes, coconut, coconut oil[1], brown (palm)sugar, tea, coffee, condensed milk, orangeade and lemonade (carbonated), sweets, liquor, ingredients (including a lime paste) used together in betel chewing.[2]

New stock received in December by a local vender who kept a few items for sale at her house included mature green beans, black beans, peanuts, sweet potatoes, salted turnip, pickled garlic and tomato sauce.

272 Larger stores served as informal men's clubs where tea,
443 coffee with condensed milk, and carbonated beverages were
515 sold primarily for consumption on the premises. The proprietor of a new store, built in December 1952, sold no liquor.

273 We have no estimate of the amount of liquor sold in Bang
[443] Chan, although for those who drank it, its caloric value might be of significance.[3] About 9% of the householders interviewed

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[354] 1. Listed by Sharp et al. with non-food items, as much of it was burned in lamps.

2. Included here as food since some calcium may be obtained from this source.

3. One observer estimated the intake of certain village men who drank regularly as at least 2 oz. of rice liquor (28-35% alcohol) per day, representing about 100 calories. The estimated intake of women who drank regularly was about 1 oz. per day.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

431 guest contributes exactly the same amount that was given
496 him by the man when he last attended his party. Written
796 account is always kept by the host specifying contributors
511 and respective amounts given. When invited to a ritual, the guest consults his book and takes along an appropriate amount of cash. It is on this basis of reciprocal help that a prospective sponsor of a ritual has been able to determine the size of cash contribution he would receive from neighbors. Since a guest normally contributes no more than ten baht and no less than five baht, his annual expense on this item depends largely on the number of parties he attends each year. Our records for 1952 show that this ranges from 30 to 1,000 baht, averaging 343 baht.

• 27 We include in the personal item of expenses the
511 amounts spent on traveling, entertainment, coffee, liquor, etc. To be sure, some of these should be grouped under the stimulant item. We, however, intentionally put coffee and liquor here because the sequence seems to better fit the requirements of the persons responding to questions so that better answers might be obtained. Tobacco, betel, and areca, for example, appear to have somewhat constant rates of consumption. They are usually bought in large quantities which will last for a considerable length of time. As a result, informants are in a position to give more accurate rates of consumption of these items than those of liquor and coffee of which consumption is somewhat irregular and is difficult to estimate.

105 262 Sweets and fruit were the items most commonly eaten. Fruits were seldom eaten except as snacks.

• 271 105 The customary beverage with meals was untreated water. Rain water was preferred for drinking, but for 3 or 4 months of the year, water from the canal or fish pond was used.

105 262 Attitudes toward food, and foods considered appropriate for the very young, the old, for the pregnant or nursing woman and for use during illness, are briefly discussed.

105 126 146 Quantitative food intake for 11 families was recorded on a total of 44 survey days distributed throughout the year. Two groups of families, in which individuals were matched so far as possible as to age and sex, were selected on the basis of apparent difference in nutriture. The sample was not stratified with respect to economic conditions, but those in Group B, chosen for apparently better nutriture proved to be, in general, more prosperous than those in Group A, chosen because of signs of poor nutrition.

105 146 Food values were calculated on the basis of published analyses. Conservative nutrient allowances were estimated for residents of Bang Chan. On the average, calories, protein, iron, niacin and ascorbic acid in the diets of persons in Group B approximated or exceeded these allowances. For Group A, this was true for niacin and ascorbic acid only. Average intakes of riboflavin were estimated to be about 1/3 or less of the allowances, and estimates of calcium intake were about 20% of the allowance for Group A and 30% of that for Group B. Vitamin A values of diets for both groups appeared to be low, and thiamine intakes marginal or low. The signs observed among persons in these families were generally those associated with low intakes of thiamine, riboflavin and vitamin A.

Rice contributed about 4/5 of the calories and over half the protein in diets of both groups. Animal foods, chiefly fish, furnished about 2/5 of the protein. Intake of fats and sugar was small. Snacks of fruit contributed about 1/6 of the total ascorbic acid for Group A, and about 1/9 for Group B.

Seasonal variations in food preparation, meal patterns, food costs and caloric and nutrient values of foods eaten are discussed. Higher caloric intake during heavy work seasons was largely accounted for by larger amounts of rice eaten. The highest intake of protein for both groups occurred in the post-harvest season, when fish ponds were drained.

Questions for further study are proposed, and possible approaches to improving food habits and nutritional status in Bang Chan are suggested.

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

271 contaminated drinking water, but the traditional use of boiled water for newborn infants and their mothers, and its occasional use for sick persons, might provide the starting point for a desirable change.

Meal Preparation and Service

Processes and Equipment

252 The principal processes involved in food preparation for which equipment was required are: cutting solid food into bite-size pieces, pounding spices and flavoring materials, grating coconut, straining, boiling, sauteing in a small amount of fat, steaming, and roasting on a stick or metal support over the fire. Although foods were steamed or roasted only occasionally, the processes were familiar to all.

354 The Thai kitchen had no oven. When the term "baked" was used, it might mean cooking with dry heat on a rack over the fire (as banana baked in the skin) or without fat in the frying pan (as small dried fish toasted in this way).

128 415 Equipment used during meal preparation by the 11 families observed on 44 survey days is listed in Appendix A, p. 96, that used in serving and eating food, on p. 96.

252 415 554 184 The type of food preparation and service was much the same in the relatively well-to-do and the poorer households in Bang Chan. The chief difference in equipment for food preparation and service in families of different economic status was in the number of items of one kind which were owned. Thus a poor family might own one knife and one clay water jar, whereas an affluent family would probably own several knives and a number of water jars. Equipment used on special occasions, as in preparation of food for large numbers of people, was owned by well-to-do families only. Some had enough equipment for large cooperative work parties.

Persons Responsible for Food Preparation

252 462 Food was usually prepared by the homemaker and/or older daughter, if one were at home, but all members of the family who were old enough to help, had some knowledge of food preparation and did prepare food as the occasion demanded. While preparing, cooking and serving food were more frequently carried out by women than by men, adults and school-age children of both sexes had some competence in this area. "While certain activities are normally assigned to men and others to women, the Thai maintain no rigid compartmentalization and are unembarrassed when a woman does a man's job or a man does

[146] [221] higher calorie intake in these periods. In general, the level of calories, phosphorus and thiamine and to some extent the protein varied with the rice consumption. The greater consumption of fish when fish ponds were drained during Round IV, accounted for the relatively higher protein content of the diets of both groups at this time, even though calorie intake was not at its peak. During this period, animal foods provided 45 and 53% of the total protein intake of Groups A and B respectively, whereas for the year as a whole, 37 and 40% of the protein intake of these groups was of animal origin.

The relatively high vitamin A and C intakes of families in Group A, during Round I as compared to other periods, was associated with a higher consumption of green leafy vegetables, and the use of sweet potatoes in quantity by one family. During Round II, families in Group A had few green vegetables, and their average intake of vitamin A was very low. The use of papaya, obtained as a gift, by one family in Group B during Round II raised the average ascorbic acid intake for this group substantially. Better average intakes, by one or both groups, of vitamin A, thiamine, riboflavin and calcium during the first Round, were not such as to provide liberal body stores to be called upon when food supplies of these nutrients were low.

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SOME RECOMMENDATIONS FOR IMPROVEMENT OF DIET AND NUTRITURE AMONG RESIDENTS OF BANG CHAN

[164] Attempts to improve nutritional status in Bang Chan should be directed both toward increasing the supply and intake of certain nutrients and toward improvement of sanitary conditions so that intestinal infestation, diarrhea and other related illnesses will not lead to needless loss or increased requirement of nutrients.

Solution of the related problems of disposal of human excreta and provision of a year-round safe water supply are in the province of the sanitary engineer. [164] [312] Intestinal parasitism was common, but little can be done through treatment of individuals so long as the water supply is contaminated. [271] Rain water was preferred for drinking, so provision of adequate and sanitary storage for rain water, coupled with sterilization of water from ponds and canals when rain water is not available, would do much to ensure safe drinking water. [846] [853] The custom of giving mother and infant boiled water only, during the post-partum rest period, provides a starting point for extending use of boiled water to other ages and conditions.

853 Table 2. Food Intake Other Than Milk of 32 Infants From 6 to 8 1/2 months Old.[1]

No. of Infants	No. of Food Items	Number of Infants Fed Food Items Other Than Milk					
		Rice	Banana	Other Fruit	Fish	Egg, Meat or Poultry	(2)Kha-(5)nom
1	0						
10	1	9					1
10	2	10	10				
4	3	4	4			3	1
3	4	3	2		3	2	2
1	5	1	1	1	1		1
3	6	3	3	3	3	3	3
Total	D[2]	29	9		3	4	2
32	F	1	6	1	1	3	3
	O		5	3	3	1	3

1. The nearest half month marked the dividing point between age groups. Thus an infant 8 months 20 days old would be considered as 8 1/2 months old and one 8 months 23 days old would be considered as 9 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

[262] 12 and 14 1/2 months of age were given egg daily, and almost all had egg either frequently or occasionally. About half the babies of this age were fed poultry or meat occasionally, but neither of these items was common in the family diets observed in Bang Chan (Hauck et al., 1958; Hauck and Hanks, 1959). At this age only 1 of 41 babies was given green vegetables daily, and less than one-third of them had vegetables of any kind even occasionally (Table 4).[A]

855 262 As the children grew older they had vegetables more frequently, so that between 15 and 20 1/2 months of age almost half of the children ate vegetables at least occasionally (Tables 5 - 8).[B] A few two-year old children had never had green vegetables; for many, even at this age or older, vegetables of any kind were occasional rather than frequent items of diet.

[271] Of the 23 children between 21 and 24 1/2 months of age for whom we had records, 5 were still being breast fed, and one (the orphaned child) continued to receive imported cow's milk diluted with boiled water. All drank untreated canal or rain water according to the available supply. All were fed rice cooked in the usual manner, but one still had soupy undrained rice at times.

A [See p. 20 - Analysis] B [See p. 21-22 - Analysis]

BANG CHAN

251 One family stored cooked food in a basket which was hung from the ceiling. One homemaker frequently covered such foods with a basket, and in one instance a homemaker, who usually took no precautions to protect cooked foods, used a basin to cover food left on a table.

271 312 Source and Treatment of Water For Drinking and Culinary Purposes. - From the time the dietary survey was begun, on May 26, 1953, through January 18, 1954, all families used rain water for drinking.

Of the 14 survey days, spaced at about weekly intervals, between January 28, 1954 through May 8, 1954, canal water was used for drinking on 7 days, water from fish ponds on 4, and rain water on 3 days. No distinction was made in source of drinking water for children and adults.

312 744 [846] All families used canal water for washing vegetables, cooking, and washing dishes, on the survey days from May 26, 1953 through March 18, 1954. On the 6 survey days between March 24 and May 8, 1954, 4 families used water from the fish pond for these purposes. In no instance was the water treated in any way before being used, although alum is known to be used, at times, in the village, to settle or clear water, and boiled water is given mothers and infants to drink during the post partum rest period.

514 Disposal of Excreta. - Of 30 families from whom information was obtained, 20 had pits for toilet use, only one of which was equipped with a cover. One other family had a flush latrine. Of the 8 families who had no special place which was used for toilet purposes, 4 reported that family members urinated on the compound, 3 that they used the fields, and 1 that either compound or field might be used for urination. One reported that the compound was used for defecation as well as urination; the remaining 7 said they went to the field to defecate.

Six families with pit latrines covered feces in some way: 3 used earth, 2 ashes, and 1 either earth or ash. A majority of those who used either an uncovered pit or had no designated place, reported that no attempt was made to cover feces. From six families, no information was obtained on this point. Various materials were mentioned as being used in the manner in which western peoples use toilet paper. Cocoanut husks were mentioned most frequently (25 times), and other materials in this order: paper (newspaper 9 times, straw paper once), wood (4 times) and water (3 times).

From the information available, custom and convenience rather than sanitary considerations appear to determine practices that are followed. If improved practices are

Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended to live in proximity. Around the houses were kitchen gardens and threshing floors, and behind them, the fields. Bananas grew abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, while fish were plentiful. Water sources were the rain, kept in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

General Nutritional Level

The population was physically well-formed with few physical deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. Food at the not-infrequent festivals was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The change-over, some decades ago, from home pounding of rice to steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community.

2. Dr. H.M. Hauck, personal communication, 1959.

262 expenditures by food groups is shown for the 11 families that
511 participated in the dietary study.

Consumption of canned foods was negligible. Some canned fish and fruits were on sale at stores in the village, in 1952-54, but were seldom seen in homes.

262 Sweetened condensed milk, which was served in coffee
272 sold at the stores, was occasionally bought for the children.
854 On one occasion, a woman was seen buying milk diluted with
855 hot water as a beverage. Among 526 records of food eaten by school children during 24 hour periods, milk appeared twice only, once with coffee. Dried milk, for infant feeding, was used occasionally. During 1952-54, several instances were noted in which dried milk, mixed with water, was used to feed an infant while the mother was at work in the field or engaged in vending, but we encountered one case only of an infant who was not breast fed. This was an infant whose mother died when he was five days old, and who was reared by grandparents.

262 Relatively few items of food were available at the vil-
443 lage stores. In the inventory of the largest of the three
[27] stores in the village in 1948-49 (Sharp et al., 1953, pp. 211-212) the following items of food were listed: big dried chilies, shrimp paste, onion, garlic, fish sauce (fishsoy), salted fish, fresh chilies, limes, coconut, coconut oil[1], brown (palm)sugar, tea, coffee, condensed milk, orangeade and lemonade (carbonated), sweets, liquor, ingredients (including a lime paste) used together in betel chewing.[2]

New stock received in December by a local vender who kept a few items for sale at her house included mature green beans, black beans, peanuts, sweet potatoes, salted turnip, pickled garlic and tomato sauce.

272 Larger stores served as informal men's clubs where tea,
443 coffee with condensed milk, and carbonated beverages were
575 sold primarily for consumption on the premises. The proprietor of a new store, built in December 1952, sold no liquor.

273 We have no estimate of the amount of liquor sold in Bang
[443] Chan, although for those who drank it, its caloric value might be of significance.[3] About 9% of the householders interviewed

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[354] 1. Listed by Sharp et al. with non-food items, as much of it was burned in lamps.

2. Included here as food since some calcium may be obtained from this source.

3. One observer estimated the intake of certain village men who drank regularly as at least 2 oz. of rice liquor (28-35% alcohol) per day, representing about 100 calories. The estimated intake of women who drank regularly was about 1 oz. per day.

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

252 usually covered. A common practice was to remove the cover and stir the rice once, toward the end of the cooking process. When the rice was almost done, surplus cooking water was drained off, and often after a lapse of time, the covered pot was put back onto the fire which had been allowed to die down, for about 6 minutes.[1] Thus the final cooking was essentially a process of steaming. Total cooking time varied from a little over 20 minutes to three-quarters of an hour, depending primarily on the amount of rice cooked. The finished product was moist enough to form a ball when pressed between the fingers. Left-over rice, if not eaten cold as a snack, was reheated by [231] being added to the hot rice at the next meal. Rice water was commonly given to pets if there were any. In 4 families which [272] participated in the dietary study, rice water was given to in- [853] fants, one 11-year old boy served himself liberally to it, and one adult man was observed to drink rice water before meals.

The many recipes for preparation of "with-rice" dishes may be grouped into two categories, hot and mild. Hot dishes always contain chili and varieties of spices which are hot tasting. One type of hot dish is curry which may be designated as either "hot" or "sour". Thai curry consists chiefly of fish or any available kind of meat, with or without vegetables. To make curry, shrimp paste, chili and spices were pounded thoroughly and then mixed with the meat and condiments and frequently with coconut milk. All were boiled together. Vegetables, if used, were added when the mixture was nearly done. Both vegetables and meat were cut into small pieces and washed before cooking. With the exception of dried chilies and tamarind, foods were not ordinarily left to soak in water. Sour curry differs from hot curry in that it contains less chili and spices and has a mixture of tamarind ((4)ma-(1)dan might be substituted) crushed with water added to it.

The other type of hot dish is (4)nam (3)phrig or chili sauce. It is made of shrimp paste, chili, garlic and other spices ground together in the mortar and then mixed with lime juice, sugar and salt or fishsoy. (4)Nam (3)phrig was always served with either raw or cooked vegetables. One informant commented that (4)nam (3)phrig was the everyday food among the villagers.

Preparation of mild dishes varied. These included panned vegetables, meat or eggs cooked with small amount of fat and a variety of spices and condiments including black pepper but not chili. Fish were sometimes roasted or boiled. Vegetables might be eaten either raw or cooked in coconut milk without seasoning. If vegetables were simply boiled in water,

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1. Median times for a series. In 15 instances cooking time before draining ranged from 18 to 38 minutes and rice was steamed from 2 to 12 minutes after draining.

The observer often had
126 opportunity to make notes on foods eaten by various family
262 members. Two examples of these are included in Appendix A, p. 97.

Snacks

262 We have noted that various family members ate the morn-
264 ing meal, in particular, at different times, and that children
855 especially might eat leftover food between meals. Most Bang
Chan school children[1] ate snacks, which were usually different
443 from foods eaten at a regular meal. Doubtless most of them were purchased from one of the venders who were to be seen on the school grounds daily. Fruits and "desserts" were most commonly eaten, although a variety of other foods, not a part of the usual Thai meal, were also listed. Sweets were listed about 450 times on the 539 records obtained. Many of them had a base of rice, rice flour or glutinous rice with sugar, and included coconut, banana or other fruit. Some were made with legumes, and a few contained egg. Fried bananas, fried sweet potato slices, bananas or beans cooked in syrup, and bananas cooked in sweetened coconut milk were also listed. A few items such as ices, flavored syrup poured over shaved ice, and candies, had little nutrient value other than caloric content.

272 A glass of milk, and milk with coffee, were each listed
once. These might have been obtained at the store adjoining
859 the school grounds. These instances are worth noting primarily because, although dried and tinned milks were obtainable, milk was seldom given to village children after weaning.

262 Many children were given a bit of cash each day, and
437 Janlekha (1955) commented that some children who did not have
855 any might barter an egg for snacks. One could tell fairly
261 well from the children's records what the venders offered for sale on a given day. Some influence of season was apparent; thus ices and syrup over shaved ice were eaten more often during the hot dry season, and cooked foods such as fried Chinese noodles appeared primarily in the cool season.

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126 1. With the cooperation of teachers of the third and fourth grades in the Bang Chan elementary school, records of food eaten during 24-hour periods were obtained from children in these grades at intervals of about one month during the school year. This was a regular activity in the health class. A total of 539 records (from 1 to 8 for each child) were obtained from 75 boys and 72 girls. To facilitate recording, each child was given a sheet of paper, with spaces for his name, the date, and kinds of food other than rice, eaten at the morning, noon and evening meals, and as snacks. These records were collected primarily for information on meal patterns of village families for comparison with the limited sample in the dietary survey, and on seasonal use of various foods.

000 concerning its culture and use. Tilapia culture was learned
[034] largely by trial and error, and was considered primarily as a
[228] source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been
[262] different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

262 More home consumption of eggs would be desirable, but
[432] their ready sale and acceptability for barter may present an
[431] obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak
[432] season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented
[260] as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

272 Milk, as canned, dried or malted milk preparations, was
792 considered an appropriate gift for the priests, who are for-
788 bidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to in-
000 clude milk among them. People gladly bought food for the
[329] priests and would probably accept on the authority of the head
[792] priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headmen were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

[796] The importance of merit making and the relatively large
[982] cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

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[375] Food for Homage-to-the-Teacher Rite (cont.)

Item	Amount	Cost in Baht
Fruit:		
Bananas ((3)kluaj (4)nam-(4)waa)	5 bun.	from father
Chico[2]		5.
Coconut	150	180.
Coconut (young, to make dessert)	30	30.
Job's tears	1 lit.	3.
Plums, yellow[2]		5.
Pomelos[2]		6.
Rose apples[2]		2.
Tamarind		7.50
Tomato sauce		8.
Young palm fruit[4]	7 bun.	3.
Vegetables (non leafy):		
Bamboo shoots, cooked	1 pail	28.
[272] Cucumber		--3
[273] Egg plants		--3
[274] Garlic	5 kg.	26.50
Gourd, white		1.
Onion, fragrant[5]		6.
Onion[5]	4 kg.	4.
Onion, welsh[5]		--3
Mushrooms		3.
Radish, white		--3
[354] **Vegetables (leafy green and yellow):**		
Cabbages		--3
Chinese kale		--3
Chili, green		7.50
Vegetables (leafy green & yellow) cont.:		
Lettuce		--3
Parsley		--3
Pumpkin	3 fruits	12.
Sweet basil leaves		1.
Sweet potatoes	6 kg.	6.
(3)Tang-(5)oo		--3
Seasonings etc.:		
Vinegar	1 bottle	1.
Fishsoy	1 jar	10.
(2)Ka-(1)chaaj	2½ kg.	12.50
Sodium glutamate		5.
Pepper		14.
Agar	400 gms.	36.
Miscellaneous:		
Cola beverage	72 bottles	72.
Liquor	16 bottles	80.[6]
Ice		30.
Cigarettes	2 pkgs.	--6
Tobacco	1 heap	--6
Betel pepper		9.
Fresh areca nut		10.
Dried areca nut		8.
Dried palm leaves	1 big bundle	2.
Firewood		50.
	Total	1577.75

[384]
1. For Moslem guests.
2. Food items placed on a tray and used in the ceremony proper.
3. Items so marked cost a total of 140 baht.
4. Not identified.
5. Several kinds of onions, both fresh and dried, are commonly used.
6. Prices not stated; estimate for liquor.

57 125

53. Which of the following six qualities do you feel is the best thing for man: Virile, friendly, educated, rich, religious, lazy? [577]

5.	To be virile	2
6.	To be friendly	31
7.	To be educated	56
8.	To be rich	43
9.	To be religious	126
X.	Not to be lazy	57
Y.	Unascertainable	15
—	No Answer	3

54. Do you drink too frequently, occasionally, seldom, or never? [272]

1.	Often	22
2.	Occasionally	68
3.	Seldom	158
4.	Never	85

55. Do you drink whiskey frequently, occasionally, seldom, or never? [273]

5.	Often	29
6.	Occasionally	73
7.	Seldom	157
8.	Never	74
9.	Unascertainable	—

56.a. In Thailand are many people who smoke opium. Excuse me, during your life have you ever smoked opium, or not? [276]

1.	Yes	45
2.	No	287
3.	Unascertainable	1

b. IF NO: Excuse me, do you think there is anything wrong with smoking opium, or not?

4.	Yes, it is wrong	281
5.	No, it is not wrong	5
6.	Unascertainable	1

c. IF SOMETHING WRONG: What are the various reasons why you think it is wrong?

7.	Bad for health	43
8.	Habit forming	42
9.	Waste of money	220
X.		
Y.	Other reasons, specify_____	40
0.	Unascertainable	

57.a. In the last month, how many times did you go to Khburi or didn't you go at all? [484]

0.	Did not go at all	67
1.	Once	95
2.	2 to 4 times	120
3.	5 to 9 times	39
4.	10 to 19 times	30
5.	20 times or more	20
6.	Unascertainable	2

On the other hand, there are scores of items that have to be bought for daily consumption. These are: (a) Food -- fish, fish sauce, shrimp paste, meat, coconut, onions, garlic, dried chili, curry essence, limes, tamarind, palm sugar, white sugar, salt, and cookies: (b) Stimulant -- dried areca, betel, lime, tobacco, tobacco binder, and liquor; (c) Clothing; (d) Medicine; (e) Soap; (f) Fuel -- Kerosine, matches, charcoal, and fire wood. The list includes only standard items appearing on our check list. Actually, there are more of such items as coffee, tea, lemonade, coca-cola, and pepsi-cola. Articles that are bought but do not appear on the check list for ordinary household expenses for certain technical reasons which will be discussed in the section on consumption later in this chapter are building materials, machinery, farm equipment, furniture and household utensils.

The Operator's Remuneration and Measures of Success

From almost the beginning of the study of farm management in the United States, much effort has been given to measuring the success of farming businesses, or of farm-family undertakings or enterprises, and then of correlating various factors with these, such as size of business, yields per acre or per animal, or work-efficiency measured perhaps as crop acres per man or per horse or per tractor, with a view to discovering some general farm management principles or rules for a farmer or farm family to follow in becoming more successful. Black, Clawson, Sayre and Wilcox give the

People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauck, et al: 42-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny kluai nam, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" kluai nam wā. Here orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plus--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (wiset:powerful) or natural (tām thammachāt) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "khun"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paroxysm, flatulence, convulsion,

16. Phillips (p. 65) reported that parents did not give their child a disliked medicine because "it offends him.... It is better not to give it to him than hurt his feelings."

17. This small skin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely pained (cf. Textor:116-127). Suspected khun was one of the few reasons why a family would authorize so grave a violation of the body of a deceased member as an autopsy.

Now that the fire was going nicely and Dūan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sāi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dūan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaichiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dūan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

As Dūan was resting quietly, Sāi made three "taping fruits" (lūk prakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dūan's legs to cure the birth wound (phlāe). The other two were set aside for use on subsequent days. Sāi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dūan, on the side away from the fire.

With satisfaction of a job well done, Sāi and Lek sat together for a quiet chew of betel. "Lek," said Sāi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that best

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36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

37. The deities addressed were māe phra phlōeng and māe phra phai. Another Pali-Thai magic formula to control fire was: "Phra Mōk Khan Lā Nō will extinguish the fire from hell, na mō phut tha ya." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mō...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Textor 1960:483-485).

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
571 the steps in the Buddhist winnowing ceremony and performed
[852 them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khăo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
[774 "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist,
[782 meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the
[197 poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 Completely Muslim was the stress on physical and
[783 moral purification as an objective of every rite, and conversely, the prevalence of the idea of defilement.
[304 "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate pro-
[764 cedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before burial," implying thorough measures beyond his ordinary
[831 experience. Procreation was viewed as dangerous and contaminating. The behavior that hid sexual phenomena at
[834 the same time by constant prescriptions kept sexuality much more in mind. Muslims separated males from females,
[562 for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (făk
[273 thong: to deposit gold). On returning home, she went as fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim mid-
795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclos-
[562 ed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khăo contained "7

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262 expenditures by food groups is shown for the 11 families that
511 participated in the dietary study.

Consumption of canned foods was negligible. Some canned fish and fruits were on sale at stores in the village, in 1952-54, but were seldom seen in homes.

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272 sold at the stores, was occasionally bought for the children.
854 On one occasion, a woman was seen buying milk diluted with
855 hot water as a beverage. Among 526 records of food eaten by school children during 24 hour periods, milk appeared twice only, once with coffee. Dried milk, for infant feeding, was used occasionally. During 1952-54, several instances were noted in which dried milk, mixed with water, was used to feed an infant while the mother was at work in the field or engaged in vending, but we encountered one case only of an infant who was not breast fed. This was an infant whose mother died when he was five days old, and who was reared by grandparents.

262 Relatively few items of food were available at the vil-
443 lage stores. In the inventory of the largest of the three
[27] stores in the village in 1948-49 (Sharp et al., 1953, pp. 211-212) the following items of food were listed: big dried chilies, shrimp paste, onion, garlic, fish sauce (fishsoy), salted fish, fresh chilies, limes, coconut, coconut oil[1], brown (palm) sugar, tea, coffee, condensed milk, orangeade and lemonade (carbonated), sweets, liquor, ingredients (including a lime paste) used together in betel chewing.[2]

New stock received in December by a local vendor who kept a few items for sale at her house included mature green beans, black beans, peanuts, sweet potatoes, salted turnip, pickled garlic and tomato sauce.

272 Larger stores served as informal men's clubs where tea,
443 coffee with condensed milk, and carbonated beverages were
515 sold primarily for consumption on the premises. The proprietor of a new store, built in December 1952, sold no liquor.

273 We have no estimate of the amount of liquor sold in Bang
443 Chan, although for those who drank it, its caloric value might
[443] be of significance.[3] About 9% of the householders interviewed

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[354] 1. Listed by Sharp et al. with non-food items, as much of it was burned in lamps.

2. Included here as food since some calcium may be obtained from this source.

3. One observer estimated the intake of certain village men who drank regularly as at least 2 oz. of rice liquor (28-35% alcohol) per day, representing about 100 calories. The estimated intake of women who drank regularly was about 1 oz. per day.

273 in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

433 434 443 Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary [442] study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

121 In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

221 227 125 [128] From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953, and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 29 --- Analyst]

264 would not come willingly to work. When a family with a repu-
476 tation for stinginess diluted the (3)khaaw (3)tom too much,
[576] the group refused to eat any, thereby reminding the host of his obligation for hospitality.

574 Guests to whom meals were served fell into four categories: 1) kin, 2) visiting dignitaries, 3) priests and 4) drinking companions. Kinfolk who came as guests were married children, or those who were away at school or work, or kinsmen from Bangkok or elsewhere. The older the relative or the greater the distance travelled, the greater the honor accorded him. Foods were exchanged. Two visiting ladies travelling in a large boat, made an annual round of all their relatives, bringing certain "city" foods and receiving substantial gifts of rice, fish and fruit. They stayed for several days as guests of one family, then moved on. Every person from Bang
[431] Chan who visited a relative in Bangkok carried big packages of food, usually rice or eggs, as gifts. With the inflated prices in Bangkok, it was advantageous to have a "country cousin" who might bring food. Visiting kinsmen always recognized the need for eventual reciprocity.

Visiting dignitaries were usually entertained by hamlet headmen. Meals served to visiting officials, policemen and others might be elaborate, involving cooperative help in preparation, but reciprocity, if any, rarely took the form of a return meal.

[792] Regular visits of the priests, as well as the invitation of priests to the house for special events, have been mentioned. Priests might also come from afar, usually staying at the temple but receiving generous offerings of food from people of the community.

[562] The custom of convivial get-togethers of either or both sexes was well established. Men traditionally enjoyed "stag" dinners of four up to twenty or more whenever the ingredients for a turtle, frog, cobra or other snake curry were available. Chicken curry might also be thus served, and once a catfish mash was prepared by a male visitor from the north. Those curries were cooked by men, and the host served liquor freely.
784 The all-male character of the occasion reflected the old re-
[213] strictions on women's partaking of flesh foods (see p. 42), but older women did not hesitate to join in the drinking.
[524] Women also got together in drinking parties, sometimes to play cards.

In addition to sharing food with people in these four categories, the general rules of hospitality required that anyone who came to the house at meal time, should be offered food, or at least a drink of liquor, tea, or plain water.

435 Some information as to the cost in baht of the larger
796 ceremonies held in 1954, and their scale, was obtained from
[124] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[714] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000.
Guests gave 2300.
[583] B: Rite of forgiveness after elopement: a meal, with 5 bottles of liquor.
[184] C: Moslem: 2 buffalo slaughtered.
400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
[583] sugar cane, fruits, sweetmeats and other things. At more
modest weddings and the rite of forgiveness for a couple who had eloped, food might differ from the usual fare only by including the three essentials of a wedding: pork, chicken and alcohol.

273 Increased consumption of alcoholic beverages during the
796 ceremonial season was indicated by the sales of one local
443

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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[574] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

443 storekeeper: about 800-900 liter bottles per month during
273 the 3 months dry season as compared to about 350 bottles per
796 month during the 9 months of the rice season.

184 Moslems never served liquor at their weddings, crema-
[273] tions, and other auspicious events. Moslem residents occa-
sionally attended Buddhist (l)ngaan in spite of dietary pro-
[262] scriptions that Buddhists did not observe.[1] A medium (spirit-
ualist) commented however that because pig's head was essen-
tial for her homage-to-the-teacher rites, some Moslem sick
persons preferred to go to the Buddhist temple for treatment.
There the priest-practitioner could afford to set up a separate
kitchen for his Moslem patients, and so spare them the dis-
tress of confronting pork. To one big ordination Moslem
guests brought their own food. Buddhists came somewhat more
often to Moslem ceremonies.

262 We do not have enough information to appraise the nutri-
574 tional significance of food eaten at ceremonies. Some indi-
476 viduals got a great deal of it, others very little. One must
264 remember that the (l)ngaan was not a public but a private
event at home, to which guests came on invitation. Although
cremations and the teacher-rites of priest-practitioners were
held at the temple, and so had a semi-public character, no one
who was not invited presented himself for food. Of the par-
ticipants, the working group undoubtedly received the most
food; they were there the longest time, had regular meals,
tastings and snacks throughout the (l)ngaan meal itself. This
group comprised the host, co-sponsors and their immediate kin;
other relatives and friends who were asked or who volunteered
to help. The feeling was, if one were "very fond" of the
host, one volunteered to cook. If less close, one was invited
as a guest, but made the usual cash donation. Sociable per-
sons combining skill and energy were invited often and volun-
[883] teered often, hence spent many days at ceremonies. Young un-
married men and women were asked and liked to be asked to
work, for such occasions offered a great chance for fun and
flirting.

114 Different degrees of participation may be estimated
476 from Janlekha's (1955) figures for reported contributions
796 ranging from 30 to 1000 baht in a year. Since a contribution
of 5 to 10 baht per (l)ngaan was customary, the villager with
the lowest reported contribution probably attended from 3 to
6 ceremonial occasions. Attendance at 100 or more (l)ngaan
is unlikely, hence the villager who gave as much as 1000 baht
probably made larger contributions per (l)ngaan.

574 What sort of persons or groups in the village were in-
796 vited as guests? Every host's list included his older

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[702] 1. Moslems were said to resist army service because they were afraid they would have to eat pork.

146 more than fats and oils as such.
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Bananas were grown by all families that participated in the study, but were eaten only occasionally, primarily as [263] snacks. Tamarind and lime were used often in small amounts in making sour curry and chili sauce, and bergamot rind was used for seasoning. Papaya and mango, both of which are good sources of vitamin A and C, were each eaten once only during the survey. The green papaya was used in curry. Fruits are relatively abundant in Thailand, the year round, yet fruit made minor contributions to the diets of families studied in Bang Chan.

Fats and oils. - Fats were used in small amounts to pan fish, meat, eggs and vegetables, and provided about 1/7 of the total fat in the diet of Group A, and 2/7 for Group B. Coconut oil, which was less expensive than pork fat, was more often used in Group A.

Sugar. - Palm sugar was used in small amounts in the preparation of many "with-rice" dishes, and occasionally in snacks, i.e. guava dipped in a mixture of sugar, salt, chili, mung beans cooked in palm syrup and the like. The amounts used were small, and the contribution to nutritive value was slight. By Western standards, the consumption of sugar in Bang Chan was almost negligible.

146 Spices. - Spices were commonly used in food preparation,
263 particularly in hot dishes (i.e. those made with chilies) but little information on their nutritive value is available.

146 Alcoholic beverages. - In the families surveyed, all men
273 except the elderly father in Household 21 drank occasionally, but most of the women did not. The husbands in Households 12 and 67 drank heavily at times. No estimate can be made of the contribution of alcoholic beverages to caloric intake in these households.

146 Summary of Nutrient Contributions of Foods Commonly
262 Eaten in Two Groups of Households. - The contribution in terms
[128] of calories and nutrients of certain foods used by 25% or more of the families studied, i.e. by 3 or more of the families on at least one survey day is shown in Table 13. Items selected for inclusion in this table are those which either made significant contributions to the nutrient content of the diets of Groups A and B respectively, or were major items in terms of amounts used or frequency of use. For certain items used frequently for seasoning, information on nutritive value was too scant to warrant inclusion in this table. Figures given are for average consumption per capita per day, based on all persons in the specified groups, and all survey days. For items used by all or most families every day, such as rice, fresh fish, chili, coconut products, and sugar, the figures represent approximately the usual daily per capita consumption.

262 435 796 [915] Food for Homage-to-the-Teacher Rite (cont.)

Item	Amount	Cost in Baht
Fruit:		
Bananas ((3)kluaj (4)nam-(4)waa)	5 bun.	from father
Chico[2]		5.
Coconut	150	180.
Coconut (young, to make dessert)	30	30.
Job's tears	1 lit.	3.
Plums, yellow[2]		5.
Pomelos[2]		6.
Rose apples[2]		2.
Tamarind		7.50
Tomato sauce		8.
Young palm fruit[4]	7 bun.	3.
Vegetables (non leafy):		
Bamboo shoots, cooked	1 pail	28.
[272] Cucumber		--3
[273] Egg plants		--3
[274] Garlic	5 kg.	26.50
Gourd, white		1.
Onion, fragrant[5]		6.
Onion[5]	4 kg.	4.
Onion, welsh[5]		--3
Mushrooms		3.
Radish, white		--3
[354] **Vegetables (leafy green and yellow):**		
Cabbages		--3
Chinese kale		--3
Chili, green		7.50
Vegetables (leafy green & yellow) cont.:		
Lettuce		--3
Parsley		--3
Pumpkin	3 fruits	12.
Sweet basil leaves		1.
Sweet potatoes	6 kg.	6.
(3)Tang-(5)oo		--3
Seasonings etc.:		
Vinegar	1 bottle	1.
Fishsoy	1 jar	10.
(2)Ka-(1)chaaj	2½ kg.	12.50
Sodium glutamate		5.
Pepper		14.
Agar	400 gms.	36.
Miscellaneous:		
Cola beverage	72 bottles	72.6
Liquor	16 bottles	80.6
Ice		30.6
Cigarettes	2 pkgs.	--6
Tobacco	1 heap	--6
Betel pepper		9.
Fresh areca nut		10.
Dried areca nut		8.
Dried palm leaves	1 big bundle	2.
Firewood		50.
	Total	1577.75

[1084]
1. For Moslem guests.
2. Food items placed on a tray and used in the ceremony proper.
3. Items so marked cost a total of 140 baht.
4. Not identified.
5. Several kinds of onions, both fresh and dried, are commonly used.
6. Prices not stated; estimate for liquor.

57 125

53. Which of the following six qualities do you feel is the best thing for man: Virile, friendly, educated, rich, religious, lazy? [577]

5.	To be virile	2
6.	To be friendly	31
7.	To be educated	56
8.	To be rich	43
9.	To be religious	126
X.	Not to be lazy	57
Y.	Unascertainable	15
—	No Answer	3

54. Do you drink tea frequently, occasionally, seldom, or never? [272]

1.	Often	22
2.	Occasionally	68
3.	Seldom	158
4.	Never	85

55. Do you drink whiskey frequently, occasionally, seldom, or never? [273]

5.	Often	29
6.	Occasionally	73
7.	Seldom	157
8.	Never	74
9.	Unascertainable	—

56.a. In Thailand are many people who smoke opium. Excuse me, during your life have you ever smoked opium, or not? [276]

1.	Yes	45
2.	No	287
3.	Unascertainable	1

b. IF NO: Excuse me, do you think there is anything wrong with smoking opium, or not?

4.	Yes, it is wrong	281
5.	No, it is not wrong	5
6.	Unascertainable	1

c. IF SOMETHING WRONG: What are the various reasons why you think it is wrong?

7.	Bad for health	43
8.	Habit forming	62
9.	Waste of money	220
X.		
Y.	Other reasons, specify_____	40
0.	Unascertainable	

57.a. In the last month, how many times did you go to Nimburi or didn't you go at all? [484]

0.	Did not go at all	67
1.	Once	55
2.	2 to 4 times	120
3.	5 to 9 times	39
4.	10 to 19 times	30
5.	20 times or more	20
6.	Unascertainable	2

438
511 On the other hand, there are scores of items that have to be bought for daily consumption. These are:
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263
273
276
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515 (a) Food -- fish, fish sauce, shrimp paste, meat, coconut, onions, garlic, dried chili, curry essence, limes, tamarind, palm sugar, white sugar, salt, and cookies: (b) Stimulant -- dried areca, betel, lime, tobacco, tobacco binder, and liquor; (c) Clothing; (d) Medicine; (e) Soap; (f) Fuel -- Kerosine, matches, charcoal, and fire wood. The list includes only standard items appearing on our check list. Actually, there are more of such items as coffee, tea, lemonade, coca-cola, and pepsi-cola. Articles that are bought but do not appear on the check list for ordinary household expenses for certain technical reasons which will be discussed in the section on consumption later in this chapter are building materials, machinery, farm equipment, furniture and household utensils.

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000 The Operator's Remuneration and Measures of Success

From almost the beginning of the study of farm management in the United States, much effort has been given to measuring the success of farming businesses, or of farm-family undertakings or enterprises, and then of correlating various factors with these, such as size of business, yields per acre or per animal, or work-efficiency measured perhaps as crop acres per man or per horse or per tractor, with a view to discovering some general farm management principles or rules for a farmer or farm family to follow in becoming more successful. Black, Clawson, Sayre and Wilcox give the

146 262 most significant source of phosphorus, iron, thiamine, riboflavin and niacin in these diets. Although the calcium content of rice is low[1], about 23 and 16% of the estimated calcium content[2] of diets of Groups A and B respectively came from the cereal groups. Glutinous rice and various products such as noodles made of rice flour were eaten occasionally in small amounts. These and other cereals and cereal products, such as wheat bread and popcorn contributed little to the total nutritive value of the diets.

Animal products other than pork fat. - Fish and other foods of animal origin furnished about 2/5 of the protein in the diets of both groups. From 20 to 30% of the riboflavin and niacin and substantial amounts of phosphorus and iron were provided by this food group, also. For families in Group A, these animal products provided substantially more fat than the group of fats and oils as such, whereas Group B obtained about the same amount of fat from these two food groups. The estimated contribution of vitamin A from this group was small. Specific analyses for most of the varieties of fish used in Bang Chan were not available, however, hence many calculations were made on the basis of average values for "fat fish," "lean fish," and "dried fish."

Although a substantial part of the calculated calcium content of the diets came from animal products, the amounts were only about 8 and 9% of the estimated allowances for Groups A and B respectively. Fermented fish are reported to contain 1126 mg. per cent of calcium (Knudson, 1955) but the amounts eaten were relatively small. Two families only in Group A used a total of 217 grams of fermented fish on survey days, and two families in Group B used a total of 608 grams. These amounts, though they represented servings of only 20 grams per person for the two families in Group A, and of 36 grams per person for those in Group B, nevertheless increased the estimated average calcium intakes substantially, so that 43% of the calcium in diets of Group A, and 34% in diets of Group B, were provided by animal products. The tiny dried fish which are eaten whole, were not used by the families studied on any of the 44 survey days.

On the average, the contribution of animal products other than fish to the nutrient content of these diets was small.

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[256] 1. According to Knudson (1955), addition of calcium carbonate to rice during the milling process was not practiced in Thailand.

[276] 2. No attempt was made to estimate calcium intake from betel chewing, although this might be considered a dietary source of calcium. Six of 15 persons twenty years of age or older, in Group A, were betel chewers, whereas among 14 persons over twenty in Group B, 9 chewed betel regularly and one occasionally.

262 435 796 [315] Food for Homage-to-the-Teacher Rite (cont.)

Item	Amount	Cost in Baht
Fruit:		
Bananas ((3)kluaj (4)nam-(4)waa)	5 bun.	from father
Chico[2]		5.
Coconut	150	180.
Coconut (young, to make dessert)	30	30.
Job's tears	1 lit.	3.
Plums, yellow[2]		5.
Pomelos[2]		6.
Rose apples[2]		2.
Tamarind		7.50
Tomato sauce		8.
Young palm fruit[4]	7 bun.	3.
Vegetables (non leafy):		
Bamboo shoots, cooked	1 pail	28.
[272] Cucumber		--[3]
[273] Egg plants		--[3]
[274] Garlic	5 kg.	26.50
Gourd, white		1.
Onion, fragrant[5]		6.
Onion[5]	4 kg.	4.
Onion, welsh[5]		--[3]
Mushrooms		3.
Radish, white		--[3]
[354] **Vegetables (leafy green and yellow):**		
Cabbages		--[3]
Chinese kale		--[3]
Chili, green		7.50
Vegetables (leafy green & yellow) cont.:		
Lettuce		--[3]
Parsley		--[3]
Pumpkin	3 fruits	12.
Sweet basil leaves		1.
Sweet potatoes	6 kg.	6.
(3)Tang-(5)oo		--[3]
Seasonings etc.:		
Vinegar	1 bottle	1.
Fishsoy	1 jar	10.
(2)Ka-(1)chaaj	2½ kg.	12.50
Sodium glutamate		5.
Pepper		14.
Agar	400 gms.	36.
Miscellaneous:		
Cola beverage	72 bottles	72.[6]
Liquor	16 bottles	80.[6]
Ice		30.[6]
Cigarettes	2 pkgs.	--[6]
Tobacco	1 heap	--[6]
Betel pepper		9.
Fresh areca nut		10.
Dried areca nut		8.
Dried palm leaves	1 big bundle	2.
Firewood		50.
	Total	1577.75

[184]

1. For Moslem guests.
2. Food items placed on a tray and used in the ceremony proper.
3. Items so marked cost a total of 140 baht.
4. Not identified.
5. Several kinds of onions, both fresh and dried, are commonly used.
6. Prices not stated; estimate for liquor.

4:Phillips E-4,5 (1956-1957) 1966
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the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

Precise figures on the divorce or separation rate in Bang Chan are unknown, primarily because many marriages as well as divorces are never registered on the government rolls; also, many separations seem to follow an on-again-off-again pattern; the sanctioned occurrence of polygyny (only eight known cases out of the 296 families) and even polyandry (two known cases) complicates the problem even further. However, the fact that *four months* after I had designated a sample of thirty families from which to select informants, six of those families, or 20 percent of the sample population, had dissolved would strongly suggest that Bang Chan families are not particularly stable.

The causes of family fission in these specific cases are unknown, but what is impressive is the apparent ease with which it takes place and the equanimity with which people seem to accept it. Other informants, reporting their own experiences or observations, discuss family breakups as if they were among the more normal events of the workaday world and completely understandable. They seem to be of no greater emotional import—in the sense of eliciting recognizable feelings of distress—than losing a good price on the sale of a piece of land or on the sale of some rice. In fact, the latter kinds of situations are considerably more likely to evoke expressions of hurt or exasperation. One repeatedly encounters in Bang Chan instances on the following order: a family breaks up simply because the husband has an inclination to work for a particular person whom he likes; a wife ("she is a touchy woman") runs away every time she has a minor disagreement with her husband (minor even by village standards, for example, "Should I buy my lottery tickets from Mr. X or Mr. Y?"; "Should we invite seven monks or ten monks to officiate at this ceremony?"). The point here is that these explanations—and the low tolerance for discord, the importance to a person of a boss or job over a spouse, the desire to be footloose, which they imply—are to the villagers completely reasonable justifications for the dissolution of family units.

Many of the family relationships referred to above as "centripetal" in nature are clearly related to or derived from patterns of social organization characteristic of an earlier Bang Chan. Although most evidence indicates that even in the years immediately following the settlement of the village in

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757 in their mouths. More than half of the teeth crowned were said to have been sound, and no crowned molars were noted. The services of a dentist appear to have been sought more for their cosmetic value than for dental care as such.

276 164 Betel Chewing and Dental Health. - Betel chewing was not habitual with any of the adults under 25 years of age who were examined. Among adults above this age in the random sample, 13 of 29 men, or 45%, and 34 of 40 women, or 85% chewed betel. The group of adults from 25 to 44 years of age was singled out for study of caries incidence in relation to betel chewing, since adults retained most of their teeth up to this age. Among 19 betel chewers, 3 persons had 5 defective teeth whereas among 19 non-betel chewers, 7 persons had 46 defective teeth. Others (Gerry et al. 1952; Shourie, 1948) have reported a lower incidence of caries among betel chewers than non-chewers. Caution must be used in interpreting our observations, however, because the sample is small, and the teeth were not cleaned before counting caries. Stain and calculus may have obscured small caries in betel chewers.

The impression was gained by casual observation that protruding incisors were common among habitual betel chewers, and that the teeth of some betel chewers appeared to be loose. Since such protruding incisors were not noted among the school children, nor among non-chewers, we associated them with habitual betel chewing. Both Gerry et al.(1952) and Balendra (1949) noted a higher incidence of gingivitis among betel chewers than non-chewers. Since most of the older persons in our sample chewed betel, our data offered no clue as to the possible effect of betel chewing on the loosening and loss of teeth among older persons. Another item of possible importance, and on which we have no data, is the extent to which tobacco is used as an ingredient of the mixture which is spread on betel leaves.

276 146 Platt (1945) considered betel chewing as a potential source of calcium in the diet. He stated that the amount and utilization of calcium ingested with 6 betel leaves was similar to that from 10 ounces of cow's milk.[1]

The amount of calcium ingested in this way doubtless varies not only with the frequency of betel chewing, but also with the amount of juice swallowed. In Bang Chan, spitting out the juice appeared to be more customary than swallowing it.

276 Further research is needed to decide whether the potential disadvantages of betel chewing outweigh its potential benefits. Moreover in any attempt to decrease the practice of betel

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1. Platt, 1945. Footnote, p. 21.

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chewing, the extent to which the betel leaves and areca nuts are associated with festival occasions must be taken into consideration. Betel chewing was forbidden in Thailand by the Thai government but the enforcement of this regulation proved impossible and it has been forgotten since World War II.

Nutritional Status

Incidence of Anemia. - Hemoglobin was determined by means of a Sponcer Hb-meter. About 9% of the school children had hemoglobin values below 11.5 g. per 100 ml. but one value only was below 9.75 g. (Table 8). As might be expected since none of the girls in the primary school had passed the menarche, no difference was apparent between values for boys and girls.

Table 8

Hemoglobin Values of 233 Children, Ages 7-14, in the Bang Chan Primary School, 1952-53

	Number of Children	Hemoglobin, grams per 100 ml.					
		Under 9.75	9.75-11.5	11.75-12.5	12.75-13.5	Over 13.5	Not Ascertained
Boys	121	0	10	32	44	33	2
Girls	112	1	10	25	38	37	1
Total	233	1	20	57	82	70	3

In the group of persons 15 years and older, in the random sample of village households, the usual difference in hemoglobin values between males and females is evident (Table 9). About 6% of the males and 25% of the females had hemoglobin values of 11.5 g. or less/100 ml. with one only below 9.75 g. Many of these might be considered as borderline rather than anemic.

[see p.25 - Analyst]

48

621
125
[872]

3.a. Is there anyone from your house who is now attending mattayom school?

1.	Yes	24
2.	No	309

b. Do you have any children who have not yet entered or not yet finished prathom school?

3.	Yes	201
4.	No	126
--	Unascertainable	4

c. IF YES: Do you plan to send any of these children to mattayom school or not, or is it uncertain?

5.	Plans to send	66
6.	Does not plan to send	43
7.	Unascertainable	32

[863]

4. What kind of occupation would please you the most--farming or some other occupation? If some other occupation, what other occupation would please you the most?

1.	Farmer prefers farming	166
2.	Farmer prefers other occupation	25
3.	N. from other occupation prefers his occupation	25
4.	N. from other occupation prefers farming	8
5.	N. from other occupation prefers another occupation	5
6.	Unascertainable	4

5. How is Ubans BC-KY in your opinion? Is it a very good place to live, a fairly good place to live, or not such a good place to live?

8.	Very good	71
9.	Fairly good	254
X.	Not so good	4
0.	Unascertainable	4

[276]

6.a. Do you smoke cigarettes or not?

7.	Yes	208
8.	No	118
--	No Answer	7

b. If yes: Would you say that you smoke more cigarettes than most people in BC-KY, less than most people in BC-KY, or about the same as most people in BC-KY?

9.	More	14
X.	Less	68
Y.	About the same	124
0.	Unascertainable	8

57 125

53. Which of the following six qualities do you feel is the best thing for man: Virile, friendly, educated, rich, religious, lazy? [577]

5.	To be virile	2
6.	To be friendly	31
7.	To be educated	56
8.	To be rich	43
9.	To be religious	126
X.	Not to be lazy	57
Y.	Unascertainable	15
—	No Answer	3

54. Do you drink tea frequently, occasionally, seldom, or never? [272]

1.	Often	22
2.	Occasionally	68
3.	Seldom	153
4.	Never	85

55. Do you drink whiskey frequently, occasionally, seldom, or never? [273]

5.	Often	29
6.	Occasionally	73
7.	Seldom	157
8.	Never	74
9.	Unascertainable	—

56.a. In Thailand are many people who smoke opium. Excuse me, during your life have you ever smoked opium, or not? [276]

1.	Yes	45
2.	No	287
3.	Unascertainable	1

b. IF NO: Excuse me, do you think there is anything wrong with smoking opium, or not?

4.	Yes, it is wrong	281
5.	No, it is not wrong	5
6.	Unascertainable	1

c. IF SOMETHING WRONG: What are the various reasons why you think it is wrong?

7.	Bad for health	43
8.	Habit forming	68
9.	Waste of money	220
X.		
Y.	Other reasons, specify_____	40
0.	Unascertainable	

57.a. In the last month, how many times did you go to Nikburi or didn't you go at all? [484]

0.	Did not go at all	67
1.	Once	55
2.	2 to 4 times	120
3.	5 to 9 times	39
4.	10 to 19 times	30
5.	20 times or more	30
6.	Unascertainable	8

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

On the other hand, there are scores of items that have to be bought for daily consumption. These are: (a) Food -- fish, fish sauce, shrimp paste, meat, coconut, onions, garlic, dried chili, curry essence, limes, tamarind, palm sugar, white sugar, salt, and cookies: (b) Stimulant -- dried areca, betel, lime, tobacco, tobacco binder, and liquor; (c) Clothing; (d) Medicine; (e) Soap; (f) Fuel -- Kerosine, matches, charcoal, and fire wood. The list includes only standard items appearing on our check list. Actually, there are more of such items as coffee, tea, lemonade, coca-cola, and pepsi-cola. Articles that are bought but do not appear on the check list for ordinary household expenses for certain technical reasons which will be discussed in the section on consumption later in this chapter are building materials, machinery, farm equipment, furniture and household utensils.

The Operator's Remuneration and Measures of Success

From almost the beginning of the study of farm management in the United States, much effort has been given to measuring the success of farming businesses, or of farm-family undertakings or enterprises, and then of correlating various factors with these, such as size of business, yields per acre or per animal, or work-efficiency measured perhaps as crop acres per man or per horse or per tractor, with a view to discovering some general farm management principles or rules for a farmer or farm family to follow in becoming more successful. Black, Clawson, Sayre and Wilcox give the

*243 511 and that they are consumed daily. Expense on cookies is high because of school children's daily allowances which *243 were assumed to be spent entirely on this item. Even though 857 cash is extremely scarce in the village, especially during 511 the period from July until just before harvesting time in January when roughly seven out of ten farm operating families do not have any cash at all, the children still have the privilege of receiving daily cash allowance. This is possible because of the chicken enterprise. The children simply take eggs along and convert them into cash at cooky stalls in the school yard. In this manner, it is seen that the school children have an important part in the daily flow of Bangchan eggs into Bangkok markets.

*243 The kind of tobacco commonly used in Bangchan is • 276 the relatively inexpensive native tobacco which smokers 511 make into cigarettes themselves with the use of a special kind of thatchleaf binder. Bangchan women do not smoke, but they use tobacco heavily while they chew betel. Most men, young and old, are in the habit of smoking, while chewing betel is now limited to elderly people of both sexes. Tobacco is thus rated among major items of expenses because it is used in smoking as well as betel chewing.

*243 Obviously, clothing is one of the major items of 291 expenses. In fact, it is the highest item after food, 511 averaging 556 baht per family annually. Since rice farmers work partially under water most of the time, the rate of wear and tear of clothing is rather high. Each family worker

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511 c. The family's purchasing power. Certain goods considered as luxuries -- medicine, eggs, pork and beef, and white sugar -- were not consumed by poor families.

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• 276 d. Individual taste and preference. The Moslems would not consume any pork although they had enough money
261 to buy it. Some poor farmers spent more money on curry
182 essence than their more affluent neighbors because they
511 preferred highly flavored dishes, and some tobacco smokers did not spend a cent on tobacco binder because they preferred the home-grown banana leaf binder to the thatch leaf binder which had to be purchased.

182 e. Producing ability of the family. It was observed
511 that those who caught more fish tended to consume more fish
[184] regardless of their financial conditions.

f. Health affected the consumption of medicine.

[431] g. Prestige affected the amount of cash contributions
[476] to neighbors.
[554]

h. Personal habits -- thrift, fun loving, indulgence, like or dislike of liquor -- affected the amount of personal expense.

i. Presence or absence of children of school age in the family affected the consumption of cookies.

Special Expenses

511 By special expenses we mean major items of expenses which do not occur regularly but which may arise in one time or another. Examples: purchases of land, gold and

278 [563] The Chinese druggists, many of whom stocked among their traditional pharmacopeia a few modern medications, gave out occasionally to their customers information derived from the manufacturer's instructions for use. People with minor indispositions sometimes sought a druggist's advice. He suggested traditional or modern remedies, depending on the wishes of the customer. Thus, the druggists also acted as a bridge to the use of modern remedies.

484 Facets of Social Life Pertinent to Childbearing:

Communication and Transportation

People went to Minburi, and less often to Bangkok, to buy, sell, work, or visit relatives. A few adults had never been outside Bang Chan.

494 [484] [206] [493] Along the road buses passed Bang Chan every two or three hours during the daytime only. Minburi was a ten minute ride, Bangkok, an hour. Minburi had no taxis, and no telephone existed to call a taxi from Bangkok. Two or three persons owned bicycles.

505 484 Within Bang Chan, transportation varied with the season. From June to February travel was entirely by boat, even to a neighbor. A message to a local midwife, for instance, could be carried quickly by a speedy paddler in his skiff. If an emergency trip to the Minburi Health Center appeared necessary, a person could be rowed fairly comfortably along the canal that bordered the road. Going by boat to Bangkok, a whole day's row away, or four hours by the motor boat from Minburi, was not considered convenient even for passenger traffic, much less for a sick person or a woman in labor.

484 844 [494] The inconvenient time of year was the three month dry season. Boats then could hardly go on the canal that ran through the middle of Bang Chan, while the smaller canals became muddy or even dry. Walking barefoot over sharp stubble in tropical sun was hard. To transport a woman in labor, assuming she could stand it, an improvised stretcher could be made, but to subject her to the jolting bus was usually foolhardy. It was not customary to flag down passing cars. If things went wrong for a woman in labor during the hot, dry season, there was practically no chance of getting her to a hospital, and none of getting modern help to her.

243 433 Work Habits in the Economy

Because of the annual flood the land was admirably suited to growing a single bounteous crop of rice. After all needs for

828 753 or fainting, and also such localized trauma as abcesses. Similar behavior followed the influence of malevolent magical amulets, incantations, and love magic. Natural intrusions may be exemplified by the seasonal influences of rain, which brought on too much water element; of heat, which increased fire; and of wind, which cooled too much or brought in certain fevers, e.g. north fever (khai nüa). An accident was a natural cause of disequilibrium. A cut might let out the air or a soul.

774 [760] [753] Any lost soul, if not restored, meant death. Souls were lost from falls or frights or from spirit attack, a condition recognized by persistent crying, hysteria, and unconsciousness. The exits were at the top of the head, the palms of the hands, and the soles of the feet, the latter 2 sometimes localized at the 2 thumbs and the 2 great toes. One of the old beliefs associated an element with one of the four čhĕttaphŭt souls (Textor:130). When one of these souls was lost one whole element was gone. Loss of the khwan soul was more frequent than any other, especially during childhood. Its care throughout life was very much in mind. The khwan[18] played an [844] especially prominent part during childbirth.

755 [262] [757] If a person were only slightly sick, he might first try to overcome his physical complaint by attention to diet. Very rarely did he by himself buy some medicine at a drug store. If it were a case of a child's lost khwan, women performed the rite for its recovery. When the khwan of an adult was affected, men performed a strengthening rite (than khwan), or a priest gave a holy water bath. If the person were very ill, holy cotton thread (sāi sin) was tied at wrist, ankle, and neck so as to shut off the soul exits. An elder relative or spouse might also "bon," i.e. vow food or liquor in return for the help of supernatural beings; or, with Buddhist "sacred things" in mind, promise the ordination of the afflicted person, or oneself, or some interested relative. In this case, the relatives had long since turned for help from the arts of medicine.

278 755 The Arts of Medicine

Medical knowledge comprised on the one hand a pharmacology of materia medica, and on the other, the far more important

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18. The conceptualization of this soul was Brahmanic in source, rather than Buddhist (cf. Martinie, 1952:370).

magical formulae and incantations (khāthā cf. Textor 1960:80-98; 67-79). It was one of the branches of occultism (saiyasāt [McF. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khāo (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khāo. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō raksā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyae). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.19

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

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sin for the sake of nourishing the child. Some Thai village women followed a local Chinese belief that eating a female chicken gave strength during pregnancy. Eating a rooster, though, caused miscarriage through "estopic gestation." Thai Muslims recommended chicken whole-heartedly.

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Medicines

Beginning early in pregnancy, one or more kinds of medicine (yā) were taken. These hot-tasting medicines of ginger, galanga, pepper, and such in 28 per cent alcohol were either bought from the big selection at a Chinese drugstore, or were made up at home from alcohol or water and an envelope of ingredients. A woman made the choice herself with the advice of experienced persons. Even the Muslims who ordinarily frowned on alcohol permitted their women to take it at this time. A few women, though, said they "did not like to get drunk," so took their medicines in hot water. The quantity varied from two to six spoonfuls per day, with big increases as delivery approached, e.g. "two big cups a day of it during the ninth month."

The primary purpose of medicine was to increase the appetite, but there were other reasons. Fragrant Medicine (yā hauaum) cured wind. One Muslim midwife's mixture "stimulated the amniotic fluid." Other preparations had more general objectives. One label advertised "strength and good blood to men and beauty to women;" another promised to "maintain the mother's body and make the inner organs do their work properly" (H.M.H.).

In the last months, the reason for the medicines was to build up the body's heat. This purpose was not affected by hot tastes, which burned but did not necessarily raise the heat, but rather by alcohol, cobra, and specific decoctions. A label cautioned, though, "Not to be used by pregnant women with fever," lest the increment of heat be excessive. Snake Brand medicine, an exceedingly hot concoction used primarily post-partum, was occasionally taken in mild dosage during pregnancy. (Used full strength it caused miscarriage, so was rumored to induce abortion). The heat raised the body's temperature far above the ordinarily desired coolness so as to implement birth.

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The Physiology of Birth

At parturition the body's usual needs were reversed. The child could not be ejected under the normal, cool condition of the body. The pushing and pulling winds inside the body that ordinarily circulated slowly had to be

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speeded up with heat to the point of blasts. The strength of the contractions of labor was in direct proportion to the speed of the winds' circulation. The great pushes of the expulsive lom beng "broke down" the sac with the amniotic fluid (nam thūn hua: water-that-supports-the-head-of-the-child), and forced out the child, water, and the placenta.

After the child was out, the mother was cold, weak, and exhausted. Her uterus was full of harmful fluids. Heat was needed more than ever not only to warm her but to give the winds "the power and push" to drive out three undesirable birth-waters: "The blood that looks like ordinary blood but is bad,"; the amniotic and abdominal body water (nām khram:refuse water); and the pale, viscous, repugnant "fish-water" (nam khāo plā). Therefore, a hot fire was built, close to which the mother lay (yu fai), turning all sides of her body towards the flame. She bathed in or drank hot or warm boiled water (nam suk: cooked, or ripe, water). She ate safe foods like rice and dried fish,[31] and klūai nam bananas, continued to take alcoholic medicines of the hottest sort, such as Snake Brand, and occasionally might be given cobra or other hot curries to eat. For a first-born, a woman stayed eleven or nine days by the fire (always an odd number), with stays shorter for each successive child, but never less than five days.

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Complications sometimes developed because of inadequate control of the heat. A "headache and a hot body" indicating "stagnation of the blood and the fishy-smelling-water," was cured by a heat-producing decoction. Rashes often occurred, causing small boils that might develop into sores. To soothe these, turmeric was painted on. In the most dangerous cases the heat "drove the bad blood to the heart, to the face or belly" where it was recognized by serious swelling, with resulting madness or death. In fact, one mō felt that the

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31. The reasons for rejecting fresh fish during pregnancy ("lest a creature of hell be born") would not hold after parturition. Yet fresh fish was rejected then too "as bad for the womb." One suspects that the less odorous dried fish was substituted so that the odor of fresh fish, like air-borne, incompatible food, would not affect adversely the "fish-smelling" post-partum discharge (nam khāo plā). In Hauck's list of foods "bad for mother during the post-partum rest," the reasons are apparent: Sour tastes did not dry out the body, but built up water; egg was too cooling; jackfruit brought in wind; glutinous rice and the sugar of sweets "wet the uterus;" fruits did not give strength and were excessively cooling (cf. Hauck,1959:15).

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heat could be better controlled by medicine alone, saying "I do not prohibit a fire, but if called because of difficulties such as a temporary paralysis, I always take the patient off the fire and prescribe a decoction, or recommend more pickled medicine (yā dong)." "Damage to the thigh ligaments," treated by a masseur, was said to result from insufficient rest by the fire. If the baby died, the mother did not curtail her fire-rest but finished it out as planned. As will be seen later, the fire-rest had far deeper meaning than just physiological restoration.

Chapter IV

THE BIRTH OF A CHILD

843 [592] [342]

Dūan and her husband, Song, had a 2 year old son, Chai.[32] They lived and worked with her widowed mother, Lek, and her unmarried sister, Mī. The comfortable house stood high on piles, surrounded by rice fields. On a nearby mound lived Sāi, 60 years old and full of energy, the youngest sister of her grandmother.

Now Dūan noticed that again her menses had stopped. Her mother had described before her marriage what this meant. With happiness in her eyes, as the first time, she told her husband, then her mother, and at the first opportunity, her husband's parents. There was no reason to keep her pregnancy secret. Since she and Song would be happy to have either a boy or a girl, she did not seek out the ritual means which existed to induce a child of a particular sex.

During the months of anticipation, Dūan worked along as usual in farming and house-keeping. Lek reminded her of prudent behavior. "Women are easily upset when pregnant. It is up to you to put yourself in a cheerful mood. Everything you do will affect the infant in your womb. If you see a scarred person, your child will be scarred. Be calm, look only at pleasant things and avoid jerky motions. Do not overeat, lest the child be a glutton. If you sleep during the day and are inactive, you will also have a lazy child. Some girls are trying to be like Bangkok people, pleading that they cannot do heavy work in the last few weeks of pregnancy, but that will cause a difficult labor."

To increase her appetite, early in her pregnancy Dūan visited a Chinese pharmacist to get medicine. He had so [278]

32. This account puts together data from several informants. Particularly illuminating phrasings are quoted exactly, over and above the conversations, which, though fictionalized, are also direct transcriptions.

843 many kinds she hardly knew which to choose. He also had all-
• 298 purpose kits for mother and baby, even one with 14 different kinds of medicine "to control the body's temperature and keep the organs functioning"(H.M.H.). She decided on one of the favorites, pickled medicine (isa dawaung), and from
843 then on took a spoonful twice a day. She avoided all pepperyhot foods which would "damage the delicate complexion of the
262 infant in the womb, burn off its hair, and maybe even kill it." Some women said they craved sweet, hot, or sour foods, but Dūan did not. A friend who had never eaten cobra curry so longed for its hot taste during her pregnancy that her mother gave her a small dish. She could not resist secretly finishing the whole pot! What heat and sleeplessness! To cool herself, she had sat in the canal. The baby, saved only because its mother drank the water from a young coconut fruit, "could resist the cobra heat because it was 6 months along, but even so, it shed its skin at birth." But another woman, pregnant 7 months with her third child, also craved cobra curry, ate a lot, and said she did not feel hot. Nothing at all happened! The second woman was nearer to delivery, so stood the heat better, but more important, each individual was different. Because of virtue and sin in former lives each woman--and man, too--was born under different astral confluences and had lived and suffered differently.

843 About the seventh month, Dūan pondered who should help
759 her at her delivery. Some of her friends were delivered by their own mothers, but Lek had undertaken the delivery of another daughter's child, and the baby had died in an hour. Dūan suspected that her mother, therefore, would prefer not to do it, and knew that she herself would feel uneasy. So she decided for safety's sake to ask a midwife. She and Song could well afford the ceremonial offering with its customary 20 or so baht, even though the midwife said it was "as you please." A great many women never consulted with a midwife beforehand at all, but just sent word to the nearest one when the pains started or when trouble was encountered. Midwives varied in their capabilities, however, and Dūan wanted not only a good one but someone she knew well. Muslim midwives were said to be skilled, but they happened to live too far from her. Dūan decided to ask her elder aunt, Sāi, who was a well known midwife. Everything was right about Sāi She had experienced hands, a true desire to help, and effective magic, and she was a relative. Best of all, her own babies had eaten and slept well, had cried little, and now were grown to maturity. With such proof of merit, capabilities, and fortunate relations with supernatural powers, what better person to help Dūan start her baby on its earthly existence? Actually, if something happened, and Sāi could not come, Dūan knew she would not be alone or unassisted. Almost every woman, and quite a few men, had

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seen childbirth not once, but many times, so willing hands abounded. So, one day, Dūan went to Sāi. "Will you help me, and come when I call you? Please do not go far at that time." Sāi agreed, knowing in her heart she had expected to care for Dūan. No day could be calculated because the baby decided when to be born. Dūan came home very fast, for doing so would help ensure a fast delivery.

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As the weeks passed, Song, the new child's father, collected outside the house a great cone of sakae firewood from their land. This wood was for the post-partum fire beside which Dūan would lie for many days. As the fire had to be very hot, a great deal of wood was needed, all to be collected beforehand. Song also covered the outside of the pile with thorny woods to keep away evil spirits. On her part, Dūan knew that everything needed for delivery was ready in the house as part of the regular household staples or utensils. Nothing need be bought except possibly a little Borneo camphor to mix with lemon grass for faintness, and alum. The midwife should never bring anything with her because it was essential to use what was in the house. Anything lacking could be quickly borrowed after the pains started. The little cushion on which the baby was to lie was cut, and half-filled with kapok. It was not sewn up, lest it induce by example a closed-up exit from the womb, or suggest a mal-placed or deformed baby which had to be delivered onto a pillow. No one wanted to prepare for such an unhappy event. No clothing was bought for the child ahead of time for then the child might die, and all would have to be destroyed.

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Dūan felt at ease and yet somewhat frightened at the prospect of the pain ahead. At an ordination she attended one night she listened again to the chant she had heard many times:

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> "In childbirth a woman has pain all over her body...She is losing her soul and feels so frightened, despairing, and suffering that she throws herself up and down from time to time as if her mind were terribly wounded by the poisonous arrow of a hunter. She is uneasy and moans loudly as if a big mountain had fallen down upon her, and she is supposed to wait for death. She does not recover even if massaged by someone. She does not think of her pain, but tries to save the child's life, when, after the pushing wind comes, he is born" (S.S.).

On other occasions she pondered the deep satisfaction of her maternal role, then laughed in recalling a crafty woman who

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[278] fast enough to break the amniotic sac. Sāi made her a medicine of mung bean and sugar, both of which wet the uterus, and murmured some magic words to help. Later she worked with her hands at the vagina, twisting the sac a bit to break it. Suddenly the sac ruptured.

Now the child was almost there. The head showed well. Sāi sat down directly in front of Dūan to do the pressing herself. With one hand she held or gently pulled on the baby, with the other she pressed on the abdomen with every [789] contraction. As she started in, she said magic words. She worked for an hour--no midwife would press more than that--until at last the child was out. A little boy! With her finger Sāi removed the blood from his mouth, and pucked out the lips. Breathing was slow in coming, so she shook him vigorously, then laid him down. Quickly she chewed up an onion and spit it over his body. "Ah-h-h!" A cry, though not very strong! Seeing the new baby appear, Chai, who up to then had been constantly near his mother, rushed precipitously from the house, and refused to come in for hours, in spite of Song and Lek's coaxing.

[787] Everyone had observed an auspicious circumstance: the cord was looped around the baby's neck! This imitation of the holy cord (mongkhon) placed around head and neck in Brahman rites of passage was a rare and good sign. "A cord looped thus could never kill a baby," someone said.

Since the placenta was slow in coming, Sāi prepared to cut the cord while Dūan rested and sipped the fiery snake brand medicine. Depending on circumstances she might cut it [278] before or after the placenta was out. Taking a rhizome of phlai (McF. 604), a traditional healing root, she laid it on a clod of soil brought in from outside. From one of the [412] old bamboo house beams, someone had sliced with a knife a sharp-edged, tapering sliver to serve as a cutter. The cord was stroked 3 times, starting near the baby's stomach "to remove the dirt." Then "something that is in the umbilical cord" was pushed back towards the baby's stomach "to prevent [778] a flow of blood." She measured the cord from the baby's abdomen to his knee, and tied off 2 places in it with the holy unspun cotton cord used ordinarily in rituals. Laying the part between the 2 knots on the phlai on its bed of soil, and saying her magic "w'nyān a sam pa nō," she cut the cord with the bamboo cutter. With a chicken feather [757] which had to come "from the mother's yard," she collected a few spider webs from the rafters, mixed them with coconut oil, and painted them around and on the cord-stump, also "to stop the blood-flow." While doing this, Sāi said, "One midwife I know severs the cord by tying it with the thread at 3 places, then burns it with a flame."

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Lek watched over the baby, while Sāi turned towards Dūan. "One looks to the mother first, unless the baby needs help more." First Sāi gave DŪan medicine for the placenta. She rubbed her hands with alum and tried unsuccessfully to work down (klōm) the slippery placenta. Then she told Dūan to get on her hands and knees, and exert all the force she could. DŪan crept around the floor but it still did not come. Sāi then tried hitting Dūan's back 3 times with DŪan's own pillow. Finally she gave DŪan a leaf of betel pepper to chew, hoping to induce a wind-producing nausea and so push out the placenta. In the end DŪan resumed her sitting position and it was pressed out. So the baby would not get pimples, the placenta was cleaned carefully, then put into an old pot, mixed with 2 dishes [751] of salt, and set aside.

While Lek sewed up the partially completed cushion, Sāi laid the baby along her legs, and washed him with soap. Sometimes she washed the baby before the cord was cut, if the placenta came quickly. She used salt to remove the greasy fat from his body, though would have preferred "fermented tamarind to protect him from pustules that enlarge to sores (rōk phuphōng)." "Soft tissue like a stomach covering his head! What a good sign of progress and fortune!" she exclaimed. She powdered him with face powder (dinaōphōng), and painted his abdomen with turmeric,[34] "so wind will not make him cry." Covering him with a little piece of old cloth, she laid him on Lek's old winnowing tray (kradong). [787] [278]

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It was the moment to winnow (rōn) the baby, and link it to home and family. While Lek got the holy unspun cord, others placed on the tray with the baby all manner of traditional things to influence the progress and well-being of the child during his lifetime. Sāi put on the phlai, the clod of soil, and the tapered bamboo she had used to cut the cord "because they will never be used again," but actually these things had a far deeper meaning to all present. Song laid on a school exercise book and pencil, so that his son would have knowledge and a good memory. Mī got a needle for sharp wit. If the baby had been a girl, the needle would have given sewing skills. When all was in readiness, DŪan had to decide on the ones to raise the child aloft, catch the tray as it was dropped, and bless him as the holy thread was tied on. She had to choose these persons carefully, for the child

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34. Other mixtures (used also on the mother) were lime-bergamot lemon; or phlai (if possible the one on which the cord was cut), wānnam (acorus calamus) (Textor:54-66) and mahāhing (asafoetida) with burned betel leaf. These were all to keep out wind.

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The next step was to prepare for Dūan's post-partum days of rest beside the holy fire. Before the baby arrived the fire-floor had been prepared, but not lighted. Song had chopped down a banana tree, and quartered and trimmed the trunk into four good planks. Along a wall inside their house he had laid them in a square about three feet on each side and 18 inches deep. He remembered that at Chāi's birth, the fire had to be in a corner, because of the direction of the celestial Snake. Lek picked up a large round basket and went out to get the soil, which had to come from the north side of the house. Three full baskets she was to get, no less, but there could have been five. She heaped the soil into the frame, smoothing it to a good fire floor. After she poured in the last load, she picked up three handfuls of earth and put them back in the basket. Quickly she took them back to the spot she had been digging and tossed the three handfuls one by one onto the earth, murmuring to the spirit of the land that she was returning the earth she had taken. Back in the house, in each of the four corners of the fireplace, Sāi planted a little banana leaf bowl containing rice, sticks of incense, a candle, and flowers. "Some persons add areca nut and betel pepper leaves, but I was not taught to do it that way," she commented. A fire of the sakae wood was laid, and the placenta and cord in the pot placed at the back where they could dry with the heat. To prepare Dūan's bed, Song searched the house for a smooth plank about 14-16 inches wide. Not one! So he ran over to a neighbor and borrowed a good one. He cut two banana trunk sections to set this plank up so that it was as high as, and two or so hand spans from, the fireplace. Sāi checked that firewood, woodpile, and plank were all parallel to the celestial Snake. Then the fire and the incense in the corners were lit.

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Meanwhile Sāi had been washing the lower part of Dūan's body and legs with warm, boiled water. She painted Dūan's abdomen with turmeric, lime, and alcohol, putting a little on the hands and arms, and now gave her a fresh skirt. "To cure the womb" Sāi also gave her a "filtrate" of tamarind, salt, and water to drink, the same potion people also gave to the cherished buffalo on the rare occasions when a calf was born. Finally, she asked Dūan to lie on the floor a moment. Putting her foot on Dūan's hip she pressed hard, three times on each side, to "close the hipbone" and get the pelvis back into place again.

date of all, Sao Hā Day, one Saturday in April, which was the fifth day of the waxing moon of the fifth month, in the year of the Big Snake. That boy is truly blessed. He will be the best and most respected doctor or teacher. He is in school now and people are always telling him he is bright. Chāi came on a Monday, so he'll be charming, but, alas, always roaming away from home! This new little son has his mother's features, which is as desirable as a daughter's having her father's features. Still, no one knows what characteristics come from a parent. One more thing, Dūan. Now you may take medicine as you please." Shortly after, Sāi took leave until the next day.

The new mother turned her face toward the fire and tried to sleep. It was night. Lek was close by, and Song slept in his mosquito net near Chāi's cradle. The fire was so hot it kept waking Dūan. Though the smoke made her eyes smart it kept the mosquitoes away. In spite of the discomfort, Dūan was eager to have the fire as hot as she could stand it, for this heat and that of the medicine would dry her uterus, rid her of the bad blood and waters of childbirth, restore her strength and stimulate her milk. She forced herself to drink as much hot boiled water as possible to keep out the dreaded wind element that might get into her body and cool her. When, however, the fire was overpowering, she dripped water from a handy jar with a cloth.

The next day, Sāi returned. With warm, boiled water she bathed Dūan--this time the upper part of her body also--and the baby. The boiled water was much more important for the mother, but being available, was used for the baby, too. Sāi washed the soiled clothing and the baby's little cloths. Turmeric was again painted on both Dūan's and the baby's abdomen, head, and neck to protect from wind. Sāi questioned and examined Dūan. Measuring a handspan down from Dūan's groin, she pressed outward gently. "I want to see if these particular ligaments on the thigh are joined. They are often damaged and do not heal if the time by the fire is too short. Some mothers cannot walk at all. They have to call a masseur for regular treatment." To "make the ligaments well," she tapped Duan's body all over with the second of the tapping-fruit balls and had her sit on one while bathing. She massaged the muscles, stiff from lying quietly near the fire, by pressing in the ball with her hands and even feet. Medicinal herbs were warmed and laid on Dūan's breasts so that the "useless early milk [colostrum] which would give diarrhea" could be worked out and thrown away. "The real milk is not ready for the baby until the third day," Sāi said, "but if the baby is crying much, and if there is milk some mothers start nursing on the second day."

Almost from the moment of his birth, whenever the baby

853 cried, Lek had dribbled from her finger warm boiled water into his mouth. Now she mashed up for him a little kluai namwa banana, honey, and water. Song happened to pass as he was going to work and saying, "Let me give it to my son this first time," took the child in his arms, and pushed it gently in with his fingers. "This variety of banana does not cool, or give diarrhea because its tissue is harder. Uncooked is better than baked because it is easier for the baby to swallow," said Lek, "but baked food is incompatible if wind is in the body." Then she painted medicine on the baby's tongue with a feather.

Dūan turned to Lek. "Who would be the best person to start my child on good nursing habits?" Lek mentioned a relative who had much milk for her handsome child. This woman gladly came to give the baby his first suck.

Sāi came the third day for the same duties. It was the last day for her, unless something serious happened. Dūan's milk came in somewhat that day. She asked, "Is it true, as people say, that the 2 breasts give milk of different consistency, that one is water and the other rice?" Sāi answered, "That is an old saying. The important thing is to feed from both breasts at each [208] nursing. Here is medicine for the baby of honey, charred betel leaf, and water. Give it 3 times a day to cool his neck. His medicine is mostly to cool him slowly; yours is to keep you hot on the inside, while the fire warms 846 you outside. Both are to keep out wind. Dūan, I would suggest 13 days by the fire, but you are the one to decide. It was 15 for your first child, but each time can be less. Be sure it is an odd number of days. My, women are certainly making it short these days! My first fire-rest was 27 days. And think of all the changes coming in! That trader-woman across the canal is using one of those small hot-ashes pots on her stomach. She is lying on a mat under her net, with her new baby. Her 2 other little children come in and out! No fire at [177] all! I have heard they use rubber hot water bottles and electric warming devices in Bangkok. Well, it probably is all right provided there is heat, but to have plenty of milk and strength to work in the fields, then you have to lie by a real fire. The longer you stay, the stronger you are. Bangkok ladies do not have to farm! They want the fire for the fine pale golden color it gives their skin (cf. footnote, p. 71)! Well, now I shall take my final leave." She reached up and took her khwan khāo bowl. Smiling, she left the house.

From then on, Lek and Mī were certainly busy, caring for both children, doing things for Dūan, boiling up quantities of water, and cooking. Song put the wood on

854 mosquitos, but then Song bought in Mĭnburī a bamboo frame with be-flowered netting. He also bought little mits to tie onto the baby's hands, so the fingers would not be sucked. Not every baby got these! Most of the time the baby lay naked, but was wrapped when nursed. One cool day they put over him a thick blanket. Lek, Dŭan, or Song bathed him in boiled water 3 times a day and always after his excretions, which were wiped off with cloths. Then fresh cloth was put under him. On the seventh day since he was thriving [856] he was bathed in ordinary rain water. Every day Lek vigorously squeezed his fingers and legs "to make them straight," which made him yell each time. To speed the drying of the • [298] cord, a charred leaf of betel pepper was applied for a while to his navel on which Dŭan spit saliva several times a day.

853 Dŭan's milk supply was only fair. For milk stimulation they pressed her nipples and kept the fire hot. She was [262] also taking daily a special nursing curry of banana flower and vegetables (khaeng lĭang). One day she ate a cobra curry. A neighbor offered to help nurse the baby but Duan refused. "It is a pitiful sight to see one's child at [854] another's breast." Whenever the baby wailed he was given boiled water but was not necessarily at once picked up. If his crying continued, however, Dŭan washed her breasts with warm water, pressed out and threw away a little milk, moistened the baby's lips with water, then lifted him on the pillow to her plank. She laid him beside her and leaned over him to nurse, though occasionally took him in her arms. He was nursed about 10 times a day, and also received honey, boiled water, and a bit of banana, too. [278] One day the baby cried a lot, so they painted him with turmeric and gave him baked cobra tail in alcohol to warm him up.

846 As to her own diet, Dŭan followed the usual practice of limiting herself rigidly to rice with salt, dried fish, 262 and baked klŭai namwâ banana. Egg was too cooling! "like glutinous rice, it brought pus to the unhealed cord and the vaginal wound." Dŭan also avoided "jam" bean which caused madness, fruit, and sweets. Whatever she ate affected her child by secreting into her milk. If she were sick, he would be so too. If he alone became ill, she must watch the foods both he and she ate. All these food instructions would stop only when nursing stopped a year or two later.

846 Duan decided to stay only 11 days by the fire, though Sâi had said 13 and she would have liked to stay longer. However, she wanted to get back to work because the transplanting season was approaching. Besides, the

178 a new way was a woman bearing her first child because she
184 was not yet ritually matured. This she wanted to be.
Moreover, her self-interest led her to try to profit as
312 much as possible from the experience of elders by first
846 following the old way. By incorporating the experience
885 of successful child-bearers into her own and the baby's
life and by asking them to initiate actions auspiciously,
she augmented by that much her own competence, and laid
the groundwork for her future progress. Self-responsibility engendered respect for elders. Thus there was no split between old and young over innovations. Experience gave grounds both for conservatism and for changing, but at different age levels.

178 Secondly, changes were adopted by the rich who,
184 spending their money rather conspicuously, sought to main-
556 tain and enhance their social position. Their wealth
and position were in themselves unquestioned as signs of merit earned in another incarnation.

178 The changes being introduced to Bang Chan were of two
554 kinds: first the prestigeful, and second, those giving no increment of esteem, i.e. idiosyncratic changes of taste or convenience; or those reflecting individual circumstances. The prestigeful innovations were oriented towards the use of market novelties, modern medical care, urban standards of cleanliness and beauty, and other ways termed "progressive" associated with the city of Bangkok, cynosure of the eyes of the rich. These values were leading certain families away from their original occupation of farming, into the fields of teaching, trading, carpentering, cottage-industry, etc. Since these new occupations brought in steady cash and large land holders, too, had a good income, an association was found of
372 wealth, prestige, urban interests, and innovation. Com-
846 ment on the hot ashes container (<u>fai chut</u>) indicated that
178 it was a strong symbol of prestige and progress. To use it was "to get away from ignorance and the old way of doing things." It was "cleaner, not hot or ugly, and more convenient." One teacher took it up after reading an advertisement in the newspapers that described glowingly its more efficient healing effect. On the other hand, one woman abandoned the <u>fai chut</u> because "it was not hot enough to rid her of stiff muscles," so she went back to the use of the fire. "It is all right for rich Bangkok ladies who want to avoid a scar, but it does not give
177 enough strength for a farmer." She had no urban preten-
178 sions. Also in this prestigeful aggregate, observed here
• 278 and there, were the market novelties mentioned above:
954 bed, mat, and mosquito net instead of the plank-bed; kits of medicine from the Chinese pharmacist instead of the old

854 177 178 [278]

home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

178 743 758 554 [842]

To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Minburi Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 2 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccessibility.

178 812 846 [789]

The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grew up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it;" and another who said the "winnowing rite was not important."

178 844 846

In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Minburi Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

had lived outside the village and returned to the home of her mother, a traditional midwife, for delivery. Eight other women who were delivered by the same midwife observed (2)juu (1)faj. Two of these 5 women who, by using a hot ashes chamber, ventured to take a step away from the tradional practice were non-Thai (Chinese and Mon). Another, a woman aged 40, was having her 12th child. When we interviewed this woman during pregnancy she said she expected to lie by the fire, but when we visited her after the baby was born she was using a hot ashes chamber. The wife of one of the school teachers, who had observed the traditional (2)juu (1)faj with her first 5 children, said she found "the new way" more convenient; but by using it she had incurred the displeasure of some of the elder women, especially her grandmother.

Activity and bathing. - Activity appeared to be rather limited during the postpartum period, but the respondents said they could move about to get some things for themselves, to eliminate, etc. We saw women sit up on the plank which served as bed to nurse the baby, change the cloths under it, and help to weigh and measure it (i.e. to assist us). Because of the warmth of the fire, and to avoid the smoke, the women turned from side to side frequently.

Bathing was customary during the postpartum rest period. For the first three days this was one of the midwife's responsibilities in care of the mother (Hanks, 1959).

Medications. - The 46 women who told us about medications used after childbirth had a total of 83 medicines; i.e., many used more than one kind. With one exception these were taken internally, and all preparations taken internally were mixed with alcoholic liquor (28% alcohol). Of the medications used, only one was prescribed from the Health Center, 4 were home remedies, and the remainder commercial preparations.[1] Two popular brands, snake brand and (1)jaa (1)daunaung, accounted for 60 per cent of the total.

Milk stimulation. - As already noted, lying by the fire was thought to be favorable to milk secretion. One woman commented that, since she was not a good milk producer, she *must lie by the fire more than 7 days*. *Six women spoke of* the hot water which they drank during the postpartum rest period as good for milk production. A large majority of the women mentioned taking (1)kaeaeng (1)liang, a broth made with dried

1. According to the label, some of these were supposed to be useful for menstrual and other complaints, as well as for childbirth. Some were even recommended for treatment of various disorders in men as well as women.

One infant had congenital stridor when seen by the physician[1] at 3 months, but the difficulty in breathing had disappeared spontaneously before the baby was next visited at 3 1/2 months of age. 164

Illness in Early Infancy.

One infant that died on the fifth day was seen when one day old, at which time neither mother nor physician made any adverse comment on its condition. The mother, who was not living with her husband, returned to her work outside the village a week after delivery, and we were unable to talk with her again. So far as we could learn from neighbors, this infant had none of the symptoms concerning which we routinely inquired; namely, convulsions, vomiting, diarrhea, or fever. 165

A third infant in this series died when he was nearly 2 months old. At 13 days of age, when first seen, this infant had white patches on his tongue which were diagnosed as moniliasis. When the physician saw the child again at 6 weeks of age he made no adverse comments on its condition. Emotional reaction to the infant's death was such that we were unable to get a clear description of events which led up to it from either parents or neighbors.[2]

Three infants had skin infections when seen within a few days after birth. The physician commented that skin was more susceptible to infection when moist than dry and that the babies had become very warm. The weather was hot, and babies were bundled up and/or were near the fire. He gave directions for keeping the skin clean and dusting with sulfa powder. 164

No deaths from tetanus occurred in this series, although infantile tetanus was prominent among causes of death of infants under one month old (Hauck, 1956). 165 164

Medicine Given to Babies During the First Few Days of Life.

On this point, information was obtained concerning 36 of 40 babies seen before they were 6 months old. Thirty of these were given medicine, sometimes more than one kind. Most of the 854 278

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1. A physician was present at all interviews with pregnant women and mothers with very young infants. [124]

2. Although the mother had children by a previous marriage, this was the first child of this union, born after the parents had lived together for 9 years. The mother was 41 years old.

854 278 medications were taken internally, sometimes being painted on the tongue with a feather; but two preparations were applied over the abdomen. Some of the medications were described as "stomach medicine" or "to prevent flatulence." Five different kinds of proprietary medicine were given to 18 infants. In 13 instances, the medicine given was clearly homemade and included as major ingredients items such as flattery fruit, (3)luug (1)yauau; cobra oil; horseshoe crab; and buffalo skin. The nature of the medicine, whether homemade or proprietary, was not clear in 8 instances. Usually medicine for infants was mixed with honey, but in 2 cases, alcoholic liquor was used as it customarily was for the mother.

Six newborn infants in this series were given no medicine. One of these was born at the Health Center. One of the other 2 infants delivered at the Health Center was given homemade medicine later, and no information was obtained on the third. Eye prophylaxis[1] was probably routine at the Health Center, as, in 2 of the 3 cases delivered there, informants knew that drops had been put in the infant's eyes. Traditional midwives, however, did nothing of this sort.

Water for Drinking and Bathing.

853 312 For the newborn infant as well as for the mother, water for drinking and bathing was boiled and was usually used while hot, often being kept warm in a vacuum bottle. Either rain water or canal water might be used depending on what was available at a given season. The water was dribbled from an adult's fingers into the infant's mouth. When the mother was no longer lying by the fire, boiled water was not considered essential for the infant. Nevertheless, over half the infants seen from this time up to 3 months of age were being given boiled water to drink. After 6 months of age this was rare.

853 855 312 In one instance, during the time when a younger sibling received boiled canal water, a 21-month old child was given boiled water also. At the time of a later visit both of these children were drinking unboiled canal water. In another case an orphaned boy's formula was made up with boiled water, although

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[744] [754] [731] 1. Vaccination for smallpox was the only modern preventive treatment which we knew to be used in Bang Chan in the absence of an epidemic. Since a severe epidemic of smallpox with many deaths ten years previously, health officers came to the Bang Chan elementary school once a year to vaccinate children, and other residents of the community could be vaccinated at this time. Four of the young children whom we visited periodically were vaccinated, at 4 months, 8 months, 1 and 2 years of age, respectively.

better nutrition for all family members or whether to concentrate on the feeding of children or other vulnerable groups, the values of the society should be considered. The importance of a suitable variety of food for health needs to be taught to adults as well as children in Bang Chan. The concept that good choice of food is important in pregnancy and lactation and for the health and growth of children seemed to be entirely absent. Since few believed certain foods to be harmful at these times, however, teaching how to choose foods for health should be easier in Bang Chan than it is in areas where positive taboos are common. 124 262

Behavior different from the traditional one may sometimes lead the way to changed practices among those who observe or hear about it. For this reason, in certain instances an informant who had ventured to deviate from the traditional practice has been identified in this record. Thus, we noted that in a number of ways the women school teachers and the wife of a man teacher deviated from the traditional behavior in Bang Chan. For example, a school teacher's wife used the hot ashes chamber after her fifth child rather than lying by the fire. She was one of two women informants who "ate all kinds of food" at this time when most women in the community restricted their diets very markedly. She did not consider taking the baby out into the sunshine harmful; indeed, she believed it would make the child stronger. This same mother was 1 of 4 in our series who had taken the baby to be vaccinated against smallpox. She and three women school teachers were among those who continued to give their babies boiled water to drink much longer than was customary in Bang Chan. The one person who suggested a specific food (eggs) as being good for a woman to eat during pregnancy was a school teacher. The two women who planned to go to the Minburi Health Center for delivery were school teachers. For lack of time after labor began they did not carry out their plans; but the fact that they intended to do, by choice, what was usually the last resort when labor proved long or difficult, may be significant. 121 183 178

Along with these departures from traditional ways and acceptance of some "modern" practices, the same persons might cling to other sorts of traditional behavior. The wife of a school teacher for example, though she thought that taking the baby into the sunshine might be favorable rather than harmful, said that if the baby were to be out very long she would cover its head with a beret to avoid bringing "cold" into the baby. This same mother took her child to the Minburi Health Center for treatment for a skin infection, but when the condition did not clear up immediately after modern therapy was begun, she took the child to a traditional doctor who prepared a decoction of herbs with which she treated the baby. [743] [278]

The behavior of respected persons, such as some of the school teachers, should be influential in helping to bring about

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434 1949-53, in actuality public service as an occupation is
463 increasing in Bangchan.
621
647 There were four home enterprisers in 1949, mostly
engaged in making cookies. As in case of the professional,
434 this activity still existed in Bangchan, but by 1953 it had
443
463 degenerated into a secondary income, leaving the lone case
621 of basket making in the home enterprise category.
• 285 Only one family head was classified in 1953 as a
home-enterpriser. The family was engaged in making takraw
-- a cane utensil used in picking mangoes from the tree.
On January 27, 1953 we met A, the head of this family, who
was taking 103 takraws of various sizes to sell in Bangkok.
[435] A gave the amounts and prices of these takrawa as follows:
56 large size, @ 3.00 baht; 31 medium size, @ 2.50 baht;
16 small size, @ 2.00 baht. A said he and his wife worked
on these 103 takraws alone, and finished them in twelve
days, using 50 baht worth of materials including cane, wood,
and binders. Ordinarily, they started making takraws in
December and continued through May. They were able to make
about 3,000 baht within this period. They also made other
things like baskets, but takraws were their main source of
income. In rice growing season, they also did some piece
working. They did not operate a farm. Piece working and
basketry during rice growing season brought them a combined
income of about 2,000 baht. The amount of each kind of
621 basketry they made was not as constant as takraws. It de-
434
463 pended more on which paid best. Their total annual income

562 [827] [853] delivery, "her blood was purified to a white color to become the milk of the breast."[48] Nursing a child was the essence of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 462 252 264 [182] [431] [796] 593 888 In a wider context, not only all their household members but people anywhere were the objects of women's nurture: women were in charge of the cooking even if occasionally helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor houshold, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry any more." She construed this as proof that she had ample merit, but it also meant that she was a great donor who gave continuously and took little. Women usually offered the early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When age pushed women past their mature capacities, they returned to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 857 [291] [593] A desire to give tender care and nourishment was deemed inborn in all women. Although sex was not strongly differentiated in babyhood,[49] by age 3 a hard-to-handle skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phûm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[856] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

125 128 2. Name. The name was recorded according to the Mary Haas system of transliteration, modified for use on a typewriter. Later a code number was given each individual examined.

3. Sex. The appropriate symbol, M or F, was circled.

4. Birth date, when known, was recorded in Thai, according to the Thai calendar. This information was later translated into age in years and months. Information given by school children was checked against that in the school records, which were obtained by the school teachers from the Naai Amphoeo, or district officer. At present, parents are required by law to register the birth of a child within 15 days. In practice, however, the interval between birth and registration is frequently longer, and the recorded date may be somewhat later than the actual birthdate. In preparing height-weight-age tables, age to nearest birthday was used. In a few cases, the birth date as given by a school child and that in the school records differed enough so that age to nearest birthday was in doubt. Data for such children were omitted in preparing the tables.

5. Marital status was recorded either as single, or the number of years married. To avoid embarrassment if there had been no legal marriage, the question was phrased so as to mean "How long have you had a house?".

6. Weight. A bathroom scale with 1/2 kg. divisions, with a magnifying glass over the scale reading so that one might interpolate to 1/4 kg., was used. All persons were asked to stand with the feet squarely on the platform, with the toes not extending beyond it. In order to get weights under as nearly standard conditions as possible, school children and adults were instructed to remove all but a minimum of clothing. All boys, [29] and the younger school girls removed their blouses, belts, and any items in pockets, leaving only short trousers, for the boys, and for the girls, a Thai-style skirt (phaasin) or standard western style school costume consisting of cotton skirt with attached bib and shoulder straps. Older girls were asked to [29] remove the outer blouse and belt but were allowed to keep on the under blouse or camisole, as well as skirt. The children did not wear shoes to school.

[29] In the homes, preschool children were usually weighed nude, older girls and women in inner blouse, and phaasin or phaapung, and the men in trousers only.

Several examples of each type of clothing were weighed. Clothing worn by children whose body weight was 22.5 kg. or less, usually weighed considerably less than 1/4 kg., and would therefore make no detectable difference in the observed weight. Clothing worn by the larger school children and adults weighed, on the average, about 1/4 kg.

*177 22
*178
207 Exposure to the media of mass communication seems to act, in
212 a sense, as a substitute for literacy. It may be that through
546 these means either an illiterate farmer can obtain information about the more complex agricultural tools and methods or motivation to try improvements, or both, even though he may not know how to read and write. One may infer that he tends to act on the information thus obtained, since he is more likely than his unexposed opposite number to try out these innovations.

*178
*177 Acceptance of Urban Patterns

369 The printed word and the mass media are, of course, not solely channels for the communication of knowledge. They are, at the same time a means whereby the farmers may establish some sort of contact with the more sophisticated world outside the community even with highly urban Bangkok.

The survey indicates in a general way the extent to which
[291] the people of Bang Chan have accepted urban patterns. Their grow-
[416] ing acceptance of urban modes is readily apparent even to a casual
[207] visitor: many own shoes, flashlights, wrist watches, radios, bicycles, fountain pens, modern furniture.* Other urban behavior
[493] is likewise beginning to be noticeable.
[413]
[352] One very simple indication of the degree to which urban influences have penetrated is the change in manners of taking food. The farmers traditionally eat with their hands rather than using a fork or spoon. In Bangkok, however, eating utensils are customarily served with the meals in restaurants and are widely adopted as well by the city population. Some Bang Chan inhabi-
*177 tants have picked up this simple urban custom and have substituted
*178 it for eating mainly with their hands. In Bang Chan of 1953, for example, a sizeable minority (26 per cent) report that they use a
264 spoon, fork or both for the evening meal.
369 That such a simple question can roughly measure exposure
[207] to urban influences, is indicated in the following table, which shows that respondents who report customarily eating with "urban
[546] utensils" are more likely to be exposed frequently to radio and motion pictures and are more likely to have visited in Bangkok.

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[412] * Survey respondents report that their households possess a flashlight (81 per cent); scissors (66 per cent); kerosene lamp (27 per cent); radio (14 per cent). About 41 per cent say they own at least one pair of shoes.

125
[653]

47.b. IF YES: For what various activities did you contribute labor? (See code at end)

c. During the past year, have there been any public welfare activities, not connected with the wat or with religious ceremonies in the home, or not, to which you contributed money or goods?

1. Yes	128
2. No	197
3. Unascertainable	8

d. IF YES: For what various activities did you contribute money or goods? (See code at end)

[796]

48.a. Have you attended the ceremony of wisaka bucha at Wat BC every year, or only in some years, or only once in many years, or never?

8. Every year	156
9. Only in some years	135
X. Once in many years	21
Y. Never	14
0. Unascertainable	7

b. Have you attended the ceremony of gilding the Buddha's footprint at Wat BC every year, or only in some years, or only once in many years, or never?

1. Every year	225
2. Only in some years	62
3. Once in many years	17
4. Never	9
5. Unascertainable	20

[291]

49.a. Excuse me, this is a strange question, but do you own a pair of shoes?

6. Yes	136
7. No	197

b. Of what various materials are your shoes made?

8. Leather	65
9. Cloth, canvass	87
X. Other, specify_____	11
0. Unascertainable	
— No Answer	1

[412]

50.a. In your household, is there a hatchet, or not?

1. Yes, hatchet	309
2. No	24

[416]

b. (In your household), is there a pressure lamp, or not?

3. Yes, pressure lamp	188
4. No	145

c. (In your household), is there a flashlight or not?

5. Yes, flashlight	271
6. No	61
— No Answer	1

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 511 and that they are consumed daily. Expense on cookies is high because of school children's daily allowances which *243 857 511 were assumed to be spent entirely on this item. Even though cash is extremely scarce in the village, especially during the period from July until just before harvesting time in January when roughly seven out of ten farm operating families do not have any cash at all, the children still have the privilege of receiving daily cash allowance. This is possible because of the chicken enterprise. The children simply take eggs along and convert them into cash at cooky stalls in the school yard. In this manner, it is seen that the school children have an important part in the daily flow of Bangchan eggs into Bangkok markets.

*243 276 511 The kind of tobacco commonly used in Bangchan is the relatively inexpensive native tobacco which smokers make into cigarettes themselves with the use of a special kind of thatchleaf binder. Bangchan women do not smoke, but they use tobacco heavily while they chew betel. Most men, young and old, are in the habit of smoking, while chewing betel is now limited to elderly people of both sexes. Tobacco is thus rated among major items of expenses because it is used in smoking as well as betel chewing.

*243 • 291 511 Obviously, clothing is one of the major items of expenses. In fact, it is the highest item after food, averaging 556 baht per family annually. Since rice farmers work partially under water most of the time, the rate of wear and tear of clothing is rather high. Each family worker

243
291
511

needs at least two work suits in each rice season, one during the field preparation and another during the harvesting season.

372
226
511

Kerosine is used every day for lighting purposes. We do not include in this category kerosine which is used in the farm work; but that used with the pressure lamp in fishing by spearing during the night is included in the ordinary household expenses, for we do not consider fishing as a farm enterprise but as a routine activity participated in by all Bangchan residents, farmers and non-farmers alike.

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476
796
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[792]
[764]
[585]

Contributions to neighbors is a necessary item of expense in the village. These are cash gifts made by invited guests to the sponsor of such rituals as ordination, cremation, marriage, topnotch-cutting, and teacher worship. These rituals usually take place during the dry season following harvesting when cash is abundant in the village and are always followed by feasts, not uncommonly in a series of two or three days. Since all these rituals necessitate the participation of the priests, they have to be arranged in consultation with the temple to avoid conflicting schedules. Although few rituals have been noted to be in conflict with one another, usually they are spread throughout the dry season and m ost people are able to attend rituals to which they are invited. In cases where they cannot attend in person, they are obliged by conventional requirement to send in their cash contributions. The standard cash contribution is 5 - 10 baht. Usually, a

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

261 701 As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in 731 diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be ra- 133 tioned. People still ate their fill. Even floods had their 226 advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the 146 school children (Hauck, 1956). "On the average . . . Bang 145 Chan children could not be considered as markedly under- weight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American 141 standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

262 Rice. - Rice is an essential part of any Thai meal. 256 The majority of the rice farmers in Bang Chan had rice for [25] home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely [26] used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

221 In households where home-milled rice was used, during 256 June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and 505 home pounding was impossible. At the time when data for the 256 present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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[293] 1. In some large houses, two related family groups lived together but maintained separate kitchens.

BANG CHAN

164 among children in Bang Chan is not known. One thing which residents of Bang Chan appeared to have in common with other [146] populations which have been reported to be relatively caries free, was low intake of sugar, particularly in a form which would be apt to adhere to the teeth.

Adults up to 44 years of age, in the random sample, retained most of their teeth. A few adults in Bang Chan have had missing teeth crowned. More sound than missing teeth were [301] found to be crowned, however, i.e. in this community a crowned tooth appears to have cosmetic value.

759 A variety of serious illnesses were found to occur among residents of Bang Chan. As a rule, local traditional practi- [164] tioners were consulted first, but most persons reported to have been seriously ill eventually received treatment by outside practitioners with some training in modern medicine.

[844] The majority of mothers in childbirth were attended by local traditional midwives, but a few difficult cases were [143] taken to the government Health Center in the nearby town of Minburi, where a trained midwife was in attendance.

465 Of 438 pregnancies reported by 84 mothers, over 90% resulted in live births. Of the 397 living children born to [163] these women, 81% survived at the time of interview. Within the first month of life, 7% had died, and a total of 11% died within the first year. Tetanus was prominent among causes of death of infants under one month of age. Infantile beriberi caused some deaths among older infants. In a majority of cases, the cause of death of infants could not be clearly identified, but fever, debility and convulsions were the symptoms most commonly described.

196 Almost half of the persons examined for possible signs of nutritional deficiency, 46% of the school children and 47% of the family sample, were free of such signs. The remainder, slightly more than one half of persons examined, had from 1 to 7 signs each. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Signs most often noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine [164] in the diet. The only clearly defined deficiency disease observed among residents of Bang Chan during the field study was beriberi.

14 Hemoglobin values of 11.5 g or less per 100 ml. were

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

262 796 A discussion of food habits in Bang Chan would be incomplete without some description of ceremonies ((1)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

796 The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-
527 teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion
274 of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

[702] Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people
550 were spurred to put on as large an affair as they could afford. Moreover, a person was judged throughout the commun-
527 ity by the abundance and quality of the food served daily and at festivities. Thus, there was reason to make a (1)ngaan
796 as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

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796 1. Significantly the same Thai word is used for work
41 and for ceremony.

2. Topknots, formerly worn by all Thai children, used
527 to be cut ritually at the time of puberty. In Bang Chan, the
535 growing of a topknot had become primarily an attempt to improve a child's health. Few school age children wore topknots. They were usually cut earlier than puberty.

575 3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

human beings. In fact, the absence of any reference to other human beings, especially parents, is striking.

Of the seventeen persons who ask for supernatural help, seven, all women, explicitly say that they would call their *khwaan* (or "soul-stuff") back. Since this is a distinctively Thai concept, it merits a few words of explanation. Thai ontology holds that every individual is inhabited by a *khwaan*, who during childhood (when the individual is unstable and immature) or during a crisis can escape the body through an invisible hole in the head. One of the major functions of the top-knot worn by half the children of Bang Chan is to cover the invisible hole so that the *khwaan*

TABLE 21

If one is frightened, the best thing to do is . . .
If raw is frightened, the best thing raw ought to do is (namely) . . .

EQUANIMITY:	40%	to keep his heart calm.
		to pull yourself together (to try to compose yourself). Sometimes, just run away.
		to control oneself.
		to control your emotions until they are better.
		to stay *chəəj-chəəj*.
DEPENDENCY:	31%	to exclaim, "Lord help me!"
		to call one's soul-stuff back; call upon God, Allah.
		to think of Lord Buddha, his teaching, and his priests.
		to sometimes exclaim, "*phra chuaj*" ("Lord Buddha, or Buddhism, or monks—help me.")
FLIGHT:	8%	to avoid the situation; to run away.

cannot escape; also most life-cycle ceremonies have a special ritual devoted to "calling the *khwaan*," who although obviously not absent from the individual at the time, is called to reaffirm the necessity of his being in his place when the individual needs him most. At the same time, the formal ritual of "calling the *khwaan*" memorializes the fact that the *khwaan* is in his proper place, thus indicating that the individual in whom he resides has had the internal stability to reach the point in life that he has in fact reached. The "calling of the *khwaan*" is usually, although not always, performed by women, which might explain why all the villagers who give this response are female. The *khwaan* has four crucial attributes: (1) although he is of the self, he does have an independent existence of his own; (2) he is that part of the self that gives the self stability, and from an analytic point of view, is really an objectification of human stability; (3) he

771
775 Man was higher on the scale than woman.[20] Progress toward
[562] Nipphan was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phī) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good health and long life, a kindly personality, many fine children, wealth, high status, intelligence, and luck. Astrologically, he was born on a day
[775] of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death, deformities, unhappiness, poverty, and had a cruel nature.
[783] Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

75]
789 The long-range protection against all illness was to
[577] live virtuously and make merit. However, to guard against
[782] temporary supernatural intrusions, everyone possessed and usually wore Buddha lockets and other amulets. Some
[304] underwent tatooing, men having Cambodian or other figures, women, 7 small dots tatooed on the torso under the arm.

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20. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

843 [775] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phī tai thang klom, caused "the worst of all possible deaths." The phi krasū spirit,[25] entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). The [753] supernatural disease missile called "khun" might also strike. "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extra pain occurring just before the baby comes out." To protect [751] themselves, women wore extra talismans or had 7 dots • [304] tattooed under the arm.

843 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 2 visible teeth, which indicated it was a non-human, yak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of women giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (Hcf.46). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb eat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
571 the steps in the Buddhist winnowing ceremony and performed
[852] them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khăo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
[774] "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist,
[782] meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the
[177] poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 Completely Muslim was the stress on physical and
[783] moral purification as an objective of every rite, and conversely, the prevalence of the idea of defilement.
[304] "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate pro-
[764] cedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before
[831] burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and
[834] contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality
[562] much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (fàk thong: to deposit gold). On returning home, she went as
[273] fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim mid-
795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclos-
[562] ed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khăo contained "7

phlai and Bamboo cutter under the house "so the child would not roam away from home." The circumcision (akiko) performed up to the eleventh year, allied a child to a human group. "Circumcision is to accept the new-born baby into the status of human beings." In a corresponding ceremony for girls, the To Iman "cut a little piece of the labia." However, some Muslims had the full winnowing ceremony performed. If it were not, the child was raised aloft in the midwife's hands with the words, "Mother Sī, Mother Sāk, may this child be cool and happy!" The new-born baby was then laid in a cloth cradle. Fruits were hung over the tray or cradle. If a lactating Muslim mother accepted another's child to nurse, the 2 babies had to be of the same sex "lest later in life they marry, in which case theirs would be an incestuous, brother-sister marriage." The Buddhists entertained no such idea, so nursed babies of either sex as needed. A Muslim view of colostrum as "like pus from a sore" carried a more negative overtone than the Buddhist's statement: "At first the mother's milk is too dilute to be useful."

At the annual homage of a Muslim midwife to her teacher each of her patients of the year sent a kilogram of sugar, one coconut, one or 2 liters of glutinous rice, and a hen (if a baby girl had been born) or a rooster (if a boy). The chicken was killed by the midwife and made into curries for mosque officials (men) invited to the ceremony. The incense and candles were burned "while she thinks of her teacher."

427 the combined land of five leading farm operators of 693
434 rai, averaging 139 rai per operator and ranging from 83
454 to 235 rai. It must be remembered that our operational
621 definition of occupations was based on the main source of
463 income and that many of the villagers had more than one
426 source of income. Investors as an occupational class in Bangchan should not be pictured as large landlords and large money lenders, possessing financial influences over their tenants and debtors. Rather, they were humble fellow villagers whose incomes were mainly derived from rents of small parcels of land or interest on small loans. To cite an extreme case, one aged woman was classified as an investor. She had only 17 rai which she rented out to her own son. She was living alone in an old shack and was too old to do any kind of work. She received as rent about a hundred tang of paddy a year which is equivalent to an annual income of only 800 baht. Thus she was considered one among the poor in the village.

178 There were three families whose occupations were
463 classified as professional in 1949. The number was reduced
621 to one in 1953. The head of this family was a Chinese car-
322 penter who derived his income primarily from boat building. Again, it must be pointed out that reduction of the number of families primarily engaged in professional services does not mean that professional services had been declining.
[305] On the contrary, they had been increasing. There were three barbers in 1953 as against only one in 1949. More traditional

244 Vegetables and Fruit. - Although kitchen-gardening has been encouraged by the Thai government, vegetables and fruit were grown in Bang Chan to a limited extent only. Every family had some sort of kitchen garden, but many edible plants which can be grown in the village were grown by relatively few families. The list of fruits grown in Bang Chan in 1948-49 (Sharp et al., 1953) included four times as many items as were grown by one or more of the 11 families that participated in the dietary study. The list of vegetables and spice plants grown or gathered by these families included 27 items, as compared to 41 listed by Sharp et al. Spices and chili were more commonly grown than vegetables and fruit.[1]

244 One affluent household whose food expenditures for 1949 245 were reported by Sharp et al., (1953, pp. 214-215) produced 433 for home use, 125 kg. of palm sugar valued at 200 baht and 500 coconuts, valued at 450 baht. Home production of both of these was unusual. Few families in Bang Chan grew either sugar palms or coconut palms and expenditures for coconuts and palm sugar were usual. During the major flood of 1942, villagers noted that coconut palms survived whereas all other fruit trees were destroyed. After this, a number of farmers planted coconut palms, but they had not yet begun to produce.

361 In 1954, about 120 acres (300 rai) of the total of about 311 2800 acres (7000 rai) of land in the village were used for [351] home sites and home gardens for 336 households. Individual home sites usually varied in area from about one-quarter to one acre, and were occupied by buildings, threshing floor and space for poultry as well as trees and garden space. Portions of this might be under water for several months of the year. Increased home production of fruit and vegetables would in many cases necessitate increasing the size of the home site by purchase, mounding or both. Ordinarily, increased land for the kitchen garden was obtained at the expense of some of the

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[245] 1. In a typical farm garden in Bang Chan one would find bananas growing, and a number of plants used for seasoning [249] curry. Various kinds of chilies, lemongrass, bergamot, of which both rind and leaves are used, and galangal were grown by all families who participated in the dietary study. Both sweet and holy basil were commonly grown. Many families grew one or more varieties of gourds and of eggplant, some of which [262] can be trained to grow on a tree or trellis. The inflorescence of the banana was also used as a vegetable. Leafy vegetables were not commonly cultivated but some families grew (2)phag (2)ka-(2)cheed, a green water plant, in gardens staked out at the edge of the canal, or in a pool, and some had trees, [262] the leaves of which were edible. Swamp cabbage or (2)phag [262] (3)bung grew wild along the edge of the canals and was the most commonly used green leafy vegetable. A few families [245] grew guava, jujube, star gooseberry, Manila tamarind, mango and pineapple.

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361 rice land. Water-ways, however, were public areas, and any
[505] convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

262 Mushroom culture as a side line activity of rice far-
344 mers developed during the period when this study was in
433 progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

[434] As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

262 Relatively few foods were purchased, but some of these,
438 such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

262 Estimates of mean annual consumption and cost of pur-
435 chased foods, for 106 households in Bang Chan are shown in
128 Table 1.

262 The list of purchased foods presented by Janlekha (1955)
432 was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)ma-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23--- Analyst]

BANG CHAN

FOREWORD

The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, Minburi. A century-old canal and to the north of it a post-war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

In 1954, when data for the present study were still being gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the households were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupation of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple food of the people. During the wet season and into the cooler dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

The Thai countryside is divided into hamlets, each with a headman in charge of the thirty to sixty households of the hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

132 The normal distribution of rain in the region, how-
*243 ever, is almost ideal for single crop rice production. Heavy rainfall in May and June softens the soil for easy plowing and harrowing. During July and August, when the young plant does not require much water, the rainfall moderates. Again there is heavy rainfall in September and October when the maturing plant needs rising water as it shoots upward. Finally, during the harvesting season of December and January there is a minimum of rainfall. It is in terms of rainfall that the people divide the year into three seasons: (1) the rainy season of late May to November; (2) the cold season, December into early February; and (3) the dry hot season from late February to early May.

Vegetation

*243 Of the 6,404 rai privately owned in Bangchan 6,106
137 rai is devoted to rice and 298 rai to homelots. During the
• [311] rice season the village is seen as a vast rice field inter-
[351] spersed with bamboos and fruit trees on the homelots which
[361] string along the half dozen canals of the village. In the
[312] dry season only stumps of rice stalks are left in the field.
132 Some of these may be removed by burning. With the coming
231 of rains, which usually fall once or twice in March and four or five times in April, a variety of grasses begin to appear and the rice field is gradually transformed into a grass field, providing a pasture for the buffaloes until the next planting season when the size of the grass field available

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

#243 growing village could not very well be studied in a brief period of only one rice year. Rather, the field study should be extended to cover years of good as well as poor crop.

Land Utilization

Official records show that the area of land privately owned in the seven hamlets comprising Bangchan is 6,404 rai. [503] hen an estimated area of 100 rai of public land occupied by the half dozen canals is added to the private land area, the total area of the village may be figured at about 6,500 rai.

#243 351 423 311 621 The area of each of the 298 homelots in Bangchan varied. It is rather difficult to get accurate figures for these homelot areas. We may, however, give an allowance of one rai for each homelot on the basis of crude estimate. This would include space for buildings and all of the home compound including family pools as well as kitchen garden, and in some cases area devoted to fruit trees. Since all of the land area in Bangchan other than homelots is devoted to rice growing, we may estimate the land available for rice production by simply deducting the homelot area from the total area of land privately owned in the village. This was found to be 6,106 rai in 1953 (Table 12).

#243 311 423 621 It should be noted that not all of this area of 6,106 rai was tilled by Bangchan residents, and that some of the villagers also worked on rice fields outside our arbitrary

[TEXT CONTINUED ON PAGE 113]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 12

LAND AVAILABLE FOR RICE PRODUCTION
Bangchan, Thailand, 1953

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Hamlet	Land Privately Owned	Allowance for Homelot	Land Available for Rice Production
	rai	rai	rai
BC4	930	40	890
BC5	809	28	781
BC6	900	47	853
KY5	891	63	828
KY6	916	31	885
KY7	939	42	897
KY8	1,019	47	972
Total	6,404	298	6,106

*243 village boundary. Table 13 shows that Bangchan residents
• 311 worked on a combined area slightly larger than that avail-
423 able to them in our arbitrary village limits. This situa-
621 tion of a village resident working on a field outside the village boundary should not be perceived as one in which the farmer in one village had to walk a few miles to work in another village, for in all cases the fields involved were in the peripheral areas.

*243 Since the approach adopted in this study was one
423 through the people rather than through land, for ease in
621 statistical manipulation we shall use the area worked by Bangchan residents to represent our natural Bangchan area. Thus, when we say that 64 per cent of the rice area in Bangchan are owned by operators, we refer to the 4,314 rai of the 6,722 rai worked by Bangchan residents, not the 3,908 rai of the 6,106 rai which is the actual rice area of the village.

*243 In Bangchan, as elsewhere in the country except in limited areas in part of Chiengmai and Lampoon provinces in the north, a single crop of rice is grown without any crop rotation practice. The rice season starts in late May or early June depending upon the actual arrival of the rainy season, and lasts until the harvest of late varieties in the first half of February. At the beginning of the season, the field work is concentrated in the seedbed which is about one-twelfth of the total planting area. Most of the field, then, is not occupied by the crop until transplanting time

[TEXT CONTINUED ON PAGE 115]

*243 well into August and September. Thus, it would appear that the rice field is utilized for only six months of the year, leaving much to be desired for an economic use of it during the other half-year.

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• 311 If consideration is given to the nature of buffalo raising, however, it will be realized that these six months are not actually wasted. In the dry season following rice harvest, buffaloes feed freely on rice stumps in the fields and on supplementary straw accumulated in the homelot during threshing. After the first few showers of rain in April, the fields are gradually covered with noncultivated grasses and the buffaloes enjoy this green feed all the more. Even when the fields are wet enough for plowing in June, the early field work is concentrated on the seedbed, leaving the greater part of the fields which have not yet been plowed to the buffaloes to graze usually during their 10 a.m. to 2 p.m. recess from work in the seedbed. When the farmer starts working on the fields other than the seedbed, the grazing area is gradually reduced and the buffaloes are now partially fed with green grasses which grow wild in limited areas between rice fields and canals to which the farmer has customary right. As the grazing area is further reduced, more and more grasses are given. By the time all the fields have been plowed, the buffaloes are totally fed with the green grasses. This total green grass feeding lasts until the next harvesting season when straw becomes available to supplement green grasses which now become

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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• 911 more scarce as the dry season creeps in, thus completing the annual buffalo feeding cycle.

*243 Double cropping has been suggested as a means by
231 which farm income may be increased. To this suggestion
911 several obstacles have been mentioned, most important of
[312] which center around the lack of ample water supply and water control and an envisaged severity of pests predatory on an early crop.[2] In the light of the discussion in the previous paragraph, the inevitable reduction of grazing area and the consequent loss of feed supply may be added to the list of obstacles to double cropping. It is rather unfortunate that little attention has been paid to this all important problem of buffalo feeding. The general idea seems to follow the line that there is no problem of feed and that the only problem concerning draft animals lies in the control of diseases. If this negligence persists, there is danger that the uncultivated grasses which are the least expensive buffalo feed might be depleted. Because of limited grazing area, buffaloes in most commercial rice growing villages in the Central plain are already not reproducing themselves rapidly enough to maintain their number. This is evident in the annual importation into the region from the northeast of inferior stock which is less strong and has shorter life. Without grass conservation, it would not be long when Thai farmers will have to deliberately "grow grass" for their

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2. Janlekha, op. cit.

243 buffaloes heretofore undreamt of and will have to bear
231 the consequent burden of increased cost of producing rice.
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Some description of the homelots which constitute
311 almost five per cent of the land area of Bangchan has already
351 been given in the section on vegetation, Chapter II. From
[231] the standpoint of land utilization, functions of the homelot
[235] other than providing standing room for the living quarters
[244] may be mentioned as follows:
[245]
[226]

1. It provides space for threshing and for storage of rice and farm equipment including buffaloes.
2. It provides room for chicken or duck raising.
3. It provides land for a kitchen garden, and for fruit and vegetable growing.
4. It provides space for fish trapping by the draining method.

To serve these functions, homelots in any rice growing village, where the fields are submerged under water during the entire life of the rice plant, must be high above water level during the flood season, must be well drained, and must have pools with ample shade.

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311 Rice land in its natural state does not meet these requirements for a homelot. In the first place its level is too low. Second, the impervious layer of clay characteristic of rice land does not permit soil drainage. To make a homelot out of rice land, it is necessary that the prospective site be mounded up to a level two or three feet higher than the level of the surrounding fields. The hole from which

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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earth has been removed for the purpose of raising the yard becomes a fish pool simply by the construction of a ditch connecting the hole with the canal, thus partially giving the last mentioned requisite of a homelot. Again, in the process of mounding up the homelot the soil may be made well drained by skillful handling of the earth. The technique adopted by the Chinese experts in the famous truck gardening area of Damnernsaduag is to remove the top soil first from the strip intended to be the ridge of the prospective vegetable garden. Then the top soil of the adjacent area intended to be the pool is also removed, and these top soils from the two adjacent strips of land are put together in one pile. Next, the tough subsoil of the pool strip is dug up and placed over the bare subsoil of the ridge strip. Finally, the subsoil ridge thus elevated is covered with the topsoils from the mixed pile. By this manipulation the depth of the top soil of the newly created ridge is greatly increased from the original depth of about 8-10 inches to perhaps 16-20 inches. The presence of the pool, also newly created, along the ridges further enhances the draining quality of the strip. Unfortunately, this technique was unknown in Bangchan, and mounding of the homelot was done by simply dumping the earth dug out from the strip intended to be the pool all over the land area of the prospective homelot. With the presence of the pool which served as a receptacle for water and with constant hoeing of the garden area, the soil depth also was increased and the draining quality improved.

7: Janiekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 14

VILLAGE RICE ACREAGE, CROP, AVERAGE YIELD, AND CROP INDEX BY YEAR, 1948-52

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Year	Area Planted to Rice	Total Crop	Av. Yield Per Rai	Crop Index*
	rai	tang	tang	
1948	3,384	108,760	32.1	111.4
1949	3,130	77,692	25.0	86.8
1950	3,102	99,225	32.0	111.1
1951	3,039	89,898	29.6	102.7
1952	3,046	76,670	25.2	87.5
Total	15,701	452,445	--	--
Average	3,140	90,489	28.8	100.0

* Average yield during 1948-1952 as 100.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 433 128 of village production and surplus of paddy (Table 16) there were no comparable basis for our estimate of the other crops. Our estimates of these other crops should therefore be considered as crude estimates.

433 418 435 Tables 16 and 17 show that in 1953 Bangchan had surpluses of 104,756 tang of paddy, 293,232 chicken eggs, and 67,050 duck eggs, and a deficit of 4,945 kilograms of fish. Using the 1953 farm prices of 9 baht per tang of paddy, 0.40 baht per chicken egg, 0.50 baht per duck egg, and 5 baht per kilogram of fish, village exports may be estimated at 942,804 baht for paddy, 146,616 baht for chicken eggs, and 33,525 baht for duck eggs, and village import of fish may be estimated at 24,725 baht.

243 311 423 427 Land Tenure

Table 18 shows that Bangchan residents owned an aggregate area of 4,315 rai. Since their combined area planted to rice was 6,722 rai, the balance of 2,407 rai had to be provided by absentee landowners. In fact an area larger than 2,407 rai had to be rented in because part of the area owned by local residents had to be used as homelots. Actually, the net area rented in was 2,438 rai (total area rented in of 3,641 rai minus total area of 1,203 rai rented out). It is not to be expected, however, that this extra area of 31 rai (an excess of 2,438 over 2,407 rai) is enough to accommodate the 298 homelots in the village. Inaccuracies might have arisen in cases of joint ownership of certain

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[TEXT CONTINUED ON PAGE 131]

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7: Janlekha X-4.5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 18

RICE AREAS WORKED, OWNED, RENTED IN, AND RENTED OUT
Bangchan, Thailand, 1953

Hamlet	Total Families	Total Population	Area In Rai			
			Worked	Owned	Rented In	Rented Out
BC4	40	236	801	849	413	458
BC5	28	136	497	305	261	69
BC6	47	270	1,102	576	531	--
KY5	63	356	1,295	963	834	487
KY6	31	168	850	585	354	96
KY7	42	250	1,016	597	527	108
KY8	47	278	1,161	440	721	--
Total	298	1,694	6,722	4,315	3,641	1,203
Areas per family			22.4	14.5	12.2	4.0
Areas per man			4.0	2.5	2.1	0.7

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

369 It should be noted also that once a villager has moved
167 into Bangkok he will be deprived of the privilege to
162 acquire free food from nature -- an important economic advantage of living in the village which counts heavily when emigration to the city is being seriously contemplated.

427 It is seen, then, that the demand for land on the
423 part of land-thirsty operators -- the tenants, part-owners, and owner-operators -- was high and inelastic, while the demand for land on the part of land-saturated landlord-operators was low and elastic. Since the combined demand of all landlord-operators constituted only a small fraction of the total demand (Table 20), it may be safely concluded that the aggregate demand for land in Bangchan at the period we are dealing with was high and inelastic.

311 Let us now consider the supply side of land. For
423 the purpose of this discussion we may differentiate four
427 sources of supply of a total of 6,722 rai considered to
463 represent our natural Bangchan area. They are:

1. Land-thirsty operators -- all for implicit rent.
   a, Owner-operators 2,131 rai
   b, Part-owners 227 rai
   c, Tenants 225 rai
   Sub-total 2,583 rai

2. Land-saturated operators (landlord-operators).
   a, For implicit rent 537 rai
   b, For explicit rent 683 rai
   Sub-total 1,220 rai

3. Local non-operators -- all for explicit rent.
   a, Traders 189 rai
   b, Investors 149 rai
   c, Public servants 165 rai
   Sub-total 503 rai

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai-AO7
Bangchan

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4. Non-indigenous landlords 2,416 rai (all for explicit rent).

To understand the working of the supply forces, it is necessary to break the non-indigenous landlords down into those living in the neighborhood of Bangchan, which we shall henceforth call the neighboring landlords, and those living far away, which we shall call the absentee landlords. It is regrettable that accurate figures for these breakdowns were not available, but it may be estimated on the basis of some known cases that they were roughly of the same proportion, that is, some 1,208 rai in this category were owned by neighboring landlords and the same amount by absentee landlords. On the basis of the same known cases, it may be generalized that the area of land owned by an average absentee landlord was larger than that owned by an average neighboring landlord.

It is obvious that the individual supply of land varies according to the type of the people who have command over it. Generally speaking, land-thirsty operators who supply part of their own working areas should provide an inelastic supply of land, for they will continue to offer to themselves all the land they own regardless of how the rent rate may change. All lands owned by land-thirsty operators yield only implicit rents, for if they are rented out for explicit rents, the landowners of the parcles in question would have changed their status to landlord-operators.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

*243 178 463 • [311] become investors, traders, and public servant. In 1948, these eight families were operating farms of a combined area of 286 rai, ranging from 20 rai to 80 rai, averaging 36 rai per farm. Seven of these eight families owned rice fields totalling 201 rai, ranging from 5 rai to 80 rai, averaging 29 rai per family owning land. Evidently, it may be said that these seven families deliberately had given up farming in favor of new occupations from which they expected higher remunerations. As for the one family owning no land, the same generalization still holds. This family was operating a 22-rai farm in 1948, a farm of optimum size which could be expected to yield a higher income than any of those operated by the thirteen former operators who had turned farm laborers. The head of this family, nevertheless, got a permanent job in the Bangkok Harbor, a government owned concern, with a salary of more than 7,000 baht annually which is much higher than his former net income from operating a rented farm. [464] [465]

A case has thus been built for the relative unattractiveness of farm operating occupation among a certain sector of farm operators who had shifted to other occupations. This was responsible for the decline of farm operating occupation from 80 per cent of the occupational structure of the village in 1949 to 72 per cent in 1953 (Table 11). If it had not been for the 14 new families branching out from existing families who had taken up farming during the period between 1949 and 1953, the decline would have been more abrupt.

Chapter I

THE COMMUNITY OF BANG CHAN

The Geographical Setting

In the populous flat central plain of Thailand where Bang Chan was located, fenceless geometric rice-fields, dotted by clumps of trees, stretch as far as the eye can see. Houses, clustering occasionally into hamlets, line the canals that serve for domestic use, drainage, irrigation, and communication. A few rounded-up roads lead out from Bangkok, the national capital on the Menam Chao Phraya, the great central river.

The monsoon divides the year into three seasons: a hot and wet (late May through November); a cool and dry (December to mid-February); and a hot and dry (late February to mid-May). The temperatures range annually from 59° to 88° F. (15° to 33° C.) with monthly means of 77° to 86° F. (25° to 30° C.) (de Young:5). A drop at night averages around 18° F. (10° C.) in April, and 22° F. (12° C.) in January, while the relative humidity varies between 66 per cent and 81 per cent (Hauck, et al.:12). Rainfall averages about 50 inches a year, 40 of which fall in the wet season (Janlekha:21). Because of the run-off from the mountains in the north, once a year the Menam Chao Phraya slowly rises, fills the canals and then overflows its banks, covering the plain for hundreds of miles to a depth of three feet or more. In Bang Chan, the water stood on the land from June until January, with its peak in October. From February to May the canals ran low, and the land dried and cracked from the intense heat.

The Community

In 1954, 1700 persons (336 families) lived in Bang Chan. Muslims, comprising 10 per cent of the population, lived as fully Thai citizens in all parts of the community in economic and social symbiosis with Buddhists. A few ethnic Chinese had married into Thai families and were accepted.

The community spread over an area of about 7000 rai (1000 hectares or 3 square miles). Bang Chan Canal bisected

361 Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended 351 to live in proximity. Around the houses were kitchen gardens and threshing floors, and behind them, the fields. Bananas grew 245 abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, 241 while fish were plentiful. Water sources were the rain, kept 226 in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large • 312 tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

146 General Nutritional Level

[142] The population was physically well-formed with few physical deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. Food at the not-infrequent festivals [292] was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The [178] change-over, some decades ago, from home pounding of rice to [256] steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community.

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2. Dr. H.M. Hauck, personal communication, 1959.

wood was getting low. Friday (wan suk:day of happiness) was the best day of all to leave the fire, but for her, Friday happened to fall on the fourteenth day after delivery. It was better to come off on another day than to risk taking such an important step on an even-numbered day. Even numbers were always associated with the even corners of a coffin. 846 [801]

Usually the fire period went off safely, but not this time! One day, the heat "seemed to come up suddenly" and choke Dūan. She rose gasping and ran to the window for air. Horrified at the terrible danger of cool air, Lek hastened to get her back to the board. Then by accident Dūan dripped too much water on the fire and put it out! Later, Dūan was almost unconscious, felt unhappy (klum) and as if "the fire were burning inside her." Lek called both Sāi and the mō. As the mō entered, Lek handed him the expected offering of incense, flowers, candle, and a baht and a half for his khwan khāe. He prayed to his teacher, then made holy water and a decoction both of which he gave Dūan to drink, saying, "The bad blood and the fish-water did not flow out well, a common trouble after childbirth. Since your body is not cold and the fire has not been out a half-day, you could start the fire up again. But as it is never good to put out the fire like this, I am taking you off it. Take a pot of salt, heat it well and wrap it in a cloth. Put that on your abdomen. Drink no cold water, or you will die." 846 755 846

Dūan was sad that she had to leave the fire early and on an even-numbered day, but one always wanted to obey a mō. All had gone so well when Chāi was born! That time she had taken the usual steps, choosing a Friday to come off the fire. Now she could not choose. Her formal leave of the fire was as before: The mō prepared earth holy water (nammon thoranisān), some of which she drank, and some he sprinkled on the fire. She then knelt down facing the fire and touched her forehead to the floor 3 times, asking the Mother of the Fire to bless her and her child, and to keep them well. She went outside to bathe, first with warm water to cleanse her body, then with holy water, and put on a clean skirt. Returning to the house she seated herself quietly, for she was not supposed to do anything for a time. Others in the family broke up the fireplace. The baby was taken off the winnowing tray. Warm water mixed with the holy water was dropped in his mouth. After being bathed in the holy water, he was laid in a little cradle made of a long cotton scarf, spread apart with sticks, and swung between 2 houseposts. [854]

Now that the fire-period was over, they stopped all boiling of the water for the baby and Dūan. Rain water was substituted, but whenever the baby seemed sickly, boiled water was used. When their rain-water ran out, they got some at the temple. Both Dūan and the baby continued taking medicine for many weeks. [312] [758]

251 which did not attract them could be left anywhere out of reach of dogs. Raw rice was stored in a large jar or oil can while salt, fermented fish, shrimp paste[1] and fishsoy[1] were kept in smaller jars or bottles. Such containers were customarily covered. Dried food materials such as onions, garlic, chili peppers and other seasonings were often kept in a basket hung from the roof. Paddy, i.e. unhusked rice, was kept in a large bin of matting or wood, the excess sometimes simply piled on an uncovered mat on the floor.

125 Descriptions of two kitchens, one in a relatively prosperous household and one in a poorer home in Bang Chan, are included in excerpts from field notes, Appendix A, p. 93.

312 In a few homes, a clay water jar was kept in the kitchen or nearby, but more frequently foods were washed, and cooking water obtained at the canal or fish pond.

The water level varied between heavy flood and threatened drought. There were no deep wells in the whole area. Rainwater was collected from the roofs and stored in jars, but during the dry season, the canal or fishpond, although low, must supply the needs of the household. In some, drinking water drawn from the fishpond was preferred, and an effort might be made to keep buffalo from wallowing in it, and to avoid contaminating it with fecal or food wastes or by bathing. Others considered the moving water of the canal preferable to pond water.

General Social Factors Affecting Nutritional Level

462 In Bang Chan, most farm and household tasks were shared by men and women. Both sexes plowed, planted, harvested and dealt with rice buyers; managed buffaloes, boats, and children; cooked, fished and cut wood for fuel; hired out as labor hands, "living in" if desired.

554 184 Though there were clear differences in socio-economic status, the daily life of the people was much alike: whether owners of land or renters, whether farming large or small acreages, the rich and the poor worked in the fields at the same tasks, produced or gathered much of their sustenance, and ran out of cash periodically. Socio-economic status was roughly defined in terms of food: a poor man "had one meal only to forego another;" a rich man "had or could get what he wanted to eat." (Sharp et al. 1953, p. 264.)

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1. Description of these products will be found on pp. 17-18.

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

29 The year starts with May, the beginning of the rice-
152 year. At this time the rains began to soften the parched
24 ground, and the heat slackened. School re-opened. Farmers
512 turned to plowing, harrowing, raising the seedlings. Both
87 sexes worked about equally in field labor, boys from 14 and
462 girls from about 15 years of age performing tasks according
93 to skill and strength. Everyone was in the field at dawn.
The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy
26 day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third
120 meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

22 With the rains, the canals had filled, so that by June
132 buyers with big rice boats could return. The few farmers who
50 could afford to hold onto a portion of their last year's crop
44 sold it for a better price at this time. Vegetables and
24 fruits which had died in the long drought were replaced, and trees were planted.

24 In July the heavy transplanting season began. Because
22 of cooperative work habits or hiring out, people worked
13 solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly con-
130 trollable. Lack of rain might be remedied by pumping water
87 from the canals but flooding would drown the plants. School
85 vacation was scheduled at this time so both teachers and
88 children could help. Older children might work in the fields, while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food
43 for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at other seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

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[312]

Chart 2. (continued)

	No.[1] Records	May	June	July	Aug.[2]	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[2]	Apr.[2]
Fruits[6]													
Banana[7]	129	x	x	x	x	x	x	x	x	x	x	x	x
Chico	17						x	x					
*Guava	14						x	x		x			
*Jujube	18							x	x	x			
Longan	41			x									
*Limes		x	x	x		x	x	x		x			
*Mango	25		x								x		x
*Orange	48					x	x	x	x				
*Papaya	11			x		x	x	x		x			
*Pineapple	63	x	x	x						x	x		
Rambai	46	x		x								x	
Sandorica	18	x	x										
Singharanut	22						x	x	x	x			
*Star gooseberry	28	x				x					x		
Source of water[8]													
For drinking:													
Rain		x	x	x	x	x	x	x	x	x	x	x	x
Canal										x	x	x	x
Fishpond		x	x									x	x
For food preparation:													
Canal		x	x	x	x	x	x	x	x	x	x	x	x
Fishpond		x										x	x

6. Good sources of ascorbic acid have been marked with an asterisk.

7. Bananas of the (4)nam-(4)wa variety were most commonly used.

8. Data for households participating in the dietary study.

2: Hauck et al. D.E-8 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaum flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

[176] higher calorie intake in these periods. In general, the
[22] level of calories, phosphorus and thiamine and to some extent the protein varied with the rice consumption. The greater consumption of fish when fish ponds were drained during Round IV, accounted for the relatively higher protein content of the diets of both groups at this time, even though calorie intake was not at its peak. During this period, animal foods provided 45 and 53% of the total protein intake of Groups A and B respectively, whereas for the year as a whole, 37 and 40% of the protein intake of these groups was of animal origin.

The relatively high vitamin A and C intakes of families in Group A, during Round I as compared to other periods, was associated with a higher consumption of green leafy vegetables, and the use of sweet potatoes in quantity by one family. During Round II, families in Group A had few green vegetables, and their average intake of vitamin A was very low. The use of papaya, obtained as a gift, by one family in Group B during Round II raised the average ascorbic acid intake for this group substantially. Better average intakes, by one or both groups, of vitamin A, thiamine, riboflavin and calcium during the first Round, were not such as to provide liberal body stores to be called upon when food supplies of these nutrients were low.

SOME RECOMMENDATIONS FOR IMPROVEMENT OF DIET AND NUTRITURE AMONG RESIDENTS OF BANG CHAN

[164] Attempts to improve nutritional status in Bang Chan should be directed both toward increasing the supply and intake of certain nutrients and toward improvement of sanitary conditions so that intestinal infestation, diarrhea and other related illnesses will not lead to needless loss or increased requirement of nutrients.

Solution of the related problems of disposal of human excreta and provision of a year-round safe water supply are in the province of the sanitary engineer. Intestinal parasitism was common, but little can be done through treatment [164] [312] of individuals so long as the water supply is contaminated. [271] Rain water was preferred for drinking, so provision of adequate and sanitary storage for rain water, coupled with sterilization of water from ponds and canals when rain water is not available, would do much to ensure safe drinking [846] water. The custom of giving mother and infant boiled water [353] only, during the post-partum rest period, provides a starting point for extending use of boiled water to other ages and conditions.

353 fish and vegetables, when asked if they did anything to stimulate milk secretion. Other preparations, each mentioned once or twice, were cobra curry, fried (3)ยอด (1)chaaj flower, pork soup with (3)ยอด (1)chaaj leaves, dried peas and peppers cooked in palm sugar syrup. Some of the medications used were reputed to stimulate milk flow. Three women spoke of peacock brand medicine and one of a Chinese medicine in this connection. With respect to the Chinese medicine, another informant said she took it "to remove the serum which interferes with milk secretion." One midwife put herbs on her daughter's breast and expressed and discarded the "early milk" which was considered bad for the baby. No association appeared to be made between putting the baby to the breast and stimulation of milk flow.

p 8% Drinking water. - Information concerning sources of drinking
• 312 water used by the mothers was obtained from 48 mothers of young babies. Of these, 20 used canal water, 23 rain water, and 3 used either one. In general, there was a relation between season and source of water used. Most of the mothers whose babies were born between March and October drank rain water, whereas from November to February a majority drank canal water. Some families had enough water jars to preserve rain water for much of the dry season, whereas others had few or no jars and, therefore, could save only small amounts of rain water on a day-to-day basis. In all instances, the water, whatever its source, was boiled for the mother during the postpartum rest period. Forty-six women said they drank the water hot; one said it was warm. One popular traditional midwife said, however, that if the mother had her baby in the hospital, use of boiled water for drinking and bathing was not necessary.

CONDITION AND CARE OF BABIES AT BIRTH AND IN EARLY INFANCY

125 All information to be reported concerning condition and care of babies at birth and in early infancy relates to infants who were under one year of age when first visited. Thirty infants were seen when they were under 3 months of age.

Condition at Birth.

164 The condition of the baby at birth was generally described
165 as satisfactory. One infant who died on the third day, before we saw the mother, was said to have cyanosis, failed to cry at birth, and needed to be "helped" for about one-half hour afterward. Three infants had congenital defects: umbilical hernia, inguinal hernia on the right side, and hemangioma on the right groin.

854 medications were taken internally, sometimes being painted on
278 the tongue with a feather; but two preparations were applied over the abdomen. Some of the medications were described as "stomach medicine" or "to prevent flatulence." Five different kinds of proprietary medicine were given to 18 infants. In 13 instances, the medicine given was clearly homemade and included as major ingredients items such as flattery fruit, (3)lung (1)yauau; cobra oil; horseshoe crab; and buffalo skin. The nature of the medicine, whether homemade or proprietary, was not clear in 8 instances. Usually medicine for infants was mixed with honey, but in 2 cases, alcoholic liquor was used as it customarily was for the mother.

Six newborn infants in this series were given no medicine. One of these was born at the Health Center. One of the other 2 infants delivered at the Health Center was given homemade medicine later, and no information was obtained on the third. Eye prophylaxis[1] was probably routine at the Health Center, as, in 2 of the 3 cases delivered there, informants knew that drops had been put in the infant's eyes. Traditional midwives, however, did nothing of this sort.

Water for Drinking and Bathing.

853 6 For the newborn infant as well as for the mother, water for
312 drinking and bathing was boiled and was usually used while hot, often being kept warm in a vacuum bottle. Either rain water or canal water might be used depending on what was available at a given season. The water was dribbled from an adult's fingers into the infant's mouth. When the mother was no longer lying by the fire, boiled water was not considered essential for the infant. Nevertheless, over half the infants [illegible]ases from this time up to 3 months of age were being given boiled water to drink. After 6 months of age this was rare.

853 In one instance, during the time when a younger sibling
855 received boiled canal water, a 21-month old child was given
312 boiled water also. At the time of a later visit both of these children were drinking unboiled canal water. In another case an orphaned boy's formula was made up with boiled water, although

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[744] [754] [781] 1. Vaccination for smallpox was the only modern preventive treatment which we knew to be used in Bang Chan in the absence of an epidemic. Since a severe epidemic of smallpox with many deaths ten years previously, health officers came to the Bang Chan elementary school once a year to vaccinate children, and other residents of the community could be vaccinated at this time. Four of the young children whom we visited periodically were vaccinated, at 4 months, 8 months, 1 and 2 years of age, respectively.

he was given untreated canal water to drink. One young mother gave boiled water to her 15-month old infant for a few days when the baby had diarrhea though on questioning she said no one had told her to do this. (The fact that boiled water was used for newborn infants and their mothers may have suggested the procedure to her.) Among the infants who received boiled water for a longer time than most, 4 were children of school teachers.

Early Feeding Practices.

Breast feeding was usual in Bang Chan, but most babies were not put to the breast until the second or third day or even later (Table 1).

Table 1. INITIATION OF BREAST FEEDING BY THE MOTHER FOR 38 INFANTS IN BANG CHAN.

Post natal day	Number of infants
1	1
2	11
3	22
4	2
5	2

As previously noted, no association was apparently made between putting the baby to the breast and establishing the milk flow.

In this series, 9 infants were nursed by a relative or neighbor one or more times before the mother's milk supply was established. Five of these infants had breast milk on the first day, 2 on the second, and 2 on the third. Choice of a woman who was a good milk producer to give the infant its first milk feeding was considered auspicious. The procedure was primarily of ritual significance.

Three infants were given cow's milk (diluted, condensed, or dried milk) before being put to the breast.

About half the infants received no food other than boiled water and milk while the mother lay by the fire. Honey was given with boiled water to about one-third of the infants, and about one-fourth had crushed banana, sometimes in addition to honey. When given, these foods were started before breast feeding was established. Either raw or baked, a small, rather flavorless variety of banana, (3)kluaj (4)nam-(4)wa, was used. We observed a grandmother dipping her fingers into a bowl of water, then crushing a bit of banana between them and poking this into the infant's mouth. The infant was given as much as he would take, usually about half of a banana at one time. Banana might be fed from one to three times per day.

desirable changes in Bang Chan. An important point, however, is that leaders should understand, insofar as possible, the reasons behind the "modern" ways and not accept them merely because they are considered modern. Without adequate understanding traditional behavior which has served a useful purpose in protecting the people's health might be abandoned, or a half-understood "modern" way substituted to their hazard. For example, a popular traditional midwife said she knew that water was not boiled for mothers and babies in the hospitals in Bangkok, and the wife of a school teacher said she did not think use of boiled water was really necessary during (2)juu (1)faj. Traditionally, heat has been considered beneficial at this time. If this idea were extended to include an understanding of the value of boiling water to destroy harmful microorganisms and parasites, the traditional practice might be confirmed and even extended for the protection of other family members. If a sanitary water supply eventually becomes available in Bang Chan[1], precautions required to keep it so might be thought of as analogous to boiling of water; or chemical purification might be understood by the peasant as a modern way of conferring on water the virtues which boiling conferred when the "old way" was followed. Improvement in health and nutrition in Bang Chan must, of course, be seen as a long-time goal dependent on continuing education.

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[312] 1. In 1952-54 there were no wells in the area, and the problem of planning for a sanitary water supply when the plain is flooded for a part of each year is not an easy one.

251 One family stored cooked food in a basket which was hung from the ceiling. One homemaker frequently covered such foods with a basket, and in one instance a homemaker, who usually took no precautions to protect cooked foods, used a basin to cover food left on a table.

271 Source and Treatment of Water For Drinking and Culinary
• 312 Purposes. - From the time the dietary survey was begun, on May 26, 1953, through January 18, 1954, all families used rain water for drinking.

Of the 14 survey days, spaced at about weekly intervals, between January 28, 1954 through May 8, 1954, canal water was used for drinking on 7 days, water from fish ponds on 4, and rain water on 3 days. No distinction was made in source of drinking water for children and adults.

312 All families used canal water for washing vegetables,
744 cooking, and washing dishes, on the survey days from May 26, 1953 through March 18, 1954. On the 6 survey days between March 24 and May 8, 1954, 4 families used water from the fish pond for these purposes. In no instance was the water treated
[846] in any way before being used, although alum is known to be used, at times, in the village, to settle or clear water, and boiled water is given mothers and infants to drink during the post partum rest period.

514 Disposal of Excreta. - Of 30 families from whom information was obtained, 20 had pits for toilet use, only one of which was equipped with a cover. One other family had a flush latrine. Of the 8 families who had no special place which was used for toilet purposes, 4 reported that family members urinated on the compound, 3 that they used the fields, and 1 that either compound or field might be used for urination. One reported that the compound was used for defecation as well as urination; the remaining 7 said they went to the field to defecate.

Six families with pit latrines covered feces in some way: 3 used earth, 2 ashes, and 1 either earth or ash. A majority of those who used either an uncovered pit or had no designated place, reported that no attempt was made to cover feces. From six families, no information was obtained on this point. Various materials were mentioned as being used in the manner in which western peoples use toilet paper. Cocoanut husks were mentioned most frequently (25 times), and other materials in this order: paper (newspaper 9 times, straw paper once), wood (4 times) and water (3 times).

From the information available, custom and convenience rather than sanitary considerations appear to determine practices that are followed. If improved practices are

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

CHAPTER II

THE COMMUNITY

Geography

131 The community of Bangchan is situated some twenty road-miles northeast of Bangkok in the heart of the economically all-important commercial rice growing area of central 361 Thailand. Surrounded by their rice fields, the population [161] of about 1,600 persons lives on some three hundred small [503] family homesteads scattered along a half dozen connecting *[243] canals. The community occupies an area of 6,500 rai,[1] or 2,600 acres, all of which, with the exception of about 300 rai of homesites and narrow strips bordering canals, is given over to the production of wet rice.

134 The soil of Bangchan area is heavy dark clay with *243 an impervious layer at a depth of about six to eight inches and is suited only to rice growing.

133 The area is essentially flat, rising slightly toward • 312 the north. It receives, in addition to rain water, irrigation water channeled into it through the Saen-saeb Canal one mile to the south, Samwa Canal one mile to the east, and Khlong-song Canal one mile to the north.[2]

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[804] 1. One rai is equal to two-fifths of an acre.

2. See map on page 162.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

132 The monsoon climate of the region in which the village lies gives the area an annual rainfall, averaged over a recent ten year period, of about fifty inches; the effective rainfall, for the critical months when the rice is in the ground, is about forty inches.[3] The minimum precipitation requirement for wet rice is about seventy inches a year. This rainfall deficiency in the central plain of Thailand is made up by direct flooding from the rivers which flow in from the mountains and plateaux on the northeast, north, and west, the run-off rate fortunately being low because forests still cover much of these uplands. The whole plain is channeled for simple distribution of the spate of these rivers which occurs during October, November, and December, just before the harvest of rice. Because most fields are fed by gravity without an artificial head of water, or with only small heads impounded behind water gates, the depth and duration of flooding cannot be wholly controlled. As a result, variable water supply produces a wide variability in harvests and crop risks may be considerable. For 117 years between 1831 and 1948 the ministry of Agriculture records four major damaging floods (1831, 1879, 1917, and 1942), four years of extreme drought, thirty-five years of severe drought, and twenty-one years of moderate drought, leaving only fifty-three years of optimal supply of water.[4]

3. Central Service of Statistics, Statistical Yearbook of Thailand, No. 21, 1939-40-1944. Bangkok, 1950.

4. Ministry of Agriculture, Thailand and Her Agricultural Problems (Bangkok, 1950).

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

427 the combined land of five leading farm operators of 693
434 rai, averaging 139 rai per operator and ranging from 83
454 to 235 rai. It must be remembered that our operational
621 definition of occupations was based on the main source of
463 income and that many of the villagers had more than one
426 source of income. Investors as an occupational class in Bangchan should not be pictured as large landlords and large money lenders, possessing financial influences over their tenants and debtors. Rather, they were humble fellow villagers whose incomes were mainly derived from rents of small parcels of land or interest on small loans. To cite an extreme case, one aged woman was classified as an investor. She had only 17 rai which she rented out to her own son. She was living alone in an old shack and was too old to do any kind of work. She received as rent about a hundred tang of paddy a year which is equivalent to an annual income of only 800 baht. Thus she was considered one among the poor in the village.

178 There were three families whose occupations were
463 classified as professional in 1949. The number was reduced
621 to one in 1953. The head of this family was a Chinese car-
322 penter who derived his income primarily from boat building. Again, it must be pointed out that reduction of the number of families primarily engaged in professional services does not mean that professional services had been declining.
[305] On the contrary, they had been increasing. There were three barbers in 1953 as against only one in 1949. More traditional

342 Housing

342 The type of house, whether big or lowly, made a difference in the comfort and care of women. The big houses were teak-paneled and floored with a good roof of thatch, tile or corrugated iron. Their high piles insured dryness during flood season. The sleeping and living space was a single airy open room, often with one or two sides balustraded rather than solid, and protected from the weather by the roof's overhang. The kitchen was sometimes a separate room. There was always one small enclosed room, perhaps ten feet square, or larger, with a door and a window. This room was used for keeping valuables under lock, and whenever privacy was desired: as a marriage chamber for bride and groom, or as a quiet room for a senile parent. Because of its almost solid walls, it was poorly ventilated and hot. Childbirth took place in this little room, if convenient, or out in the main part of the house. The fire-rest was in this room so that the dreaded wind could be kept out.

[844]

342 The poor lived in modest earth-floored cottages of bamboo
184 frame, thatch sides and roof, with one or two raised wood plat-
352 forms for sleeping and sitting. In the rainy season, these
844 cottages could be damp. In fact, one October the water was observed ankle deep inside a house, and the wife splashed around at her chores. Under the latter conditions, a woman in childbirth would be moved to some kinsmen's house. Delivery took place on one of the sleeping platforms, and post-partum rest was on a plank raised off the earth floor, unless space permitted that the plank and temporary fire-floor be placed on the platform. On one observed occasion reed mats as protection from drafts were temporarily set up, making an enclosure about three feet high within which a mother lay in her post-partum rest period.

434 Cash

434 Cash was short to everyone. The poor felt very poor and
426 the rich did not feel rich. This was because the rice-money,
556 which came in a lump sum once or twice a year, was at once turned over to clear debts, to make large purchases of agricultural equipment, to repair the house, or to perform elaborate ceremonies. What was left over was not kept around the house for day-to-day expenses for fear of robbery, but was immediately loaned out. Thus cash was not available for emergencies
434 which in childbirth might mean taxis or hospital care. Being
844 rich or poor made little difference in Bang Chan, however, as
556 to the quality of the obstetrical help given.

Chapter IV

THE BIRTH OF A CHILD

Dūan and her husband, Song, had a 2 year old son, Chai.[32] They lived and worked with her widowed mother, Lek, and her unmarried sister, Mī. The comfortable house stood high on piles, surrounded by rice fields. On a nearby mound lived Sāi, 60 years old and full of energy, the youngest sister of her grandmother.

Now Dūan noticed that again her menses had stopped. Her mother had described before her marriage what this meant. With happiness in her eyes, as the first time, she told her husband, then her mother, and at the first opportunity, her husband's parents. There was no reason to keep her pregnancy secret. Since she and Song would be happy to have either a boy or a girl, she did not seek out the ritual means which existed to induce a child of a particular sex.

During the months of anticipation, Dūan worked along as usual in farming and house-keeping. Lek reminded her of prudent behavior. "Women are easily upset when pregnant. It is up to you to put yourself in a cheerful mood. Everything you do will affect the infant in your womb. If you see a scarred person, your child will be scarred. Be calm, look only at pleasant things and avoid jerky motions. Do not overeat, lest the child be a glutton. If you sleep during the day and are inactive, you will also have a lazy child. Some girls are trying to be like Bangkok people, pleading that they cannot do heavy work in the last few weeks of pregnancy, but that will cause a difficult labor."

To increase her appetite, early in her pregnancy Dūan visited a Chinese pharmacist to get medicine. He had so

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32. This account puts together data from several informants. Particularly illuminating phrasings are quoted exactly, over and above the conversations, which, though fictionalized, are also direct transcriptions.

443 noodles. Their prices were higher than in Minburi or Bangkok, but their service was such a convenience that many people rarely went to town. Some adults in Bang Chan had never been to Bangkok though almost all had visited Minburi, about 3 [437] miles from the temple. Venders often extended credit, and also accepted items such as fresh fish, fruit, and eggs on a barter basis, thus providing an outlet for small amounts of home products. When the subsidiary canals were dry, however, venders could not get to some parts of the village.

Home Sites and Houses

General Arrangement

361 487 Since the canals provided the chief means of local transportation for much of the year, and also supplied water for many household uses, houses were built near the canal, usually within sight of a neighbor's. Home sites were mounded up to a level of two or three feet above that of the fields, but even so, water might cover the mound at the peak of the rainy season. Old wooden houses were set in a grove of bamboo, bananas and other fruit trees and vines, occa- 343 sionally betel and coconut palms. Nearby might be a shed for the water buffalo which were the draught animals used in farming. Rarely one saw a walled privy.[1] On the same mound might be a cottage built by parents for married children or by an affluent farmer for a hired hand. In this case, the threshing floor, firewood from trees on the mound, and area 342 for kitchen garden would be shared. Many houses were built on stilts to avoid flooding when the water level was high. If the house was elevated sufficiently, the area underneath provided a relatively cool shelter during the hot season for the buffalo, and even for family members for some of their daytime activities.

Depending on the resources of the family, houses were built of either thatch or wood, roofed with thatch, galvan- 352 ized iron or occasionally, tile. Split bamboo or matting might be used for dividing walls if the house had more than one room. Wooden flooring was usual, but in simpler thatched houses with dirt floors, the buffalo might be sheltered under the same roof with the family. In such a house, one or more low wooden platforms were built for sitting and sleeping. Wide cracks between floor boards conveniently permitted betel 364 chewers to spit without the need for a spittoon. Those who 267 were preparing food or clearing up after a meal could also thus discard refuse or dispose of leftover food that was to 364 be given to chickens, without leaving the kitchen. Some

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1. cf. Hauck, 1956, p. 45-6 for description of latrine facilities.

221 435 Despite the availability of fish and of vegetables in the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

221 512 The two months of September and October during which the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit and take trips. A few might go on a pilgrimage. Therefore, in this season, all family members were less often together at the evening meal. Fishing was a continuous occupation, with some preserving and home craft. Jobs such as selling food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

342 133 High water caused time-consuming inconvenience only in earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

243 221 By November, the earliest varieties of rice matured. Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

461 226 434 426 443 The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience of purchased food was greatest, cash was exhausted. With rice money in sight, venders might be generous with credit, but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

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604 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

*243 Of 47 farms which had negative labor incomes, 37
434 were in the class interval of from -1 to -2,000 baht, 9
[435] from -2,001 to -4,000 baht, and one -- the least efficient as far as this measurement is concerned -- produced as low a labor income as -8,006 baht. This last farm had to support a large family of eleven members. With an acreage of 40 rai, which was rather small relative to the size of the family (another family of ten was operating a 110-rai farm in that same year), it was natural that this farm did not have much rice to sell.

*243 In figuring farm expenses, we intentionally left
434 out the dwelling and included as farm buildings only the
• 342 ones that housed the buffaloes, farm equipment and materials.
[427] The main reason for this omission was that there was a wide
[435] range of dwelling facilities in Bangchan -- from a teak building valued at 30,000 baht to a dirt floor thatched shack valued at no more than a few hundred baht. Besides, rental for a dwelling in rural areas of the country is practically unknown. Since a family living in the village must have their own dwelling regardless of their occupation, it was considered in this study that dwellings should be separated from farm investment. This consideration was further substantiated by the fact that when a family gives up farming they continue to live in the dwelling while all the farm equipment may be sold.

*243 When the charge for dwelling is dispensed with for
434 the reasons given above, the only difference between labor
433

443 noodles. Their prices were higher than in Minburi or Bangkok, but their service was such a convenience that many people rarely went to town. Some adults in Bang Chan had never been to Bangkok though almost all had visited Minburi, about 3 [431] miles from the temple. Venders often extended credit, and also accepted items such as fresh fish, fruit, and eggs on a barter basis, thus providing an outlet for small amounts of home products. When the subsidiary canals were dry, however, venders could not get to some parts of the village.

Home Sites and Houses

General Arrangement

361 487 Since the canals provided the chief means of local transportation for much of the year, and also supplied water for many household uses, houses were built near the canal, usually within sight of a neighbor's. Home sites were mounded up to a level of two or three feet above that of the fields, but even so, water might cover the mound at the peak of the rainy season. Old wooden houses were set in a grove of bamboo, bananas and other fruit trees and vines, occa- 343 sionally betel and coconut palms. Nearby might be a shed for the water buffalo which were the draught animals used in farming. Rarely one saw a walled privy.[1] On the same mound might be a cottage built by parents for married children or by an affluent farmer for a hired hand. In this case, the threshing floor, firewood from trees on the mound, and area 342 for kitchen garden would be shared. Many houses were built on stilts to avoid flooding when the water level was high. If the house was elevated sufficiently, the area underneath provided a relatively cool shelter during the hot season for the buffalo, and even for family members for some of their daytime activities.

Depending on the resources of the family, houses were built of either thatch or wood, roofed with thatch, galvan- 352 ized iron or occasionally, tile. Split bamboo or matting might be used for dividing walls if the house had more than one room. Wooden flooring was usual, but in simpler thatched houses with dirt floors, the buffalo might be sheltered under the same roof with the family. In such a house, one or more low wooden platforms were built for sitting and sleeping. Wide cracks between floor boards conveniently permitted betel 364 chewers to spit without the need for a spittoon. Those who 267 were preparing food or clearing up after a meal could also thus discard refuse or dispose of leftover food that was to 364 be given to chickens, without leaving the kitchen. Some

1

1. cf. Hauck, 1956, p. 45-6 for description of latrine facilities.

311
341 rice land. Water-ways, however, were public areas, and any
[505] convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

262 Mushroom culture as a side line activity of rice far-
344 mers developed during the period when this study was in
433 progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

[434] As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

262 Relatively few foods were purchased, but some of these,
432 such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

262 Estimates of mean annual consumption and cost of pur-
435 chased foods, for 106 households in Bang Chan are shown in
124 Table 1.

262 The list of purchased foods presented by Janlekha (1955)
432 was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)un-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23---Analyst]

Bang Chan Canal bissected

the community and joined, about one mile south, Sāensāeb Canal, a broad old waterway connecting Bangkok and Mīnburī with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Mīnburī, two miles east, cut through one side of the area. On it lay Bang Khūat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō pèet," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Mīnburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Mīnburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Mīnburī, Kilō pèet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoe), one located in Mīnburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided, reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

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1. A new large school has since been built away from the temple compound.

4

132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 36/ dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [943] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [18] river, provided natural conditions for raising a single crop of wet rice. From May or June to February, the principal activ- [220] ities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [433] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part of the Thai-Buddhist community. Information to be presented [28] on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

193 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the 484 nearest market town, ran through one edge of the village. Bus 358 service was available along this road, to either Bangkok or [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)dɛɛsɛng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chaauun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

In Bang Chan when donations for a new school
264 building warranted buying the foundation materials, so that
476 volunteer labor was solicited for their installation, some of
346 the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

782 The spirit-offering, or the portions eaten by a partic-
864 ipant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests.
262 The pork was cut up and eaten with a hot sauce, or put into a
782 "with-rice" dish. It was especially appropriate with liquor.

262 The use of food ritually was not limited to the ceremon-
755 ial season nor to big events. The same purposes underlay the
852 use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

43 The benefits of a (l)ngaan accrued to every participant
554 down to the last worker and contributor according to the degree
796 of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

796 One assistance in the financing was that every invited
476 guest made a contribution, customarily 5 to 10 baht, which
435 helped defray the costs. In 1952, household heads reported these contributions as totalling from 30 to 1,000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (l)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

361 Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended 351 to live in proximity. Around the houses were kitchen gardens and threshing floors, and behind them, the fields. Bananas grew 245 abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, 241 while fish were plentiful. Water sources were the rain, kept 226 in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large 312 tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

General Nutritional Level

146 The population was physically well-formed with few physical [142] deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. Food at the not-infrequent festivals [292] was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The [178] change-over, some decades ago, from home pounding of rice to [256] steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community.

2. Dr. H.M. Hauck, personal communication, 1959.

244 Vegetables and Fruit. - Although kitchen-gardening has been encouraged by the Thai government, vegetables and fruit were grown in Bang Chan to a limited extent only. Every family had some sort of kitchen garden, but many edible plants which can be grown in the village were grown by relatively few families. The list of fruits grown in Bang Chan in 1948-49 (Sharp et al., 1953) included four times as many items as were grown by one or more of the 11 families that participated in the dietary study. The list of vegetables and spice plants grown or gathered by these families included 27 items, as compared to 41 listed by Sharp et al. Spices and chili were more commonly grown than vegetables and fruit.[1]

244 One affluent household whose food expenditures for 1949 were reported by Sharp et al., (1953, pp. 214-215) produced for home use, 125 kg. of palm sugar valued at 200 baht and 500 coconuts, valued at 450 baht. Home production of both of these was unusual. Few families in Bang Chan grew either sugar palms or coconut palms and expenditures for coconuts and palm sugar were usual. During the major flood of 1942, villagers noted that coconut palms survived whereas all other fruit trees were destroyed. After this, a number of farmers planted coconut palms, but they had not yet begun to produce.

361 In 1954, about 120 acres (300 rai) of the total of about 2800 acres (7000 rai) of land in the village were used for home sites and home gardens for 336 households. Individual home sites usually varied in area from about one-quarter to one acre, and were occupied by buildings, threshing floor and space for poultry as well as trees and garden space. Portions of this might be under water for several months of the year. Increased home production of fruit and vegetables would in many cases necessitate increasing the size of the home site by purchase, mounding or both. Ordinarily, increased land for the kitchen garden was obtained at the expense of some of the

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1. In a typical farm garden in Bang Chan one would find bananas growing, and a number of plants used for seasoning curry. Various kinds of chilies, lemongrass, bergamot, of which both rind and leaves are used, and galangal were grown by all families who participated in the dietary study. Both sweet and holy basil were commonly grown. Many families grew one or more varieties of gourds and of eggplant, some of which can be trained to grow on a tree or trellis. The inflorescence of the banana was also used as a vegetable. Leafy vegetables were not commonly cultivated but some families grew (2)phag (2)ka-(2)cheed, a green water plant, in gardens staked out at the edge of the canal, or in a pool, and some had trees, the leaves of which were edible. Swamp cabbage or (2)phag (3)bung grew wild along the edge of the canals and was the most commonly used green leafy vegetable. A few families grew guava, jujube, star gooseberry, Manila tamarind, mango and pineapple.

132 The normal distribution of rain in the region, how-
*243 ever, is almost ideal for single crop rice production. Heavy rainfall in May and June softens the soil for easy plowing and harrowing. During July and August, when the young plant does not require much water, the rainfall moderates. Again there is heavy rainfall in September and October when the maturing plant needs rising water as it shoots upward. Finally, during the harvesting season of December and January there is a minimum of rainfall. It is in terms of rainfall that the people divide the year into three seasons: (1) the rainy season of late May to November; (2) the cold season, December into early February; and (3) the dry hot season from late February to early May.

Vegetation

*243 Of the 6,404 rai privately owned in Bangchan 6,106
137 rai is devoted to rice and 298 rai to homelots. During the
[311] rice season the village is seen as a vast rice field inter-
• [351] spersed with bamboos and fruit trees on the homelots which
[361] string along the half dozen canals of the village. In the
[312] dry season only stumps of rice stalks are left in the field.
192 Some of these may be removed by burning. With the coming
231 of rains, which usually fall once or twice in March and four or five times in April, a variety of grasses begin to appear and the rice field is gradually transformed into a grass field, providing a pasture for the buffaloes until the next planting season when the size of the grass field available

#243
132
137 to the buffaloes will be gradually reduced by the process
231 of land preparation.

The homelot is usually surrounded on all sides,
244
245 except the one facing the canal, with bamboos which serve
• 351 to protect the farm home from strong wind. Within this compound there always is a kitchen garden where a variety of plants and vegetables for everyday use are grown. If the homelot is large, there may be enough room at the backyard for an orchard where fruit trees may be grown. In some cases, aquatic plants are cultivated in the canal in front of the house.

137 In addition to cultivated plants, there are to be seen also wild shrubs and vines which are more or less restricted to small strips of land along the banks of the canals. Wild aquatic vegetables, especially the morning glory, are always seen in these canals, making them appear narrower than they actually are.

Livestock

231 Buffaloes: As in most of the rice producing areas of the country, so in Bangchan buffaloes are used in all kinds of farm work where the help of draft animals is needed. Since the village is without land which can be grazed the year-round, buffaloes are not locally bred but are brought in from the northeast and other parts of the kingdom. To be sure, there are some local-born buffaloes, and these are considered to be stronger and to live longer than the imported

*243 growing village could not very well be studied in a brief period of only one rice year. Rather, the field study should be extended to cover years of good as well as poor crop.

Land Utilization

Official records show that the area of land privately owned in the seven hamlets comprising Bangchan is 6,404 rai. [503] ..hen an estimated area of 100 rai of public land occupied by the half dozen canals is added to the private land area, the total area of the village may be figured at about 6,500 rai.

*243 • 351 423 311 621 The area of each of the 298 homelots in Bangchan varied. It is rather difficult to get accurate figures for these homelot areas. We may, however, give an allowance of one rai for each homelot on the basis of crude estimate. This would include space for buildings and all of the home compound including family pools as well as kitchen garden, and in some cases area devoted to fruit trees. Since all of the land area in Bangchan other than homelots is devoted to rice growing, we may estimate the land available for rice production by simply deducting the homelot area from the total area of land privately owned in the village. This was found to be 6,106 rai in 1953 (Table 12).

*243 311 423 621 It should be noted that not all of this area of 6,106 rai was tilled by Bangchan residents, and that some of the villagers also worked on rice fields outside our arbitrary

[TEXT CONTINUED ON PAGE 113]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 12

LAND AVAILABLE FOR RICE PRODUCTION
Bangchan, Thailand, 1953

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•951
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Hamlet	Land Privately Owned	Allowance for Homelot	Land Available for Rice Production
	rai	rai	rai
BC4	930	40	890
BC5	809	28	781
BC6	900	47	853
KY5	891	63	828
KY6	916	31	885
KY7	939	42	897
KY8	1,019	47	972
Total	6,404	298	6,106

243 buffaloes heretofore undreamt of and will have to bear
231 the consequent burden of increased cost of producing rice.
311

Some description of the homelots which constitute
311 almost five per cent of the land area of Bangchan has already
351 been given in the section on vegetation, Chapter II. From
[231] the standpoint of land utilization, functions of the homelot
[235] other than providing standing room for the living quarters
[244] may be mentioned as follows:
[245]
[226]

1. It provides space for threshing and for storage of rice and farm equipment including buffaloes.
2. It provides room for chicken or duck raising.
3. It provides land for a kitchen garden, and for fruit and vegetable growing.
4. It provides space for fish trapping by the draining method.

To serve these functions, homelots in any rice growing village, where the fields are submerged under water during the entire life of the rice plant, must be high above water level during the flood season, must be well drained, and must have pools with ample shade.

243 Rice land in its natural state does not meet these
311 requirements for a homelot. In the first place its level is too low. Second, the impervious layer of clay characteristic of rice land does not permit soil drainage. To make a homelot out of rice land, it is necessary that the prospective site be mounded up to a level two or three feet higher than the level of the surrounding fields. The hole from which

243 earth has been removed for the purpose of raising the yard
911 becomes a fish pool simply by the construction of a ditch connecting the hole with the canal, thus partially giving the last mentioned requisite of a homelot. Again, in the
312
• 951 process of mounding up the homelot the soil may be made well drained by skillful handling of the earth. The technique adopted by the Chinese experts in the famous truck gardening area of Damnernsaduag is to remove the top soil first from the strip intended to be the ridge of the prospective vegetable garden. Then the top soil of the adjacent area intended to be the pool is also removed, and these top soils from the two adjacent strips of land are put together in one pile. Next, the tough subsoil of the pool strip is dug up and placed over the bare subsoil of the ridge strip. Finally, the subsoil ridge thus elevated is covered with the topsoils from the mixed pile. By this manipulation the depth of the top soil of the newly created ridge is greatly increased from the original depth of about 8-10 inches to perhaps 16-20 inches. The presence of the pool, also newly created, along the ridges further enhances the draining quality of the strip. Unfortunately, this technique was unknown in Bangchan, and mounding of the homelot was done by simply dumping the earth dug out from the strip intended to be the pool all over the land area of the prospective homelot. With the presence of the pool which served as a receptacle for water and with constant hoeing of the garden area, the soil depth also was increased and the draining quality improved.

*243 requires much additional hand labor and reduces the possibil-
242 ities for mechanization to a minimum. On the other hand, the more labor intensive transplanting method would seem to be more suitable to a population pressure area like Thailand if it really gives as relatively higher a yield as it is claimed to give.

*243 Farm equipment

• 351 [235] [244] [245] [226] In Thai agriculture, it is very difficult to separate the farm from the home. In the chapter on the community it has already been indicated that the home lot not only is the living place for the farm family but also provides space for threshing and for storage of farm equipment, room for chicken raising, land for kitchen garden and for fruit and vegetable growing, and space for fish trapping by the draining method.

*243 351 422 In other words, all the material components of the farm, except the rice fields, are located or stored on the home lot. Here, items that are uniformly or frequently found include:

A. Household equipment

1. Buildings
2. Furniture
3. Bedding facilities
4. Kitchen accessories
5. Storing facilities
6. Lamps of various sizes
7. Ritual accessories

B. Farm equipment

1. Farm building: equipment and buffalo shed.
2. Implement: plow, harrow, yoke, roller, shovel, spade, hoe, weeding knife, noria, sickle, pitch-fork, rake, broom, winnowing machine, wooden winnowing spitula, basket, mat bin, box bin, home-mill.

*243
• 351
422

3. Mechanical power: windmill.
4. Engine power: internal combustion engine.
5. Fishing equipment: pressure lamp, spear, hook, throwing net, dipping net, trap.
6. Repair equipment: axe, knife, chisel, handsaw, auger set, hammer, jack plain, block plain.
7. Transportation facilities: various kinds of boats.

C. Livestock

1. Draft animals: buffaloes.
2. Poultry: chicken, duck.

D. Seeds and materials

1. Paddy for seeds and for consumption.
2. Ropes.
3. Fuel and oil for engine and for light.

*243
*128 Since we are primarily concerned in this section with farm equipment, only those listed under B will be discussed. And since we are dealing primarily with rice production which is the main source of income of Bangchan rice farmers, attention will be paid almost exclusively on the equipment which are used in the production of rice.

For the purpose of our discussion, farm equipment used in Bangchan may be categorized in a number of ways: (1) According to their use in the various processes of rice production; (2) According to their relative degree of indispensibility on rice farms; (3) According to their relative prices, and the cose of maintenance and repair; and (4) According to their historical improvement.

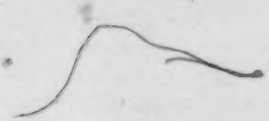
*243 Farm equipment was used in Bangchan in different processes of rice production as follow:

462
[503] Besides the work in rice-fields, women dug and cleaned
[226] canals and ditches, mounded land, and fished in many ways, the most laborious of which was plunging a heavy basket into the mud to catch burrowing fish. In the household chores, in which men shared to some extent, they carried water, cut and fetched wood, tended livestock, cultivated kitchen gardens, [501] pounded rice in mortars, and cleaned houses. Boats were rowed by paddling or sculled by standing and pushing a single large [354] oar. Cooking was time consuming. The low stoves were on the ground or floor. Since there were no tables or chairs, one [352] squatted two to four hours a day to cut or pound ingredients, [516] stir the curry, or wash the dishes.

868 The training of boys and girls for farm and household
561 work was thorough and started early. By 10 years of age,
461 boys and girls with few exceptions were experienced in every step of farming. Janlekha's chart (1955:82) indicates the progression (parenthetical additions are the present author's):

Age	Method	Kinds of farm work
5 - 7	not forced, but allowed or induced to work if they want to	light hauling, removal of weeds which have been turned over by harrowing
8 - 12	mild pressure	light hauling, removal of weeds which have been turned over by harrowing; some household work and help in the kitchen - girls only - (sometimes boys)
13 - 14	moderate pressure	hauling, weeding, buffalo-tending, transplanting, chicken-feeding, fishing, household work (boys and girls)
15 - 16	high pressure	all kinds of farm work, harrowing, harvesting, and uprooting - boys only - are started at this age.

872 Children worked in the fields before and after school
461 which, compulsory for all children aged eight to fourteen, was held from 9 a.m. to 3 p.m. five and one-half days a week. Vacations coincided with peak work seasons so children could help in the fields or at home.



Housing

342 The type of house, whether big or lowly, made a difference in the comfort and care of women. The big houses were teak-paneled and floored with a good roof of thatch, tile or corrugated iron. Their high piles insured dryness during flood season. The sleeping and living space was a single airy open room, often with one or two sides balustraded rather than solid, and protected from the weather by the roof's overhang. The kitchen was sometimes a separate room. There was always one small enclosed room, perhaps ten feet square, or larger, with a door and a window. This room was used for keeping valuables under lock, and whenever privacy was desired: as a marriage chamber for bride and groom, or as a quiet room for a senile parent. Because of its almost solid walls, it was poorly [844] ventilated and hot. Childbirth took place in this little room, if convenient, or out in the main part of the house. The fire-rest was in this room so that the dreaded wind could be kept out.

342 The poor lived in modest earth-floored cottages of bamboo
184 frame, thatch sides and roof, with one or two raised wood plat-
• 352 forms for sleeping and sitting. In the rainy season, these
844 cottages could be damp. In fact, one October the water was observed ankle deep inside a house, and the wife splashed around at her chores. Under the latter conditions, a woman in childbirth would be moved to some kinsmen's house. Delivery took place on one of the sleeping plarforms, and post-partum rest was on a plank raised off the earth floor, unless space permitted that the plank and temporary fire-floor be placed on the platform. On one observed occasion reed mats as protection from drafts were temporarily set up, making an enclosure about three feet high within which a mother lay in her post-partum rest period.

434 Cash

426 Cash was short to everyone. The poor felt very poor and the rich did not feel rich. This was because the rice-money, [556] which came in a lump sum once or twice a year, was at once turned over to clear debts, to make large purchases of agricultural equipment, to repair the house, or to perform elaborate ceremonies. What was left over was not kept around the house for day-to-day expenses for fear of robbery, but was immedi-
434 ately loaned out. Thus cash was not available for emergencies
844 which in childbirth might mean taxis or hospital care. Being
556 rich or poor made little difference in Bang Chan, however, as to the quality of the obstetrical help given.

443 noodles. Their prices were higher than in Minburi or Bangkok, but their service was such a convenience that many people rarely went to town. Some adults in Bang Chan had never been to Bangkok though almost all had visited Minburi, about 3 [431] miles from the temple. Venders often extended credit, and also accepted items such as fresh fish, fruit, and eggs on a barter basis, thus providing an outlet for small amounts of home products. When the subsidiary canals were dry, however, venders could not get to some parts of the village.

Home Sites and Houses

General Arrangement

361 487 Since the canals provided the chief means of local transportation for much of the year, and also supplied water for many household uses, houses were built near the canal, usually within sight of a neighbor's. Home sites were mounded up to a level of two or three feet above that of the fields, but even so, water might cover the mound at the peak of the rainy season. Old wooden houses were set in a grove of bamboo, bananas and other fruit trees and vines, occa- 343 sionally betel and coconut palms. Nearby might be a shed for the water buffalo which were the draught animals used in farming. Rarely one saw a walled privy.[1] On the same mound might be a cottage built by parents for married children or by an affluent farmer for a hired hand. In this case, the threshing floor, firewood from trees on the mound, and area 342 for kitchen garden would be shared. Many houses were built on stilts to avoid flooding when the water level was high. If the house was elevated sufficiently, the area underneath provided a relatively cool shelter during the hot season for the buffalo, and even for family members for some of their daytime activities.

Depending on the resources of the family, houses were built of either thatch or wood, roofed with thatch, galvan- 352 ized iron or occasionally, tile. Split bamboo or matting might be used for dividing walls if the house had more than one room. Wooden flooring was usual, but in simpler thatched houses with dirt floors, the buffalo might be sheltered under the same roof with the family. In such a house, one or more low wooden platforms were built for sitting and sleeping. Wide cracks between floor boards conveniently permitted betel 364 chewers to spit without the need for a spittoon. Those who 267 were preparing food or clearing up after a meal could also thus discard refuse or dispose of leftover food that was to 364 be given to chickens, without leaving the kitchen. Some

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1. cf. Hauck, 1956, p. 45-6 for description of latrine facilities.

364 garbage was customarily fed to animals. As previously reported (Hauck, 1956) "Each family seemed to have its own pattern for disposal of garbage which was not fed to stock. Those who threw it in the canal, did so consistently, except when the nearby canal was dry, and those who threw garbage elsewhere, did this consistently. No one was observed to burn or bury garbage."

The Kitchen Area

354 In the larger houses, the kitchen was usually a small separate room with a wooden floor and at least one window for ventilation. A low table or wooden case with sides built up several inches, and filled with clay, served as the "fireplace." On this stood the clay stove, and hot pans and pots were set there when removed from the fire. In homes with an earthen floor, the fireplace might be built directly on the ground. The clay stove was several inches high, shaped so that rice pots and curved frying pans would fit into the large segment of a circle which was its top. An open space was left in front to facilitate building and maintaining the fire. Firewood was kept nearby. Most families also had a portable clay stove in which charcoal was burned. This might be used as an auxiliary unit, for outdoor cooking on a hot day or when traveling by boat.

Matches, although available, were hard to protect from dampness. Kerosene filled cigarette lighters of a cheap and efficient type were commonly used. As kindling, one might use coconut husks or purchase resinous bits of wood that would hold a flame for sometime.

Although only a small amount of firewood was needed, as it was used for cooking only, local supplies were inadequate. In all seasons, some was brought in from other areas. One family participating in the survey planted trees each year for firewood. The wife in another household used to return to her parents' home to gather a boatload of wood as needed. Because charcoal was more expensive than wood, and none was produced in the village, it was used for home cooking by only about 10 per cent of the village families, primarily those such as storekeepers and venders who did not have time to cut firewood.

352 In many kitchens clean dishes were placed upside down on
251 a slatted wooden rack. The other common item of furniture was a free standing ventilated cupboard or food safe. At its best, this was screened, and the legs antproofed in some way, as by putting them into small containers partially filled with kerosene, or rubbing them with powdered pitch; but relatively few
251 village families had such well constructed food safes. Families that did not own a food safe often kept leftover cooked foods in a basket, or covered with large dishes on a tray. Fish and sugar must be kept away from ants, but cooked rice,

APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children. . . . . The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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117 takes it down the steps to the fish pond, where she swishes
252 the basket around to wash the fish, and rinses her hands at the same time.

[29] There are some hazards to the food--chickens trying to get at the edible part of fish while the niece cleans it (she leaves the scales, etc. for them to eat); cat and kittens in the kitchen, having to be driven away from the grated coconut and coconut milk, and getting an occasional unweighed nip. Whether we start to weigh food for the evening meal or a.m. meal, some cooked foods are apt to be used, either left over
[262] from a previous meal, or cooked in advance. This a.m., for
[126] example, buffalo meat, already cooked (but not weighed before cooking) was used, and (3)khii-(2)leg leaves, which SS weighed last night. These latter were cooked last night, to reduce bitterness, then put into curry today.

Description of Food Preparation Area in a Relatively Poor Household

Wednesday, May 27, 1953

117 Arrived about 5:45 a.m. While other food was being pre-
[262] pared, the 11-year old son came in with a package of salted white radish and a small milk tin with some coconut oil which had just been bought. This is the house which we found flooded when they sent for us to see the baby last fall. The roof seems to be well thatched. The floor is not wet after last
[158] night's downpour. The bed platform, in one corner, is about
[85] 8 x 10 feet. The baby's cradle hangs above it. In the oppo-
[162] site corner is a shelf where utensils are kept. Some food,
[26] in paper bags, is in a basket hung from the roof. Fresh fish
[359] is kept in a jar of water until needed. The stove is on a small mound of earth, and further elevated on a small box (just big enough for the stove) filled with earth.

[158] We sit on a mat, spread on the mud floor, with the
[356] scales, plastic bowls and waxed paper ready for weighing food. The children lie on a mat nearby. In the house is a fresh mound of earth, a small straw bin with rice, and various pieces of equipment.

*177 22
*178

207 Exposure to the media of mass communication seems to act, in
a sense, as a substitute for literacy. It may be that through
212 these means either an illiterate farmer can obtain information
546 about the more complex agricultural tools and methods or motivation
to try improvements, or both, even though he may not know how to
read and write. One may infer that he tends to act on the infor-
mation thus obtained, since he is more likely than his unexposed
opposite number to try out these innovations.

*178
*177 Acceptance of Urban Patterns

369 The printed word and the mass media are, of course, not solely
channels for the communication of knowledge. They are, at the
same time a means whereby the farmers may establish some sort of
contact with the more sophisticated world outside the community
even with highly urban Bangkok.

The survey indicates in a general way the extent to which
[291] the people of Bang Chan have accepted urban patterns. Their grow-
[416] ing acceptance of urban modes is readily apparent even to a casual
[207] visitor: many own shoes, flashlights, wrist watches, radios,
[493] bicycles, fountain pens, modern furniture.* Other urban behavior
[413] is likewise beginning to be noticeable.
[358]

One very simple indication of the degree to which urban in-
fluences have penetrated is the change in manners of taking
food. The farmers traditionally eat with their hands rather than
using a fork or spoon. In Bangkok, however, eating utensils are
customarily served with the meals in restaurants and are widely
*177 adopted as well by the city population. Some Bang Chan inhabi-
*178 tants have picked up this simple urban custom and have substituted
it for eating mainly with their hands. In Bang Chan of 1955, for
264 example, a sizeable minority (26 per cent) report that they use a
369 spoon, fork or both for the evening meal.

That such a simple question can roughly measure exposure
[207] to urban influences, is indicated in the following table, which
[546] shows that respondents who report customarily eating with "urban
utensils" are more likely to be exposed frequently to radio and
motion pictures and are more likely to have visited in Bangkok.

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[412] * Survey respondents report that their households possess a
flashlight (81 per cent); scissors (54 per cent); kerosene lamp
(27 per cent); radio (14 per cent). About 41 per cent say they
own at least one pair of shoes.

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Age	Method	Kinds of farm work
5 - 7	not forced, but allowed or induced to work if they want to	light hauling, removal of weeds which have been turned over by harrowing
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The Kitchen Area

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Matches, although available, were hard to protect from dampness. Kerosene filled cigarette lighters of a cheap and efficient type were commonly used. As kindling, one might use coconut husks or purchase resinous bits of wood that would hold a flame for sometime.

Although only a small amount of firewood was needed, as it was used for cooking only, local supplies were inadequate. In all seasons, some was brought in from other areas. One family participating in the survey planted trees each year for firewood. The wife in another household used to return to her parents' home to gather a boatload of wood as needed. Because charcoal was more expensive than wood, and none was produced in the village, it was used for home cooking by only about 10 per cent of the village families, primarily those such as storekeepers and venders who did not have time to cut firewood.

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251 village families had such well constructed food safes. Families that did not own a food safe often kept leftover cooked foods in a basket, or covered with large dishes on a tray. Fish and sugar must be kept away from ants, but cooked rice,

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862 511 expenditures by food groups is shown for the 11 families that participated in the dietary study.

Consumption of canned foods was negligible. Some canned fish and fruits were on sale at stores in the village, in 1952-54, but were seldom seen in homes.

262 272 854 855 Sweetened condensed milk, which was served in coffee sold at the stores, was occasionally bought for the children. On one occasion, a woman was seen buying milk diluted with hot water as a beverage. Among 526 records of food eaten by school children during 24 hour periods, milk appeared twice only, once with coffee. Dried milk, for infant feeding, was used occasionally. During 1952-54, several instances were noted in which dried milk, mixed with water, was used to feed an infant while the mother was at work in the field or engaged in vending, but we encountered one case only of an infant who was not breast fed. This was an infant whose mother died when he was five days old, and who was reared by grandparents.

262 443 [277] Relatively few items of food were available at the village stores. In the inventory of the largest of the three stores in the village in 1948-49 (Sharp et al., 1953, pp. 211-212) the following items of food were listed: big dried chilies, shrimp paste, onion, garlic, fish sauce (fishsoy), salted fish, fresh chilies, limes, coconut, coconut oil[1], brown (palm) sugar, tea, coffee, condensed milk, orangeade and lemonade (carbonated), sweets, liquor, ingredients (including a lime paste) used together in betel chewing.[2]

New stock received in December by a local vendor who kept a few items for sale at her house included mature green beans, black beans, peanuts, sweet potatoes, salted turnip, pickled garlic and tomato sauce.

272 443 515 Larger stores served as informal men's clubs where tea, coffee with condensed milk, and carbonated beverages were sold primarily for consumption on the premises. The proprietor of a new store, built in December 1952, sold no liquor.

273 [443] We have no estimate of the amount of liquor sold in Bang Chan, although for those who drank it, its caloric value might be of significance.[3] About 9% of the householders interviewed

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[354] 1. Listed by Sharp et al. with non-food items, as much of it was burned in lamps.

2. Included here as food since some calcium may be obtained from this source.

3. One observer estimated the intake of certain village men who drank regularly as at least 2 oz. of rice liquor (28-35% alcohol) per day, representing about 100 calories. The estimated intake of women who drank regularly was about 1 oz. per day.

271 contaminated drinking water, but the traditional use of boiled water for newborn infants and their mothers, and its occasional use for sick persons, might provide the starting point for a desirable change.

Meal Preparation and Service

Processes and Equipment

252 The principal processes involved in food preparation for which equipment was required are: cutting solid food into bite-size pieces, pounding spices and flavoring materials, grating coconut, straining, boiling, sauteing in a small amount of fat, steaming, and roasting on a stick or metal support over the fire. Although foods were steamed or roasted only occasionally, the processes were familiar to all.

354 The Thai kitchen had no oven. When the term "baked" was used, it might mean cooking with dry heat on a rack over the fire (as banana baked in the skin) or without fat in the frying pan (as small dried fish toasted in this way).

128 415 Equipment used during meal preparation by the 11 families observed on 44 survey days is listed in Appendix A, p. 96, that used in serving and eating food, on p. 96.

252 415 554 184 The type of food preparation and service was much the same in the relatively well-to-do and the poorer households in Bang Chan. The chief difference in equipment for food preparation and service in families of different economic status was in the number of items of one kind which were owned. Thus a poor family might own one knife and one clay water jar, whereas an affluent family would probably own several knives and a number of water jars. Equipment used on special occasions, as in preparation of food for large numbers of people, was owned by well-to-do families only. Some had enough equipment for large cooperative work parties.

Persons Responsible for Food Preparation

252 462 Food was usually prepared by the homemaker and/or older daughter, if one were at home, but all members of the family who were old enough to help, had some knowledge of food preparation and did prepare food as the occasion demanded. While preparing, cooking and serving food were more frequently carried out by women than by men, adults and school-age children of both sexes had some competence in this area. While certain activities are normally assigned to men and others to women, the Thai maintain no rigid compartmentalization and are unembarrassed when a woman does a man's job or a man does

and conditions. An improved stove[1], by making more efficient use of fuel, would reduce one obstacle to boiling drinking water. The alternative, chemical treatment, might be regarded as "medicine," and people might be more willing to spend money for this than for firewood. Water supply and latrine facilities at the school and wat should be such as to set a good example. Since links between sanitation and health have not been established in the minds of the villagers, no proposed solutions are apt to be effective without a strenuous and continued educational campaign.

Since the nutrient content of many foods used in Bang Chan has not been ascertained, the responsible Thai government personnel should as soon as possible seek to analyze those more commonly used, in particular fish, fermented fish, shrimp paste, fish paste and fishsoy, both commercial and home-made products, edible green leaves and flowers. Discovery, among the many varieties of fish used, of some which are good sources of vitamin A, would be particularly useful. Of the calculated vitamin A values in diets for the two groups of households studied 90% or more of the vitamin A value was from vegetable sources, therefore in the precursor form. Among foods of animal origin which were used, eggs were the only food known to contain appreciable amounts of vitamin A. With more, and more complete, analyses of Thai foods, some of unusual nutritive value would probably be discovered. Also, information on composition of coconut milk should permit reasonably accurate calculation if the weight of coconut meat and the resulting product are known. Use of figures now available in food value tables, for coconut milks as prepared in Bang Chan, would lead to gross overestimate of caloric value and fat content of diets.

In using present knowledge to improve nutrient intake, emphasis should be placed on changes which would improve the everyday diet for all members of the family. We would start with familiar foods and methods of preparation, stressing the types of food which should be produced and used in increasing amounts. Advice of specialists in agriculture at nearby Kasetsart University should be sought in making choices appropriate to the location, among vegetables which would enhance the nutrient content of the diet, particularly in vitamin A value and riboflavin. Since garden area is often limited, vine vegetables which can be trellised may be useful. In introducing innovations, we would, if possible, build on procedures known to be acceptable to some respected persons in the community.

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1. The "Hyderabad Smokeless Chula" would be useful in Bang Chan. In Smokeless Kitchens for the Millions, S. P. Raju (1953) includes designs for models with one to three cooking holes and hot water pot (The Christian Literature Society, P. O. Box 501, Park Town, Madras, India).

APPENDIX A

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The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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117 252 takes it down the steps to the fish pond, where she swishes the basket around to wash the fish, and rinses her hands at the same time.

[234] There are some hazards to the food--chickens trying to get at the edible part of fish while the niece cleans it (she leaves the scales, etc. for them to eat); cat and kittens in the kitchen, having to be driven away from the grated coconut and coconut milk, and getting an occasional unweighed nip. Whether we start to weigh food for the evening meal or a.m. meal, some cooked foods are apt to be used, either left over [262] [126] from a previous meal, or cooked in advance. This a.m., for example, buffalo meat, already cooked (but not weighed before cooking) was used, and (3)khii-(2)leg leaves, which SS weighed last night. These latter were cooked last night, to reduce bitterness, then put into curry today.

Description of Food Preparation Area in a Relatively Poor Household

Wednesday, May 27, 1953

117 [262] Arrived about 5:45 a.m. While other food was being prepared, the 11-year old son came in with a package of salted white radish and a small milk tin with some coconut oil which had just been bought. This is the house which we found flooded when they sent for us to see the baby last fall. The roof seems to be well thatched. The floor is not wet after last [352] night's downpour. The bed platform, in one corner, is about [353] 8 x 10 feet. The baby's cradle hangs above it. In the oppo- [352] site corner is a shelf where utensils are kept. Some food, [126] in paper bags, is in a basket hung from the roof. Fresh fish [359] is kept in a jar of water until needed. The stove is on a small mound of earth, and further elevated on a small box (just big enough for the stove) filled with earth.

[353] We sit on a mat, spread on the mud floor, with the scales, plastic bowls and waxed paper ready for weighing food. [355] The children lie on a mat nearby. In the house is a fresh mound of earth, a small straw bin with rice, and various pieces of equipment.

262 435 796 [875] Food for Homage-to-the-Teacher Rite (cont.)

Item	Amount	Cost in Baht
Fruit:		
Bananas ((3)kluaj (4)nam-(4)waa)	5 bun.	from father
Chico[2]		5.
Coconut	150	180.
Coconut (young, to make dessert)	30	30.
Job's tears	1 lit.	3.
Plums, yellow[2]		5.
Pomelos[2]		6.
Rose apples[2]		2.
Tamarind		7.50
Tomato sauce		8.
Young palm fruit[4]	7 bun.	3.
Vegetables (non leafy):		
Bamboo shoots, cooked	1 pail	28.
[272] Cucumber		--3
[273] Egg plants		--3
[276] Garlic	5 kg.	26.50
Gourd, white		1.
Onion, fragrant[5]		6.
Onion[5]	4 kg.	4.
Onion, welsh[5]		--3
Mushrooms		3.
Radish, white		--3
[354] **Vegetables (leafy green and yellow):**		
Cabbages		--3
Chinese kale		--3
Chili, green		7.50
Vegetables (leafy green & yellow) cont.:		
Lettuce		--3
Parsley		--3
Pumpkin	3 fruits	12.
Sweet basil leaves		1.
Sweet potatoes	6 kg.	6.
(3)Tang-(5)oo		--3
Seasonings etc.:		
Vinegar	1 bottle	1.
Fishsoy	1 jar	10.
(2)Ka-(1)chaaj	2½ kg.	12.50
Sodium glutamate		5.
Pepper		14.
Agar	400 gms.	36.
Miscellaneous:		
Cola beverage	72 bottles	72.6
Liquor	16 bottles	80.6
Ice		30.6
Cigarettes	2 pkgs.	-- 6
Tobacco	1 heap	-- 6
Betel pepper		9.
Fresh areca nut		10.
Dried areca nut		8.
Dried palm leaves	1 big bundle	2.
Firewood		50.
	Total	1577.75

[184]

1. For Moslem guests.
2. Food items placed on a tray and used in the ceremony proper.
3. Items so marked cost a total of 140 baht.
4. Not identified.
5. Several kinds of onions, both fresh and dried, are commonly used.
6. Prices not stated; estimate for liquor.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

The Family

592 Although the family is the smallest of social institutions, it occupies first rank in importance. For the purpose of this study family is defined as a group of persons who form a household under one head including parents, children, servants and other dependents. It is a social unit [264] for both consumption and production. In Bangchan, members [464] of the same family, with the possible exception of piece- [463] workers who have the privilege of eating with their employers only during periods of certain kinds of work, usually share the same meal although not necessarily at the same time. Physically able members are expected to contribute to family work although some may also do extra jobs for their own pocket money. In all cases family work has priority over the extra job, and in most cases members turn over all or part of the [354] earning thus realized to the family head. Although most [184] families have separate dwellings, there are instances of two families sharing the same dwelling but having separate cook- [464] ing arrangement. Such cases are rare, however. According [463] to our operational definition, then, a member of a biological family who has hired himself out as regularly hired laborer ceases to be a member of his own biological family and becomes a member of his employer's family. Piece workers, on the other hand, although they may occasionally eat with their employers, still retain membership of their biological family if they still live with them. Finally, people who live in the same dwelling may not belong to the same family if they

221 435 Despite the availability of fish and of vegetables in the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

221 [512] The two months of September and October during which the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit [188] and take trips. A few might go on a pilgrimage. Therefore, [244] in this season, all family members were less often together [224] at the evening meal. Fishing was a continuous occupation, [443] with some preserving and home craft. Jobs such as selling [554] food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

[342] [133] High water caused time-consuming inconvenience only in earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

243 221 By November, the earliest varieties of rice matured. Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could [461] not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into [226] the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience 434 of purchased food was greatest, cash was exhausted. With 426 rice money in sight, venders might be generous with credit, 443 but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

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[904] 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

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The town of Mīnburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Mīnburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Mīnburī, Kilō pāet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoe), one located in Mīnburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

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Chapter I

THE COMMUNITY OF BANG CHAN

The Geographical Setting

In the populous flat central plain of Thailand where Bang Chan was located, fenceless geometric rice-fields, dotted by clumps of trees, stretch as far as the eye can see. Houses, clustering occasionally into hamlets, line the canals that serve for domestic use, drainage, irrigation, and communication. A few mounded-up roads lead out from Bangkok, the national capital on the Menam Chao Phraya, the great central river.

The monsoon divides the year into three seasons: a hot and wet (late May through November); a cool and dry (December to mid-February); and a hot and dry (late February to mid-May). The temperatures range annually from 59° to 89° F. (15° to 32° C.) with monthly means of 77° to 86° F. (25° to 30° C.) (de Young:5). A drop at night averages around 18° F. (10° C.) in April, and 22° F. (12° C.) in January, while the relative humidity varies between 66 per cent and 81 per cent (Hauck, et al.:12). Rainfall averages about 50 inches a year, 40 of which fall in the wet season (Janlekha:21). Because of the run-off from the mountains in the north, once a year the Menam Chao Phraya slowly rises, fills the canals and then overflows its banks, covering the plain for hundreds of miles to a depth of three feet or more. In Bang Chan, the water stood on the land from June until January, with its peak in October. From February to May the canals ran low, and the land dried and cracked from the intense heat.

The Community

In 1954, 1700 persons (338 families) lived in Bang Chan. Muslims, comprising 10 per cent of the population, lived as fully Thai citizens in all parts of the community in economic and social symbiosis with Buddhists. A few ethnic Chinese had married into Thai families and were accepted.

The community spread over an area of about 7000 rai (1000 hectares or 4 square miles). Bang Chan Canal bisected

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361 Most of the dwellings in Bang Chan flanked the canals that stretched away from the temple area. All houses were in sight of one or more other houses, if not standing side by side. Here and there they formed small hamlets where kinsmen tended to live in proximity. Around the houses were kitchen gardens and threshing floors, and behind them, the fields. Bananas grew abundantly; pineapples, mangoes, and other fruits occasionally. The canals were full of water-vegetables, cultivated or wild, while fish were plentiful. Water sources were the rain, kept in large jars; artificial ponds dug near the houses and fed from ground water; and the canals. No wells existed. The large tile roofs of the temple collected a good deal of rain-water which was available to anyone during the hot season when all water ran low.

351 245 241 226 312

General Nutritional Level

146 [142] The population was physically well-formed with few physical deformities evident. There was little obesity or emaciation. The daily diet (cf. Hauck, et al.:passim) consisted of large quantities of rice, with small amounts of fish, meat, vegetables, fruits, spices, and eggs. Food at the not-infrequent festivals [292] was rich in meat, eggs, and sugar. No milk was available except canned imports, and little was used. "Nevertheless, though caloric deficiency ('hollow hunger') was not prominent, over half of a sample of the population inspected medically had one or more signs of malnutrition. Even in a group chosen for research reasons for apparently good nutrition, about one in four had some such sign and in another group, selected for evidence of poor nutrition, two out of three persons had such."[2] The nutritional level in Bang Chan did not always correlate absolutely with economic level, for nutritionally one of the poorest families was found to be one of the best fed because the father did so much fishing and collecting of green canal vegetables. The change-over, some decades ago, from home pounding of rice to steam milling by most families had probably been a major factor in increasing nutritional deficiencies throughout the community. [178] [256]

2. Dr. H.M. Hauck, personal communication, 1958.

581 It was not felt necessary to marry. Because of the strong
589 economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married.
[593] One group of grown siblings of both sexes stated they were "too happy together to marry."

836 Pre-marital chastity was more or less observed. If a girl
848 became pregnant before marriage, her parents brought pressure, usually successful, on the boy to marry her. The occasional illegitimate child was raised without stigma in the girl's family, though problems arose during pregnancy and delivery (cf. "cone of wood" below). The mother later found a husband. One father was angered because he felt his daughter's pregnancy wrecked her chances for a marriage of prestige. He was conspicuous for his social aspirations towards city ways.

864 Information on human sexual matters was gathered by the
831 young sometimes by accidental observation of parents and others, through hints from hearing cursing, and by conversations with grandparents, older siblings, and friends of the same sex. Men joked on sex matters at the all-male rice-uprooting parties. Being antithetic to the ascetic prescriptions of Buddhism, sex talk was highly charged. Sex was never discussed in mixed company.

Residence

592 The nuclear family of husband, wife, and unmarried children was the primary social and productive unit, but other resident kinship units larger and smaller also occurred. After marriage,
[591] the couple usually lived for a time in the house of the parents of one spouse or the other; then, as soon as they could afford it, set up housekeeping in their own house. Of a sample of 98 families in Bang Chan, 30 set up independent households at once after marriage, 18 after one year, and the rest, a few per year, on throughout 10 years; 15 of the families never had a house of their own but lived with other relatives (Janlekha:37). Of 298 families, 59.4 per cent lived independently as a nuclear family, while 34.9 per cent lived with other relatives in the house. (The remaining were single persons living alone, or priests at the temple in the "ecclesiastical family.") The average size of the households (not necessarily the nuclear families) was 5.7 persons, with a range of 1 to 14, the median
• 361 being 6 (ibid. 28-29). The house of a new couple was usually built adjacent to parents or relatives, and certainly within calling distance or sight of some other household. Social
621 patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mɔ̄, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mɔ̄ gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mɔ̄. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the thaw khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

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132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [463] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [220] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [433] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part of the Thai-Buddhist community. Information to be presented [028] on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

133 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the nearest market town, ran through one edge of the village. Bus 484 service was available along this road, to either Bangkok or 487 [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [501] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

443 noodles. Their prices were higher than in Minburi or Bangkok, but their service was such a convenience that many people rarely went to town. Some adults in Bang Chan had never been to Bangkok though almost all had visited Minburi, about 3 [437] miles from the temple. Venders often extended credit, and also accepted items such as fresh fish, fruit, and eggs on a barter basis, thus providing an outlet for small amounts of home products. When the subsidiary canals were dry, however, venders could not get to some parts of the village.

Home Sites and Houses

General Arrangement

• 361 489 Since the canals provided the chief means of local transportation for much of the year, and also supplied water for many household uses, houses were built near the canal, usually within sight of a neighbor's. Home sites were mounded up to a level of two or three feet above that of the fields, but even so, water might cover the mound at the peak of the rainy season. Old wooden houses were set in a grove of bamboo, bananas and other fruit trees and vines, occa- 343 sionally betel and coconut palms. Nearby might be a shed for the water buffalo which were the draught animals used in farming. Rarely one saw a walled privy.[1] On the same mound might be a cottage built by parents for married children or by an affluent farmer for a hired hand. In this case, the threshing floor, firewood from trees on the mound, and area 342 for kitchen garden would be shared. Many houses were built on stilts to avoid flooding when the water level was high. If the house was elevated sufficiently, the area underneath provided a relatively cool shelter during the hot season for the buffalo, and even for family members for some of their daytime activities.

Depending on the resources of the family, houses were built of either thatch or wood, roofed with thatch, galvan- 352 ized iron or occasionally, tile. Split bamboo or matting might be used for dividing walls if the house had more than one room. Wooden flooring was usual, but in simpler thatched houses with dirt floors, the buffalo might be sheltered under the same roof with the family. In such a house, one or more low wooden platforms were built for sitting and sleeping. Wide cracks between floor boards conveniently permitted betel 364 chewers to spit without the need for a spittoon. Those who 264 were preparing food or clearing up after a meal could also thus discard refuse or dispose of leftover food that was to 344 be given to chickens, without leaving the kitchen. Some

1. cf. Hauck, 1956, p. 45-6 for description of latrine facilities.

244 Vegetables and Fruit. - Although kitchen-gardening has been encouraged by the Thai government, vegetables and fruit were grown in Bang Chan to a limited extent only. Every family had some sort of kitchen garden, but many edible plants which can be grown in the village were grown by relatively few families. The list of fruits grown in Bang Chan in 1948-49 (Sharp et al., 1953) included four times as many items as were grown by one or more of the 11 families that participated in the dietary study. The list of vegetables and spice plants grown or gathered by these families included 27 items, as compared to 41 listed by Sharp et al. Spices and chili were more commonly grown than vegetables and fruit.[1]

244 245 433 One affluent household whose food expenditures for 1949 were reported by Sharp et al., (1953, pp. 214-215) produced for home use, 125 kg. of palm sugar valued at 200 baht and 500 coconuts, valued at 450 baht. Home production of both of these was unusual. Few families in Bang Chan grew either sugar palms or coconut palms and expenditures for coconuts and palm sugar were usual. During the major flood of 1942, villagers noted that coconut palms survived whereas all other fruit trees were destroyed. After this, a number of farmers planted coconut palms, but they had not yet begun to produce.

361 311 [351] In 1954, about 120 acres (300 rai) of the total of about 2800 acres (7000 rai) of land in the village were used for home sites and home gardens for 336 households. Individual home sites usually varied in area from about one-quarter to one acre, and were occupied by buildings, threshing floor and space for poultry as well as trees and garden space. Portions of this might be under water for several months of the year. Increased home production of fruit and vegetables would in many cases necessitate increasing the size of the home site by purchase, mounding or both. Ordinarily, increased land for the kitchen garden was obtained at the expense of some of the

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[245] [249] [262] [262] [245] 1. In a typical farm garden in Bang Chan one would find bananas growing, and a number of plants used for seasoning curry. Various kinds of chilies, lemongrass, bergamot, of which both rind and leaves are used, and galangal were grown by all families who participated in the dietary study. Both sweet and holy basil were commonly grown. Many families grew one or more varieties of gourds and of eggplant, some of which can be trained to grow on a tree or trellis. The inflorescence of the banana was also used as a vegetable. Leafy vegetables were not commonly cultivated but some families grew (2)phag (2)ka-(2)cheed, a green water plant, in gardens staked out at the edge of the canal, or in a pool, and some had trees, the leaves of which were edible. Swamp cabbage or (2)phag (3)bung grew wild along the edge of the canals and was the most commonly used green leafy vegetable. A few families grew guava, jujube, star gooseberry, Manila tamarind, mango and pineapple.

311
361 rice land. Water-ways, however, were public areas, and any
[505] convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

262 Mushroom culture as a side line activity of rice far-
344 mers developed during the period when this study was in
433 progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

[436] As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

262 Relatively few foods were purchased, but some of these,
432 such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

262 Estimates of mean annual consumption and cost of pur-
435 chased foods, for 106 households in Bang Chan are shown in
128 Table 1.

262 The list of purchased foods presented by Janlekha (1955)
432 was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)ma-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23---Analyst]

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

[P. 14]

I

The Village of Bang Chan

Geographical and Cultural Setting

T
133 The heartland of Siam is the Mɛ̄naam or Caw Phrajaa Valley, a vast
361 alluvial plain stretching out for some 250 miles north of the Gulf of
161 Thailand and the capital city of Bangkok, where approximately 40 percent
137 of the nation's 26.3 million persons (1960) live.[1] This Central region is
563 distinguished geographically, and to a lesser extent culturally, from the three other major areas of Thailand: the North, a forested mountain area dominated by Chiengmai, Thailand's second largest city, and in whose outer reaches live many of the tribal peoples of Siam; the Northeast, a broad plateau region which is the largest and economically poorest area of the country; and the South, or Peninsular Thailand, a jungle and mountain area where the heaviest concentration of Thai Malay–Moslems live.

e
13 The community of Bang Chan is located some 31 kilometers northeast
487 of Bangkok on what is essentially a flat, seemingly endless rice field, broken
361 occasionally by tall Asiatic pines, strings of houses along canals, or clumps
[491] of trees shielding some isolated homesteads. A person seeing Bang Chan for the first time is struck particularly by the intense green of the landscape and, once off the macadam road that connects the village to Bangkok and to the market town of Minburi four kilometers to the east, the stillness of the setting, even along the thickly populated main canal where voices are muffled by the heavy foliage surrounding each house. Often in the early hours of the afternoon the only sound that one can hear in Bang Chan is the dip of the paddles of boats moving up the canal or the barking of dogs.

T
[114]

[1] There is no general agreement on the precise boundaries of the Mɛ̄naam Valley. Zimmerman (1931), Andrews (1935), Blanchard *et al.* (1958), and most Thai government documents use the term synonymously with "Central region," which would include the provinces east and southeast of Bangkok to the Cambodia frontier, west to the Burma border, and north of the Gulf of Thailand. Credner (1935) and deYoung (1955) on the other hand limit the term to only that portion of the Central region which falls north of Bangkok, equivalent to what Pendleton (1962) calls the "Bangkok Plain." Our population figure refers to the former usage.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

In addition to these widespread national patterns, Bang Chan has certain characteristics that seem relatively distinctive of villages of the Central Plain. Not of least importance is the demographic arrangement of the community: either isolated homesteads surrounded by rice fields and connected to larger canals by small tributaries or groups of households strung out along both sides of the canals. The former pattern is more commonplace and historically more recent, and is the result of an expanding population trying to live on a land that has been so committed to the commercialized cultivation of rice that the only available house sites are on the fields themselves. This "typical Central Plain" pattern contrasts with the "cluster" type villages found in the North and Northeast (deYoung 1955) where houses are integrated into compact communities around which are located the rice fields. Although it is difficult to draw precise relationships between demographic arrangements and psychological characteristics, it is noteworthy that the isolated locale of so many Bang Chan households is not out of keeping with the independent and individualistic propensities of the villagers. As one villager expressed it, "If people live far away from each other, there will not be any trouble."

Related to the above pattern and characteristic of other communities of the Central region (cf. Kaufman 1960) is the absence among village residents of any strong sense of identification with the needs of their community as a whole. Except for religious activities and the reciprocal work groups organized for rice transplanting and harvesting—the rewards for which are directly personal—the villagers simply are not predisposed to participate in communal projects. Thus, activities which require large-scale coöperation or organization to be effective—clearing or deepening canals, repairing the unusable road that leads from the main highway to the school, building a playground for the school—are either not carried out or are effected only with extreme difficulty. Although a few villagers recognize these as defects of social organization, it is clear that the majority find it easier to live with them than to try to change the basic institutional framework that sustains them; maintaining their own freedom of action is simply more important, and more culturally "natural," to the villagers than getting involved in public service projects. Again, this pattern seems to contrast with that found in the villages of the North (deYoung 1955) where individuals regularly contribute labor to their communities by repairing village streets and maintaining irrigation systems, even when such efforts require coöperation between adjacent villages.

The inability of Bang Chaners to organize coöperative projects is undoubtedly abetted by the formal governmental structure of the village which, although perhaps more of an administrative nightmare than is normally found elsewhere in the Central Plain, is in its organizational

BANG CHAN

FOREWORD

114 The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

[013] The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on [128] health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

• 361 Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, [487] Minburi. A century-old canal and to the north of it a post- [491] war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

621 In 1954, when data for the present study were still being 162 gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the house- [592] holds were made up of independent nuclear families consisting of parents and unmarried children. The average size for all 243 families was 5.7 persons. Rice farming was the main occupa- 241 tion of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With [463] the exception of some 120 acres (300 rai) used for the home [311] sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple [132] food of the people. During the wet season and into the cooler 221 dry season, from May or June to February, the growing of the [517] single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

621 The Thai countryside is divided into hamlets, each with [622] a headman in charge of the thirty to sixty households of the [128] hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

and KY followed by a number.) The center of social life in Bang Chan is the Buddhist monastery or wat and the adjacent government primary school. The community simply consists of the clientele which regularly patronizes Wat Bang Chan and this school rather than other comparable institutions elsewhere in the region. Within the area of the community lives a minority of Thai Moslems constituting about ten per cent of the population. They have their own mosque which happens to be just outside Bang Chan, but they attend many secular and some Buddhist functions at Wat Bang Chan. A number of small stores, which also serve as coffee houses and men's clubs, are used as neighborhood centers in different parts of the village. Near the central wat and school, there is also a store, and the house provided by one of the headmen for use as the Project headquarters.

This present interim report of the Cornell Thailand Project includes some of the data necessary for the design of a program to improve health and diet in Bang Chan. Another report, now in preparation, will give the results of a detailed dietary survey made in the community following the health survey reported on here. These two studies together will indicate existing deficiencies in health and diet, and will permit the formulation of recommendations for needed changes in behavior as these can be realized in the context of the village and national culture.

The author of this study, Dr. Hazel M. Hauck, is Professor of Food and Nutrition in Cornell University. She has been associated with the work of the Cornell Thailand Project since 1950. She not only designed and supervised the research on health, nutritional status, and diet in Bang Chan, but during almost a year of field work in Thailand she obtained valuable data on many other topics for the Project's files. Some of her daily work in Bang Chan made little sense to the villagers, but they nevertheless became devoted to her. Her energy, tact and fine spirit in facing the discomforts and difficulties of rough field work in a tropical foreign land inspired both her Thai and American associates. Working with Professor Hauck were Dr. Anusith Rajatasilpin, now a teacher in the School of Public Health in Bangkok; Miss Sapha Indrasud, now in the Ministry of Public Health; Dr. Chumlong Kittiveja, of the Dental School of the University of Medical Sciences, Bangkok; and Miss Saovanee Sudsaneh, who has been doing post-graduate work in nutrition at Cornell and Harvard. To all of these faithful workers, the Cornell Thailand Project is greatly indebted.

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Ithaca, New York
September, 1956

121 established that none of the correlated factors finally turned out to produce the disease--the necessary condition was a bacillus. Indeed, some of the factors mentioned might be viewed as results of the illness rather than as causal factors. Correlational analysis in a study of this type can establish only that the factors associated with tuberculosis constitute the context within which the necessary condition (in this case the bacillus) was known to operate. In the second example, traffic accidents, it is perfectly apparent that age , or time of day, cannot produce a car accident, but the linkage between accidents and other factors provides portions of the context where accidents occur.

Why is it important to understand this context' Such knowledge can lead to inferences about more direct causation, which serve to narrow down the clinician or experimenter's search for the necessary condition. Indeed, a necessary condition may operate only when it is imbedded in this complex matrix of other related variables--or may even be rendered inoperative when the context is changed. Thus efforts toward change or improvement can be made more effective by being directed to the relevant conditions.

It is essentially this kind of reasoning which underlies the procedure of the present study. Just as in the examples cited, linkages can lead to inferences about causation which may later be checked in the laboratory, so, in the same way, linkages discerned in the present study can lead to inferences about causal factors. They are useful chiefly in providing the context within which the decision to try out these sorts of innovations comes about. In this sense of understanding the context, efforts to produce social change may be made with more understanding of the dynamics.

We may now turn to the data collected in Bang Chan for a study of factors related to acceptance or rejection of innovations within the larger context of a rural community in contemporary Thailand.

THE COMMUNITY AND THE INNOVATIONS

The Scene of Bang Chan

• 361 [131] Twenty-five miles by highway northeast of Bangkok is situated the community of Bang Chan. In this section of the central plains the inhabitants live as near as possible to the rice paddies which they till, so that instead of a compact village Bang Chan is a community spreading broadly along the banks of a [621] canal network which from its two-mile stretch through Bang Chan, covers most of Central Thailand. Under these circumstances precise definition of the community becomes difficult and might be

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area.

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them.

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor.

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. Sp also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

CHAPTER II

THE COMMUNITY

Geography

131 The community of Bangchan is situated some twenty road-miles northeast of Bangkok in the heart of the economically all-important commercial rice growing area of central
• 361 Thailand. Surrounded by their rice fields, the population
[161] of about 1,600 persons lives on some three hundred small
[503] family homesteads scattered along a half dozen connecting
*[243] canals. The community occupies an area of 6,500 rai,[1] or 2,600 acres, all of which, with the exception of about 300 rai of homesites and narrow strips bordering canals, is given over to the production of wet rice.

134 The soil of Bangchan area is heavy dark clay with
*243 an impervious layer at a depth of about six to eight inches and is suited only to rice growing.

133 The area is essentially flat, rising slightly toward
312 the north. It receives, in addition to rain water, irrigation water channeled into it through the Saen-saeb Canal one mile to the south, Samwa Canal one mile to the east, and Khlong-song Canal one mile to the north.[2]

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[804] 1. One rai is equal to two-fifths of an acre.

2. See map on page 162.

132 The normal distribution of rain in the region, how-
*243 ever, is almost ideal for single crop rice production. Heavy rainfall in May and June softens the soil for easy plowing and harrowing. During July and August, when the young plant does not require much water, the rainfall moderates. Again there is heavy rainfall in September and October when the maturing plant needs rising water as it shoots upward. Finally, during the harvesting season of December and January there is a minimum of rainfall. It is in terms of rainfall that the people divide the year into three seasons: (1) the rainy season of late May to November; (2) the cold season, December into early February; and (3) the dry hot season from late February to early May.

Vegetation

*243 Of the 6,404 rai privately owned in Bangchan 6,106
137 rai is devoted to rice and 298 rai to homelots. During the
[311] rice season the village is seen as a vast rice field inter-
[351] spersed with bamboos and fruit trees on the homelots which
* [361] string along the half dozen canals of the village. In the
[312] dry season only stumps of rice stalks are left in the field.
192 Some of these may be removed by burning. With the coming
231 of rains, which usually fall once or twice in March and four or five times in April, a variety of grasses begin to appear and the rice field is gradually transformed into a grass field, providing a pasture for the buffaloes until the next planting season when the size of the grass field available

621 *128 the hamlet or muban -- is indivisible, although as a matter of fact a Thai hamlet is actually made up of individuals and families. We proceeded, then, to draw the boundary line of our natural village by first selecting Wat Bangchan as the social center and defining the natural village as composed of all hamlets whose headmen and the birth of whose population patronized this wat. The hamlets thus included were found to be Muban 4, Muban 5 and Muban 6 of Tambol Bangchan, Amphur Minburi, Changwad Phra-nakorn, and Muban 5, Muban 6, Muban 7 and Muban 8 of Tambol Kannayao, Amphur Bangkapi, Changwad Phra-nakorn. For the sake of brevity these seven hamlets will henceforth be referred to as BC4, Bc5, BC6, KY5, KY6, KY7 and KY8 respectively.

[872] We then checked the list of students enrolled in the primary school which is adjacent to the wat and found that most of the families residing in the seven hamlets sent their children to this school and that only a negligible fraction of the student body consisted of those from other nearby hamlets.

Our "Bangchan Village" may thus be defined as an area within the composite boundary line of BC4, BC5, BC6, KY5, KY6, KY7 and KY8. This is an area of about 6,500 rai (of which 6,404 rai are privately owned), assuming a somewhat circular shape and having as its centers Wat Bangchan and the adjacent Bangchan Primary School (see Map I).

• 361 312 Across this "Bangchan Village" and through its center runs a main canal, the Bangchan Canal, in a northeast-southwest

361 direction dividing it into two halves, the Bangchan half
312 consisting of BC4, BC5, BC6, and the Kannayao half consistingoof KY5, KY6, KY7 and KY8.

621 As mentioned earlier, our functional Bangchan village
634 is under two different administrative authorities, the Bangchan half consisting of part of Tambol Bangchan which is in turn part of Amphur Minburi in Changwad Phra-nakorn (Bangkok) and the Kannayao half consisting of part of Tambol Kannayao which is part of Amphur Bangkapi in the same Changwad Phranakorn.

History of Settlement

194 No official records on the history of the settlement
361 of Bangchan could be discovered, but evidence from genealo-
[503] gies provides a few clues on the subject. Following the digging of Saensaeb Canal some one hundred and twenty years ago, settlement was made along the banks of this important canal which provides one of the few connections between the
175 Menam and Bangprakong rivers. It was not, however, until
621 the 1870's, apparently, that people found it necessary to
361 move onto the land away from the canal. At that time, according to one of our older informants, her father was born in what is now Bangchan, his father and mother having come out from Bangkok as a young married couple to take up farm-
175 ing where plenty of land was available from the Crown. These
621 people and their followers, usually kinfolk or friends, cleared off scrub jungle areas in which, it is claimed, tigers and

• 361
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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 28

ESTIMATED PRICES OF BANGCHAN LAND BY ZONE
SHOWING PRICE CHANGES FROM 1948 TO 1953
Bangchan, Thailand, 1948-53

Zone*	Location	1948-Price baht/rai	1953-Price baht/rai	Increase baht/rai	Increase Per cent
Residential:					
1	Roadside** (200 m. depth)	300	12,000	11,700	3,900
Agricultural:					
2	"Thung Nai Sab"-	270	1,500	1,230	456
3	"Thung Nai Pho"	280	1,800	1,520	543
4	"Thung Kl. Kred"	250	2,000	1,750	700
5	Kl. Kred - Kl. Bangchan	230	1,500	1,270	552
6	Kl. Krached-Kl. Bangchan	210	1,500	1,290	614
7	Kl. Bangchan-Kl. Kralog	200	1,200	1,000	500
	Av. for ag. land	240	1,583	1,343	560

* See Map I.
** In 1948, this zone was still considered agricultural land -- not residential land as it was in 1953.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

MAP I

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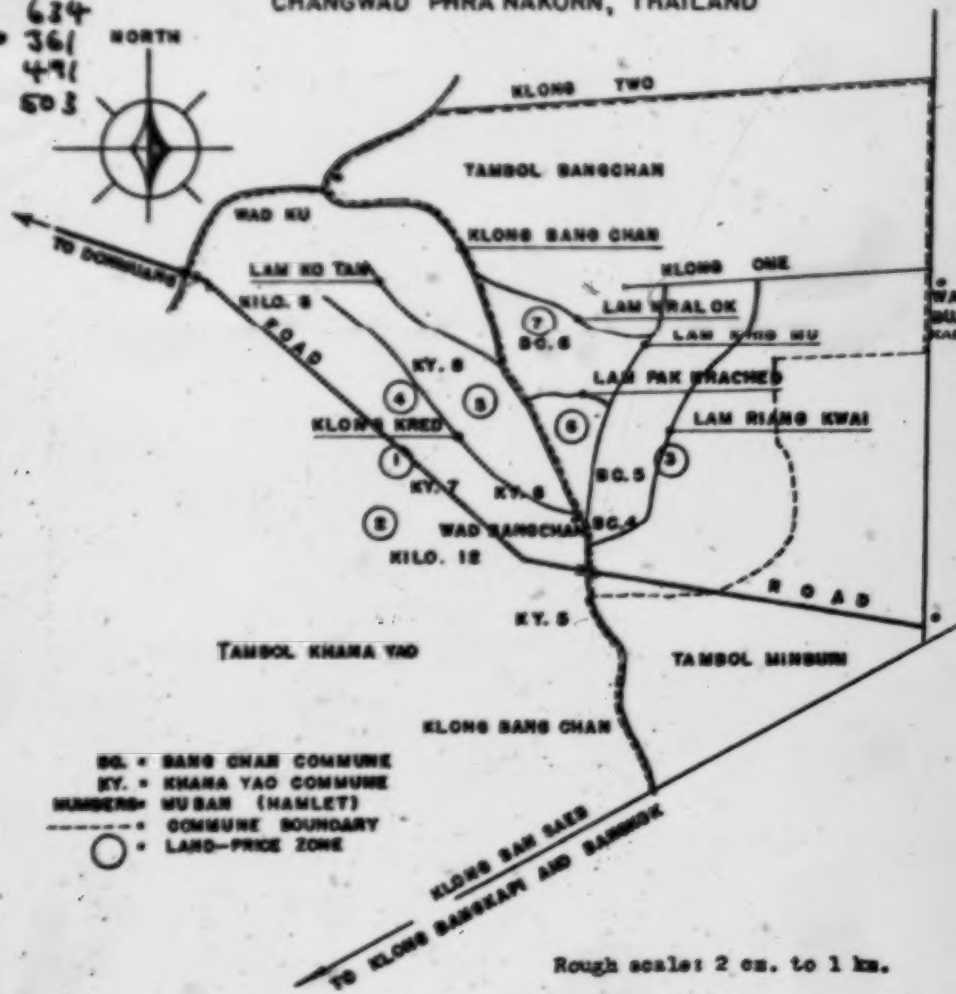
103
102
634
361
491
503

SKETCH MAP OF TAMBOL KHANA YAO, AMPHOE BANGKAPI AND TAMBOL BANGCHAN, AMPHOE MINBURI CHANGWAD PHRA NAKORN, THAILAND



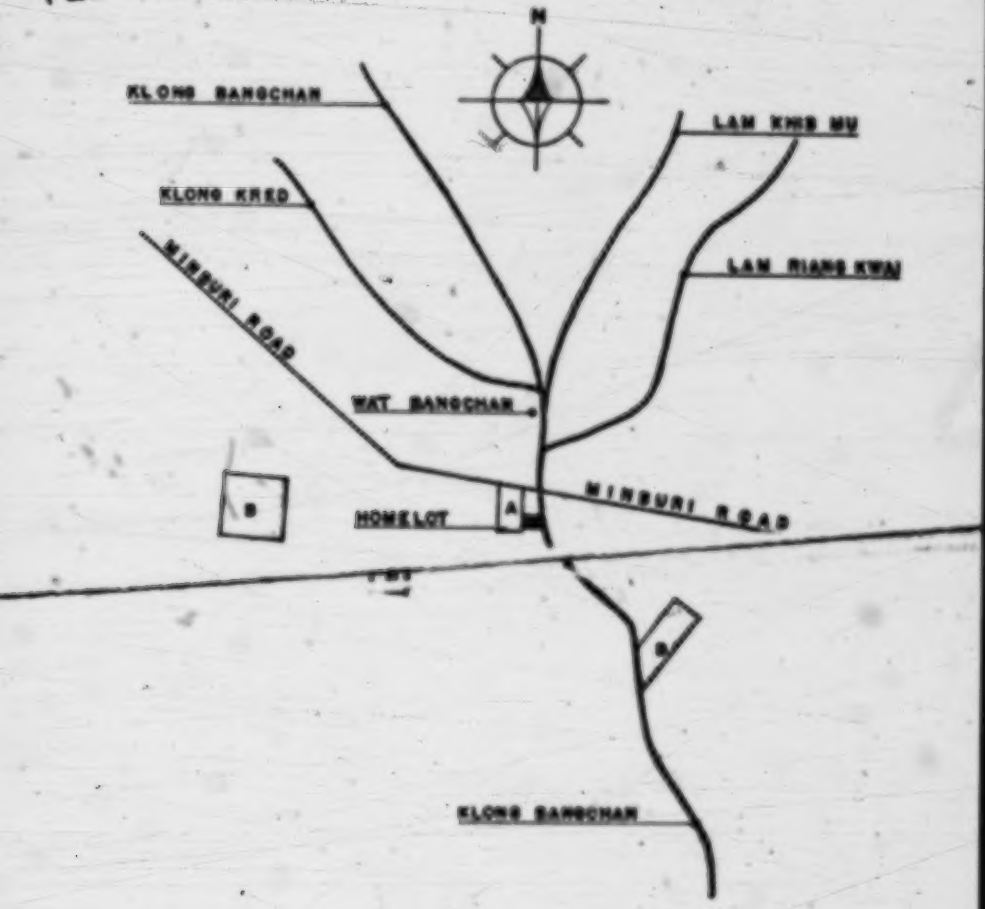
Rough scale: 2 cm. to 1 km.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

MAP II

243
102
361
423

SKETCH MAP OF CHOM FARM AND HOME LOT
BANGCHAN, THAILAND
1953



Rough scale: 4 cm. to 1 km.

443 noodles. Their prices were higher than in Minburi or Bangkok, but their service was such a convenience that many people rarely went to town. Some adults in Bang Chan had never been to Bangkok though almost all had visited Minburi, about 3
[431] miles from the temple. Venders often extended credit, and also accepted items such as fresh fish, fruit, and eggs on a barter basis, thus providing an outlet for small amounts of home products. When the subsidiary canals were dry, however, venders could not get to some parts of the village.

Home Sites and Houses

General Arrangement

361 Since the canals provided the chief means of local
487 transportation for much of the year, and also supplied water for many household uses, houses were built near the canal, usually within sight of a neighbor's. Home sites were mounded up to a level of two or three feet above that of the fields, but even so, water might cover the mound at the peak of the rainy season. Old wooden houses were set in a grove of bamboo, bananas and other fruit trees and vines, occa-
343 sionally betel and coconut palms. Nearby might be a shed for the water buffalo which were the draught animals used in farming. Rarely one saw a walled privy.[1] On the same mound might be a cottage built by parents for married children or by an affluent farmer for a hired hand. In this case, the threshing floor, firewood from trees on the mound, and area
342 for kitchen garden would be shared. Many houses were built on stilts to avoid flooding when the water level was high. If the house was elevated sufficiently, the area underneath provided a relatively cool shelter during the hot season for the buffalo, and even for family members for some of their daytime activities.

Depending on the resources of the family, houses were built of either thatch or wood, roofed with thatch, galvan-
352 ized iron or occasionally, tile. Split bamboo or matting might be used for dividing walls if the house had more than one room. Wooden flooring was usual, but in simpler thatched houses with dirt floors, the buffalo might be sheltered under the same roof with the family. In such a house, one or more low wooden platforms were built for sitting and sleeping. Wide cracks between floor boards conveniently permitted betel
364 chewers to spit without the need for a spittoon. Those who
267 were preparing food or clearing up after a meal could also thus discard refuse or dispose of leftover food that was to
369 be given to chickens, without leaving the kitchen. Some

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1. cf. Hauck, 1956, p. 45-6 for description of latrine facilities.

364 garbage was customarily fed to animals. As previously reported (Hauck, 1956) "Each family seemed to have its own pattern for disposal of garbage which was not fed to stock. Those who threw it in the canal, did so consistently, except when the nearby canal was dry, and those who threw garbage elsewhere, did this consistently. No one was observed to burn or bury garbage."

The Kitchen Area

354 In the larger houses, the kitchen was usually a small separate room with a wooden floor and at least one window for ventilation. A low table or wooden case with sides built up several inches, and filled with clay, served as the "fireplace." On this stood the clay stove, and hot pans and pots were set there when removed from the fire. In homes with an earthen floor, the fireplace might be built directly on the ground. The clay stove was several inches high, shaped so that rice pots and curved frying pans would fit into the large segment of a circle which was its top. An open space was left in front to facilitate building and maintaining the fire. Firewood was kept nearby. Most families also had a portable clay stove in which charcoal was burned. This might be used as an auxiliary unit, for outdoor cooking on a hot day or when traveling by boat.

Matches, although available, were hard to protect from dampness. Kerosene filled cigarette lighters of a cheap and efficient type were commonly used. As kindling, one might use coconut husks or purchase resinous bits of wood that would hold a flame for sometime.

Although only a small amount of firewood was needed, as it was used for cooking only, local supplies were inadequate. In all seasons, some was brought in from other areas. One family participating in the survey planted trees each year for firewood. The wife in another household used to return to her parents' home to gather a boatload of wood as needed. Because charcoal was more expensive than wood, and none was produced in the village, it was used for home cooking by only about 10 per cent of the village families, primarily those such as storekeepers and venders who did not have time to cut firewood.

352 In many kitchens clean dishes were placed upside down on
251 a slatted wooden rack. The other common item of furniture was a free standing ventilated cupboard or food safe. At its best, this was screened, and the legs antproofed in some way, as by putting them into small containers partially filled with kerosene, or rubbing them with powdered pitch; but relatively few
251 village families had such well constructed food safes. Families that did not own a food safe often kept leftover cooked foods in a basket, or covered with large dishes on a tray. Fish and sugar must be kept away from ants, but cooked rice,

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14 observed in 9% of the school children 7 to 14 years of age who were examined, and in about 6% of the males and 25% of the females over 15 years of age. Of 337 persons examined, however, 2 only, one child and one adult female, were found to have hemoglobin values under 9.75 g per 100 ml.

744 514 164 364 Modern sanitation was practically unknown in Bang Chan. Few families had covered pit latrines or made any effort to cover excreta. Intestinal parasitism was common. Garbage might be fed to animals, but was frequently thrown into the canal or elsewhere about the compound. Provisions for protecting foods from contamination were meager.

When rain water was available, it was used for drinking, but several months each year water from the canals or fish ponds was used without prior treatment. For washing vegetables, cooking and washing dishes, canal and pond water was used throughout the year.

744 751 A few changes in sanitary practices, if they could be brought about, might reduce some kinds of illness substantially. For example, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

758 121 Modern medicine will probably not be readily or generally available to a majority of the residents of Bang Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

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44

Sanitation

364 Disposal of Garbage. - Of the 6 categories for disposal of garbage listed on the schedule (Appendix A), 3 only were used by the families who took part in the dietary study (Table 18).

Table 18

Disposal of Garbage in 11 Households, Bang Chan

Round[1] of dietary study	Number of Families Using Each Method			
	I	II	III	IV
[231] Garbage fed to animals	10	10	10	10
Garbage thrown into canal	2	6	3	4
Garbage thrown elsewhere	5	5	5	5

1. Each family was visited 4 times during the year. Each series of visits to the 11 households was called a round.

Ten of the 11 families fed some garbage to animals, and for 4 families, on 10 survey days, (i.e. 1 to 4 days per family), this was the only manner of garbage disposal. One family had no animals other than chickens, and those were not fed garbage on the survey days.

Each family seemed to have its own pattern for disposal of garbage which was not fed to stock. Those who threw it in the canal, did so consistently, except when the nearby canal was dry, and those who threw garbage elsewhere, did this consistently. No one was observed to burn or bury garbage.

251 Protection of Food From Contamination by Insects and Other Animals. - Large oil tins, with covers, were commonly used to store dry rice and other non-perishable foods in the kitchen area. One family covered the container with a plate.

In 8 of the 11 households of the dietary study some provision was made for storage of left-over and perishable foods. None of the households had screened cupboards, but two used some means to ant-proof the legs of the cupboard such as rubbing them with powdered pitch, or setting them in bowls of water.

A [see p. 63 - Analyst]

4:Phillips E-4,5 (1956-1957) 1966
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Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

84 A soul desiring rebirth flew into the womb of a woman at [775] conception. By care and imitative magical practices, both parents helped the fetus grow but the mother gave the baby its [774] body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective [789] stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of 846 several days was taken beside a hot fire, the purpose of which 392 was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman. 793 The comparable ceremony of maturation for men, when they too 789 were changed from "raw" to mature, compassionate, and strong 562 males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to nurturing purposes, and could never be destructive. The [688] respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

844 This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

128 The understanding of, and the attitudes toward, modern 844 medicine are given along with findings accounting for 846 acceptance or rejection of modern hospital care for parturients. Accepting the changes that were observed in the practices 369 surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step 178 towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

close touch with each other's activities and needs. 621

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time. 621 844 592 844 476 593 [462]

Wealth Differences:

Way of Life 556 875 441

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable. [464] 556 511 178 369

743 758 178

to make use of modern facilities one suffered confusing and unhappy experiences. Bangkok traffic was dizzying, even if one knew just where to go. Hospitals had beds, not mats, and the personnel were strangers. Foods were often unfamiliar or violated traditional injunctions concerning heating and cooling. People were brusque, impersonal, and overbearing to country people. One woman complained, "I am afraid of the doctor there. She scolds me and does not treat me like city people. She will not explain what the sickness is." Mīnburī's clinic was small, set up in more familiar terms, and the staff known personally to many villagers.

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Finally, there was the problem of finding an experienced escort, i.e. someone who "knew the way." More was involved than just convenience. In all walks of Bang Chan's life, no one ever presented himself to a school, to a household, anywhere, without a personal introduction from someone who had been there before, and so was accustomed (khoēi) to it. It was not hard to find someone who had been to the Mīnburī Health Center, but it was difficult to find one who had been to a hospital in Bangkok, knew what to do, and had the time, money, and inclination to act as escort. The latter was always a relative by blood or marriage or the sick person's mō himself (Hanks and Hanks, 1955: 160). Actually, five or ten persons might accompany an ill person, only one of which was acting as the recognized go-between. Many of those who had been to a hospital or clinic as patients had previously accompanied others merely as escort, or to visit (Goldsen and Ralis 1955:31).

758 743 184 178 [369] [844] [554]

Who had actually tried modern medicine for one reason or another? About a third of the household heads had used some modern clinic or hospital for treatment or hospitalization (Goldsen and Ralis 1955:31). Use was more frequent among (1) the literate, (2) those exposed to the mass media of radio and movies, (3) those accepting certain urban ways, and (4) those having greater contacts with the city in the way of visits, but users were not of a noticeably higher economic level (ibid:37). Women went no more frequently than men (ibid:32). No figures indicated how many of these occasions were for childbirth, but our interviews point to a small number. Taking the will for the deed, two women teachers who appeared to be the first to plan ahead to be delivered at the Mīnburī Health Center--but who did not get there because labor was too quick--seemed to be viewing the use of modern methods as a means to higher status.

758 743 844 178

Why was modern obstetrics so largely eschewed? What had been Bang Chan's experience, unfavorable or favorable, that colored their attitudes? First, home was the most convenient place for care. Bangkok was ruled out categorically as too far. In fact, Mīnburī might be too far if labor manifested its normal celerity as the case of the two teachers showed, or if complications had developed. Furthermore, a Chinese resident of Bang

4:Phillips E-4,5 (1956-1957) 1966
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from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise of regular wages, lighter work, and the bright lights of the city, leave Bang Chan with the hope that they will never have to return, although of course many do. The Goldsen-Ralis survey reveals that 26 percent of their respondents had lived in Bangkok for a year or more, although for most this was in fulfillment of military service.

Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

The frequent transit between Bang Chan and Bangkok,[8] however,

[8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

4:Phillips E-4,5 (1956-1957) 1966
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continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959*b*: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family:

home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

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207 Exposure to the media of mass communication seems to act, in
a sense, as a substitute for literacy. It may be that through
212 these means either an illiterate farmer can obtain information
about the more complex agricultural tools and methods or motivation
546 to try improvements, or both, even though he may not know how to
read and write. One may infer that he tends to act on the infor-
mation thus obtained, since he is more likely than his unexposed
opposite number to try out these innovations.

*178
*177 Acceptance of Urban Patterns

• 369 The printed word and the mass media are, of course, not solely
channels for the communication of knowledge. They are, at the
same time a means whereby the farmers may establish some sort of
contact with the more sophisticated world outside the community
even with highly urban Bangkok.

The survey indicates in a general way the extent to which
[291] the people of Bang Chan have accepted urban patterns. Their grow-
ing acceptance of urban modes is readily apparent even to a casual
[416] visitor: many own shoes, flashlights, wrist watches, radios,
[207] bicycles, fountain pens, modern furniture.* Other urban behavior
is likewise beginning to be noticeable.

[493]
[413] One very simple indication of the degree to which urban in-
[352] fluences have penetrated is the change in manners of taking
food. The farmers traditionally eat with their hands rather than
using a fork or spoon. In Bangkok, however, eating utensils are
customarily served with the meals in restaurants and are widely
adopted as well by the city population. Some Bang Chan inhabi-
*177 tants have picked up this simple urban custom and have substituted
*178 it for eating mainly with their hands. In Bang Chan of 1955, for
example, a sizeable minority (26 per cent) report that they use a
264 spoon, fork or both for the evening meal.

369 That such a simple question can roughly measure exposure
[207] to urban influences, is indicated in the following table, which
shows that respondents who report customarily eating with "urban
[546] utensils" are more likely to be exposed frequently to radio and
motion pictures and are more likely to have visited in Bangkok.

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[412] * Survey respondents report that their households possess a
flashlight (81 per cent); scissors (66 per cent); kerosene lamp
(27 per cent); radio (14 per cent). About 41 per cent say they
own at least one pair of shoes.

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TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Pattern	
	With hands (242)	With fork and/or spoon (84)
Listens to radio		
Regularly (daily)	10%	25%
Occasionally	17	28
Seldom	51	35
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	15
2 - 4 times	29	23
5 or more times	28	55

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When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive [241] to urban influence are twice as likely as others to use fertilizer (21 per cent versus 9 per cent), one and a half times as likely [244] to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per [402] cent versus 61 per cent). There is no noticeable relationship, [228] however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for [212] those on high as well as low economic levels and also for the [434] literate as well as illiterate farmers.

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TABLE 17. VILLAGERS RESPONSIVE TO URBAN PATTERNS ARE MORE LIKELY THAN OTHERS TO USE AGRICULTURAL INNOVATIONS

Agricultural Innovations	Eat with fork and/or spoon	Eat with hands
Artificial fertiliser		
Tried it	21%	9%
Never did	79	91
Total cases*	(69)	(218)
Mushrooms		
Tried growing	57%	39%
Never did	43	61
Total cases	(84)	(242)
Small engine motor		
Own one or have used it	82%	61%
Never did	18	39
Total cases	(84)	(242)

* For farmers only; excludes all non-farmers

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TABLE 18. ACCEPTANCE OF URBAN PATTERNS IS LINKED TO ACCEPTANCE OF MOTOR AND MUSHROOM GROWING, IRRESPECTIVE OF ECONOMIC AND LITERACY LEVELS

	Economic Level				Literacy Level			
	Low		High		Illiterate		Literate	
Acceptance of urban patterns	(Proportion who used motor)							
Eat with hands	55%	(77)	76%	(73)	47%	(73)	83%	(76)
Fork or spoon	75	(20)	89	(34)	69%	(16)	90	(38)
	(Proportion who tried mushroom growing)							
Eat with hands	28%	(77)	58%	(73)	38%	(73)	47%	(76)
Fork or spoon	45	(20)	65	(34)	44	(16)	66	(40)
	(Proportion who used fertiliser)							
Eat with hands	11%	(77)	13%	(73)	10%	(73)	14%	(76)
Fork or spoon	19	(20)	24	(34)	3	(16)	23	(40)

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 18.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)	Twice or more (Proportion who own or use the motor)
Illiterate	44% (40)	58% (51)
Literate	83 (36)	88 (83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

as apt to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	38%	(40)	80%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	50%	(67)	82%	(76)
One or more	57	(24)	88	(43)

*Male farmers only

However, no such relationship was discerned between these culture contacts and trying out either fertilizer, tilapia, or mushrooms.

Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertilizer or mushrooms.

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TABLE 22. AMONG ILLITERATE FARMERS USE OF MOTOR IS LINKED TO WIDER SOCIAL CONTACTS

	Exposure to Influences of Others	
	Have more friends or about the same	Have fewer friends
	(Proportion who tried small motor)	
Literacy		
Illiterate	64% (56)	26% (27)
Literate	87 (86)	86 (78)
	(Proportion who tried tilapia)	
Illiterate	34% (56)	15% (28)
Literate	43% (86)	35 (27)

[369] This finding corroborates and expands the previous discussion of the culture contact and acceptance of innovations. Exposure to influence of others from outside the community (through contact with the city, with the airport, with the agricultural fair, for example), as well as exposure to the influence of others from within (through friends and associates) clearly relates to the decision to use an innovation such as the motor. Its effectiveness is not felt equally by the whole population, mainly instead, by those who are illiterate.

The significance of these internal and external contacts to illiterates may be that through such contacts they are likely to gain needed information and motivation which, if one can read and write, is available through other sources. If one cannot read and write, however, it is the outside world which provides this kind of needed information.

Capital Investment and Debt

426 Bang Chan a economy is largely a money economy and many farmers avail themselves of credit facilities through professional money lenders. Most loans are sought for the purpose of replacing capital equipment and purchasing land and buffalo.*

The present survey secures a rough measure of the extent of such borrowing in Bang Chan. The majority of farmers (39 per cent)

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[113] * See Janlekha, Kamol O. A Preliminary Study of the Economic Conditions of Siamese Rice Farmers in Bang Chan, Thailand. M.S. Thesis Cornell University, 1951, p. 93.

*178 With more frequent exposure to these media, the link between literacy and use of hospitals or clinics decreases.
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TABLE 30. EXPOSURE TO MASS MEDIA IS LINKED TO HOSPITAL USE, ESPECIALLY AMONG ILLITERATES

	Literate (Proportion reporting use of hospital or clinic)		Illiterate	
Movie Attendance				
High (ten or more times)	78%	(103)	71%	(38)
Low (nine times or less)	64	(36)	48	(111)
Radio Listening				
High (listen "frequently")	81%	(68)	79%	(48)
Low (listen "seldom or never")	66	(86)	48	(122)

*178 Acceptance of Urban Practices

• 369 Table 17 showed that acceptance of certain urban practices was
743 linked to acceptance of the major agricultural innovations. Acceptance of urban practices is also associated with use of clinics and hospitals. Use of modern medicine is significantly higher among those who no longer eat with their hands than among those who do.

TABLE 31. ACCEPTANCE OF URBAN PRACTICES IS LINKED TO USE OF CLINIC AND HOSPITAL FACILITIES

	Customarily Eat With Fork or spoon (84)	Hands (242)
Have you ever been to a clinic or a hospital?		
No, never	26%	39%
Yes, for treatment	48	33
Yes, for other reasons	26	28

*178 Contact Outside Bang Chan

369 It has already been reported (see Table 23) that hospital and
484 clinic use is higher for those who, during the past year, have
743 paid more frequent visits to Bangkok. This correlation may seem, at first, spurious, since the main centers of medical care are situated in Bangkok. But the questions asked about contact with Bangkok for the one-year period preceding the survey, and visits to the hospital or clinic over an unspecified time period show

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that the relation of these two indices appears valid. In addition there is further substantiation of the hypothesis that contacts with the world outside Bang Chan are linked with use of modern medical practices: The incidence of such use is significantly higher among those who have visited the airport than among those who have never done so.

TABLE 32. INCIDENCE OF HOSPITAL OR CLINIC USE IS HIGHER AMONG THOSE WHO HAVE VISITED THE AIRPORT

	Trips to the Airport		
Have you ever been to a clinic or a hospital?	None (148)	One (50)	Two or more (134)
No, never	41%	36%	28%
Yes, for treatment	33	40	39
Yes, for other reasons	24	24	33

Moreover, additional support for this contention is found in the higher incidence among hospital and clinic users, of knowledge of the world outside the community.

It is reasonable to assume that greater contact with the capital city is likely to increase the farmers' awareness of its major public figures. And, indeed, the incidence of hospital and clinic use is highest among those who are able to name correctly certain of Thailand's major public figures, as the Prime Minister and the National Police Chief.

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TABLE 33. INCIDENCE OF HOSPITAL OR CLINIC USE IS MORE WIDESPREAD AMONG VILLAGERS WHO ARE AWARE OF THAILAND'S PUBLIC FIGURES

	Have you ever been to a hospital or a clinic?			
	No, never	Yes, for other reasons	Yes, for treatment	Total 100%
...Who is now the Prime Minister of Thailand ...Would you please tell me his name?				
Names Prime Minister	27%	30%	43%	(192)
Does not know	48	33	19	(140)
...Who is now the Chief of Police of Thailand...Would you please tell me his name:				
Names Chief of Police	27%	31%	44%	(166)
Does not know	48	33	19	(164)

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The water users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be water users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and receptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike acceptors of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

125

b. And how about mushroom growing? Do you think mushroom growing yields very good money, good money, or little money? [244]

5. Very good money	68
6. Good money	160
7. Little money	49
8. Unascertainable	56

c. And what about Tilapia. Do you think tilapia raising pays very good money, or good money, or little money? [228]

9. Very good money	15
X. Good money	73
Y. Little money	175
0. Unascertainable	70

39. Do you believe in sadism strongly, somewhat, or not at all? [787]

1. Strongly	12
2. Somewhat	192
3. Not at all	105
4. Unascertainable	24

40.a. Suppose you could do the same work in another rural place and earn ½ more than here. For example, it would be a place 100 kilometers from here. Would you be willing to leave for that place or not? [166]

5. Yes	118
6. No	203
7. Unascertainable	12

.b. IF NO: For what various reasons would you not be willing to go?

(See code at end)

41.a. If you had no land to work in NE-KT would you move to another place or not?

X. Yes	166
Y. No	112
0. Unascertainable	80
— No Answer	35

b. IF NO: For what various reasons?

(See code at end)

42.a. Some people say that, generally speaking people who live in Bangkok have more genuine and lasting happiness than people here in NE-KT. Do you agree or disagree? [369] [829]

1. Agree	136
2. Disagree	134
3. Unascertainable	63

b. IF AGREE: For what various reasons do you agree?

If Agreement (See code at end)

125 42.c. IF DISAGREE: For what various reasons do you disagree?

[369]
[829]

If Disagreement (See code at end)

[793] 43. Do you agree or disagree that all priests are honest and moral men?

[792]

X.	Agree	197
Y.	Disagree	90
O.	Undecided	40
—	No Answer	6

[829] 44. Do you think it is right or wrong for a Thai to marry a Chinese?

1.	Right	55
2.	Wrong	182
3.	Unascertainable	91
—	No Answer	5

[775] 45. Do you believe that ghosts bother people? Strongly, somewhat, or not at all?

4.	Strongly	40
5.	Somewhat	136
6.	Not at all	124
7.	Unascertainable	28
—	No Answer	5

[653] 46.a. During the past year, have there been any activities for the public welfare in BC Wat, or not, to which you contributed labor?

1.	Yes	231
2.	No	102

b. IF YES: For what various activities did you contribute labor?

_____

_____

c. During the past year or so, have there been any activities for the public welfare in the wat, or not, to which you contributed money or goods?

1.	Yes	264
2.	No	63
—	No Answer	6

[651] d. IF YES: For what various activities did you contribute money or goods?

_____

_____

47.a. How about activities not connected with the wat or with religious ceremonies in the home. During the past year, have there been any such activities for the public welfare in BC-KY, to which you contributed labor, or not?

1.	Yes	94
2.	No	232
3.	Unascertainable	7

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Question 42.b. Reasons for Agreement (multiple choice replies)

Amount of effort in earning a living
- Earn living more easily, lighter work, a farmer has to work too hard, life is hard here--easy there 58
- Can work indoors, needn't work in sun and rain 13
- Other (living is easy if you have money, don't have as many worries as farmers, can trade more easily) 3

Availability of jobs and money
- They have salaries so don't have to worry 11
- Earn more money, earn more money for pleasure, earn money more quickly, can make money in commerce 11
- They have money, they have properties 10
- Can find job more easily 10
- Good occupations 1

Convenience
- More comforts 10
- They can get everything they want, can get everything easily 7
- Can find food more easily, it's more plentiful, food is better 6
- They have communication, transportation, water and light 5
- Everything is convenient 4
- Other (more privacy, children have a better chance for education, many pleasures, better living, no troubles) 5

Other Reasons
- More civilized, they have "knowledge," they can write, they govern the country, Bangkok is progressive, wherever you live you are happy if you behave well 8

No Answer 8

Question 42.c. Reasons for Disagreement (Multiple choice replies)
- Cost of Living (Cost of living too high, must spend too much money, everything more expensive, food is expensive there) 34
- Availability of jobs and money (Easier to make living here, no way of earning money there, hard to find a job there) 23
- Dangers of Bangkok life (Fires, traffic, wars, too much fighting there, cheating, robberies, bandits) 17
- No security (Poor people starve there, occupation is not permanent, economically less secure) 14
- Urban Atmosphere (It's too crowded, the weather is bad, the air is bad, it's too noisy, too many mosquitoes, no kindness) 14
- Integration in Bang Chan, lack of it in Bangkok (Work is harder here--but you have peace of mind, people have no strength or unity there, plenty of friends and relatives here, can live in own house here) 12
- Bang Chan is O.K. (There is plenty of food (vegetables) here, life is easier and more convenient here) 9
- Specific qualifications needed (Don't have enough knowledge, education, or experience to be happy there, must be a skilled worker) 7

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Question 42.c. (Cont'd)

Need for Money in Bangkok (Only happy there when have plenty of money)	6	125
Amount of effort in earning a living (Have to work every day there	4	369
Other reasons (Too many poor people there, many illnesses there, the life of the people there depends on the farmer, people from Bangkok always go to the country when anything bad happens, people can be happy both places, different people have different hearts)	12	829
No Answer	4	
Don't know	5	

Question 46.b. For what various activities did you contribute labor? 125

Earth work		653
Earth work at Wat	18	
Earth work at Mosque	7	
Earth work, unspecified (digging dirt, filling low places, digging Klong, loading and unloading earth and bricks)	53	
Cement Work		
Cement work at Wat (moved cement bags, laid concrete floor)	12	
Cement work, unspecified (building cement sidewalks, helped make concrete, poured concrete)	14	
Building and Repairs		
Building sala (pavilion, repairing pavilion)	51	
Building mosque (repairing Surao porch)	8	
Built priest house, construction work in wat, latrine in Wat, repair crematorium	8	
Building bridge	21	
Building road	13	
Constructionwork, unspecified (carried posts, repair a building, carpentry)	7	
Services		
At Wat fair (helped cook and serve, helped manage, swooping)	27	
At Surao fair (helped cook and serve)	3	
Services, unspecified (boiled water, cooked, carried water)	15	
Guilding the gold leaf, miscellaneous labor at footprint guilding festival)	7	
Priest's funeral (cooked, helped at cremation)	7	
Other (served at Katlin ceremony, solicited money for Wat)	3	

Question 46.d. For what various activities did you contribute money or goods? 125

To the Wat, unspecified	19	431
Contribution, unspecified	19	651
Construction activities		
To build pavilion (sala), to repair pavilion	57	
To make path, build street on Wat grounds	27	

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

landlord-operators were more sensitive to the change in rent rates than were the other groups of farm operators.

Limited opportunity for an alternative occupation was mentioned in the preceding paragraph as one of the factors contributing to the inelastic nature of demand for working land. It was also mentioned in the section on the occupational structure of Bangchan that farm laboring families as existing in the village were indigenous and were an outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent in any land. Limited opportunity for an alternative occupation in the village was also suggested in the same section when it was mentioned that the only possible alternative -- petty trading which was actually taken up by some former farm operators -- was limited by the fact that villagers bypassed local traders and went to the nearby market town of Minburi for major purchases and variety goods.

Limited opportunity for an alternative occupation outside the village, however, needs elaboration. It cannot be denied that wages in Bangkok, only twenty miles away and easily accessible through good road and bus services, were higher on the average than corresponding returns for labor in the village. It is important to note, however, that what will attract a villager to seek a job in Bangkok is not a higher average wage level in the city but a higher marginal wage there. Regarding the marginal wage, it is highly doubtful that a better condition exists in Bangkok.

369 It should be noted also that once a villager has moved
167 into Bangkok he will be deprived of the privilege to
162 acquire free food from nature -- an important economic advantage of living in the village which counts heavily when emigration to the city is being seriously contemplated.

427 It is seen, then, that the demand for land on the
423 part of land-thirty operators -- the tenants, part-owners, and owner-operators -- was high and inelastic, while the demand for land on the part of land-saturated landlord-operators was low and elastic. Since the combined demand of all landlord-operators constituted only a small fraction of the total demand (Table 20), it may be safely concluded that the aggregate demand for land in Bangchan at the period we are dealing with was high and inelastic.

311 Let us now consider the supply side of land. For
423 the purpose of this discussion we may differentiate four
427 sources of supply of a total of 6,722 rai considered to
463 represent our natural Bangchan area. They are:

1. Land-thirsty operators -- all for implicit rent.
   - a, Owner-operators 2,131 rai
   - b, Part-owners 227 rai
   - c, Tenants 225 rai
   - Sub-total 2,583 rai

2. Land-saturated operators (landlord-operators).
   - a, For implicit rent 517 rai
   - b, For explicit rent 683 rai
   - Sub-total 1,220 rai

3. Local non-operators -- all for explicit rent.
   - a, Traders 189 rai
   - b, Investors 149 rai
   - c, Public servants 165 rai
   - Sub-total 503 rai

178 in this zone has since been considered as residential land
423 although there has not been any apparent change in land
435 utilization.

178 It should be noted in this connection that during
423 the same period of 1948-53 there has been a steady rise in
435 the price of residential land in Bangkok at a highly varying rate depending upon location. For the purpose of our discussion, we may consider only the price of land in the northern suburb of Bangkok, on each side of Paholyotin Road (the popular Bangkok-Donmuang Road) which branches off at Kilometer 20 into Minburi Road which cuts across Bangchan Canal at Kilometer 13 (Crossing of Paholyotin and Minburi Roads as Km.0). It has been observed that the price of land on each side of Paholyotin Road has been increasing rapidly: a parcel at Km. 11 which was valued at 50,000 baht per rai in 1952, for example, was sold at 150,000 baht per rai in 1954. It has also been observed that price of land in this section of the Bangkok suburb declines with the distance from Bangkok proper: the 1954 price was 150,000 per rai at Km. 11, and 50,000 baht per rai at Km. 20 where the Minburi Road begins. If the Minburi Road is considered as a continuation of Paholyotin Road, it is only natural that the price of land would gradually decline to 12,000 baht per rai at Km. 13.

182 It is conceivable that the recent increase in Bangkok
423 population is one among several factors causing the rapid
435 rise of residential land prices. When the rapidity of the

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182 423 435 369 rate of increase in land price is considered, however, it is reasonable to believe that population increase is certainly not the only factor.

[121] It is not the purpose of this study to deal with the price of urban land. Neither the problem of land utilization nor the whole economy of Bangchan can be clearly understood, however, without some account of the rapid building up of urban land prices in recent years. It is thus necessary to digress at this point into some factors accountable for this rapid rise.

369 454 423 435 178 182 It has been observed that the volume of domestic saving in Thailand is small because of the low level of income, and that such saving as does take place tends to be put into real estate and gold and jewelry. Concentration of income resulting from the postwar phenomenon of shifting of political and economic power into the hands of few people, however, has somewhat increased the proportion of saving; but this is again used largely to purchase real estate. The natural result is the boosting up of urban land prices especially in the suburban sections where there has been a relatively high degree of improvement in road construction since the war.

423 45 178 369 182 This investment in land purchase has more than ever before assumed a speculative nature. This is largely due to the experience of inflation initiated by World War II whereby huge and easy profits could be made from buying and selling of land. Corruption in the sale and purchase

423 of government real estates has no doubt increased these
45 speculative activities. The process has also been greatly
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369 accelerated by an enormous increase since the war of banking
182 facilities, which traditionally extend loans on mortgage of real estate. It should be noted in this connection that the demand for loans in Bangkok has been so great as to allow most commercial banks to adopt a highly discriminating policy of extending loans only to their favored customers who are often willing to give as much as five per cent of the loan sought to bank officials as a customary "tea-money".

182 A third factor is that some organized financial
423 institutions have actively been engaged in deliberate at-
435 tempts to boost up land prices for their own speculative
455 gains. This was the immediate cause of the rise of land
178 price in Zone 1 from 300 baht per rai in 1948 to 12,000 baht
369 per rai in 1953. According to several informants in Bangchan, a representative of an insurance company in Bangkok came to the village in 1952 and offered to buy land on each side of Minburi Road at 10,000 baht per rai. This man was able to buy 20 rai of land at Km. 8, Minburi Road, which is in the immediate neighborhood of our arbitrary Bangchan Village, at his offered price of 10,000 baht per rai. At the time of the signing of the purchase contract, he made a 10 per cent down payment of 20,000 baht. Although the balance of 180,000 baht was not paid and the contract was later forfeited, the proposed purchase immediately pushed land prices in Zone 1 up to 10,000 baht per rai or over. According to

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423 our informants, the insurance company owned hundreds of
435 rai of land in the vicinity. By spending only 20,000 baht
456 in boosting up land prices, the company thus set the stage
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• 367 for making a large profit through sale of their own land at inflated prices.

178 While the increase in land prices in Zone 1 was
423 attributable to the sudden assumption of residential land
435 prices, this explanation does not apply to the increases in land prices in the other zones which have remained agricultural throughout. Although less spectacular than the case of Zone 1, the rise in land prices in these six zones was also quite abrupt, averaging 560 per cent for the five-year period from 1948 to 1953 (Table 28).

423 Capitalized valuation of these farm lands (Zones
434 2-7) may shed some light on the situation, although there
427 is limitation especially to the cost concept. There are two ways by which a capitalized value of farm lands may be obtained: (1) by capitalizing income from the farm operation left after payment of all factor costs except land, and (2) by capitalizing income deriving from explicit rent of the land.

*243 Receipt from one rai of rice land in 1948 may be cal-
435 culated from the crop of 32.1 tang at 252 baht, using that
434 year's average farm price of 7.86 baht per tang of paddy.
423 When the cost, including an imputed return to all labor but
427 excluding rent, of 166 baht per rai is deducted, a residual return to land of 86 baht per rai is obtained for the year.[15]

15. For want of sufficient data, it is assumed that the cost items other than rent remain the same.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 857 872 labor to the family farm work. It is also the time for children of families of other occupation to earn their small lampai from piece-working.

872 871 We have devoted a few pages to this topic of training the young for farm work because we think it is relevant to the study of the village economy. While the standard of teaching is generally poor in most primary schools in Thailand and consequently farm children receive rather poor academic education, it has been observed that their training in the farm work given by the family is exceedingly thorough. With the exception of a few bright children who are able to finish Pratom IV in four years and thus are able to leave the primary school at the age of 12, most farm children are kept in the school until the age of 14 because they usually fail in the examination at the end of each academic year and have to repeat once, twice, and even thrice. A good many are obliged to leave school at the compulsory age of 14 without passing Pratom IV. Urban children, on the other hand, usually pass Pratom IV at the age of 10 and are able to proceed on their secondary education at the standard age of 11 when they start their Matyom I. This is because they went to school at an early age and had better teachers at the Pratom level. Thus, farm children usually lag behind urban children in academic achievement. The situation is aggravated by the city secondary schools' practice of using students' achievement by age as the basis for admission decision. As a result, farm children do not

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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369 have an opportunity for secondary education although some
87 of them have adequate financial support. This has a tre-
[464] mendous effect on job opportunity for farm people, for most firms and Government departments set Matyom VIII as minimum standard for even the lowest clerical job.

243 While farm children have a poor academic education,
369 they are compensated by a high degree of farm training which
464 includes not only the technique of rice growing but also the
868 use of basic equipment for manual labor and simple construction work. It has been observed that farmers are better qualified to do manual work than urban people. This aptitude, however, does not to any considerable extent minimize the farmer's disadvantage in making a living other than by farming. In the first place, compensation for manual work is generally lower than the pay for clerical jobs. Second, there are in the city more job opportunities for clerical work and other white-collar types than there are for manual work. Third, the white-collar jobs tend to be more or less permanent while the manual jobs tend to be somewhat seasonal, and the manual worker seldom has a "position" in the firm as does the white-collar worker.

To the extent that these three conditions remain true, it may be assumed that the type of academic education and practical training being given to Bangchan children will serve only to confine them to farming life rather than to give them opportunity for alternative occupations.

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/For the special use of fire during the post-partum period of recovery from childbirth, see category 846./

779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

84 A soul desiring rebirth flew into the womb of a woman at
[775] conception. By care and imitative magical practices, both
[774] parents helped the fetus grow but the mother gave the baby its
[789] body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of
846 several days was taken beside a hot fire, the purpose of which
• 392 was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman.
793 The comparable ceremony of maturation for men, when they too
789 were changed from "raw" to mature, compassionate, and strong
562 males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to
[688] nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

844 This view of the role of woman in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of [illegible] practice are discussed.

128 The understanding of, and the attitudes toward, modern
844 medicine are given along with findings accounting for
846 acceptance or rejection of modern hospital care for parturients.
369 Accepting the changes that were observed in the practices
178 surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

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speeded up with heat to the point of blasts. The strength of the contractions of labor was in direct proportion to the speed of the winds' circulation. The great pushes of the expulsive lom beng "broke down" the sac with the amniotic fluid (nam thun hua: water-that-supports-the-head-of-the-child), and forced out the child, water, and the placenta.

After the child was out, the mother was cold, weak, and exhausted. Her uterus was full of harmful fluids. Heat was needed more than ever not only to warm her but to give the winds "the power and push" to drive out three undesirable birth-waters: "The blood that looks like ordinary blood but is bad,"; the amniotic and abdominal body water (nam khraa: refuse water); and the pale, viscous, repugnant "fish-water" (nam khao plā). Therefore, a hot fire was built, close to which the mother lay (yu fai), turning all sides of her body towards the flame. She bathed in or drank hot or warm boiled water (nam suk: cooked, or ripe, water). She ate safe foods like rice and dried fish,[31] and kluai nam bananas, continued to take alcoholic medicines of the hottest sort, such as Snake Brand, and occasionally might be given cobra or other hot curries to eat. For a first-born, a woman stayed eleven or nine days by the fire (always an odd number), with stays shorter for each successive child, but never less than five days.

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Complications sometimes developed because of inadequate control of the heat. A "headache and a hot body" indicating "stagnation of the blood and the fishy-smelling water," was cured by a heat-producing decoction. Rashes often occurred, causing small boils that might develop into sores. To soothe these, turmeric was painted on. In the most dangerous cases the heat "drove the bad blood to the heart, to the face or belly" where it was recognised by serious swelling, with resulting madness or death. In fact, one man felt that the

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31. The reasons for rejecting fresh fish during pregnancy ("lest a creature of hell be born") would not hold after parturition. Yet fresh fish was rejected then too "as bad for the womb." One suspects that the less odorous dried fish was substituted so that the odor of fresh fish, like air-borne, incompatible food, would not affect adversely the "fish-smelling" post-partum discharge (nam khao plā). In Hauck's list of foods "bad for mother during the post-partum rest," the reasons are apparent: Sour tastes did not dry out the body, but built up water; egg was too cooling; jackfruit brought in wind; glutinous rice and the sugar of sweets "wet the uterus;" fruits did not give strength and were excessively cooling (cf. Hauck, 1959:15).

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000 in Bang Chan tried to carry on the old rites.

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• 372 The Cone of Wood

When a child was conceived out of wedlock, the first problem raised was, "Who will build the wood pile?" The actual father had to come forward and identify himself, for he and no one else could perform this duty. A child could not be born without the father giving this assistance.

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372 This cone of wood represented a "womb" towards which a father actively played out his role. His child was in it. While building it, his behavior affected the child, just as his wife's behavior acted on the child in her womb. If the pile were incomplete before the onset of labor or gave out before the fire-rest was terminated, the child would "never finish any task in its life." The very manifestation of industriousness involved in collecting the wood, though, made the unborn child industrious. Gathering a quantity of wood for this big pile was not easy. Old houses had plenty of wood, for they stood in thick groves, but new houses sometimes stood bare and stark in the fields. He placed spiny Indian jujube or Chinese date (phutsǎ) and Manila tamarind (ma khām thēt) all over the outside to protect [824] this "womb" from invasion by malevolent spirits. Thus he also protected his wife's womb. Sakae wood was preferred because it was smokeless. Collecting a mixture of woods was easier, but then the fire smoked. Mixed or all sakae, whichever the constitution of the pile for a woman's first confinement set the pattern for all her later ones.

At the onset of labor, the father had to open the way for his child to come out of the womb, so the pile was tipped over in a direction paralleling the position of the Great Snake. This astrological orientation was exactly that of the woman in labor. Unless the mother's head and the apex of the fallen wood pile coincided with the direction of the head of the Snake, with the open end of womb and cone below, "with and not against the lie of the snake's scales," the child would have to struggle against these scales as he came out. By tipping the cone of wood properly the father helped his child to an easy exit.

The thorns protected the womb and the baby inside from all evil spirits during the months of pregnancy. With the onset of labor, the holy cord which surrounded the mother took over this function, and kept away such dangerous spirits as phi krasy and, if the baby died at birth, the violent New Baby Ghost (cf. Textor:261).

Even after the child was out, the pile of wood was still a drying womb to be treated carefully. It was also the wood for a consecrated fire. To drop a piece of this wood carelessly both injured and desecrated. If this happened a disease of the eyes "sang," came at once for which no male medical powers had any remedy. The only cure was in women's hands, that essence of maternity, "a drop of mother's milk--any mother's." The larger implications of this linking of fire and maternity are dealt with in the next section.

The Fire of Maturity

In the events surrounding the birth of the child, the significant step for the woman personally was the post-partum rest period by the fire (yū fai). Far more was at stake than just drying the uterus. The fire rest was one of the series of rites of the life-cycle which marked the course of an individual from birth to death. The others were the cutting of the umbilical cord, first head shaving, top-knot tonsure, ordination (for men), marriage, and cremation. Through the consecrated fire a woman formally achieved full maturity: she became suk (cooked, ripe, mature). Maturity did not come just by bearing a child. The fire brought about the transformation.[46]

How was mature womanhood viewed? What was the essential female role and office? Bang Chan saw a woman as one who "feeds and lengthens lives." As the custodian of growth she was, first, the guardian of the vital, essential khwan soul, and especially of the immature, flighty khwan of growing persons.

Secondly, a woman was a donor of nourishment (liang).[47] Her primary responsibility was to nurture children and other tender beings. She nourished the fetus with her blood. After

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46. "The fiery element digests what is eaten or drunk...and cooks the body and gives it its beauty of complexion. And the body thus cooked is kept free from decay" (Warren:157-158).

47. All the deities "concerned with the welfare of our bodies and our khwan" were maternal (mae), e.g. Rice, Water, Earth, "Mother-Goddess" (Mae Sū), and several Mother-Princesses (Chao Mae). Fire, and maybe wind, were both female (mae) and male (phra) (Textor:485). To these deities, "higher" than ordinary spirits, Bang Chan "owed more."

Only when the youngster was satiated did she gobble the remainder.[50] Parents often commented that girls in general were obedient and good, but boys were not. Everyone spoke, however, of exceptions. The capacity to play the female role grew with the child. It was not completed with the physiological maturity of first menstruation but only with ritual maturity.

The rituals to fit a woman for her office, described as "directly related to the welfare of the child," had 4 specific purposes. They perfected her as a compassionate being; restored and strengthened her body; improved her capacities as a nourisher; and strengthened her own kwan. The key to each of these aims was the holy fire.[51] Because actions taken by the fire were immediately and permanently effective, every effort was made to induce auspicious happenings. Words spoken by the fire had compelling effect so even ordinary speech became magical. Speaking of the fire's hotness so raised its heat that a mother was burned. For this reason, uninformed or careless visitors like children or foreigners were a danger.

According to Buddhist thinking, suffering developed compassion. Through the discomfort of pregnancy, followed by the anguish of childbirth and the heat of the fire, a woman became compassionate and so achieved the guide-line for moral behavior. Then a woman was sure to be touched with pity for the younger or less fortunate. One teacher despite the inconvenience went home twice a day from school to nurse her new baby because she "pitied" him too much to hire a wet-nurse. It was "pitiful" to see a child at another woman's breast for it implied that its mother was either unwilling or unable to nurse it. Thus, babies were rarely nursed by others than their own mothers.

The fire also strengthened a woman by ridding her of bad blood and foul fluids. Wind and fire, the 2 spirit guardians of the elements necessary to the occasion, were invoked to assist in the drying of the uterus. In addition, strengthening

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50. Boys too fed their younger siblings but their purpose was a power-play: "to assure obedience in the future" (cf. Hanks and Phillips:548).

51. This fire was kept entirely separate from the one for cooking and boiling of water. It was ritually lit and ritually extinguished at the end of the fire-rest.

In addition, strengthening
846 foods like rice and fish, the staples for stout farmers,
262 were stressed. Fruit, "which gave no strength," and vegetables (except for the nursing curry mentioned below) were avoided.

846 The holy fire also transformed a woman into a better
372 nourisher. It gave her new, lasting beneficial nursing
827 habits. As one man explained, "the very nature of water
262 is changed by boiling over a fire. It becomes ausk (ripe)." Similarly, a woman's body, her very nature, was permanently changed to ausk by the fire's heating. The fire, in fact, made ausk all the food she ate beside it. Since this food was turned into milk, her breast milk became ausk and so more nourishing, and did not disturb elements.[52] "Food eaten while lying by the fire, when eaten later on (during lactation) by the mother, does not cause diarrhea in the baby." Jackfruit ordinarily caused wind-trouble during lactation, but one woman ate it during the fire-rest, and at once "got used to it, so she could eat it all the time." To make themselves better nourishers, some women spoke of the desirability of "eating a bit of every kind of food." The "nursing curry" (kaeng liang) was a mixture of vegetables.

846 Finally, the consecrated fire strengthened a woman's
372 own khuan. She could better withstand convulsion if
774 attacked by a spirit.[53] She was able thereby to handle
[796] a khuan even without the special magic that existed for it.

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[252] 52. To be nourishing even the daily rice had to be made ausk by boiling (Amuman Rajadhon:77). It may be that no food was considered nourishing unless ausk, either naturally (like ripe fruit) or by cooking.

[787] 53. "...when 'involuntarily' entered by ghosts...maidens in the 17-21 age bracket tend to convulse more violently than do women of more advanced years"(Textor:486). "Maidens" were presumably not married and so not ausk.

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156 (riak khwan). Theirs was an augmented personal potency[55] in nurture not unlike the mana so widespread in the Asian-Pacific area.[56] The best midwives were liang dī, though not all liang dī were midwives. This societal peak was not an unattainable ideal. In the community, certain women were pointed out as liang dī and some of them recognized in themselves the validity of this title.

562 The association of rice, motherhood, and khwan now stands
774 clear. Rice made suk by cooking over a fire, was the essential
776 food not only for the body but for the khwan. Growth and life
262 depended on the nourished khwan. Rice came from a maternal figure, the Rice Goddess, Mae Phosop (cf. J.R. Hanks, 1960). Human mothers, too, when made suk, gave suk nourishment: the milk of the breast was merely transformed rice. Whenever rice was eaten throughout human adulthood, the Rice Mother continued her nourishment, for in each grain was a bit of her khwan, nourishing to the human khwan. The rice-bowl and ladle, used in many a ceremony, stood for the maternal care given a human khwan, and by extension, personal care throughout life. Whenever the rice bowl with offerings (khwan khao: soul-[of]-rice) was presented by a parturient or by a sick person, loving care comparable to maternal care was being requested.

182 The idea of re-birth, of a fresh start within the pure
885 area encircled by the holy cord, with auspicious words and
846 consecrated fire, was deep in every life-cycle rite. The
562 particular circumstance of the fire of parturition was a forthright cooking to bring out and increase a woman's
372 essential femaleness, to transform her from a youthful, partial giver into a complete, mature doner of nourishment. Such was the satisfaction of women in this female role that many said they would like to be reborn as women. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:378) for a quick run-down on a definition of mana.

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to be reborn as men. All women were eager to undergo the post-partum fire at least once. After that modifications might be entertained.[57] Whether the baby lived or died was not pertinent, for the benefits of the fire were for the mother.

Comparison of Male and Female Maturation Rites

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The parallel ritual that fitted men to perform their masculine role was ordination into the Buddhist priesthood. The well-documented Buddhist ends should not be permitted to eclipse this other personal goal. Just as the fire prepared a woman for motherhood, so ordination changed an immature youth into a man ready for marriage and fatherhood. He too was transformed from raw (dib) to ripe (suk). Men gained compassion through denial and suffering. Since their natures were seen as hard (khaeng), strong, bent on gain, influence, and power, possibly destructive and concupiscent, the severest deprivations were invoked: the renouncement of the gratifications of sex and food. Of the 2, the deprivation of food involved the greatest break with previous habits, for since babyhood, food had been a symbol of maternal care. Hence, a man was cast on his own. His only refuge and support was the Buddha, the law, and the Brotherhood. This self-denial induced the suffering that, coupled with knowledge gained from study of the scriptures, led to compassion. The suffering in no way

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57. The fire-rest though desirable was not obligatory. In 1865, Bradley said it could be "dispensed with in times of civil commotion, for fear of the enemy" and "no damages whatever were suffered whatever to mother or child" (p.79). Like other life cycle rites it was postponed if not convenient (sadwak). Also in times of peace, "a few mothers here and there cannot lie by the fire," and a few say, "they will not" (ibid:p.79). Bang Chan would accept this viewpoint freely as reflecting an individual, constitutional set of elements, or as an autonomous decision of an individual. The woman would never feel herself as competent as a ritually mature person though.

Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

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Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire. For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

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Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous magical protective needle.

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"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments, modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1955:155-195). It was sometimes better not to claim competence outside these customary lines. One mō said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease.

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Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "women are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

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Chapter VIII

CHANGES

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In studying change in the customs surrounding childbirth in Bang Chan, we have D.B. Bradley's description of birth in Bankok in 1865 as a base-line on which to project our findings. Since most of the population of Bang Chan (Thai, with a few Laotians, Mon, Muslims, and Chinese) stems from Bangkok, we may reasonably assume that the parallels derive from a true historical connection. Bradley's description fitted Bang Chan as if written today:

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> "Siamese theory in regard to the part which external and internal fire plays in the functions of life and health is made to work powerfully...There is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which, if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child...[Thus a woman lies by the fire]... exposing all parts of her body, and more particularly her abdomen, to that drying process, so that the uterus shall be forced to shrink up quickly to its normal dimensions, and the sanguineous streams which had been diverted to support the child before birth, shall, by fire, be driven backward to their more usual limitations, all which is...a sine qua non to a sound constitution and good health in the future..." (Bangkok Calendar, 1865:78-84).

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Bradley showed that some behavior one might call "change" today was a recognized alternative in 1865. For instance, in Bang Chan a few women "are made too unhappy (klum) by the fire so cannot use it. They should take extra amounts of pickled medicine" (yā dɔɔng). Bradley wrote, "a few delicate females...who cannot endure [this] usual treatment, are compelled, against all their ...fears of the consequences, and all the importunities of their

friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of "...medicines" (p. 81).[74]

The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: fai chut) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Minburi Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered net-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (nuk) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a mō did the same (with the possible exception of the sponging with tepid water), that as a mō-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorization, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calendar, 1871:107-109).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1920's.

178 a new way was a woman bearing her first child because she
184 was not yet ritually matured. This she wanted to be.
Moreover, her self-interest led her to try to profit as
•372 much as possible from the experience of elders by first
846 following the old way. By incorporating the experience
885 of successful child-bearers into her own and the baby's
life and by asking them to initiate actions auspiciously,
she augmented by that much her own competence, and laid
the groundwork for her future progress. Self-responsibility engendered respect for elders. Thus there was no split between old and young over innovations. Experience gave grounds both for conservatism and for changing, but at different age levels.

178 Secondly, changes were adopted by the rich who,
184 spending their money rather conspicuously, sought to main-
556 tain and enhance their social position. Their wealth
and position were in themselves unquestioned as signs of merit earned in another incarnation.

178 The changes being introduced to Bang Chan were of two
554 kinds: first the prestigeful, and second, those giving no increment of esteem, i.e. idiosyncratic changes of taste or convenience; or those reflecting individual circumstances. The prestigeful innovations were oriented towards the use of market novelties, modern medical care, urban standards of cleanliness and beauty, and other ways termed "progressive" associated with the city of Bangkok, cynosure of the eyes of the rich. These values were leading certain families away from their original occupation of farming, into the fields of teaching, trading, carpentering, cottage-industry, etc. Since these new occupations brought in steady cash and large land holders, too, had a good income, an association was found of
372 wealth, prestige, urban interests, and innovation. Com-
846 ment on the hot ashes container (<u>fai chut</u>) indicated that
178 it was a strong symbol of prestige and progress. To use it was "to get away from ignorance and the old way of doing things." It was "cleaner, not hot or ugly, and more convenient." One teacher took it up after reading an advertisement in the newspapers that described glowingly its more efficient healing effect. On the other hand, one woman abandoned the <u>fai chut</u> because "it was not hot enough to rid her of stiff muscles," so she went back to the use of the fire. "It is all right for rich Bangkok ladies who want to avoid a scar, but it does not give
177 enough strength for a farmer." She had no urban preten-
178 sions. Also in this prestigeful aggregate, observed here
278 and there, were the market novelties mentioned above:
854 bed, mat, and mosquito net instead of the plank-bed; kits of medicine from the Chinese pharmacist instead of the old

844 178 122 412 this rust is believed to cause tetanus--and they are unsuitable for the ritual objective at the moment of cutting. It will be remembered that cutting the cord on a rhizome of phlai or soil with a bamboo sliver from the housepost guarantees that a child will not roam away from home. Could the bamboo sliver be dipped in "heating" alcohol, or passed over the flame of a holy fire? Could the old family kitchen-knife--long associated with the household--be substituted and dipped in the beneficial heat of boiling water? Such a knife once was substituted on the winnowing tray. Might the phlai or soil be covered with a boiled, clean, old cloth? If modern science succeeds in coming up with an acceptable substitute, one sees the possibility of a very small change making a big difference in the amount of tetanus poisoning observed (Hauck, 1956:41). One should then ask the midwives to watch as to whether the new method reduced the infection called "death because of a red or green face and clenched fists."

262 In diet "the concept that a good choice of food is important to the health of both mother and child" (Hauck, 1959:2) was very much shared by modern science and by traditional ideas but the basis of choice was entirely different.[77] Modern science has ascertained that certain foods are [261] beneficial because of certain nutrients, while old beliefs have set up certain foods as desirable because of properties of heating, cooling, compatibilities with the elements, etc. The nature of these properties should be collected and listed. If dietary deficiencies in Bang Chan are noted, the foods that combine the needed beneficial qualities in both systems should be stressed. A hot-tasting tonic (yā) with appropriate dietary supplements, to be taken daily during pregnancy, and another kind during the post-partum period, might be acceptable. The period of the fire-rest is the best 372 place to initiate dietary changes for whatever is done by 846 the fire becomes a habit beneficial to mother and child. The use of boiled water should be encouraged as "making for [illegible]gth." Again, disturbance of customs is minimized, and the presence or absence of "increased strength" and healthiness can be observed experientially.

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77. Hauck felt the concept was lacking, but it appears only that the grounds of choice were different.

The Muslim khwan khao contained 7 items"--a young (or ripe) coconut with its water; thread or "a skein of yarn"(used not to tie in the khwan but "for the teacher"); 7 pieces or areca nut; 7 betel pepper leaves; one "heavy" (15 gram) yellow wax candle; one "bag" of incense; rice; and 30 baht in money.[78] The khwan khao was not offered with the idea of its reaching phra In (Indra) ultimately, but rather the local princely spirits of the land, chao thi, chao thān, and Mae Thoranī (Mother Earth). It was waved 3 times by the midwife over the abdomen of the woman in labor with the prayer: "Spirits of the land, Mother Earth, may the delivery be easy!" The khwan khao was then placed at the mother's head. The woodpile was knocked over so as to point to Mecca, which was west, a direction avoided by the Buddhists. "When nearly ready to deliver, a Muslim midwife turns the mother's face in the direction where the family's hens hatch their chicks. If they have no chicken, then in any direction."[79] If delivery were slow, a Buddhist nō was called to "shift the mother to new places" until the baby came out.

Muslim women lay post-partum by a fire for the usual physiological reasons. In making up the fireplace, instead of a cluster of incense, flowers, and a candle, this purely Hindu-Brahman-Buddhist trio, they sprinkled salt "to keep away evil spirits" on the dirt at the corners. Salt, oil, or alcohol was spewed over the fire and the woman's body, or only magic was recited, "to control the poison of the fire." "Of these, salt is best," said a Muslim midwife, but "whichever a midwife used first has to be continued for the rest of her life as her way of doing things, because the habit has been started that way." The Muslim magic for controlling the fire was "ōm ming ōm fun ōm fai sawā hai." "So be it, stove, rocks (or mountains), fire, be cool, may a blessing rest to you," though "ōm" is the Pali-Buddhist "mystical word." The placenta was not put in a pot beside the fire, but was washed by the midwife several times until perfectly clean, then was mixed with salt and buried in the dirt directly under the fire. When the fire was finally destroyed, the placenta was dug up, washed again, and immediately buried (not in a pot), with the

78. There was some evidence that the thread and incense were included only when a Muslim midwife was delivering a Buddhist woman.

79. To the Muslims this was an act of imitative magic. The Buddhists saw the action of a setting hen as a quick source of information for the parturient's orientation. The hen always avoided the direction of the phī luang (Textor:378).

births, until with the seventh child it might be dispensed with altogether without harm. In Bang Chan women who observed (2)juu (1)faj rested for an odd number of days, from 5 to 15 in this series. Seven or 9 days was most common. An odd number of days was considered good; an even number, bad. A wood fire was customary, although in 2 instances a charcoal brazier was used. One woman lay near a charcoal brazier and used a hot ashes chamber[1] also. With one exception (a non-Thai), even those who did not lie by the fire, but who used the hot ashes chamber, rested an odd number of days.

The traditional ideas on which the custom of lying by the fire was based were described in the Bangkok Calendar (Bradley, 1865):

> "The Siamese theory in regard to the part, which external and internal fire plays in the functions of life and health, is made to work powerfully in these circumstances. It teaches that there is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in the circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child."

The author, however, attributed deficiency in milk production to the practice of lying by the fire:

> "Now it is very remarkable that these last sequences, which are guarded against at so much expense of ease and comfort by the custom, are postively and directly brought about by following it. The mothers have but little milk for their babes during the month, and that of a poor quality. Consequently the attendant nurses have to feed them from the hour of their birth with honey, rice-water, and the pulp of soft bananas. This is their almost entire living for the first two or three days, and a large portion of it during the first month."

Of the 5 women we interviewed who did not lie by the fire, 3 used a hot ashes chamber regularly throughout the postpartum rest period, one used it occasionally, and one used both the hot ashes chamber and a hot water bottle. This latter woman

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1. A small metal box in which sticks of fuel were burned. The box was wrapped in cloth and placed on the mother's abdomen.

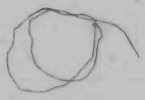
7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

On the other hand, there are scores of items that have to be bought for daily consumption. These are: (a) Food -- fish, fish sauce, shrimp paste, meat, coconut, onions, garlic, dried chili, curry essence, limes, tamarind, palm sugar, white sugar, salt, and cookies: (b) Stimulant -- dried areca, betel, lime, tobacco, tobacco binder, and liquor; (c) Clothing; (d) Medicine; (e) Soap; (f) Fuel -- Kerosine, matches, charcoal, and fire wood. The list includes only standard items appearing on our check list. Actually, there are more of such items as coffee, tea, lemonade, coca-cola, and pepsi-cola. Articles that are bought but do not appear on the check list for ordinary household expenses for certain technical reasons which will be discussed in the section on consumption later in this chapter are building materials, machinery, farm equipment, furniture and household utensils.

The Operator's Remuneration and Measures of Success

From almost the beginning of the study of farm management in the United States, much effort has been given to measuring the success of farming businesses, or of farm-family undertakings or enterprises, and then of correlating various factors with these, such as size of business, yields per acre or per animal, or work-efficiency measured perhaps as crop acres per man or per horse or per tractor, with a view to discovering some general farm management principles or rules for a farmer or farm family to follow in becoming more successful. Black, Clawson, Sayre and Wilcox give the

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan



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511 needs at least two work suits in each rice season, one during the field preparation and another during the harvesting season.

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511 Kerosine is used every day for lighting purposes. We do not include in this category kerosine which is used in the farm work; but that used with the pressure lamp in fishing by spearing during the night is included in the ordinary household expenses, for we do not consider fishing as a farm enterprise but as a routine activity participated in by all Bangchan residents, farmers and non-farmers alike.

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511 Contributions to neighbors is a necessary item of expense in the village. These are cash gifts made by invited guests to the sponsor of such rituals as ordination, cremation, marriage, topnotch-cutting, and teacher worship. [792] [764] [535] These rituals usually take place during the dry season following harvesting when cash is abundant in the village and are always followed by feasts, not uncommonly in a series of two or three days. Since all these rituals necessitate the participation of the priests, they have to be arranged in consultation with the temple to avoid conflicting schedules. Although few rituals have been noted to be in conflict with one another, usually they are spread throughout the dry season and most people are able to attend rituals to which they are invited. In cases where they cannot attend in person, they are obliged by conventional requirement to send in their cash contributions. The standard cash contribution is 5 - 10 baht. Usually, a

Bang Chan Canal bisected the community and joined, about one mile south, Sāensaēb Canal, a broad old waterway connecting Bangkok and Mīnburī with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Mīnburī, two miles east, cut through one side of the area. On it lay Bang Khūat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō pēet," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Mīnburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Mīnburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Mīnburī, Kilō pēet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoē), one located in Mīnburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

1. A new large school has since been built away from the temple compound.

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*178 The Innovations

243 A. Agricultural Innovations: During the past few years,
493 certain innovations have come to Long Chan which have increased agricultural productivity and improved the level of living. Some of these innovations are listed below.

1. The small motor. One innovation is the small engine,
*402 gasoline motor, which is used mainly as a water-lifting device for
*177 irrigation purposes. In 1950 only five small motors were found in
178 Long Chan. Twenty-one per cent of the respondents in the 1953
[244] survey, however, report owning these motors; the majority of the respondents (60 per cent) claim to have used this labor-saving device which is sometimes jointly owned by more than one household and is frequently loaned out.**

2. Straw mushroom growing. Three years ago the com-
244 mercial growing of mushrooms in Long Chan was unknown. By 1955,
434 the practice of growing mushrooms had reached into many homes
*177 (44 per cent of the respondents report that they have engaged in
*178 this activity***). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

One advantage in the culture of straw mushrooms is that it permits quickly realized returns. The cycle, from sowing spores in moistened straw to harvesting the mushrooms, takes about two to three weeks. Another advantage is that there is relatively little heavy work or investment required besides the acquisition of straw and spores. A third advantage is a ready market, for the plant is sought by Chinese dealers in Bangkok who supply hotels and restaurants. Long Chan rice farmers who engage in mushroom growing as a sideline activity sell it either to local middlemen or directly to the Chinese in Bangkok.

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[113] * Sharp, L., H. M. Enoch, K. Janlekha, and H. B. Textor, Siamese Rice Village. A Preliminary Study of Bang Chan. Thailand, Cornell Research Center, June, 1953.

[125] ** The questions: "Do you own a small engine motor or not? (If NO"): Have you ever made use of one in your work?"

[125] *** The question: "Have you ever grown mushrooms, or not?"

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743 *177 *178 **Institutional Care of the Sick:** Equally important as agricultural innovations in raising the level of living of an area such as Bang Chan are the efforts to improve the health and welfare of the population. Since the thirties there has been a clinic in the neighboring market town of Minburi and some Bang Chan farmers used clinics and hospitals in Bangkok before that time. Only about a third (36 per cent) say they have never been to a clinic or a hospital; over a third (37 per cent) have themselves gone for treatment; about one fourth (23 per cent) report having brought a patient there; over one tenth (12 per cent) say they visited relatives there; and a few (3 per cent) say they went there for various other reasons.*

ANALYSIS OF DATA ON AGRICULTURAL INNOVATIONS

121 The central question to which the present analysis directs itself is: What are some of the factors which may be said to account for the fact that certain members of the community are willing to try out these innovations and to continue using them, while others are unwilling even to make the initial attempt? Is there some general pattern to be discerned among the several innovations? Is there any discernible clustering among them; that is, are some community members more "innovation-minded" than others, in the sense that if they try out or accept one innovation they are more likely to accept another? Or are these innovations accepted independently of each other? The following analysis of the survey responses attempts to shed some light on these and related problems.

Factors in Acceptance of Agricultural Innovations

241 * 402 *177 *178 Use of the small motor is basic to acceptance of other agricultural innovations. Although only a minority of the persons of Bang Chan report that they own a small motor, many more used this machine through joint ownership or borrowing. Indeed, knowing whether a person owns or uses such a motor is a useful indicator of his readiness to accept other agricultural innovations. If he owns or has used a motor, then he is about five times more likely than others to try fertilizer, about two and a half times more likely to try raising tilapia, and about one and a third times more likely to try straw mushrooms.

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[125] * The question: "Have you ever been to a clinic or hospital...? In what various places...? For what various purposes did you go ...?"

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TABLE 1. THOSE WHO OWN OR USE SMALL MOTOR ARE MORE LIKELY THAN OTHERS TO TRY OTHER AGRICULTURAL INNOVATIONS (FARMERS ONLY)

	Owns motor	Does not own motor but uses it	Neither owns nor has used motor
(Total cases)*	(70)	(150)	(104)
Have you ever used fertilizer?**			
Yes	18%	14%	3%
No	82	84	97
Have you ever raised tilapia?			
Yes	33%	29%	22%
No	67	71	78
Have you ever grown mushrooms?			
Yes	62%	49%	37%
No	38	51	64

[125]

* The bases on which per cents are computed appear in parentheses at the head of each column in this and subsequent tables. Actually the bases vary by a few cases, table to table, since there were always a few respondents who did not answer a given question or whose answers were unclassifiable.

** Asked of farmers only. The bases are:

Owns motor	63
Does not own motor but uses it	141
Neither owns nor has used motor	82
NA	3

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There is some evidence, then, that if a person is willing to try out one agricultural device, such as the motor, he is more likely to try out other agricultural innovations. However, this "clustering" cannot support the hypothesis that there is something like "innovation mindedness" in general, or that acceptance of any innovation in a series is predictive of acceptance of all other innovations in the same series.

Evidence may be cited to substantiate this contention. In the first place, if such a clustering indeed prevailed, one would expect users of any of these agricultural innovations to be more disposed than others to use, as well, certain non-agricultural innovations, such as hospital or clinic facilities, for example.

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228 and so much tendency may be discerned in the present data. (See
241 Table 2.)
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749 TABLE 2. ITEMS OF HOSPITAL AND CLINIC FACILITIES SHOW NO SIGNIFI-
182 CANT DIFFERENCES IN RATES OF ACCEPTANCE OF AGRICULTURAL INNOVATIONS

Agricultural Innovations	Percentage who have ever gone to hospital or clinic for treatment	Total cases
Mushrooms		
Tried them out	38%	(143)
Never did	38	(188)
Tilapia		
Tried it out	44%	(104)
Never did	34	(223)
Motor		
Tried it out	37%	(213)
Never did	36	(104)
Fertilizer*		
Tried it out	37%	(32)
Never did	34	(232)

* Farmers only

228 In the second place: use of the motor is much less strongly
241 linked to use of mushrooms than the use of fertilizer or tilapia.
244 It may well be that there may be some common factor strongly under-
• 402 lying the decision to use the motor on the one hand, fertilizer and
*177 tilapia on the other, while the decision to try mushroom-growing
*178 is relatively more "autonomous". A possible explanation for the greater "autonomy" may be sought in the differential requirements for growing mushrooms compared with the requirements for adopting the other innovations.

Both tilapia and sulphates demand extra heavy work, care, an essential initial investment, and willingness to wait for a delayed return. An additional requirement for a successful and continuous pay-off from both these innovations may be an aptitude to follow rather complicated instructions. In the case of mushroom growing, however, the initial investment is relatively small, the labor may be tedious but is not heavy, no protracted or complicated care is involved, and the results of the effort are relatively quickly realizable.

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It appears, then, that we may be dealing with two types of innovations, one type (fertilizer and tilapia) where attitude is linked to decision to use it and another (mushrooms) where attitude seems to be unrelated to such use.* And here again may be further substantiation of the greater autonomy of the acceptance of mushroom growing. For, in the case of innovations such as artificial fertilizer and tilapia, it is known that they require investment of funds and labor, risk, delayed return, and departure from well-known ways. It could be that in the face of these disadvantages acceptance will occur only if motivation is high. Acceptors would then be selected mainly from among those who have high motivation and accompanying positive affective feeling. Those who do not have these feelings would, following this reasoning, be less likely to overcome their objections to the disadvantages of the innovation in question.

There is also the second type of innovation like mushroom growing. This innovation is much less "costly" not only of funds but effort. Hence, high motivation and accompanying positive affect might be less influential than other factors--factors quite aside from the crop itself--on acceptance of this type of innovation. Consequently, growers of mushrooms may be recruited equally from persons with favorable attitudes and less favorable attitudes towards this crop.

These findings suggest the more general hypothesis (which might be corroborated by analysis of related contextual data collected in Bang Chan, and by examining equivalent situations in other underdeveloped areas) that: the more complex the innovation, the more effort involved in employing it, the more risk involved, and the less immediate the return, the greater the likelihood that acceptors will be recruited from a selected group of highly motivated people, rather than at random among all persons "eligible" to accept it. If the innovation requires the high motivation which is needed to overcome the disadvantages of investment, work, risk, and rarity, then this attitude toward it is important. If the innovation demands only short-term investment and relatively light labor, then this motivation is of little importance in the decision to try it.

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Sociological Factors in Agricultural Innovation

The decision to use the small motor, once made, tends to accelerate the decision to try out other agricultural innovations, especially fertilizer and tilapia and, to a lesser extent, even mushrooms.

* Both mushroom growing and tilapia raising are sideline activities to the Bang Chan rice farmer and are, therefore, comparable in this respect.

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228 mushrooms. The following section searches for sociological factors
241 linked to these decisions. For example, are the well-to-do farmers*
244 more apt than the less well-to-do to adopt agricultural innovations?
To what extent is literacy a factor in acceptance of innovations?
To what extent do differences in literacy, communications habits,
cultural contacts and urban orientation account for tendencies to
adopt or reject these changes?

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[125] The following analysis has been made, in most cases, for male farmers only. The distribution of initial acceptance among the three groups of male farmers, females, and male non-farmers is given in the following table.

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TABLE 6. USE OF AGRICULTURAL INNOVATIONS AMONG THREE GROUPS OF LAKE CHAD VILLAGERS

	Male Farmers (211)	Male Non-farmers (81)	Females (32)
Tried motor	71%	61%	48%
Didn't try	29	39	52
Tried mushroom growing	66%	35%	41%
Didn't try	34	65	59
Tried tilapia raising	33%	25%	31%
Didn't try	67	75	69
Tried fertilizer	15%	7%	oo
Didn't try	85	93	

oo Asked of farmers only.

It is apparent, as one would expect, that it is mainly the farmers who try these innovations. Relatively few women (with the exception of tilapia raising) and even fewer non-farmers say they have tried them. Since the absolute number of acceptors among women and non-farmers is too small to bear the separate treatment which would be essential to analyze the factors influencing the use or non-use of innovations, they have been excluded from the following presentation, which refers, thus, to male farmers only.

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Decisions to use all these innovations--with the possible exception of the use of fertilizer--seem to be more widespread among the upper economic levels of the population. (See Table 8.) One wonders whether the initial link between use of the motor and readiness to try the innovations may actually disguise a more basic relationship based simply on ability to afford the investment and the risk.

TABLE 8. FARMERS* ON HIGHER SES LEVELS ARE MORE LIKELY THAN OTHERS TO HAVE USED THE MOTOR, TO HAVE GROWN MUSHROOMS AND TO HAVE RAISED TILAPIA

	Ownership of Buffaloes	
	2 or less (99)	3 or more (112)
Used motor		
Own	9%	37%
Use	33	45
Neither	41	18
Grow mushrooms		
Yes	30%	60%
No	70	40
Raised tilapia		
Yes	26%	42%
No	74	58
Used fertilizer		
Yes	12%	17%
No	78	83

* Male farmers only

The following table presents again the initial relationships between use of motor and readiness to try out other innovations. But this time the link is examined separately for persons on the different economic levels.

Table 9 was made by first dividing the population into two groups, those from high and those from low economic levels. The resulting two groups were then further subdivided on the basis of whether they owned (or used) a motor or whether they did not. In each of the four resultant groups the percentage that raised tilapia was then calculated. Thus among those of high economic level who own or use motors, 45 per cent raised tilapia, and we infer that 55 per cent did not raise tilapia. The same procedure was repeated to ascertain the percentage that has tried fertilizer and subsequently the percentage that has tried mushroom growing.

This table shows that in tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertilizer holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic level	
	High*	Lower**
Owns or used motor (Proportion who have raised tilapia)		
Yes	45% (89)	33% (37)
No	23 (31)	17 (40)
Owns or used motor (Proportion who have tried fertilizer)		
Yes	20% (89)	14% (37)
No	3 (31)	* (40)
Owns or used motor (Proportion who have tried mushroom growing)		
Yes	40% (89)	30% (37)
No	17 (31)	23 (40)

* Three buffaloes or more
** Two buffaloes or fewer

[231]

LITERACY

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

125 he could write, could only sign his name, or could do neither.* Those who said they could write a letter are considered here to be
212 literate. All others are grouped together as illiterates or on a low level of literacy.

212 The literacy rating was tested for validity as follows: in
Long Chan literacy is known to be related to age. Ever since
872 1935** there has been a school in the community. Since that date
125 school attendance has been compulsory. Attendance has been fairly full for the last twenty years, but most older residents have never had the opportunity for formal schooling.

212 The survey data reflect this correlation between literacy and
*177 age. Among farmers under 40 years of age, only 16 per cent were
*178 rated as illiterate or barely literate by the survey criterion; while 59 per cent of those of 40 years or older are rated as illiterate. Thus one can have reasonable confidence in the survey
561 response as a rating of literacy.

TABLE 10. LITERACY OF FARMERS DECREASES WITH AGE

	Age	
	Under 40 yrs.	40 yrs. or more
Literacy		
Illiterate	16%	59%
Literate	84	41
Total cases	(79)	(131).

*177 Literacy is linked discernibly to acceptance of the water and
*178 mushroom growing. The proportion of literate farmers who have tried the water is twice as high as the corresponding proportion among those who are illiterate. It is less strongly linked to the
228 decision to grow mushrooms, and is, at best, weakly linked to the
241 decision to raise tilapia or to use fertilizer.
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212 * In addition, interviewers asked respondents who said they could write to demonstrate it by writing something on the ques-
* 402 tionnaire.

** See Siamese Rice Village, op. cit.

[125]

TABLE 11. LITERATE FARMERS* ARE MORE LIKELY TO HAVE USED THE MOTOR AND TO HAVE TRIED MUSHROOM GROWING

	Illiterate (Cannot write a letter) (92)	Literate (Can write a letter) (114)
Motor		
Own	16%	26%
Use	35	60
Neither	48	14
Mushrooms		
Have tried	39%	53%
Have not	62	47
Fertilizer		
Have used	12%	17%
Have not	88	83
Tilapia		
Have tried	29%	39%
Have not	71	61

* Male farmers only

If Bang Chan were like certain areas of the United States and Europe, it might be objected that such a relationship between acceptance of innovations and literacy reflects a spurious link with economic level: that illiterates tend to come from the economically deprived strata of the population; hence an observed relationship with literacy may actually reflect the initial correlation with economic level. In Bang Chan, however, this is not the case. A Bang Chan farmer who is well-to-do is as likely to be illiterate as literate, as is illustrated by the table below.

TABLE 12. LITERACY AND ECONOMIC LEVELS ARE UNRELATED IN BANG CHAN*

	Literacy: Low (91)	Literacy: High (119)
Economic Level		
Low	48%	36%
High	52	64

* Male farmers only

Hence the correlation between use of innovations and literacy may be taken at face value and does not reflect a spurious link with economic level.

6: Goldsen and Rolia Z-4.5 (1958) 1957
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Communications Media

With the increasing use of mass communications, the community member is exposed to sources of information other than the printed word. Ownership of radios has nearly tripled in about five years (in the 1955 survey radios were reported in 14 per cent of the households, whereas in 1949* only 5 per cent of the households reported owning a radio). Quite apart from ownership, radio listening is widespread; less than one-fifth of the people in Bang Chan claim they never listen to the radio (18 per cent). Motion pictures are also popular. Only one-tenth claim to having never attended a movie, while half (49 per cent) say they have seen motion pictures more than ten times.

There is, of course, a strong relationship between exposure to one of these media and exposure to the other. Table 13 below indicates that the majority (64 per cent) of respondents who listen to the radio likewise report frequent movie attendance. Similarly, the majority (67 per cent) of those who say they never listen to the radio, reported that they go to movies rarely or never.

TABLE 13. EXPOSURE TO RADIO AND MOVIES AMONG RICE INTERRELATION

	Radio Listening		
Movie Attendance	High Exposure (regular or occasional listeners) (111)	Low Exposure (listen seldom) (148)	No Exposure (60)
High exposure (10 times or more)	64%	31%	13%
Medium exposure (4 to 9 times)	19	17	21
Low Exposure (0 to 3 times)	16	31	67

Exposure to the communications media is strongly linked to acceptance of a basic innovation such as the motor. It is not directly linked to acceptance of the other agricultural innovations (fertilizer, tilapia, mushrooms). Respondents who report frequent exposure to radio listening and motion picture attendance are significantly more likely than others to say they own or have used the motor. (Among daily radio listeners 88 per cent report use of the motor; and this proportion declines steadily until among those who never listen, only 44 per cent use the motor; for movies, the corresponding proportion of users ranges from 74 to 36 per cent.)

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* Siamese Rice Village, op. cit.

TABLE 14. HIGH EXPOSURE TO COMMUNICATIONS MEDIA IS LINKED TO ACCEPTANCE OF THE MOTOR

	Exposure to Radio			
	High			Low
	Listens Daily (43)	Listens Occasionally (66)	Listens Seldom (148)	Never Listens (60)
Small Engine Motor				
Used it	81%	78%	64%	48%
Didn't use it	13	22	36	34

	Exposure to Movies			
	High			Low
	Ten times or more (51)	4-9 times (60)	1-3 times (75)	None (33)
Used it	[illegible]%	69%	59%	36%
Didn't use it	[illegible]	31	31	64

Of course it is important to check whether these relationships hold true when people of different economic levels are examined separately; for literates as well as for illiterates. We infer that the basic link between use of the motor and exposure to the media of communication holds for literate as well as illiterates; for poorer as well as for richer farmers. More specifically, the relationship between exposure to the communications media and decision to use the motor is even more marked for less well-to-do and for the illiterate farmers, in contrast to the better-off farmers and those who can read and write.

TABLE 15. EXPOSURE TO MOTION PICTURES IS LINKED TO ACCEPTANCE OF MOTOR ESPECIALLY FOR THE ILLITERATES AND FOR THE ECONOMICALLY LESS WELL-OFF*

	Exposure to Motion Pictures			
	High		Low	
	(Percentage Using Motor)			
Economic Level				
Low	76%	(47)	44%	(32)
High	83	(44)	73	(48)
Literacy				
Illiterate	63%	(36)	44%	(35)
Literate	89	(77)	83	(41)

* Male Farmers Only

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TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Pattern	
	With hands (342)	With fork and/or spoon (64)
Listens to radio		
Regularly (daily)	10%	23%
Occasionally	17	28
Seldom	51	35
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	13
2 - 4 times	29	23
5 or more times	28	55

When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive to urban influence are twice as likely as others to use fertilizer (21 per cent versus 9 per cent), one and a half times as likely to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per cent versus 61 per cent). There is no noticeable relationship, however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for those on high as well as low economic levels and also for the literate as well as illiterate farmers.

TABLE 17. VILLAGERS RESPONSIVE TO URBAN PATTERNS ARE MORE LIKELY THAN OTHERS TO USE AGRICULTURAL INNOVATIONS

Agricultural Innovations	Eat with fork and/or spoon	Eat with hands
Artificial fertilizer		
Tried it	21%	9%
Never did	79	91
Total cases*	(69)	(218)
Mushrooms		
Tried growing	57%	39%
Never did	43	61
Total cases	(84)	(242)
Small engine motor		
Own one or have used it	82%	61%
Never did	18	39
Total cases	(84)	(242)

* For farmers only; excludes all non-farmers

TABLE 18. ACCEPTANCE OF URBAN PATTERNS IS LINKED TO ACCEPTANCE OF MOTOR AND MUSHROOM GROWING, IRRESPECTIVE OF ECONOMIC AND LITERACY LEVELS

	Economic Level				Literacy Level			
	Low		High		Illiterate		Literate	
Acceptance of urban patterns	(Proportion who used motor)							
Eat with hands	55%	(77)	76%	(73)	47%	(73)	83%	(76)
Fork or spoon	75	(20)	89	(34)	69%	(16)	90	(38)
	(Proportion who tried mushroom growing)							
Eat with hands	28%	(77)	58%	(73)	38%	(73)	47%	(76)
Fork or spoon	45	(20)	65	(34)	44	(16)	66	(40)
	(Proportion who used fertilizer)							
Eat with hands	11%	(77)	13%	(73)	10%	(73)	14%	(76)
Fork or spoon	19	(20)	28	(34)	3	(16)	23	(40)

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Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 16.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

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One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

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484

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)		Twice or more (Proportion who own or use the motor)	
Illiterate	44%	(40)	58%	(31)
Literate	83	(36)	88	(83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

*178
212
369
• 402
484

as apt to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	30%	(40)	84%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	50%	(67)	85%	(74)
One or more	37	(34)	88	(45)

[562]
[241]
[238]
[244]

*Male farmers only

However, no such relationship was discerned between these culture contacts and trying out either fertilizer, tilapia, or mushrooms.

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Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

*178
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Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

[402]
[228]
[241]
[244]

The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertilizer or mushrooms.

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[125]

TABLE 21. INCIDENCE OF MOTOR USE IS HIGHER AMONG VILLAGERS WHO REPORT WIDER SOCIAL CONTACTS

	Social Contacts ("...do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?")	
	"More" or "the same" (143)	"Fewer" (55)
Motor		
Has used it	77%	59%
Never did	23	41
Tilapia		
Has tried it	39%	21%
Never did	61	79
Fertilizer		
Has used it	16%	11%
Never did	84	89
Mushrooms		
Has tried them	49%	40%
Never did	51	60

[212]

Once again, however, when this link between breadth of social contacts and use of the innovations is examined separately for the literate, compared with the illiterate farmers, we find further substantiation of the previous finding that under certain circumstances contact may act as a substitute for literacy in acceptance of complex innovations. For, although the link between social contacts and use of tilapia remains constant for literate as well as illiterate farmers, it is mainly for those who are illiterate that exposure to wider local social contacts is associated with greater incidence of motor use.

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TABLE 22. AMONG ILLITERATE FARMERS USE OF MOTOR IS LINKED TO WIDER SOCIAL CONTACTS

	Exposure to Influences of Others	
	Have more friends or about the same	Have fewer friends
	(Proportion who tried small motor)	
LITERACY		
Illiterate	64% (36)	26% (27)
Literate	87 (86)	84 (70)
	(Proportion who tried tilapia)	
Illiterate	34% (36)	15% (28)
Literate	43% (86)	26 (27)

[369] This finding corroborates and expands the previous discussion of the culture contact and acceptance of innovations. Exposure to influence of others from outside the community (through contact with the city, with the airport, with the agricultural fair, for example), as well as exposure to the influence of others from within (through friends and associates) closely relates to the decision to use an innovation such as the motor. Its effectiveness is not felt equally by the whole population, mainly instead, by those who are illiterate.

The significance of these internal and external contacts to illiterates may be that through such contacts they are likely to gain needed information and motivation which, if one can read and write, is available through other sources. If one cannot read and write, however, it is the outside world which provides this kind of needed information.

Capital Investment and Debt

426 Bang Chan's economy is largely a money economy and many farmers avail themselves of credit facilities through professional money lenders. Most loans are sought for the purpose of replacing capital equipment and purchasing land and buffalo.*

The present survey secures a rough measure of the extent of such borrowing in Bang Chan. The majority of farmers (39 per cent)

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[113] * See Janlekha, Kamol O. A Preliminary Study of the Economic Conditions of Siamese Rice Farmers in Bang Chan, Thailand. M.S. Thesis Cornell University. 1951, p. 73.

6: Goldsen and Ralis Z-4.5 (1955) 1957
AO7 Central Thai AO7

admit in response to a direct question* that they have a debt. Confidence in the validity of these responses as an index of indebtedness is increased since the expected correlation between indebtedness and ownership of buffalo is reflected in the survey data.

TABLE 23. INCIDENCE OF REPORTED DEBT IS HIGHER AMONG VILLAGERS WHO REPORT OWNERSHIP OF MORE BUFFALOES

	Reported Ownership of Buffaloes		
	None (81)	One to three (153)	Four or more (97)
"...Do you now have a debt?"			
Yes	49%	56%	69%
No	51	44	31

When the use of agricultural innovations is examined for those farmers who say they have a debt, compared with those who deny it, it becomes apparent that there is a relationship only between indebtedness and use of the motor but not with any of the other mentioned innovations. Seventy-nine per cent of the male farmers who said they have a debt own or use the motor; among those who claim they have no debt the proportion owning or using the motor is significantly less (60 per cent).

TABLE 24. INCIDENCE OF MOTOR USE IS HIGHER AMONG FARMERS WHO REPORT INDEBTEDNESS

	"...Do you now have a debt?"	
	Yes (125)	No (105)
Motor		
Has used it	79%	60%
Never did	21	40
Tilapia		
Has tried it	37%	33%
Never did	63	67
Fertiliser		
Has used it	14%	16%
Never did	86	84
Mushrooms		
Has tried them	45%	48%
Never did	55	52

"Male farmers only

* The question: "...I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?" Janishha's M.S. thesis, ibid., reports a similar distribution of indebtedness for his sample of 94 farmers.

30

*178
426
402 One is tempted to speculate about the significance of this relationship. One possibility deserves further investigation if the data were only available. If one important reason for incurring debts is to secure or to replace capital equipment, then those farmers more willing to make a capital investment, even though they incur a debt, are more likely to use the motor. Conversely, farmers unwilling or unable to contract debts for a basic improvement in their capital equipment might be the ones less likely to adopt an innovation such as the motor.

Other Factors

121 A number of other factors which conceivably might have been expected to differentiate those who tried out these innovations from those who never made an attempt to use them were investigated and proved to have no differentiating power. Factors such as age and family size, for example, were examined to see whether differential acceptance existed among younger compared with older age groups, or small as compared with large families. No such differences appeared. In the same way, the survey's rough measures of community integration and identification, certain religious beliefs and superstitions, certain personality traits, of knowledge of political figures, and willingness to perform industrial work likewise revealed no differential rates of acceptance when groups were compared.

*178 USE OF MODERN HEALTH FACILITIES
743
75 Improvements in agricultural production must certainly not be viewed as the only efforts worthy of attention to raise the level of living in Bang Chan. Equally important are efforts to train the population to use modern health practices and facilities.

Hospitals have been available since the twenties in Bangkok and a clinic in Minburi since the thirties. Despite these facilities, much curing continues in the traditional way through priests or certain farmers of the locality who have learned from other practitioners to compound medicines, set bones, deliver babies and expel demons.

743 In the present survey the majority of respondents reported
[125] that they have sometimes in their lives used hospital or clinic facilities. To the question, "Have you ever been to a clinic or hospital?" 63 per cent answered affirmatively. Less than half of those who replied indicated having gone for their own treatment or hospitalization, the remainder for other reasons. The distribution of responses is given below.

* 178
743 Use of Health Facilities and Other Factors Associated With
241 Agricultural Innovations
572 Although use of the basic agricultural innovations was shown
426 to be linked to breadth of contacts within the community, on the one hand, and to indebtedness, on the other hand, the association between these factors and use of modern health facilities, although showing the same tendency, is not statistically significant. For the sake of completeness, the figures are reported below:

TABLE 34. NO RELATIONSHIP BETWEEN INDEBTEDNESS OR INTERNAL SOCIAL CONTACTS AND USE OF HOSPITALS AND CLINICS

	"Have you ever been to a clinic or a hospital?"			
	No, never	Yes, for treatment	Yes, for other reasons	Total (100%)
Social Contacts				
"More friends"	31%	39%	36%	(82)
"The same"	40	33	27	(134)
"Fewer friends"	33	41	27	(94)
Do you now have a debt?				
No	42%	33%	25%	(140)
Yes	33	41	26	(192)

* 177
* 178
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SUMMARY

1. In the community of Bang Chan in Central Thailand, various factors are studied statistically in order better to determine the conditions of acceptance of selected agricultural innovations and conditions for using the facilities of modern medicine in clinics and hospitals. Four agricultural innovations were selected, viz. gasoline motor, raising of fish (tilapia), use of fertilizer, and mushroom culture.

2. The present study was concerned with the initial adoption or trial of innovations, rather than the continuing use of these innovations or the merging of the new with the old features of the culture.

3. While adoption of the gasoline motor was associated with all other agricultural innovations, no generalized acceptance of the new was found because: a) adoption of the gasoline motor bore little or no relation to use of non-agricultural innovations such as hospital and clinic facilities; and b) adoption of gasoline motors was only weakly associated with raising of mushrooms.

4. A cluster of traits including high motivation and sizable capital outlay was associated with the use of the gasoline motor.

7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things?

1.	Fertilizer	9
2.	Small engine	4
3.	New rice seeds	3
4.	Tilapia	78
5.	Other fish, specified	13
6.	Fish, unspecified	83
7.	Mushrooms	5
8.	Poultry	179
9.	Pigs	11
X.	Other, specify	8
0.	Unascertainable	45

9. Here, some farmers get a lot more rice from one rai of land than others get. Generally speaking, what are the various reasons why this is so?

1.	Fertilizer	99
2.	Skill of the farmer	63
3.	Quality of the soil	66
4.	Irrigation facilities	129
5.	Type of seed	17
6.	Other reason, specify	
		53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago?

1.	This past year	111
2.	No difference	37
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	34
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	8
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertilizer	
X.	Other, specify _____	25
7.	Unascertainable	2

10.a. Do you own a small engine motor, or not?

1.	Yes	70
2.	No	859
—	No Answer	4

125
[402]

b. If no: Have you ever made use of one in your work, or not?
1. Yes 145
2. No 106
5. Unascertainable 8

11. What is your opinion about fertilizer?
(Use code at end)

[241]

12.a. IF A FARMER: Have you ever used fertilizer or not?
6. Does not apply 27
7. Yes 38
8. No 139
— No Answer 12

b. IF HAS NOT USED FERTILIZER: For what various reasons have you not used fertilizer?
(Use code at end)

c. IF HAS USED FERTILIZER: Have you ever used fertilizer in your seed-beds or not?
9. Yes 20
X. No 13

d. IF HAS USED FERTILIZER: To what extent have you used fertilizer on your fields? On all your fields, or on the larger part of your fields, or on the smaller part of your fields?
1. On all fields 4
4. On larger part of fields 1
3. On minor part of fields 15
4. Unascertainable 1

13. What is your opinion about mushroom growing?
(Use code at end)

[244]

14.a. Have you ever grown mushrooms, or not?
1. Yes 143
2. No 188
— No Answer 2

b. IF NO: Do you have any relatives or relative-like neighbors, who have grown mushrooms or not?
3. Yes 141
4. No 44
5. Unascertainable 4

15.a. What is your opinion about tilapia raising?

[228]

b. Have you ever raised tilapia, or not?
1. Yes 104
2. No 225
— No Answer 4

125
[412] 50.d. (In your household) is there a pair of scissors of any kind or not?

7.	Yes, scissors	219
8.	No	114

[207] e. (In your household) is there a radio or not?

9.	Yes, radio	47
0.	No	286

[402] f. (In your household) is there a winnowing machine, or not?

X.	Yes, winnowing machine	102
Y.	No	231

[243] g. (In your household) is there a windmill, or not?
[402]

1.	Yes, windmill	161
2.	No	172

[805] 51. Do you have a wrist watch, or not?
[405]

3.	Yes	79
4.	No	252
—	No Answer	2

[231] a. Here in your household, how many buffaloes do you own?

5.	None	81
6.	One	27
7.	Two	67
8.	Three	61
9.	Four or more	97

b. (Here in your household) how many pigs do you have?

0.	None	321
1.	One	2
2.	Two	2
3.	3 or more	1
—	No Answer	7

[235] c. (Here in your household) how many chickens do you have?

4.	None	35
5.	1 to 2	7
6.	3 to 4	17
7.	5 to 9	31
8.	10 or more	243

d. (Here in your household) how many ducks do you have?

0.	None	208
1.	1 to 2	9
2.	3 to 4	16
3.	5 to 9	58
4.	10 or more	42

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243

Processes of rice production	List of equipment used
Repair dikes	Shovel, spade, hoe
Break and level soil	Plow, harrow, roller, yoke
Irrigation and drainage	Windmill, engine, noria, spade, shovel, hoe
Weeding	Weeding knife, hoe
Harvesting	Sickle
Hauling	Boat
Threshing	Pitchfork, rake, broom
Winnowing	Wooden winnowing spatula, winnowing machine
Storing	Basket, mat bin, box bin

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Most of the equipment enumerated above were indispensible on rice farms. Only where there were substitutions -- for example, the windmill and the internal combustion engine, and the wooden winnowing spatula and the winnowing machine -- either the less costly but more labor using or the more costly but less labor using instruments might be used. It was observed however, that while the less affluent farm operators were able to use the less costly of these irrigation and winnowing equipment, the affluent farm operators kept both and utilized each appropriately. When only a small amount of water was needed in the field, for example, they might use the windmill although the engine was available, because the windmill was already on the field and it was only a question of hitching the noria to it while the use of the engine involved heavy hauling and some extra cost of fuel.

As a matter of fact, both the windmill and the engine were not absolutely indispensable. In 1948, it was found

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 312 402 that of the total of 104 farms under the survey, 77 farms were equipped with either or both of these major irrigation equipment and 37 farms did not have any of these. It was found also that the average yield of farms with irrigation facilities was 32.2 tang per rai as against 30.7 tang of farms without irrigation facilities. It must be noted, however, that Bangchan farmers reported that the water condition of the 1948-49 crop year was ideal for rice growing, one which occurs only once in a life time. Farmers unequipped with irrigation facilities were thus not as much handicapped as they would be in the less favorable years. Moreover, it has been a customary practice for farmers who had enough water in their fields to drain excess water into the fields of their neighbors who need some water. If the neighbors still need more water, they may get a free use of the windmill which has completed its service for the year to its owner. Thus in a good year, a windmill owner would have less use of the instrument which in turn becomes more available to neighboring farmers. In a drought year, on the other hand, the owner uses more of his windmill, and prospective borrowers have a slim chance to use the instrument. It would appear, then, that if the survey were conducted in a drought year, the disparity between the average yield of farmers owning irrigation facilities and of farmers not owning ones would be much larger than 1.5 tang per rai as was the case for the crop year 1948-49.

243 312 We may thus group farm equipment according to their relative degree of indispensability as follow:

annual depreciation of the equipment in question. In cases where the equipment still had some market values at the end of their servicable lives, these residual values were first deducted from the original costs before they were divided by the length of service. The most complicated cases were those of chala and mard boats and the noria, which involved annual maintenance and minor repair as well as periodical major repair in say every four or five years before they were finally and totally worn out at the end of their rather long services of from twenty to fifty years. In each of these cases, all items of such expenses -- annual maintenance and minor repairs as well as periodical major repairs -- were added to the original cost and the total was divided by the entire length of service in order to arrive at the annual depreciation figure.

With few exceptions, all farm equipment enumerated above have been used by Thai farmers for centuries. Thus, since the establishment of the village there has been no change in the use of such basic agricultural tools as the plow, harrow, hoe, weeding knife and sickle. Moreover, it may be said also that there have been only slight modifications, if any at all, in these equipment during the long course of their usage. The plow, harrow, or sickle which is now being used in Bangchan is perhaps of the same type and appearance as would have been seen centuries ago.

Standing in contrast to these basic agricultural tools, the first known propeller windmill in Thailand, according to testimonies by Bangchan informants, was invented by Nai Yong

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

A243 197 178 402

Manichaem of KY8 in 1940. An official report to the Director of the Department of Agriculture in 1940,[2] however, gives the credit to Nai San of Lard Buakhao, Minburi, who lived only four miles to the south of Manichaem's home. The buying up of gasoline engines by the Japanese during the occupation period served to facilitate the spread of this device. Gasoline engines probably came to the village about 1930 or slightly later. In 1948, there were five engines owned by Bangchan residents. Because of the exceptionally good water condition of that year, these engines were not used in rice production. They were not, therefore, included in our calculation of the cost of producing paddy in 1948. It was observed that their use was limited to fishing by the draining method. The winnowing machine, which utilizes a hand-operated fan arrangement, is relatively new. It is rather expensive, costing an average of 498 baht. Only 21 out of the 104 farmers in our 1948-sample could afford to own it, the rest being obliged to use the traditional winnowing method of simply tossing the grains into the air by wooden spatula and letting the wind carry away the chaffs.

According to historical improvement, farm equipment may thus be categorized as follow:

A. Old simple tools without any modification:

Shovel, spade, hoe, plow, harrow, roller, yoke, weeding knife, sickle, boat, pitchfork, rake, broom, wooden spatula, basket, mat bin, box bin.

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2. Submitted by Yingsakdi Israsena and Kamol Janlekha.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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402

B. Old equipment with slight modifications:

Noria (larger ones are now used because they are more adapted to windmills than smaller ones to which human energy was applied in the old days).

C. Recently employed equipment, mostly labor saving devices:

Gasoline engine, first used in Bangchan in 1930 or slightly later.
Winnowing machine, relatively new, date of introduction into the village not certain.
Propeller windmill, allegedly invented in the village, first used in 1940.

On the whole, it may be said that very few improvements have been made in farm equipment. For this, two opposing explanations may be advanced: (1) Little attention has been paid in the past to farm equipment, resulting in continual using of primitive implements which are inefficient and could be improved if enough attention and effort along the line were given; (2) These basic farm equipment are functionally efficient although they may be simple in form -- the fact that there has been no structurally change in the past few hundred years means that they have successfully stood the test of time rather than that the effort to improve these equipment has been lacking.

The author reserves his judgment on the validity of either of these two explanations, for scientific study of rice farm equipment in Thailand on which proper judgment may be based is not known to him.

Draft Animals

231 In Bangchan, as in most of the rice producing areas of the country, only one kind of draft animal is used -- the buffalo. This subject has already been dealt with in the

124 On the basis of experience during the pretest, the ob-
125 server began the 24-hour period of observation with an unannounced visit in the afternoon, in time to see the preparation for the evening meal. This proved to have several advantages. A householder whose home had been visited at the evening meal, [illegible] who anticipated the observer's return before breakfast, could restrain the dog, if necessary; or the homemaker might postpone washing the rice until the observer arrived to weigh it. Without such cooperation on the part of the homemaker, our records would have been much less complete
[408] than they were. Since few village families had clocks, the time when the homemaker said she would start breakfast was always approximate.

125 Foods were weighed in both the raw and cooked states,
262 and foods given to priests, fed to animals, left over, etc. were weighed so that the actual amount eaten by the family could be calculated. Previously cooked foods included in the survey meals were weighed and raw weights estimated from information obtained in other observations. If possible, snacks were weighed. School children and others who ate snacks away from home were asked to report them to the obser-
128 ver, and weights were estimated. The guides prepared for
262 the observer are included in Appendix C, pp. 110-111. Data were recorded on the schedule, shown in Appendix C, pp. 116-120. and essential information such as the weights of food, after allowing for weight of containers, was later transferred to the shorter form shown in Appendix C, p. 121. As examples some of the data obtained on 3 of the 44 survey days are shown. Examples of notes on procedures in food preparation are included with these records. For examples of notes on the food intake of individuals see Appendix A, p. 97.

Calculation of Nutritive Value of the Diets

Figures from the original records were transferred to the Form for Calculating Raw Weights of Foods Eaten (Appendix C, p. 121), and the edible portion of each raw ingredient consumed was calculated by adjusting the gross amounts according to the use made of the cooked food and the number of family members present. Procedures followed are outlined in Appendix C, pp. 113-115.[1]

Few analyses of Thai foods had been made in Thai laboratories, and most of these were for proximate composition only. Therefore, data from other available sources were used. Since Handbook No. 34 of the United States Department of Agriculture "Composition of Foods Used in Far Eastern Countries" (Leung

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[114] 1. Many of the calculations were checked by Mrs. Mary Barkley Campbell, who made independent use of the data.

125 [412] 50.d. (In your household) is there a pair of scissors of any kind or not?

7.	Yes, scissors	219
8.	No	114

[207] e. (In your household) is there a radio or not?

9.	Yes, radio	47
0.	No	286

[402] f. (In your household) is there a winnowing machine, or not?

X.	Yes, winnowing machine	102
Y.	No	231

[243] [402] g. (In your household) is there a windmill, or not?

1.	Yes, windmill	161
2.	No	172

[805] [405] 51. Do you have a wrist watch, or not?

3.	Yes	79
4.	No	252
—	No Answer	2

[231] a. Here in your household, how many buffaloes do you own?

5.	None	81
6.	One	27
7.	Two	67
8.	Three	61
9.	Four or more	97

b. (Here in your household) how many pigs do you have?

0.	None	321
1.	One	2
2.	Two	2
3.	3 or more	1
—	No Answer	7

[235] c. (Here in your household) how many chickens do you have?

4.	None	35
5.	1 to 2	7
6.	3 to 4	17
7.	5 to 9	31
8.	10 or more	243

d. (Here in your household) how many ducks do you have?

0.	None	208
1.	1 to 2	9
2.	3 to 4	16
3.	5 to 9	58
4.	10 or more	42

Equipment Used For Food Preparation

252 41 [251] Equipment used for food preparation by 11 families participating in the dietary study: clay stove; pots and covers of clay, light weight aluminum, and enameled iron; frying pans, curved, of sheet iron, with home-made wooden handle on one side, or metal handles on opposite sides (shallow clay pans were also used for frying); basins, pails, chopping boards; grater for coconut: a metal, toothed instrument mounted on one end of a low wooden stool (often called a "wooden rabbit" because the seat of the stool might be shaped like a rabbit); mortar of pottery or stone; wooden pestle; fiber strainers usually with rigid handles, to hold them in place on top of a pot; a large-bladed all-purpose knife; in some households, one or more smaller knives; metal turner, with home-made wooden handle; spoons, with bowls of coconut shell, gourd or wood; tin cans for dipping, measuring rice, etc.; fiber trays used for winnowing rice, for drying food, storing dried chilies, onions, etc.; metal tray for serving food to priests, and for household use; baskets for storing food; (5)faa-(1)chii, or fiber cover, to keep flies and insects off cooked food; large earthenware water jars.

[184] Other items less often used, and owned by relatively few families in Bang Chan, included: steamer; a perforated clay pot or metal pan with cover, designed to fit tightly into another pot in which water was boiled; large wooden mortar, made of a hollowed tree trunk; spring-type egg beater (a strong spiral spring attached to a stick); scale; glass water jars.

Equipment Used in Serving Food and Eating

264 412 415 The equipment for serving and eating food might include: flat bottomed bowls with a deep edge, similar to Western-style soup plates, used as individual rice bowls; plates; small bowls for "with-rice" dishes; sauce dishes with stand, for chili sauce; enameled iron or china spoons (Chinese type) used for serving moist foods; forks, used by some families on special occasions;[1] teapot and cups; large rice bowl for ceremonial use (silver or aluminum); large brass spoon with serpent-tail handle, for serving rice; drinking glasses; tiered lunch pail; canteen; thermos bottle.

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1. A relatively poor family (Sharp et al. 1953, p. 223) had one pair of fork and spoon for eating.

844 fast enough to break the amniotic sac. Sāi made her a
[278] medicine of mung bean and sugar, both of which wet the uterus, and murmured some magic words to help. Later she worked with her hands at the vagina, twisting the sac a bit to break it. Suddenly the sac ruptured.

Now the child was almost there. The head showed well. Sāi sat down directly in front of Dūan to do the pressing herself. With one hand she held or gently pulled on the baby, with the other she pressed on the abdomen with every
[789] contraction. As she started in, she said magic words. She worked for an hour--no midwife would press more than that--until at last the child was out. A little boy! With her finger Sāi removed the blood from his mouth, and pucked out the lips. Breathing was slow in coming, so she shook him vigorously, then laid him down. Quickly she chewed up an onion and spit it over his body. "Ah-h-h!" A cry, though not very strong! Seeing the new baby appear, Chai, who up to then had been constantly near his mother, rushed precipitously from the house, and refused to come in for hours, in spite of Song and Lek's coaxing.

[787] Everyone had observed an auspicious circumstance: the cord was looped around the baby's neck! This imitation of the holy cord (nongkhon) placed around head and neck in Brahman rites of passage was a rare and good sign. "A cord looped thus could never kill a baby," someone said.

Since the placenta was slow in coming, Sāi prepared to cut the cord while Dūan rested and sipped the fiery snake brand medicine. Depending on circumstances she might cut it
[278] before or after the placenta was out. Taking a rhizome of phlai (McF. 604), a traditional healing root, she laid it on a clod of soil brought in from outside. From one of the
• [412] old bamboo house beams, someone had sliced with a knife a sharp-edged, tapering sliver to serve as a cutter. The cord was stroked 3 times, starting near the baby's stomach "to remove the dirt." Then "something that is in the umbilical cord" was pushed back towards the baby's stomach "to prevent
[778] a flow of blood." She measured the cord from the baby's abdomen to his knee, and tied off 2 places in it with the holy unspun cotton cord used ordinarily in rituals. Laying the part between the 2 knots on the phlai on its bed of soil, and saying her magic "w'nvān a dam pa nō," she cut
[757] the cord with the bamboo cutter. With a chicken feather which had to come "from the mother's yard," she collected a few spider webs from the rafters, mixed them with coconut oil, and painted them around and on the cord-stump, also "to stop the blood-flow." While doing this, Sāi said, "One midwife I know severs the cord by tying it with the thread at 3 places, then burns it with a flame."

Chapter IX

GUIDES FOR THE INTRODUCTION OF CHANGES

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The government of Thailand provides in Bangkok and in other centers of the country up-to-date facilities for training in modern midwifery. It has also created in some places special opportunities for the traditional midwives to upgrade their skills. One of the objectives of the Minburi Health Center was to carry on a certain amount of instruction in modern views. For reasons that have been explained, no one in Bang Chan ever had or even sought modern instruction. The midwives of whom we have spoken grew up entirely in the folk tradition.

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On the basis of the material presented at length in the previous pages, a few suggestions are here advanced which may be of help to these public programs in maternal and child health.

1. Build a program around the idea that it will help women in their age-old role of caring for, raising, and nourishing (liang) children. Emphasize that through new techniques they may increase their strength and care better for themselves and the babies.

2. Change existing practices as little as possible.

3. When a change is offered, ask that the midwife, mother, or whoever observed it watch for certain results which allow them to judge it in relation to the old. The idea is strong that aspects of the natural world can be analyzed and considered pragmatically, then legitimately utilized as a basis for modifying customary behavior.

4. Pay special attention to the places where the old and the new come into conflict and seek ways to resolve these conflicts.

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As an example, let us consider these points in relation to cutting the umbilical cord. Modern instruction recommends the use of scissors--neat, sterilizable, handy--to avoid infection while cutting the cord. People in Bang Chan wish to avoid this infection, too, but for them scissors are unsatisfactory for several reasons: they are scarce, they rust--and

844 178 177 412 this rust is believed to cause tetanus--and they are unsuitable for the ritual objective at the moment of cutting. It will be remembered that cutting the cord on a rhizome of phlai or soil with a bamboo sliver from the housepost guarantees that a child will not roam away from home. Could the bamboo sliver be dipped in "heating" alcohol, or passed over the flame of a holy fire? Could the old family kitchen-knife--long associated with the household--be substituted and dipped in the beneficial heat of boiling water? Such a knife once was substituted on the winnowing tray. Might the phlai or soil be covered with a boiled, clean, old cloth? If modern science succeeds in coming up with an acceptable substitute, one sees the possibility of a very small change making a big difference in the amount of tetanus poisoning observed (Hauck, 1956:41). One should then ask the midwives to watch as to whether the new method reduced the infection called "death because of a red or green face and clenched fists."

262 [261] 372 846 In diet "the concept that a good choice of food is important to the health of both mother and child" (Hauck, 1959:2) was very much shared by modern science and by traditional ideas but the basis of choice was entirely different.[77] Modern science has ascertained that certain foods are beneficial because of certain nutrients, while old beliefs have set up certain foods as desirable because of properties of heating, cooling, compatibilities with the elements, etc. The nature of these properties should be collected and listed. If dietary deficiencies in Bang Chan are noted, the foods that combine the needed beneficial qualities in both systems should be stressed. A hot-tasting tonic (yā) with appropriate dietary supplements, to be taken daily during pregnancy, and another kind during the post-partum period, might be acceptable. The period of the fire-rest is the best place to initiate dietary changes for whatever is done by the fire becomes a habit beneficial to mother and child. The use of boiled water should be encouraged as "making for strength." Again, disturbance of customs is minimized, and the presence or absence of "increased strength" and healthiness can be observed experientially.

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77. Hauck felt the concept was lacking, but it appears only that the grounds of choice were different.

Equipment Used For Food Preparation

252 Equipment used for food preparation by 11 families par-
41 ticipating in the dietary study: clay stove; pots and covers
[251] of clay, light weight aluminum, and enameled iron; frying pans, curved, of sheet iron, with home-made wooden handle on one side, or metal handles on opposite sides (shallow clay pans were also used for frying); basins, pails, chopping boards; grater for coconut: a metal, toothed instrument mounted on one end of a low wooden stool (often called a "wooden rabbit" because the seat of the stool might be shaped like a rabbit); mortar of pottery or stone; wooden pestle; fiber strainers usually with rigid handles, to hold them in place on top of a pot; a large-bladed all-purpose knife; in some households, one or more smaller knives; metal turner, with home-made wooden handle; spoons, with bowls of coconut shell, gourd or wood; tin cans for dipping, measuring rice, etc.; fiber trays used for winnowing rice, for drying food, storing dried chilies, onions, etc.; metal tray for serving food to priests, and for household use; baskets for storing food; (5)faa-(1)chii, or fiber cover, to keep flies and insects off cooked food; large earthenware water jars.

[184] Other items less often used, and owned by relatively few families in Bang Chan, included: steamer; a perforated clay pot or metal pan with cover, designed to fit tightly into another pot in which water was boiled; large wooden mortar, made of a hollowed tree trunk; spring-type egg beater (a strong spiral spring attached to a stick); scale; glass water jars.

Equipment Used in Serving Food and Eating

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415 style soup plates, used as individual rice bowls; plates; small bowls for "with-rice" dishes; sauce dishes with stand, for chili sauce; enameled iron or china spoons (Chinese type) used for serving moist foods; forks, used by some families on special occasions;[1] teapot and cups; large rice bowl for ceremonial use (silver or aluminum); large brass spoon with serpent-tail handle, for serving rice; drinking glasses; tiered lunch pail; canteen; thermos bottle.

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1. A relatively poor family (Sharp et al. 1953, p. 223) had one pair of fork and spoon for eating.

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207 Exposure to the media of mass communication seems to act, in
212 a sense, as a substitute for literacy. It may be that through
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*177 Acceptance of Urban Patterns

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[291] The survey indicates in a general way the extent to which
[416] the people of Bang Chan have accepted urban patterns. Their grow-
[207] ing acceptance of urban modes is readily apparent even to a casual
[493] visitor: many own shoes, flashlights, wrist watches, radios,
[413] bicycles, fountain pens, modern furniture.* Other urban behavior
[352] is likewise beginning to be noticeable.

One very simple indication of the degree to which urban influences have penetrated is the change in manners of taking food. The farmers traditionally eat with their hands rather than using a fork or spoon. In Bangkok, however, eating utensils are customarily served with the meals in restaurants and are widely adopted as well by the city population. Some Bang Chan inhabi-
*177 tants have picked up this simple urban custom and have substituted
*178 it for eating mainly with their hands. In Bang Chan of 1953, for example, a sizeable minority (26 per cent) report that they use a spoon, fork or both for the evening meal.
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[412] * Survey respondents report that their households possess a flashlight (81 per cent); scissors (66 per cent); kerosene lamp (27 per cent); radio (14 per cent). About 41 per cent say they own at least one pair of shoes.

125
[653]

47.b. IF YES: For what various activities did you contribute labor?
(See code at end)

c. During the past year, have there been any public welfare activities, not connected with the wat or with religious ceremonies in the home, or not, to which you contributed money or goods?

1. Yes	128
2. No	197
3. Unascertainable	8

d. IF YES: For what various activities did you contribute money or goods?
(See code at end)

[796]

48.a. Have you attended the ceremony of wisaka bucha at Wat BC every year, or only in some years, or only once in many years, or never?

8. Every year	156
9. Only in some years	135
X. Once in many years	21
Y. Never	14
0. Unascertainable	7

b. Have you attended the ceremony of gilding the Buddha's footprint at Wat BC every year, or only in some years, or only once in many years, or never?

1. Every year	225
2. Only in some years	62
3. Once in many years	17
4. Never	9
5. Unascertainable	20

[291]

49.a. Excuse me, this is a strange question, but do you own a pair of shoes?

6. Yes	136
7. No	197

b. Of what various materials are your shoes made?

8. Leather	65
9. Cloth, canvas	87
X. Other, specify_____	11
0. Unascertainable	
— No Answer	1

[412]

50.a. In your household, is there a hatchet, or not?

1. Yes, hatchet	309
2. No	24

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b. (In your household), is there a pressure lamp, or not?

3. Yes, pressure lamp	188
4. No	145

c. (In your household), is there a flashlight or not?

5. Yes, flashlight	271
6. No	61
— No Answer	1

125 [412] 50.d. (In your household) is there a pair of scissors of any kind or not?

7.	Yes, scissors	219
8.	No	114

[207] e. (In your household) is there a radio or not?

9.	Yes, radio	47
0.	No	286

[402] f. (In your household) is there a winnowing machine, or not?

X.	Yes, winnowing machine	102
Y.	No	231

[243] [402] g. (In your household) is there a windmill, or not?

1.	Yes, windmill	161
2.	No	172

[805] [405] 51. Do you have a wrist watch, or not?

3.	Yes	79
4.	No	252
—	No Answer	2

[231] a. Here in your household, how many buffaloes do you own?

5.	None	81
6.	One	127
7.	Two	67
8.	Three	61
9.	Four or more	97

b. (Here in your household) how many pigs do you have?

0.	None	321
1.	One	9
2.	Two	2
3.	3 or more	1
—	No Answer	7

[235] c. (Here in your household) how many chickens do you have?

4.	None	35
5.	1 to 2	7
6.	3 to 4	17
7.	5 to 9	31
8.	10 or more	243

d. (Here in your household) how many ducks do you have?

0.	None	206
1.	1 to 2	9
2.	3 to 4	16
3.	5 to 9	58
4.	10 or more	42

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these means either an illiterate farmer can obtain information
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it for eating mainly with their hands. In Bang Chan of 1955, for
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That such a simple question can roughly measure exposure
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called out "Mine!" ("khǭng chan" [female speaking] or "phom" [male speaking]). Never did a parent say "ours!"[44] Sometimes the mother might ask a relative or friend present to claim the child, and so become a godparent.

As the first human step to control the volatile khwan, the first objective of winnowing a baby was to seize it (kan rap khwan) and so "complete" the child's person.[45] By tying holy thread at the wrist and ankle soul-exits, the khwan which had flitted in and out of the womb was given root. It was still flighty, but now it had a life-long home.

Secondly, the child was given membership in a human family. Connection through blood and semen did not establish kinship. At first, the child hovered between corporeal and non-corporeal existence. "The child is not fully human for the first 3 days." This period was under the supernatural control of Mother Sū, for babies "never died during the first 3 days after birth. They might be born dead or they died 6 or 7 days later." The shock of dropping the child on the tray "made him forget his life as a spirit." When somone cried "mine!" the child finally cut his relationship with the spirit-world. As an old woman explained, "The ties are the important part [of the ceremony]. They show that the child belongs to someone. Once a tie fell off one wrist. The child cried and cried until it was restored," fearing its lost khwan would attach itself elsewhere. The claiming set up kinship as a contract before witnesses. Whoever announced responsibility for the child's care, and this was usually the mother, deserved reciprocal care in old age. Other relatives would also help to bring him through to maturity. He would not be so frightened of an evil spirit because of family support, nor of the "ghost of an ancestor" who would be recognized as a relative.

Third, the ceremony strengthened the child. By giving him through the ties a stable khwan, he "grew better, cried less, and did not get sick."

The incorporation of as many auspicious elements as possible into the ritual was customary. Since the child took

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44. A winnowing tray (basket) had the capacity to "trap" spirits. It could sieze or trap not only the khwan soul, but, at New Year's, one of the fun ghosts (Textor:371).

45. There is no convenient way of expressing "ours" in Thai in this restricted sense (id.).

271 contaminated drinking water, but the traditional use of boiled water for newborn infants and their mothers, and its occasional use for sick persons, might provide the starting point for a desirable change.

Meal Preparation and Service

Processes and Equipment

252 The principal processes involved in food preparation for which equipment was required are: cutting solid food into bite-size pieces, pounding spices and flavoring materials, grating coconut, straining, boiling, sauteing in a small amount of fat, steaming, and roasting on a stick or metal support over the fire. Although foods were steamed or roasted only occasionally, the processes were familiar to all.

358 The Thai kitchen had no oven. When the term "baked" was used, it might mean cooking with dry heat on a rack over the fire (as banana baked in the skin) or without fat in the frying pan (as small dried fish toasted in this way).

128 Equipment used during meal preparation by the 11 fami-
415 lies observed on 44 survey days is listed in Appendix A, p. 96, that used in serving and eating food, on p. 96.

252 The type of food preparation and service was much the
415 same in the relatively well-to-do and the poorer households
55 in Bang Chan. The chief difference in equipment for food
184 preparation and service in families of different economic status was in the number of items of one kind which were owned. Thus a poor family might own one knife and one clay water jar, whereas an affluent family would probably own several knives and a number of water jars. Equipment used on special occasions, as in preparation of food for large numbers of people, was owned by well-to-do families only. Some had enough equipment for large cooperative work parties.

Persons Responsible for Food Preparation

252 Food was usually prepared by the homemaker and/or older
462 daughter, if one were at home, but all members of the family who were old enough to help, had some knowledge of food preparation and did prepare food as the occasion demanded. While preparing, cooking and serving food were more frequently carried out by women than by men, adults and school-age children of both sexes had some competence in this area. "While certain activities are normally assigned to men and others to women, the Thai maintain no rigid compartmentalization and are unembarrassed when a woman does a man's job or a man does

APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children. . . . . The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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1. In reproducing these notes, slight changes have been made such as substitution of descriptive terms for personal names which appeared in the original.

Equipment Used For Food Preparation

252 41 [251] Equipment used for food preparation by 11 families participating in the dietary study: clay stove; pots and covers of clay, light weight aluminum, and enameled iron; frying pans, curved, of sheet iron, with home-made wooden handle on one side, or metal handles on opposite sides (shallow clay pans were also used for frying); basins, pails, chopping boards; grater for coconut: a metal, toothed instrument mounted on one end of a low wooden stool (often called a "wooden rabbit" because the seat of the stool might be shaped like a rabbit); mortar of pottery or stone; wooden pestle; fiber strainers usually with rigid handles, to hold them in place on top of a pot; a large-bladed all-purpose knife; in some households, one or more smaller knives; metal turner, with home-made wooden handle; spoons, with bowls of coconut shell, gourd or wood; tin cans for dipping, measuring rice, etc.; fiber trays used for winnowing rice, for drying food, storing dried chilies, onions, etc.; metal tray for serving food to priests, and for household use; baskets for storing food; (5)faa-(1)chii, or fiber cover, to keep flies and insects off cooked food; large earthenware water jars.

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Equipment Used in Serving Food and Eating

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1. A relatively poor family (Sharp et al. 1953, p. 223) had one pair of fork and spoon for eating.

593 There was one item of parental gifts which is not
431 shown in Table 8 -- the household equipment. Two of the
• 415 63 families reported that they received a complete set of kitchen utensils, and two included jars in their gift lists. After checking the result of this survey with some informants, however, many admitted that they did not include these kitchen utensils in the list because they were obvious items. Nevertheless, there was no basis on which it could be inferred that every newly established family received a set of the kitchen utensils. It was therefore decided to omit the household equipment from the table.

593 Another form of parental gifts was the practice,
427 if the parents had enough land to spare, of letting the
423 couple work on some ten or twenty rai free of charge for the first two years. Rent might be charged after that, but there were also cases in which the couples continue to work on the parcel without paying any rent to their parents and finally took it for granted that the parcels belonged to them.

Economic Significance of the Family

59 Much space has been devoted to discussion of the family because of its significant role as the only organized producing unit in the village economy. Another important function of the family was mentioned in previous sections -- through privileges extended to the majority of newly wed couples during the nascent period, the old family facilitated

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(27 per cent); radio (14 per cent). About 41 per cent say they
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47.b. IF YES: For what various activities did you contribute labor? 125 [653]
(See code at end)

c. During the past year, have there been any public welfare activities, not connected with the wat or with religious ceremonies in the home, or not, to which you contributed money or goods?

1. Yes	128
2. No	197
3. Unascertainable	8

d. IF YES: For what various activities did you contribute money or goods?
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48.a. Have you attended the ceremony of wisaka bucha at Wat BC every year, or only in some years, or only once in many years, or never? [796]

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b. Have you attended the ceremony of gilding the Buddha's footprint at Wat BC every year, or only in some years, or only once in many years, or never?

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b. Of what various materials are your shoes made?

8. Leather	65
9. Cloth, canvas	87
X. Other, specify_____	11
0. Unascertainable	
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50.a. In your household, is there a hatchet, or not? [412]

1. Yes, hatchet	309
2. No	24

b. (In your household), is there a pressure lamp, or not? [416]

3. Yes, pressure lamp	188
4. No	145

c. (In your household), is there a flashlight or not?

5. Yes, flashlight	271
6. No	61
-- No Answer	1

178 laboring profession, limiting the work to transplanting only.
592 Apparently she did not earn enough. During this hard period
621 the young boy left her. The woman continued to live alone for two years. After the collapse of her shack in 1953 she went to live with a young couple in KY5 who are not related to her. In exchange for room and board and a nominal allowance, the old woman agreed to take care of the couple's baby.

178 Case 8: In 1949, a couple, both teachers in the Bang-
592 chan Primary School, were sharing the same dwelling with the
895 wife's mother's family, but having a separate food arrange-
434 ment for themselves and their two young daughters. Thus,
621 they appeared in the 1949 census as a separate family. In local standard, the combined income of these two teachers
[416] was quite high. The family lived well and was the only family in Bangchan that owned a camera. In the 1953 census this family became a part of the wife's mother's family because they had arranged to share the same food. The reason that was given for this new arrangement was that some time earlier the wife's brother, who had been living with his mother, got married and moved out to start an independent family, whereupon the old lady suggested that her daughter move in to fill the vacancy.

178 Case 9: In 1949, a family of three, consisting of
592 a young couple and their six years old daughter, worked as
621 farm hands for the wife's mother for fixed pay on which they
[573] were able to live independently. Two or three years later, the wife's mother asked this family to move into her household

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592

Table 8. Summary of Economic Conditions of the Two Groups of Households Participating in Dietary Studies

Household Group and Code No.	Members	Land: Rai Worked	Land: Rai Owned	Buffalo[1]	Food Cost[2] Total	Food Cost[2] Per Cap.	No. of Priests Fed	Sources of Income
Group A								
222	5	0	0	0	2.96	0.59	0	Labor contractor; hired out as labor; boat repair; fishing; vegetables sold; canal digging.
12	3	12	0	1	2.70	0.90	0	Rice production; occasional work in Bangkok.
215	5	14	0	1	1.59	0.32	0	Rice production; wife, a medium.
67	5	16	6	1-0	2.52	0.50	0	Rice production; eggs sold; road jobs.
2	6[3]	20	0	2	3.97	0.66	3	Rice production; "professional cook".
103	8	47	12	5	2.04	0.26	2[4]	Rice production; eggs, fish, mushrooms sold; buffaloes raised.
Mean		18.2	3.0	1.6	2.37	0.49	0.7	
Group B								
23	8[3]	6	0	1	1.56	0.19	0	Rice production; selling fish and vegetables; masseur.
21	4	25	25	3	1.92	0.48	3	Rice production; headman
16	8	47	47	5	2.70	0.34	2	Rice production; vegetables, fruit sold; road jobs.
25	8	50	50	3	7.97	1.00	2	Rice production; eggs, mushrooms sold.
20	9	66	51	1[1]	2.47	0.27	2	Rice production; ceremonialist; doctor; carpentry; trading; eggs collected and sold.
Mean		38.8	34.7	2.6[1]	3.32	0.45	1.8	

1. The buffalo belonging to Household 67 died during the year. In Household 20, the brother who moved in owned several buffalo, thus the total for Group B was more than the number shown.

2. Average cash expenditure per day, in baht. (One baht equalled about 5 cents) Household 222 received rice as part of wages.

3. Babies born during Round IV were not included. In Household 23, a 12-year old son served as temple boy and was away from home much of the time.

4. Rainy season only, when priests could come by boat; counted as 1 in computing average.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

*243 requires much additional hand labor and reduces the possibil-
242 ities for mechanization to a minimum. On the other hand, the more labor intensive transplanting method would seem to be more suitable to a population pressure area like Thailand if it really gives as relatively higher a yield as it is claimed to give.

*243 Farm equipment

351 In Thai agriculture, it is very difficult to separate
[235] the farm from the home. In the chapter on the community it
[244] has already been indicated that the home lot not only is the
[245] living place for the farm family but also provides space for
[226] threshing and for storage of farm equipment, room for chicken raising, land for kitchen garden and for fruit and vegetable growing, and space for fish trapping by the draining method.

*243 In other words, all the material components of the farm, except
351 the rice fields, are located or stored on the home lot. Here,
422 items that are uniformly or frequently found include:

A. Household equipment

1. Buildings
2. Furniture
3. Bedding facilities
4. Kitchen accessories
5. Storing facilities
6. Lamps of various sizes
7. Ritual accessories

B. Farm equipment

1. Farm building: equipment and buffalo shed.
2. Implement: plow, harrow, yoke, roller, shovel, spade, hoe, weeding knife, noria, sickle, pitch-fork, rake, broom, winnowing machine, wooden winnowing spitula, basket, mat bin, box bin, home-mill.

*243
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3. Mechanical power: windmill.
4. Engine power: internal combustion engine.
5. Fishing equipment: pressure lamp, spear, hook, throwing net, dipping net, trap.
6. Repair equipment: axe, knife, chisel, handsaw, auger set, hammer, jack plain, block plain.
7. Transportation facilities: various kinds of boats.

C. Livestock

1. Draft animals: buffaloes.
2. Poultry: chicken, duck.

D. Seeds and materials

1. Paddy for seeds and for consumption.
2. Ropes.
3. Fuel and oil for engine and for light.

*243
*128 Since we are primarily concerned in this section with farm equipment, only those listed under B will be discussed. And since we are dealing primarily with rice production which is the main source of income of Bangchan rice farmers, attention will be paid almost exclusively on the equipment which are used in the production of rice.

For the purpose of our discussion, farm equipment used in Bangchan may be categorized in a number of ways: (1) According to their use in the various processes of rice production; (2) According to their relative degree of indispensibility on rice farms; (3) According to their relative prices, and the cose of maintenance and repair; and (4) According to their historical improvement.

*243 Farm equipment was used in Bangchan in different processes of rice production as follow:

What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the families, living in tiny separate cottages.[1] Usually with inadequate or no land, they earned an irregular income by hiring themselves out for farm or other work. At the other extreme, in a hamlet-like cluster of dwellings, lived a closely affiliated group of kin. A senior couple more or less headed the married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying home from school to do so. Where the adult cooperative group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

Plowing could be done by a man and wife, but for both transplanting and harvesting which had to be done within a few days, large groups were necessary. Two patterns of auxiliary group labor prevailed: reciprocal cooperative work, and hiring of labor.

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1. Janlekha, 1955, categorized families as 5% "one-person," 59% nuclear, 8% limited extended (including one or more parents of a spouse), 27% extended (including dependent married couples or other collateral relatives), and the temple residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

2: Henck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

Table 8. Summary of Economic Conditions of the Two Groups of Households Participating in Dietary Studies

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67	5	16	6	1-0	2.52	0.50	0	Rice production; eggs sold; road jobs.
2	6[3]	20	0	2	3.97	0.66	3	Rice production; "professional cook".
103	8	47	12	5	2.04	0.26	2[4]	Rice production; eggs, fish, mushrooms sold; buffaloes raised.
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25	8	50	50	3	7.97	1.00	2	Rice production; eggs, mushrooms sold.
20	9	66	51	11	2.47	0.27	2	Rice production; ceremonialist; doctor; carpentry; trading; eggs collected and sold.
Mean		38.8	34.7	2.6[1]	3.32	0.45	1.8	

1. The buffalo belonging to Household 67 died during the year. In Household 20, the brother who moved in owned several buffalo, thus the total for Group B was more than the number shown.

2. Average cash expenditure per day, in baht. (One baht equalled about 5 cents) Household 222 received rice as part of wages.

3. Babies born during Round IV were not included. In Household 23, a 12-year old son served as temple boy and was away from home much of the time.

4. Rainy season only, when priests could come by boat; counted as 1 in computing average.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad, national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.[4] As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

[4] It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise of regular wages, lighter work, and the bright lights of the city, leave Bang Chan with the hope that they will never have to return, although of course many do. The Goldsen-Ralis survey reveals that 26 percent of their respondents had lived in Bangkok for a year or more, although for most this was in fulfillment of military service.

Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

The frequent transit between Bang Chan and Bangkok,[8] however,

[8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to landholders than to renters and the landless. Age also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

178 to which surviving elements of the disappearing families
592 were subsequently attached. It was noticed that in the
621 last four cases -- Cases 8, 9, 10, and 11 -- merging with new families was arranged on the basis of mutual convenience, and the disappearing families moved en masse into the new ones (with the exception of Case 10 -- a lone woman when arrangement for merging was being made). It may even be said that the initiative came from the receiving families, although the new members may have been more anxious for the union. In the remaining six cases -- Cases 1, 2, 3, 4, 5, and 7 -- there was no element of mutual convenience, and the surviving elements of the disappearing families did not move into new families as a body but as an individual. It seemed in these latter cases that the force of circumstances -- death or extreme poverty -- had prompted either party, usually the disintegrating elements, to seek the union as a quick way out. Because of the purposive nature of the arrangement in the former cases, the process may be called 'annexation'; while for want of a proper term, the process seen among the latter cases will be called 'disintegration'.

[162] None of the eleven cases undergoing disintegration
[423] or annexation owned landed property. Table 6 shows that
[464] six of these were farm laboring families. The five others were distributed among the following occupational groups: farm operator, public servant, and no occupation.

[166] Among the 27 families that moved out of Bangchan, eleven families were known to be living in the bordering

[TEXT CONTINUED ON PAGE 75]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 6

DISINTEGRATION AND ANNEXATION OF FAMILIES
Bangchan, Thailand, 1949-53

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Case	Occupation	Landed Property	Immediate Cause	Number of Surviving Elements	Number of Attached Families
Disintegration:					
1.	F. laborer	no	poverty	11	4
2.	Public servant	no	death	1	1
3.	F. laborer	no	death	2	2
4.	F. operator	no	death	1	1
5.	F. laborer	no	death	5	3
6.	no occupation	no	death	0	0
7.	F. laborer	no	death	2	2
Annexation:					
8.	Public servant	no	convenience	4	1
9.	F. laborer	no	convenience	3	1
10.	F. operator	no	convenience	1	1
11.	F. laborer	no	marriage	3	1

593 There was one item of parental gifts which is not
431 shown in Table 8 -- the household equipment. Two of the
415 63 families reported that they received a complete set of kitchen utensils, and two included jars in their gift lists. After checking the result of this survey with some informants, however, many admitted that they did not include these kitchen utensils in the list because they were obvious items. Nevertheless, there was no basis on which it could be inferred that every newly established family received a set of the kitchen utensils. It was therefore decided to omit the household equipment from the table.

593 Another form of parental gifts was the practice,
427 if the parents had enough land to spare, of letting the
• 423 couple work on some ten or twenty rai free of charge for the first two years. Rent might be charged after that, but there were also cases in which the couples continue to work on the parcel without paying any rent to their parents and finally took it for granted that the parcels belonged to them.

Economic Significance of the Family

59 Much space has been devoted to discussion of the family because of its significant role as the only organized producing unit in the village economy. Another important function of the family was mentioned in previous sections -- through privileges extended to the majority of newly wed couples during the nascent period, the old family facilitated

59 the establishment of a new family, virtually a new farm. It must be noted in this connection, however, that not all new families started outwith financial resources. There are circumstances like incongenial relationship between the dependent couple and their parents or other members of the family, tight financial situation of the old family, or extreme optimism on the part of the young couple themselves that brought about premature fission.

*243 The role of the family becomes more outstanding when 433 the following features of rice farming are considered: 59

• [423] 1. In Bangchan, as elsewhere in the rice producing areas of Thailand, a farm means rice land available for the family to till because farm income depends more on rice acreage than anything else.

2. An operator is generally not in a position to reallocate his resources in order to obtain higher income. Usually he does not, for example, put in more labor to get a better crop, for crop under existing technology would not increase with more labor than normally used. He does not put in fertilizer, for it is not certain, in his thinking, that profit is assured in so doing. He does try to improve his rice strains for greater yield, however.

[464] 3. The only way to increase income from rice with no change in technology (other than improving strains), then, is to increase acreage utilizing the same amount of family labor. This is the case, as we shall see in a later chapter on farm organization and management, because of the existing under-employment of family labor.

*243 growing village could not very well be studied in a brief period of only one rice year. Rather, the field study should be extended to cover years of good as well as poor crop.

Land Utilization

Official records show that the area of land privately owned in the seven hamlets comprising Bangchan is 6,404 rai. [503] When an estimated area of 100 rai of public land occupied by the half dozen canals is added to the private land area, the total area of the village may be figured at about 6,500 rai.

*243 351 • 423 911 621 The area of each of the 298 homelots in Bangchan varied. It is rather difficult to get accurate figures for these homelot areas. We may, however, give an allowance of one rai for each homelot on the basis of crude estimate. This would include space for buildings and all of the home compound including family pools as well as kitchen garden, and in some cases area devoted to fruit trees. Since all of the land area in Bangchan other than homelots is devoted to rice growing, we may estimate the land available for rice production by simply deducting the homelot area from the total area of land privately owned in the village. This was found to be 6,106 rai in 1953 (Table 12).

*243 311 423 621 It should be noted that not all of this area of 6,106 rai was tilled by Bangchan residents, and that some of the villagers also worked on rice fields outside our arbitrary

[TEXT CONTINUED ON PAGE 113]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 12

LAND AVAILABLE FOR RICE PRODUCTION
Bangchan, Thailand, 1953

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Hamlet	Land Privately Owned	Allowance for Homelot	Land Available for Rice Production
	rai	rai	rai
BC4	930	40	890
BC5	809	28	781
BC6	900	47	853
KY5	891	63	828
KY6	916	31	885
KY7	939	42	897
KY8	1,019	47	972
Total	6,404	298	6,106

*243 311 • 423 621 village boundary. Table 13 shows that Bangchan residents worked on a combined area slightly larger than that available to them in our arbitrary village limits. This situation of a village resident working on a field outside the village boundary should not be perceived as one in which the farmer in one village had to walk a few miles to work in another village, for in all cases the fields involved were in the peripheral areas.

*243 423 621 Since the approach adopted in this study was one through the people rather than through land, for ease in statistical manipulation we shall use the area worked by Bangchan residents to represent our natural Bangchan area. Thus, when we say that 64 per cent of the rice area in Bangchan are owned by operators, we refer to the 4,314 rai of the 6,722 rai worked by Bangchan residents, not the 3,908 rai of the 6,106 rai which is the actual rice area of the village.

*243 In Bangchan, as elsewhere in the country except in limited areas in part of Chiengmai and Lampoon provinces in the north, a single crop of rice is grown without any crop rotation practice. The rice season starts in late May or early June depending upon the actual arrival of the rainy season, and lasts until the harvest of late varieties in the first half of February. At the beginning of the season, the field work is concentrated in the seedbed which is about one-twelfth of the total planting area. Most of the field, then, is not occupied by the crop until transplanting time

[TEXT CONTINUED ON PAGE 115]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 13

RICE LAND WORKED BY BANGCHAN RESIDENTS
Bangchan, Thailand, 1953

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Hamlet	Land Available for Rice Production	Land Worked by Residents	Net Area Outside, Worked by Residents
	rai	rai	rai
BC4	890	801	- 89
BC5	781	497	-284
BC6	853	1,102	249
KY5	828	1,295	467
KY6	885	850	- 35
KY7	897	1,016	119
KY8	972	1,161	189
Total	6,106	6,722	616

of village production and surplus of paddy (Table 16) there were no comparable basis for our estimate of the other crops. Our estimates of these other crops should therefore be considered as crude estimates.

Tables 16 and 17 show that in 1953 Bangchan had surpluses of 104,756 tang of paddy, 293,232 chicken eggs, and 67,050 duck eggs, and a deficit of 4,945 kilograms of fish. Using the 1953 farm prices of 9 baht per tang of paddy, 0.40 baht per chicken egg, 0.50 baht per duck egg, and 5 baht per kilogram of fish, village exports may be estimated at 942,804 baht for paddy, 146,616 baht for chicken eggs, and 33,525 baht for duck eggs, and village import of fish may be estimated at 24,725 baht.

Land Tenure

Table 18 shows that Bangchan residents owned an aggregate area of 4,315 rai. Since their combined area planted to rice was 6,722 rai, the balance of 2,407 rai had to be provided by absentee landowners. In fact an area larger than 2,407 rai had to be rented in because part of the area owned by local residents had to be used as homelots. Actually, the net area rented in was 2,438 rai (total area rented in of 3,641 rai minus total area of 1,203 rai rented out). It is not to be expected, however, that this extra area of 31 rai (an excess of 2,438 over 2,407 rai) is enough to accommodate the 298 homelots in the village. Inaccuracies might have arisen in cases of joint ownership of certain

[TEXT CONTINUED ON PAGE 131]

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TABLE 18

RICE AREAS WORKED, OWNED, RENTED IN, AND RENTED OUT
Bangchan, Thailand, 1953

Hamlet	Total Families	Total Population	Area In Rai			
			Worked	Owned	Rented In	Rented Out
BC4	40	236	801	849	413	458
BC5	28	136	497	305	261	65
BC6	47	270	1,102	576	531	--
KY5	63	356	1,295	963	834	487
KY6	31	168	850	585	354	95
KY7	42	250	1,016	597	527	108
KY8	47	278	1,161	440	721	--
Total	298	1,694	6,722	4,315	3,641	1,203
Areas per family			22.4	14.5	12.2	4.0
Areas per man			4.0	2.5	2.1	0.7

243 parcels by siblings who failed to include their share in
423 those parcels in the reporting of areas owned. For want
427 of a proper basis for adjustment, we chose to let the figures
128 stand as they were reported.

Table 19 shows that the combined area in rice of all the 216 farms in Bangchan was 6,638 rai, or almost 99 per cent of total area planted to rice by the residents, the balance of 84 rai being worked on by residents whose occupations were those other than farm operating. Of these 216 farms, 48 were classified as all owned, 88 part-owned, and 80 all rented.

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423 The conventional system of classifying farms accord-
554 ing to land tenure into all owned (owner-operator), part-
427 owned (part-owner), and all rented (tenant) should not be
128 used without modification as a classification of economic or social status in population pressure areas where an efficient size farm is usually an exception rather than a rule. In these areas, it does not hold, as it seems to imply, that an owner-operator has a superior economic status than a part-owner and that a part-owner is still in a better eco-
[434] nomic position than a tenant. There is a wide range in size of farm operation and hence of incomes within these categories.

Within the category of owner-operator, there are major differences in size of operation and hence economic and social status. If a farmer -- to cite a specific case, Farmer A in BC4 -- owns the large area of rice of 235 rai,

[TEXT CONTINUED ON PAGE 133a]

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 19

DISTRIBUTION OF 216 FARMS ACCORDING TO LAND TENURE, BY CONVENTIONAL CLASSIFICATION
Bangchan, Thailand, 1953

Land Tenure	Number of Farms	Working Area				Average Number of Rai Operated
		Rai Owned	Rai Rented*	Total Rai Operated		
				Actual	Per Cent	
All owned**	48	1,589	--	1,589	23.9	33.1
Part owned	88	1,511	1,583	3,094	46.6	35.2
All rented	80	--	1,955	1,955	29.5	24.4
Total	216	3,100	3,538	6,638	100.0	30.7

* In cases where an operator both rents in and rents out some land, the net area rented in is used.

** Figures include only land owned and operated, land rented out is not included.

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7: Janlokha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 20

DISTRIBUTION OF 216 FARMS ACCORDING TO LAND TENURE,
BY SUGGESTED METHOD OF CLASSIFICATION
Bangchan, Thailand, 1953

Land Tenure	Number of Farms	Working Area				Average Number of Rai Operated
		Rai Owned	Rai Rented*	Total Rai Operated		
				Actual	Per Cent	
Landlord-operator	11	517	--	517	7.8	47.0
Owner-operator	79	2,131	513	2,644	39.8	33.5
Part-owner	23	227	325	552	8.3	24.0
Tenant	103	225	2,700	2,925	44.1	28.4
Total	216	3,100	3,538	6,638	100.0	30.7

* In cases where an operator both rents in and rents out some land, the net area rented in is used.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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he may rent out some and retain only the part he can operate well. In this case he chose to operate 65 rai in 1953, renting out the balance of 170 rai. On the other hand, another farmer -- Farmer B, also in BC4 -- who owns only a small parcel of nine rai may not be able to rent in additional land to make an efficient size farm. In this case, B was not able to rent in any land and had to work on only nine rai of his own in 1953. In an area of relatively low population pressure, the probability of failure to rent in some more land may be small, but it is not so small in the relatively high population pressure areas such as Bangchan. The difference between farmers owning a small area of land and a large area is so great from the standpoint of economics and social position as to warrant having two sub-divisions of the conventional "owner-operators".

Small "owner-operators" may increase their size of operation by renting in some more land and thus becoming part-owners. These farmers actually improve their socio-economic status if they are able to move from the group of owner-operators into the group of part-owners. To use another concrete example, Farmer B, mentioned in the preceding paragraph, who worked on the nine-rai parcel of his own, does not earn more farm income than Farmer C, also in BC4, who owned 20 rai and still rented in 30 more rai in order that his four family workers including himself might be fully employed with a 50-rai farm.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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It is seen, then, that the conventional system of land tenure classification is of very limited usefulness in areas where under-employment of farm labor is the general pattern. In an attempt to increase its usefulness mentioned above, a new classification system for land tenure is suggested in which the "owner-operator" category of the conventional system is sub-divided and arbitrary limits set to partially solve the problem of the third type of confusion.

The emphasis of the suggested method of classification lies in the functional aspect of each category. Thus, operators who own all the farm land they operate and still have some more land to rent out, an indication that they really have more than enough land for their farm operating occupation, are grouped under the landlord-operator category. This group resembles the conventional "owner-operator" in that in both the farmers do not rent in any more land, but differs from the latter in that they are really land saturated farmers while the latter may or may not be land saturated. Generally speaking, therefore, the new landlord-operator group are economically more secure than the conventional owner-operator group.

Operators who own all the farm land they operate but do not have any more land in the village or close neighborhood to rent out are grouped under the owner-operator category. To avoid confusion of the second two adjustments are made: (1) if a farmer owns two-thirds or more of his working area, he is included in this category; and (2) he

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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427 is also included in the category if he owns 20 rai or more of his working area regardless of how much land he rents in. It may be noticed that the non-renting section of this group resembles the conventional "owner-operator" and the renting section resemble the most affluent section of the conventiona "part-owner". Generally speaking, however, the whole group represents farmers who own the majority of their working area, or, in cases of those operating fairly large farms, own at least 20 rai of the working area -- a moderate size which may well place them in the middle third of the conventional "owner-operator" group if they should choose not to rent in any land.[7]

Operators whose working areas are more or less equall split between their own lands and rented lands are grouped under the part-owner category. Arbitrarily and more specifically, these include all operators who own one-third to almost two-thirds of their working areas with the exception of those owning 20 rai or more who are already grouped under the new owner-operator category.

Finally, operators whose working areas are predominantly rented lands are grouped under the tenant category. More specifically and also arbitrarily, these include all operators owning less than one-third of their working areas with the exception of those owning 20 rai or more.

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7. Of a total of 136 operators owning land in Bangchan, there were 66 who owned less than 20 rai (Table 21).

*128 While this "functional" classification of land tenure
• 423 does not eliminate all of the shortcomings of the conventional
427 method which have been accentuated by land scarcity, it evidently helps to bring about a clearer economic picture of the farm. If the primary purpose of land tenure classification is merely to establish a plain typology of the land holding situation for its own sake only, the conventional method might suffice even in farm labor underemployment areas. On the other hand, if we want to probe further into the business aspect of the farm, as we propose to do in Part II of this study, then a more revealing system of classification is perhaps necessary.

*243 It has been mentioned earlier in this section that
423 of 6,722 rai planted to rice by Bangchan residents a total
427 of 4,315 rai was locally owned (Table 18) and that a total
463 area rented in from outside renters was some 2,407 rai.
621 Since the net area rented out by local renters was 1,186 rai (Table 21), the proportion of outside renters to local renters was roughly two to one. Table 21 shows that there were 21 local renters whose main occupations were distributed among landlord-operators, trader, investors, and public servants, and that an average area rented out by each local renter was 56.5 rai.

Table 22 shows a frequency distribution of land owned by operators, and Table 23 shows a frequency distribution of land owned by non-operators.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 22

FREQUENCY DISTRIBUTION OF LAND OWNED BY OPERATORS
BY SIZE CLASSES
Bangchan, Thailand, 1953

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Size Class	Frequency
rai	
0- 9	12
10-19	54
20-29	28
30-39	14
40-49	13
50-59	6
60-69	0
70-79	0
80-89	2
90-99	0
100-149	4
150-199	2
200 and over	1
Total	136
Mean	31.0 rai
Median	20.8 rai

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 23

FREQUENCY DISTRIBUTION OF LAND OWNED BY NON-OPERATORS
BY OCCUPATIONAL GROUPS
Bangchan, Thailand, 1953

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Class	Frequency	Total Area	Ave. Area	Range
		rai	rai	rai
Farm laborer	2	8	4.0	2- 6
Trader	8	184	23.0	3- 86
Investor	5	164	32.8	10- 76
Public servant	2	167	83.5	7-160
Total	17	523	30.8	2-160

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

369 It should be noted also that once a villager has moved
167 into Bangkok he will be deprived of the privilege to
162 acquire free food from nature -- an important economic advantage of living in the village which counts heavily when emigration to the city is being seriously contemplated.

427 It is seen, then, that the demand for land on the
423 part of land-thirsty operators -- the tenants, part-owners, and owner-operators -- was high and inelastic, while the demand for land on the part of land-saturated landlord-operators was low and elastic. Since the combined demand of all landlord-operators constituted only a small fraction of the total demand (Table 20), it may be safely concluded that the aggregate demand for land in Bangchan at the period we are dealing with was high and inelastic.

311 Let us now consider the supply side of land. For
423 the purpose of this discussion we may differentiate four
427 sources of supply of a total of 6,722 rai considered to
463 represent our natural Bangchan area. They are:

1. Land-thirsty operators -- all for implicit rent.
   a, Owner-operators 2,131 rai
   b, Part-owners 227 rai
   c, Tenants 225 rai
   Sub-total 2,583 rai

2. Land-saturated operators (landlord-operators).
   a, For implicit rent 537 rai
   b, For explicit rent 683 rai
   Sub-total 1,220 rai

3. Local non-operators -- all for explicit rent.
   a, Traders 189 rai
   b, Investors 149 rai
   c, Public servants 165 rai
   Sub-total 503 rai

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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4. Non-indigenous landlords 2,416 rai (all for explicit rent).

To understand the working of the supply forces, it is necessary to break the non-indigenous landlords down into those living in the neighborhood of Bangchan, which we shall henceforth call the neighboring landlords, and those living far away, which we shall call the absentee landlords. It is regrettable that accurate figures for these breakdowns were not available, but it may be estimated on the basis of some known cases that they were roughly of the same proportion, that is, some 1,208 rai in this category were owned by neighboring landlords and the same amount by absentee landlords. On the basis of the same known cases, it may be generalized that the area of land owned by an average absentee landlord was larger than that owned by an average neighboring landlord.

It is obvious that the individual supply of land varies according to the type of the people who have command over it. Generally speaking, land-thirsty operators who supply part of their own working areas should provide an inelastic supply of land, for they will continue to offer to themselves all the land they own regardless of how the rent rate may change. All lands owned by land-thirsty operators yield only implicit rents, for if they are rented out for explicit rents, the landowners of the parcles in question would have changed their status to landlord-operators.

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In discussing the forces of demand for and supply of land in the few preceding pages, it is not the purpose of the author to quantify these forces and attempt to predict rent or the price paid by the tenant for the control of net income deriving from the use of the productive powers of the soil. Rather, the purpose is to confirm in this specific case Chamberlin's general notion that "the equilibrium of economic forces has been wrongly identified with an equilibrium between demand and supply. The latter is merely a special case of the former. Curves of demand and supply tell nothing, either by themselves or by their intersection, as to what price will be established, until other conditions are known."[14]

Prices of Land

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One of the most significant phenomena during the period covered by this study, from 1948 to 1953, is the rise of prices of land in Bangchan.

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Records of major receipts and expenses of 96 farm operators who have been continuously working on an average area of 3,140 rai, or 47 per cent of the total area worked by Bangchan residents, show that during this six-year period two operators sold two parcels of land and ten operators bought eleven parcels of land. Since none of these involved transaction between one and the other in our sample of 96 opera;tors, it can be said that there was a total of thirteen

14. Chamberlin, op. cit., p. 15.

423 purchases (or sales) of land involving operators in our
432 sample as either sellers or buyers. The price and size as well as the time of sale of each parcel is shown in Table 27. Using the highest of each year as the basis, it is observed that land price in Bangchan has been rising steadily from 350 baht per rai in 1948 to 700 baht in 1949, to 1,100 baht in 1950 and 1951, and then rose skyhigh to 11,000 per rai in 1953. To be sure, this spectacular rise, especially from 1951 to 1953, was largely due to the changing over of former agricultural to residential land. Nevertheless, when residential land is excluded from consideration, it is seen that the average rise in agricultural land prices was 560 per cent during the period from 1948 to 1953 (Table 28).

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Perhaps a case of one large parcel in "Thung Nai Sab" in KY5 may serve to illustrate the way land prices rose in Bangchan during these past few years. The area of this parcel, which was owned by Lady Phung of Bangkok, was 100 rai. Our informant's father, Hajji Sa-ard of Bangchan Mosque, was interested in this parcel of land because it was adjacent to his land which was not far away from his home. In 1946, Lady Phung was willing to sell it at 300 baht per rai, but Sa-ard was reluctant or not quick enough to accept this offer for sale. In 1947, the lady raised her price to 350 baht and Sa-ard was ready to buy. This time it was hesitancy on Phung's part that prevented the proposed purchase from being consumated. In 1948, our

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TABLE 27

PRICES OF RICE LAND ACTUALLY SOLD OR PURCHASED
Bangchan, Thailand, 1948-53

Year	Parcel Size	Price Per Rai	Highest Price of the Year	Average Price of the Year
	rai	baht	baht	baht
1948	11	350	350	223
	12	180		
	16	138		
1949	10	700	700	700
	10	700		
	10	700		
	10	700		
1950	1	1,100	1,100	850
	10	600		
1951	19 1/2	1,100	1,100	721
	10 1/2	1,000		
	19 1/2	250		
1952	--	--	--	--
1953	1	11,000	11,000	11,000

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7: Jantakha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 28

ESTIMATED PRICES OF BANGCHAN LAND BY ZONE
SHOWING PRICE CHANGES FROM 1948 TO 1953
Bangchan, Thailand, 1948-53

Zone*	Location	1948-Price baht/rai	1953-Price baht/rai	Increase baht/rai	Increase Per cent
Residential:					
1	Roadside** (200 m. depth)	300	12,000	11,700	3,900
Agricultural:					
2	"Thung Nai Sab"-	270	1,500	1,230	456
3	"Thung Nai Pho"	280	1,800	1,520	543
4	"Thung Kl. Kred"	250	2,000	1,750	700
5	Kl. Kred - Kl. Bangchan	230	1,500	1,270	552
6	Kl. Krached-Kl. Bangchan	210	1,500	1,290	614
7	Kl. Bangchan-Kl. Kralog	200	1,200	1,000	500
	Av. for ag. land	240	1,583	1,343	560

* See Map I.
** In 1948, this zone was still considered agricultural land -- not residential land as it was in 1953.

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423 informant said that some of the lady's tenants who had been
435 renting the parcel told her that she should not let it go under 500 baht per rai. Our informant thought that these tenants did not want to see any transfer of the ownership of the parcel for fear that it might adversely affect their prospective tenure. Lady Phung therefore raised her price to 550 baht. At this price Sa-ard gave up his intention of buying the land. In 1949, four tenants (all are included in our sample of 96 farm operators, hence the purchases are shown in Table 27) jointly purchased 40 rai of this parcel, and one Nai Ma of Klong 13 bought the remaining 60 rai of the 100-rai parcel at 700 baht per rai. The four tenants divided the land equally among themselves (10 rai each) and paid 7,000 baht each with borrowed money. In 1952 an offer to buy at 1,000 baht per rai was made for the same parcel but none of the new owners wanted to sell any of his land. In 1953 the price rose to 1,500-2,000 baht per rai and again none of the owners contemplated selling his land. Of the four tenants, Farmer A was luckiest because his share was attached to the Minburi Road and the price of this specific portion has risen to somewhere around 12,000 baht per rai.

The case just mentioned shows one significant point regarding the price of land in Bangchan other than the steady rise -- that nearness to the road was not a factor of price distinction until after 1949, for if it was, there would certainly have been some difficulty in dividing the 40-rai piece among the four tenants.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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Table 28 shows estimated prices of land in Bangchan in 1948 and in 1953. These prices are estimates made by our informant who is a son of Hajji Sa-ard mentioned in an earlier paragraph. He is one of the best informed persons in the village, has visited Mecca, and has received a higher education than any other person in Bangchan with the possible exception of one store-keeper who had spent a few years in the Military Academy in the 1910's.

Our informant, who will henceforth be called by his real name -- Hajji Direg, based his estimates of land prices in Bangchan on what he was willing to pay. He was aware of locational variation in prices of land in the village. Strictly speaking, this is not contradictory to our assumption of homogeneous nature of soils in Bangchan, for slight variation in Direg's estimated prices was due, according to him, to differences in the land levels which affected the cost of irrigation and drainage. Direg divided Bangchan into seven land-price zones (Table 28 and Map I). It is seen in this table that the 1948 price ranged from 200 baht per rai in Zone 7 to 300 baht per rai in Zone 1, averaging 249 baht per rai.

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Table 28 shows that the average price of agricultural land in Bangchan rose from 240 baht per rai in 1948 to 1,583 baht in 1953, an increase of more than five times in six years. Most remarkable was the increase of the price of land in Zone 1 from 300 baht per rai to 12,000 baht per rai. The increase in the price of land in Zone 1 shows that land

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178 in this zone has since been considered as residential land
423 although there has not been any apparent change in land
435 utilization.

178 It should be noted in this connection that during
423 the same period of 1948-53 there has been a steady rise in
435 the price of residential land in Bangkok at a highly varying rate depending upon location. For the purpose of our discussion, we may consider only the price of land in the northern suburb of Bangkok, on each side of Paholyotin Road (the popular Bangkok-Donmuang Road) which branches off at Kilometer 20 into Minburi Road which cuts across Bangchan Canal at Kilometer 13 (Crossing of Paholyotin and Minburi Roads as Km.0). It has been observed that the price of land on each side of Paholyotin Road has been increasing rapidly: a parcel at Km. 11 which was valued at 50,000 baht per rai in 1952, for example, was sold at 150,000 baht per rai in 1954. It has also been observed that price of land in this section of the Bangkok suburb declines with the distance from Bangkok proper: the 1954 price was 150,000 per rai at Km. 11, and 50,000 baht per rai at Km. 20 where the Minburi Road begins. If the Minburi Road is considered as a continuation of Paholyotin Road, it is only natural that the price of land would gradually decline to 12,000 baht per rai at Km. 13.

182 It is conceivable that the recent increase in Bangkok
423 population is one among several factors causing the rapid
435 rise of residential land prices. When the rapidity of the
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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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423 rate of increase in land price is considered, however, it
435 is reasonable to believe that population increase is cer-
369 tainly not the only factor.

[121] It is not the purpose of this study to deal with the price of urban land. Neither the problem of land utilization nor the whole economy of Bangchan can be clearly understood, however, without some account of the rapid building up of urban land prices in recent years. It is thus necessary to digress at this point into some factors accountable for this rapid rise.

369 It has been observed that the volume of domestic
454 saving in Thailand is small because of the low level of in-
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435 come, and that such saving as does take place tends to be
178 put into real estate and gold and jewelry. Concentration
182 of income resulting from the postwar phenomenon of shifting of political and economic power into the hands of few people, however, has somewhat increased the proportion of saving; but this is again used largely to purchase real estate. The natural result is the boosting up of urban land prices especially in the suburban sections where there has been a relatively high degree of improvement in road construction since the war.

This investment in land purchase has more than ever
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45 before assumed a speculative nature. This is largely due
178 to the experience of inflation initiated by World War II
369 whereby huge and easy profits could be made from buying
182 and selling of land. Corruption in the sale and purchase

423 of government real estates has no doubt increased these
45 speculative activities. The process has also been greatly
178 accelerated by an enormous increase since the war of banking
369 facilities, which traditionally extend loans on mortgage of
182 real estate. It should be noted in this connection that the demand for loans in Bangkok has been so great as to allow most commercial banks to adopt a highly discriminating policy of extending loans only to their favored customers who are often willing to give as much as five per cent of the loan sought to bank officials as a customary "tea-money".

182 A third factor is that some organized financial
423 institutions have actively been engaged in deliberate at-
435 tempts to boost up land prices for their own speculative
455 gains. This was the immediate cause of the rise of land
178 price in Zone 1 from 300 baht per rai in 1948 to 12,000 baht
369 per rai in 1953. According to several informants in Bangchan, a representative of an insurance company in Bangkok came to the village in 1952 and offered to buy land on each side of Minburi Road at 10,000 baht per rai. This man was able to buy 20 rai of land at Km. 8, Minburi Road, which is in the immediate neighborhood of our arbitrary Bangchan Village, at his offered price of 10,000 baht per rai. At the time of the signing of the purchase contract, he made a 10 per cent down payment of 20,000 baht. Although the balance of 180,000 baht was not paid and the contract was later forfeited, the proposed purchase immediately pushed land prices in Zone 1 up to 10,000 baht per rai or over. According to

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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our informants, the insurance company owned hundreds of rai of land in the vicinity. By spending only 20,000 baht in boosting up land prices, the company thus set the stage for making a large profit through sale of their own land at inflated prices.

While the increase in land prices in Zone 1 was attributable to the sudden assumption of residential land prices, this explanation does not apply to the increases in land prices in the other zones which have remained agricultural throughout. Although less spectacular than the case of Zone 1, the rise in land prices in these six zones was also quite abrupt, averaging 560 per cent for the five-year period from 1948 to 1953 (Table 28).

Capitalized valuation of these farm lands (Zones 2-7) may shed some light on the situation, although there is limitation especially to the cost concept. There are two ways by which a capitalized value of farm lands may be obtained: (1) by capitalizing income from the farm operation left after payment of all factor costs except land, and (2) by capitalizing income deriving from explicit rent of the land.

Receipt from one rai of rice land in 1948 may be calculated from the crop of 32.1 tang at 252 baht, using that year's average farm price of 7.86 baht per tang of paddy. When the cost, including an imputed return to all labor but excluding rent, of 166 baht per rai is deducted, a residual return to land of 86 baht per rai is obtained for the year.[15]

15. For want of sufficient data, it is assumed that the cost items other than rent remain the same.

In 1953, figure for the size of the crop was not available, but we may use the 1948-52 average of 28.8 tang per rai. With the year's farm price of 9.00 baht per tang, receipt may be calculated at 259 baht per rai. Using the same cost, again excluding rent, of 166 baht as in 1948, a residual return to land may be estimated at 93 baht per rai.

Capitalized value of land may be calculated from the formula $v = \frac{a}{r}$ where 'v' stands for capitalized value of land, 'a' for income from the land, 'r' for the rate of interest prevailing in the locality.[16]

When the calculated residual return to land is used, the capitalized value of farm land in Bangchan (Zones 2-7) is found to be 573 baht per rai in 1948, and 620 baht per rai in 1953. When income deriving from explicit rent is used in the calculation, however, the capitalized values become 327 baht per rai in 1948 and 487 baht per rai in 1953.

It is interesting to note that capitalized values of land computed from these two different types of income were closer to each other in 1953 (487 baht computed from income deriving from explicit rent as against 620 baht computed from the calculated residual return to land) than in 1948 (327 baht computed from income deriving from explicit rent as against 573 baht computed from the calculated residual return to land). In other words, landlords are now receiving a larger proportion of the residual after payment of all

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16. The rate of interest of 15 per cent per year is used. This is the minimum going rate with security. Without security, the rate may be as high as 30 to 50 per cent per year.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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factors, except land, at the going rate of return. A more interesting point to note is that the capitalized value of land in 1948 (327-573 baht per rai) was substantially higher by either method of calculation that the average price of farm land in that same year (240 baht per rai), while the capitalized value of land in 1953 by either method of calculation (487-620 baht per rai) was far below the average price of farm land in that same year (1,583 baht per rai).

The situation in 1953 indicates that the price of farm land in Bangchan has been bid up too high. The stickiness of rent rates in the locality mentioned earlier together with the fact that landlords are now receiving a larger proportion of the residual after payment of all factors, except land, at the going rate of return have led us to the belief that the proportionate share of the landlords will be increasing in the near future.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 463 [423] [431] Third, among the land owning class the newly established family usually received from their parents an outright gift of land or the benefit of free use of a certain area of land for two or more years. They would not receive this gift if they did not pursue rice farming.

It is seen, then, that while rice growing might have become less attractive as an occupation, there are still some cultural factors that have been working to confirm the Bangchan villagers in their preference for rice cultivation.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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MAP II

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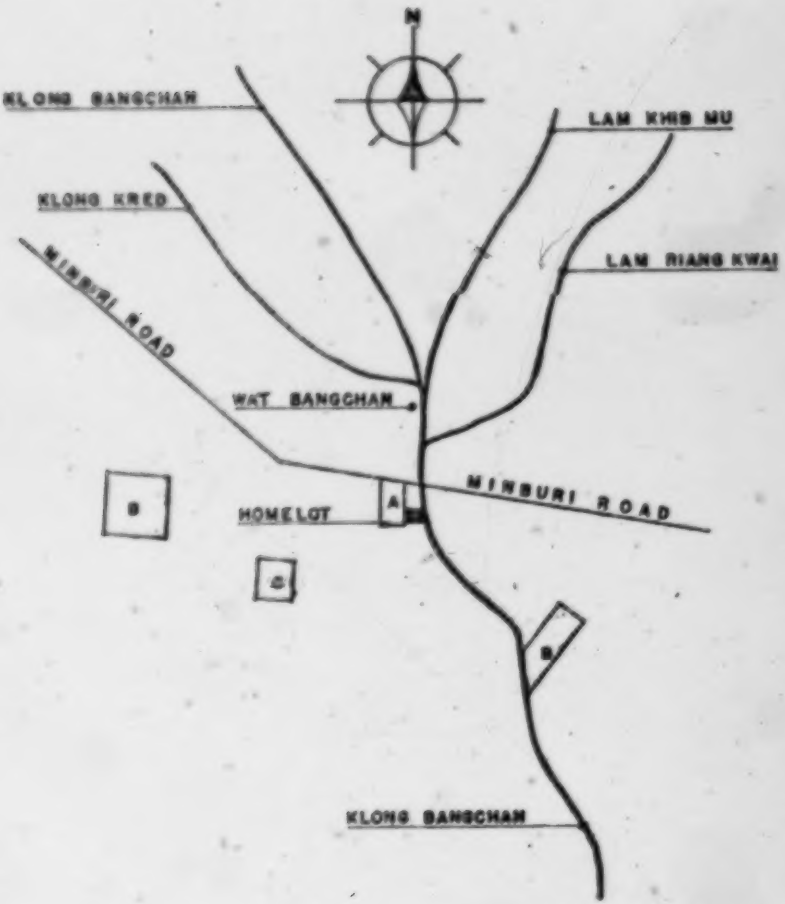
SKETCH MAP OF CHOM FARM AND HOME LOT BANGCHAN, THAILAND 1953



Rough scale: 4 cm. to 1 km.

7: Janiekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 433 water conditions is also a major factor militating against investment on fertilizer. As it happens, therefore, fertilization does not prevail in the decision making of Bangchan operators.

If the operator has any positive role at all in the production plan, it is in the selection of rice varieties. This topic has already been dealt with in the section on labor adjustment devices of the preceding chapter.

243 433 423 Finally, one of the most important organizational decisions involves the choice of the size of the farm. It has been observed that poverty in agriculture is as much a problem of farm size as of any other single factor. Most frequently, farm size is spoken of in terms of acres -- the land input. Although this measure is generally not sufficient, it serves the purpose quite well in single-crop farming areas such as Bangchan and all other rice areas in this country. In this study, therefore, farm size will be expressed in rai (two-fifths of an acre) devoted to rice.

Generally speaking, if the Bangchan operator is free [464 592] to choose the farm size that suits him best, his decision will be based almost entirely on the size of labor force under his command, which in turn depends largely on the size of his family labor. As it happens, most operators are not 243 free to do so. It was mentioned in the section on land tenure 427 of Chapter III that it was only the landlord-operator group, 464 actually 11 out of a total of 216 farm operators in Bangchan, 423 that had demonstratively shown sign of land saturation and

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

thus could freely choose the proper size of their farms.

To be sure, some of the other 205 operators in the land scarce group could rent in enough additional parcels to make an efficient-sized farm. The preliminary study in 1948-49, however, reveals that of 104 farms under study 87 were under-sized. The point we want to make in this section is that there are considerations other than economic interest which preclude the attainment of a most favorable farm size by some of these land scarce operators. In the study of labor utilization on Chom Farm, it was seen that preparation of the fields was finished long before the deadline, indicating that the land input could be increased or labor input could be decreased. If Chom wanted to rent in an additional parcel of five rai, the problem presented would not be simple. In the first place, all rice land in the village had been filled up, so Chom's additional parcel had to be one that had been operated by a neighbor of his. Unless this neighbor had expressed an intention to quit this parcel, conscience alone would prevent Chom from outbidding the other person for the parcel. Second, although lease of land was on a one-year basis, in practice the landlord usually rented his lands continuously to the same tenants. If the landlord wanted to operate a certain parcel himself, the former tenant might think that it was reasonable enough to abandon the parcel. But it was inconceivable that he should leave the parcel so that another tenant could operate it. Third, the additional parcel should not be too far away

A 243 from the homelot because much time and energy would be
• 423 wasted in daily walking to the field.
464
427 It would seem, then, that most rice farm operators had little opportunity to obtain a farm size they thought best and had to accept what was due them. Thus, their role in choosing the size of business, which is the most important role, is also limited.

A243 2. Limited role in management: Inasmuch as manage-
221 ment refers to the function of putting the scheme into opera-
431 tion, Bangchan operators certainly have a large part to play. A good rice crop depends largely on the relationship between the height of the young plant and the rising water level. Since the rise of water level is highly seasonal, depending on local rains as well as rains elsewhere that affect the general water level, scheduling the farm work and seeing to it that the schedule is followed becomes a most important function of the farm operator.

A243 Management, however, refers also to the function of
433 making those adjustments in the business which are necessary in order to obtain the maximum economic returns from the farm business as a whole. Inasmuch as this latter function is concerned, the operator's role has been limited as in the case of the organizational function. As previously stated, under the present stage of technological development in rice production in this country, not only the points of diminishing return of both labor and capital (farm equipment, at the present state of technical development in the village)

243 433 [435] the value of family labor, the cost of managerial service of the operator of 1,000 baht was arbitrarily charged for farms with the size of 10 rai or over. For farms under 10 rai, only 500 baht was arbitrarily charged as the cost of managerial service.

4. Depreciation: From the original cost of each item of equipment (including buffaloes) was deducted its residual value at the termination of its service, and the result was divided by the expected length of service in years of the equipment.

5. Interest on investment: The rate of 15 per cent per year was arbitrarily chosen. This was the maximum legal rate, and was also a minimum rate of return which any person in Bangchan might reasonably expect from his money if he chose to lend it out at any moment.

[128] Since much of these imputed expenses were arbitrarily chosen, the cost of producing paddy might naturally vary widely according to the assigned value of each item. Our cost of production figure, then, will be more meaningful, if the amounts of these arbitrarily imputed values are constantly kept in mind.

243 433 461 423 Farms in Bangchan are composed of from one to four parcels of land. The characteristics of this fragmentation are shown in Table 39. The size of a parcel ranges from one rai to 65 rai, averaging 18.8 rai. Fragmentation obviously brings about a waste of considerable time and energy spent in going from one parcel to another, and thus an increase in

[TEXT CONTINUED ON PAGE 282]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 433 461 423 labor cost. Most farmers must go by foot or boat to work at places ranging from a hundred meters to two kilometers from home. This waste is the more serious during the period of preparation of the fields at the beginning of the season when the water level in the canals is not high enough to permit the effective use of a boat.

243 178 423 Table 40 shows the frequency distribution of areas worked by Bangchan operators in 1948 and 1952. It is seen that in both years work areas concentrate in the size groups between 10 to 40 rai, averaging 34.2 rai for 1948 and 31.7 rai for 1952. It is seen also that the work areas of 1948 have a wider range than that of 1952. There were 30 farms in 1948 whose areas were 40 rai and over, while the number of such farms was 28 in 1952.

Table 41 shows that of 96 continuing farms, 20 have increased their size during the five years period, 40 have decreased their size, while 35 farms have the same size throughout.

243 433 46 2. Labor: This element represents 51 per cent of the total cost of producing paddy (Table 38). Of this, only a small fraction is actually paid for -- 3.3 per cent to hired laborers and 3.4 per cent to pieceworkers. The bulk of labor is supplied by family workers (including the operator himself) whose labor value is assessed at 44.6 per cent of the total cost of producing paddy.

It is seen in Table 42 that the number of adjusted rai per worker is only 9.4 for farms which used only family

[TEXT CONTINUED ON PAGE 286]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 40

FREQUENCY DISTRIBUTION OF AREAS WORKED BY 96 OPERATORS
Bangchan, Thailand, 1948 and 1952

*243
178
• 423

Class in Rai	Number of Farms 1948	1952
110 to under 120	1	0
100 to under 110	0	0
90 to under 100	1	0
80 to under 90	4	2
70 to under 80	3	3
60 to under 70	5	7
50 to under 60	6	7
40 to under 50	10	9
30 to under 40	18	22
20 to under 30	22	19
10 to under 20	16	18
Under 10	10	9
Total	96	96
Mean	34.2 rai for 1948 31.7 rai for 1952	
Median	30.3 rai for 1948 31.1 rai for 1952	

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 41

CHANGES IN AREAS WORKED BY 96 OPERATORS
Bangchan, Thailand, 1948-52

*243
178
• 423

Description of Farms	Number of Farms
Same size*	35
Increased size	20
Decreased size	41
Total	96

* To take care for reporting errors and errors due to confusion over planted areas and harvested areas, a margin of 2 rai is allowed. Hence, farms reporting size changes of two rai and under are considered to have no change in size.

*243 433 It is often said that the underdeveloped areas are characterized by over-population and under-capitalization. While there is much truth in this, there is also a danger of oversimplification. Capital here includes a relatively small physical in put, but it is actually large in terms of cost per unit.

4. Management: We did not assign any value to the operator's managerial work; only the assessed value of his labor -- 1,000 baht annually, or 500 baht annually if he operated only 10 rai or less -- was included in the item of assessed value of family labor.

The role of management has already been discussed in the previous section of this chapter.

It has been observed that management is furnished by the Bangchan operator and his wife, and in some cases *243 their grown-up sons and daughters. Not a single case has 423 been known where the management on rented farm is shared 427 with the landlord or his agent. It is interesting to note that the absence of the landlord's part in management was exhibited in an environment that should normally create and regenerate his influence over the tenant -- the condition of land scarcity, the Thai respect for one's betters, and the ease in communication between the landlord and the tenant.

Actually, the absence of the landlord's part in management does not necessarily mean that he has no influence over his tenants. On the contrary, landlords in Thailand

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 are as influential as most landlords in other countries.
423 It is the limited role of organization and management, which
427 has already been discussed, that has precluded their advisory contributions.

243 434 464 Some farmers had artificially reduced their operational cost by utilizing free labor of transient members of the family, who would not stay long if they were not adequately taken care of. These farmers would have to resort to pieceworkers or hired laborers when transient members decided to leave them.

243 434 655 The farm price of paddy was adversely affected by the government control of rice export. It was estimated that huge profits of no less than 100 per cent had been made each year by the government through its monopoly over and later control of rice export and foreign exchange control. This will be dealt with separately later in this chapter.

243 434 423 Although the average size of farm of 30.7 rai for Bangchan can be favorably compared to the average of 23.1 rai for the Central Plain, this does not mean that size of farm is not a problem contributing to low returns from rice. [464] It was pointed out earlier that there was a condition of disguised unemployment among Bangchan operators. Small size elsewhere simply indicates the widespread nature of the problem of disguised unemployment among farm operators in the Central Plain.

243 434 Limited earning opportunity for incomes from sources other than rice is due to the fact that at the present stage of technological development no other crop can be profitably grown in rotation with rice because of agronomic limitations.

243 434 221 The inundation period from the middle of September to early December, during which time no work is needed on

overlap at all. Magic was wielded by men to gain power over spirits, persons, elements, and forces. It had either social or personal benefits. The role of highest social benefit, corresponding to the liang dī in women, was the khwan-specialist (mō khwan) who conducted the life-cycle, khwan-strengthening (tham khwan) (for persons and for the rice) and many other ceremonies for the mature khwan. This role demanded men of the highest qualifications in probity, erudition, and personal dedication. Men also had the formulae for curing, house- or boat-blessing, invoking guardian spirits (sān phrs phūm), etc. Men could make protective amulets to render the wearers safe from bullets, knives, spirits, and all sorts of hostile forces in the world.

On the other hand men's magical objectives could be aggressive and hostile. The gamut of amulets, missiles, love-oil, and incantations (Textor:passim) showed the potential for attack and why the converse need for invulnerability was so strong. Men had a nurturing (liang) role, but only for non-human beings, e.g. buffalo, pet birds, and guardian spirits of house and land. Subverting this role for hostile ends, they obtained possession of the ghost of a recent corpse by gathering the drop of oil at the chin, and nourishing it (liang) for use in sorcery. For a man, nourishing something gave control.

All of the powers of men's magic were available to women on request for any purpose, hostile or not, but the "owner" had to be the mediating agent.

A woman's magical knowledge was linked exclusively to her female task. It did not give power over people. It could not be destructive. No female sorceress existed in Bang Chan. No woman feared the magic of another woman in childbirth nor at any time. A woman's magic was devoted solely to promoting the processes of growth and life. Thus it controlled the searing heat of the fire, invoked the Spirits of the 4 elements, and helped at various points in childbirth. It handled the soul of the Rice Goddess and of Mother Sū, guardian of children. It restored any frail and wandering khwan to its proper bodily abode. Such was a woman's magic.

To insure separateness the respective provinces of magical activity were ringed with sanctions. Contact with a woman's skirt, undergarments, or menstrual blood completely negated any of a man's protective amulets (re tattooing, cf. Textor: 102). Though this reflected the traditional avoidance between sexual phenomena and Buddhism, it might also indicate a tacit moral evaluation of the magical powers of men and women: the powers for growth were ultimately ascendant over those for power, for men had nothing that undid a woman's powers. Though women were easily prey to men's magical control, as by

Housing

342 The type of house, whether big or lowly, made a difference in the comfort and care of women. The big houses were teak-paneled and floored with a good roof of thatch, tile or corrugated iron. Their high piles insured dryness during flood season. The sleeping and living space was a single airy open room, often with one or two sides balustraded rather than solid, and protected from the weather by the roof's overhang. The kitchen was sometimes a separate room. There was always one small enclosed room, perhaps ten feet square, or larger, with a door and a window. This room was used for keeping valuables under lock, and whenever privacy was desired: as a marriage chamber for bride and groom, or as a quiet room for a senile parent. Because of its almost solid walls, it was poorly ventilated and hot. Childbirth took place in this little room, if convenient, or out in the main part of the house. The fire-rest was in this room so that the dreaded wind could be kept out.

[844]

342 The poor lived in modest earth-floored cottages of bamboo
184 frame, thatch sides and roof, with one or two raised wood plat-
352 forms for sleeping and sitting. In the rainy season, these
844 cottages could be damp. In fact, one October the water was observed ankle deep inside a house, and the wife splashed around at her chores. Under the latter conditions, a woman in childbirth would be moved to some kinsmen's house. Delivery took place on one of the sleeping plarforms, and post-partum rest was on a plank raised off the earth floor, unless space permitted that the plank and temporary fire-floor be placed on the platform. On one observed occasion reed mats as protection from drafts were temporarily set up, making an enclosure about three feet high within which a mother lay in her post-partum rest period.

Cash

434 Cash was short to everyone. The poor felt very poor and
426 the rich did not feel rich. This was because the rice-money,
[556] which came in a lump sum once or twice a year, was at once turned over to clear debts, to make large purchases of agricultural equipment, to repair the house, or to perform elaborate ceremonies. What was left over was not kept around the house for day-to-day expenses for fear of robbery, but was immediately loaned out. Thus cash was not available for emergencies
434 which in childbirth might mean taxis or hospital care. Being
844 rich or poor made little difference in Bang Chan, however, as
556 to the quality of the obstetrical help given.

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburī Health Center managed to pay the 60 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygymous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap. V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

426 Because of scattered farms and frequent shortage of cash, borrowing food and other items, and many exchanges of service were necessary. Blood-kin were easier to approach, and in the larger social unit, nearer. Borrowing from a non-kin neighbor was supposed to be less frequent, and the favor had to be returned more promptly and exactly.

434 Most opportunities for increasing cash income such as hiring out as temporary farm labor, digging canals, marketing eggs, mushrooms, or cooked snacks, took one out of the home, often overnight. In the small family, one partner was left at home. Both could not go because fear of theft forbade leaving a home unoccupied for any length of time.

The Buddhist Priesthood

792 At the temple lived twenty or thirty priests under the abbot, with a group of boys to serve them. The priesthood was maintained by daily voluntary offerings of food, with larger donations of food and commodities at certain times. Persons who thus "made merit," by supporting the priesthood, by giving to the needy, and adhering to the ethical tenets of the Buddhist religion, reaped a reward of health, happiness, wealth and eventually, freedom from rebirth. The immediacy of these beliefs must not be underestimated. Men only were ordained. They might resign at any time after three months, but some spent their lives in the priesthood.

792 In Bang Chan, throughout the year, the priests set out
262 at dawn to receive cooked food for the day. They appeared
431 at houses by more or less specific arrangement and were given a generous share of the food prepared by the family for its own use, sometimes with the addition of fruit and other delicacies. Each priest stopped at two or more houses. The food then was brought to the temple to be eaten at 8 and 11. For the rest of the day the priests fasted, i.e. they ate no solid food, but drank liquids such as tea, soft drinks, and recently, tinned milk and a fortified malted milk drink. Priests were also invited to eat in homes not only at large ceremonies, but at small merit-making occasions. Sporadic special food offerings were also received. If a buffalo died, much of the meat was usually given to the temple. Traditional practitioners, mid-wives, and ceremonialists always gave the priests a portion of the fees from their practice which consisted in 1 or 2 liters of milled rice, a bunch of bananas, and perhaps cash. On the numerous Buddhist holidays and at specially organized temple convocations, quantities of cooked, preserved and raw foods were brought to the temple and apportioned among the priests. From this bounty a meal was served to the priests, who ate while the villagers looked on in satisfaction.

One of the duties of the abbot was to coordinate the

Despite the availability of fish and of vegetables in the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

The two months of September and October during which the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit and take trips. A few might go on a pilgrimage. Therefore, in this season, all family members were less often together at the evening meal. Fishing was a continuous occupation, with some preserving and home craft. Jobs such as selling food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

High water caused time-consuming inconvenience only in earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

By November, the earliest varieties of rice matured. Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience of purchased food was greatest, cash was exhausted. With rice money in sight, venders might be generous with credit, but they could navigate only the larger canals, so were not available to many.

There was an important psychological difference between

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1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

796 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A big cremation might require planning in detail for years ahead: invitations to priests and relatives in distant parts of the country; hiring an orchestra and obtaining ceremonial gear. For the largest events, when the guest lists ranged upward to 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person, usually one of the "professional" cooks of the village. The day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

262 The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an annual homage-to-the-teacher rite. It is the nearest approximation to a quantitative record of food for a ceremony that the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either at 7 a.m. or 11 a.m., or both, always at least in part by the host, who sat and chatted with them. No one else ate until

4:Phillips E-4,5 (1956-1957) 1966
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"extended families." The aim of all Bang Chan families even then was to attain a position in which they would be free from such obligations or would have other families dependent upon them.

In the intervening years the influx of new families into Bang Chan, the increased self-sufficiency of the individual nuclear families and, most important, the increased acceptance of commercial values, have served to break down kindred groups so that today few kinsmen work their fields together and even fewer share their food or equipment with one another, beyond what has been noted above. Perhaps the only remaining universally practiced function of the old kindred groups is the celebration of ceremonials involving members of the family, particularly cremations and ordinations, the cost and merit of which are shared among the participants, depending upon their wealth. Very often people do not want to borrow from or lend money or equipment to kinsmen precisely because the intrusion of the kinship tie makes the collection of such debts doubly awkward ("relatives take twice as long in repaying money; I do not want to lend anything to them"). However, the old forms have not been completely obliterated and when necessity requires or personal convenience moves an individual to look to others, the traditions of extended kinship, as indicated earlier, may be invoked.

For purposes of conceptual convenience, two types of kindred may be specified: the kind referred to above which involves kinsmen living in the village and to which Kaufman (1960) gives the name "spatially extended family"; and the type descriptive of relatives living outside Bang Chan, dispersed throughout other villages and provinces or in Bangkok, and called by Kaufman "the remotely extended family" and by L. M. Hanks (1959c) "the multi-local extended family." These terms are of course generic labels descriptive of actual or potential relationships between individuals, not of specifically delimited groups. Sometimes Bang Chaners attempt to extend the definition of the latter type of relationship to individuals who have never heard of them, but who may be in a position to help their son obtain a job in the city or get him admitted into a vocational school. Hanks has shown how the multi-local extended family has to a limited extent in recent years rejuvenated extended kinship ties by becoming the major institutional mechanism through which villagers leave Bang Chan to seek their fortunes elsewhere. (This last phrase is not merely a figure of speech; many young Bang Chan men have what could be called almost a Dick Whittington view about leaving Bang Chan for Bangkok.) A cousin who undertakes to serve as a villager's liaison to a city job or who offers him a place to stay usually does so willingly, for it creates obligations which may be called upon later if need be.

The above description of variations and extensions has been presented

*178
212
572
402
228

TABLE 22. AMONG ILLITERATE FARMERS USE OF MOTOR IS LINKED TO WIDER SOCIAL CONTACTS

	Exposure to Influence of Others	
	Have more friends or about the same	Have fewer friends
	(Proportion who tried small motor)	
Literacy		
Illiterate	64% (36)	26% (27)
Literate	87 (86)	86 (78)
	(Proportion who tried tilapia)	
Illiterate	34% (36)	15% (28)
Literate	43% (86)	26 (27)

[369] This finding corroborates and expands the previous discussion of the culture contact and acceptance of innovations. Exposure to influence of others from outside the community (through contact with the city, with the airport, with the agricultural fair, for example), as well as exposure to the influence of others from within (through friends and associates) clearly relates to the decision to use an innovation such as the motor. Its effectiveness is not felt equally by the whole population, mainly instead, by those who are illiterate.

The significance of these internal and external contacts to illiterates may be that through such contacts they are likely to gain needed information and motivation which, if one can read and write, is available through other sources. If one cannot read and write, however, it is the outside world which provides this kind of needed information.

Capital Investment and Debt

• 426 Bang Chan s economy is largely a money economy and many farmers avail themselves of credit facilities through professional money lenders. Most loans are sought for the purpose of replacing capital equipment and purchasing land and buffalo.*

The present survey secures a rough measure of the extent of such borrowing in Bang Chan. The majority of farmers (39 per cent)

[113] * See Janlekha, Kamol S. A Preliminary Study of the Economic Conditions of Siamese Rice Farmers in Bang Chan, Thailand. M.S. Thesis Cornell University, 1951, p. 73.

admit in response to a direct question* that they have a debt. Confidence in the validity of these responses as an index of indebtedness is increased since the expected correlation between indebtedness and ownership of buffalo is reflected in the survey data.

TABLE 23. INCIDENCE OF REPORTED DEBT IS HIGHER AMONG VILLAGERS WHO REPORT OWNERSHIP OF MORE BUFFALOES

	Reported Ownership of Buffaloes		
	None (81)	One to three (155)	Four or more (97)
"...Do you now have a debt?			
Yes	49%	56%	69%
No	51	44	31

When the use of agricultural innovations is examined for those farmers who say they have a debt, compared with those who deny it, it becomes apparent that there is a relationship only between indebtedness and use of the motor but not with any of the other mentioned innovations. Seventy-nine per cent of the male farmers who said they have a debt own or use the motor; among those who claim they have no debt the proportion owning or using the motor is significantly less (60 per cent).

TABLE 24. INCIDENCE OF MOTOR USE IS HIGHER AMONG FARMERS WHO REPORT INDEBTEDNESS

	"...Do you now have a debt" Yes (125)	No (85)
Motor		
Has used it	79%	60%
Never did	21	40
Tilapia		
Has tried it	37%	33%
Never did	63	67
Fertiliser		
Has used it	14%	16%
Never did	86	84
Mushrooms		
Has tried them	45%	48%
Never did	55	52

**Male farmers only

* The question: "...I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?" Janlekha's M.S. thesis, ibid., reports a similar distribution of indebtedness for his sample of 98 farmers.

*178 30
426 One is tempted to speculate about the significance of this re-
402 lationship. One possibility deserves further investigation if the data were only available. If one important reason for incurring debts is to secure or to replace capital equipment, then those farmers more willing to make a capital investment, even though they incur a debt, are more likely to use the motor. Conversely, farmers unwilling or unable to contract debts for a basic improvement in their capital equipment might be the ones less likely to adopt an innovation such as the motor.

Other Factors

121 A number of other factors which conceivably might have been expected to differentiate those who tried out these innovations from those who never made an attempt to use them were investigated and proved to have no differentiating power. Factors such as age and family size, for example, were examined to see whether differential acceptance existed among younger compared with older age groups, or small as compared with large families. No such differences appeared. In the same way, the survey's rough measures of community integration and identification, certain religious beliefs and superstitions, certain personality traits, of knowledge of political figures, and willingness to perform industrial work likewise revealed no differential rates of acceptance when groups were compared.

*178 USE OF MODERN HEALTH FACILITIES
743 Improvements in agricultural production must certainly not be
75 viewed as the only efforts worthy of attention to raise the level of living in Bang Chan. Equally important are efforts to train the population to use modern health practices and facilities.

Hospitals have been available since the twenties in Bangkok and a clinic in Minburi since the thirties. Despite these facilities, much curing continues in the traditional way through priests or certain farmers of the locality who have learned from other practitioners to compound medicines, set bones, deliver babies and expel demons.

743 In the present survey the majority of respondents reported
[125] that they have sometime in their lives used hospital or clinic facilities. To the question, "Have you ever been to a clinic or hospital?" 63 per cent answered affirmatively. Less than half of those who replied indicated having gone for their own treatment or hospitalization, the remainder for other reasons. The distribution of responses is given below.

*178
743 Use of Health Facilities and Other Factors Associated With
241 Agricultural Innovations
572 Although use of the basic agricultural innovations was shown
* 426 to be linked to breadth of contacts within the community, on the one hand, and to indebtedness, on the other hand, the association between these factors and use of modern health facilities, although showing the same tendency, is not statistically significant. For the sake of completeness, the figures are reported below:

TABLE 34. NO RELATIONSHIP BETWEEN INDEBTEDNESS OR INTERNAL SOCIAL CONTACTS AND USE OF HOSPITALS AND CLINICS

	"Have you ever been to a clinic or a hospital?"			
	No, never	Yes, for treatment	Yes, for other reasons	Total 100%
Social Contacts:				
"More friends"	31%	33%	34%	(61)
"The same"	40	35	25	(134)
"Fewer friends"	32	41	27	(94)
Do you now have a debt?				
No	40%	32%	28%	(140)
Yes	33	41	26	(192)

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SUMMARY

1. In the community of Bang Chan in Central Thailand, various factors are studied statistically in order better to determine the conditions of acceptance of selected agricultural innovations and conditions for using the facilities of modern medicine in clinics and hospitals. Four agricultural innovations were selected, viz. gasoline motor, raising of fish (tilapia), use of fertilizer, and mushroom culture.

2. The present study was concerned with the initial adoption or trial of innovations, rather than the continuing use of these innovations or the merging of the new with the old features of the culture.

3. While adoption of the gasoline motor was associated with all other agricultural innovations, no generalized acceptance of the new was found because: a) adoption of the gasoline motor bore little or no relation to use of non-agricultural innovations such as hospital and clinic facilities; and b) adoption of gasoline motors was only weakly associated with raising of mushrooms.

4. A cluster of traits including high motivation and sizable capital outlay was associated with the use of the gasoline motor.

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and acceptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike acceptors of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

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[513] f. During the last year, did it occur to you frequently, sometimes, or never that you had a nightmare?

4.	Frequently	16
5.	Occasionally	120
6.	Never	197

[546] 35. In your life, how many times have you seen a movie, or haven't you ever seen one?

5.	Ten times and more	161
6.	4 to 9 times	60
7.	1 to 3 times	75
8.	Never	33
—	No Answer	4

[426] 36.a. Excuse me, I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?

5.	Yes	192
6.	No	140
7.	Unascertainable	1

b. IF YES: Is your debt now higher, or lower, or about the same as it was two years ago?

8.	Higher	68
9.	Lower	95
X.	About the same	28
Y.	Unascertainable	1

c. IF NO: How about two years ago, did you have a debt then or not?

9.	Yes	61
X.	No	78
Y.	Unascertainable	—
—	No Answer	1

[441] 37.a. Do you or anybody in your household buy certain products in order to resell them at a profit?

9.	Yes	85
X.	No	242
Y.	Unascertainable	2
—	No Answer	4

b. IF YES: Do (you/they) sell things regularly, occasionally or just at festival times?

7.	Regularly	31
8.	Occasionally	49
9.	Just at festival times	5
X.	Unascertainable	—

[241] 38.a. And now, I would like to know a little more about fertiliser. Do you think fertiliser is very good, fairly good or bad?

1.	Very good	106
2.	Fairly good	149
3.	Bad	15
4.	Unascertainable	63

59 themselves up ; financially to compete with A's parents.

The same informant said further, however, that usually it was up to the couple themselves to decide when to leave the old family. Parents, in his words, "rarely drive the offspring out. They also rarely resist the couple's decision to leave. The most they can do in case labor is badly needed is to ask the couple to stay a year or two longer."

591 494 On the other hand, a second informant, a headman as was the first, indicated that the five-year period he and his wife spent with his wife's parents immediately after their marriage in 1922 was their most prosperous time. As [431] lampai the couple were given the harvest from a 5-rai parcel each year. When he married, he already had five baht weight [426] of gold. With surplus income, he was engaged in lending for interest. Accumulation during their five years' stay with the parents included timber enough to construct the new home when they moved out, one hundred tang of paddy, and forty baht weight of gold.

As a matter of fact, there are several factors that should be taken into consideration in evaluating the advantages and disadvantages of a newly wed couple undergoing the nascent period. These are the lampai arrangement, willingness of the parents to let the couple earn extra income from sources outside the family, current wage rate and job opportunity, and, most important, the current profitability of the farming business which is assumed to be the alternative

*243
434 on a small plot that they own or rent, but all families
463 in this category derive their main income from wages.

3. Trader. Main income from the more or less regular sale, not production, of rather considerable amounts of goods. Perhaps somewhat arbitrarily, we have not included in this category those very few families who derive their main income from production of cookies or the like, even though such families might themselves perform the selling of their products to local consumers; such families are included in the 'home enterpriser' category below.

[426]
[427] 4. Investor. Main income from land rent, interest on loans, and/or speculative gain.

5. Professional. Main income from such specialties as midwifery or dramatic entertainment.

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647 6. Public servant. Main income from, or majority of
463 working time spent in, government employment. This is the only category in which we had to add the additional criterion of "majority of working time"; government pay is rather low, and one person who works full time in the employ of the government actually receives more income from other sources.
[875] This category includes regular government officials, teachers
[622] and school janitors. The hamlet headmen are not included, however, as their main incomes are otherwise derived and their remuneration from the government is extremely low. They maintain no daily routine as public servants. The headmen are all farm operators, except one who is an investor.

621 four in the immediate neighborhood of the temple or on the
463 temple ground itself, and three on the banks of up-canal
443 Bangchan. These stores varied in the size of business but the goods sold were almost identical. To be found in each store were inexpensive articles of daily use, mostly dry foods, cookies, tobacco, betel, areca, lime, toilet articles, matches, kerosene, and farm materials like ropes. Most of these stores also sold hot coffee, soft drinks, and liquor. It should be noted in this connection that the market town is only two miles away. This nearness to a large market adversely affects the nature and volume of business of local traders in two ways -- villagers bypass local stores and go to the market town for varieties and large purchase, and the village is daily invaded by a number of peddlers from the town selling perishable foods.

443 While local stores operated the whole year round, the
463 activities of twelve other trader families classified as peddlers were highly seasonal subject to local water condition, seasonal demand for purchased food, seasonal supply of cash, and alternative income on the part of the peddlers themselves. These peddlers sold small quantities of vegetables, fruit, and the cheap salt water platoo fish (Rastrelliger chrysozonus), receiving in exchange from buyers cash, [426] eggs, or paddy. Extension of credit was necessary for villagers did not have cash especially during the period from July to November. The following passages in the author's daily note dated January 12, 1953 gives an idea as to how

443 she wanted to spend more time collecting debts."

221 433 434 443 261 262 It should be noted that A's brief duration of peddling started in the harvesting season. During this time the village cash supply was high, resulting in demand for such a delicacy as pork which normally constituted a negligible fraction of the diet of Bangchan people. This is a good business period for the peddlers. Another good business period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this latter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

443 It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

427 434 454 621 463 426 Five families were classified as investors in 1953. All these families lived on rents from land, interest on loans, and income from speculative sources such as buying paddy when the price was low and selling it at high prices. Actually, most of these five families were not among large land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

427 the combined land of five leading farm operators of 693
434 rai, averaging 139 rai per operator and ranging from 83
454 to 235 rai. It must be remembered that our operational
621 definition of occupations was based on the main source of
463 income and that many of the villagers had more than one
426 source of income. Investors as an occupational class in Bangchan should not be pictured as large landlords and large money lenders, possessing financial influences over their tenants and debtors. Rather, they were humble fellow villagers whose incomes were mainly derived from rents of small parcels of land or interest on small loans. To cite an extreme case, one aged woman was classified as an investor. She had only 17 rai which she rented out to her own son. She was living alone in an old shack and was too old to do any kind of work. She received as rent about a hundred tang of paddy a year which is equivalent to an annual income of only 800 baht. Thus she was considered one among the poor in the village.

178 There were three families whose occupations were
463 classified as professional in 1949. The number was reduced
621 to one in 1953. The head of this family was a Chinese car-
322 penter who derived his income primarily from boat building. Again, it must be pointed out that reduction of the number of families primarily engaged in professional services does not mean that professional services had been declining.
[305] On the contrary, they had been increasing. There were three barbers in 1953 as against only one in 1949. More traditional

243 In 1953, figure for the size of the crop was not
423 available, but we may use the 1948-52 average of 28.8 tang
434 per rai. With the year's farm price of 9.00 baht per tang,
435 receipt may be calculated at 259 baht per rai. Using the
427 same cost, again excluding rent, of 166 baht as in 1948, a residual return to land may be estimated at 93 baht per rai.

Capitalized value of land may be calculated from the formula $v = \frac{a}{r}$ where 'v' stands for capitalized value of land, 'a' for income from the land, 'r' for the rate of interest prevailing in the locality.[16]

When the calculated residual return to land is used, the capitalized value of farm land in Bangchan (Zones 2-7) is found to be 573 baht per rai in 1948, and 620 baht per rai in 1953. When income deriving from explicit rent is used in the calculation, however, the capitalized values become 327 baht per rai in 1948 and 487 baht per rai in 1953.

178 It is interesting to note that capitalized values of
423 land computed from these two different types of income were
434 closer to each other in 1953 (487 baht computed from income
427 deriving from explicit rent as against 620 baht computed
435 from the calculated residual return to land) than in 1948 (327 baht computed from income deriving from explicit rent as against 573 baht computed from the calculated residual return to land). In other words, landlords are now receiving a larger proportion of the residual after payment of all

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[426] 16. The rate of interest of 15 per cent per year is used. This is the minimum going rate with security. Without security, the rate may be as high as 30 to 50 per cent per year.

243 426 432 Differentiation in paddy prices is limited to cases where farmers have received in advance the payment for paddy to be delivered at harvesting time. This is a common practice which is called in Thai "tog khao" (lit., fall rice). Usually, the advance price received by the farmer is about half or not more than three-fifths of what he would normally receive. Considering that cash is usually received about a month or two before the delivery of the paddy, it would seem that tog khao is a kind of loan with as high a rate of interest as from 25 to 50 per cent per month.

243 426 465 A similar practice is adopted with respect to advanced payment for piecework, where pieceworkers are committed to uproot, transplant, or harvest at about half of the prevailing rates. This is called tog raeng (lit., fall labor).

243 128 427 Tables 24 and 25, in the section on land tenure of Chapter III, show a wide range of rental rates of rice lands which have not demonstrated any marked difference in crop producing ability.

Rates of interest in Bangchan vary greatly from 0 to 10 per cent per month. This topic will be discussed more fully in later sections of this chapter.

243 434 556 The important point that should be observed in connection with these differentials in paddy prices, rates of interest, rentals, and wage is that it is the less affluent farmers who usually bear the burden of higher costs due to these practices. Thus, these differentiations serve only to widen the gap between poor and well-to-do farmers.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*128
434 the loans previously extended to them. Among the five operators reporting sales of farm equipment, one sold his part of the joint ownership of an engine in order to buy a new one for his own, three sold their old buffaloes and bought younger ones, and one -- the inventor of the propeller windmill mentioned earlier in this dissertation -- sold windmills and other farm implements he made for sale.

434 The average amount of money received from loan set-
426 tlement during the past five years of 1,700 baht appeared
432 to be too small considering that the amount of loans ex-
511 tended by the sample-families during the period was as high as 51,630 baht and that the ability of these sample-families to settle loans extended to them was 101,530 baht out of a total of 141,100 baht. An explanation for this lies in switching of debt responsibility. At least one case was known where an operator, who was in debt to a fellow farm operator, sold a parcel of land to a third party at 11,000 baht. This buyer, apparently not having enough cash, arranged that he would assume responsibility for the amount of 8,000 baht which the seller of the parcel owed the other farm operator and would pay only the balance of 3,000 baht to the seller in cash. Strictly speaking, the creditor should report that he received a certain amount as loan repayment (actually, 4,000 baht for the principal and 4,000 baht for interest of 25 per cent for four years) and spent this same amount on loan extension. Actually, however, only the seller of the parcel reported that he had sold a

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426 parcel of land and had cleared off his debt. The creditor
432 did not report anything about this deal, for he really did
511 not receive a cent out of the arrangement.

434 Loan obtained is the largest item of special receipts
426 involving 29 farm operators and 141,100 baht. The following
511 were the purposes of the loans sought as given by borrowers: land purchase, 7 cases; buffalo purchase, 3 cases; sponsoring rituals, 3 cases; to partially defray ordinary household expenses which exceeded cash incomes especially in years of poor crop, 16 cases; and to cover major medical expenses, 2 cases (two operators listed two combined purposes of the loan, hence the total becomes 31 instead of 29 if there is only one purpose for each case).

*128 Net Accumulation of Assets

434 Figures of net accumulation of assets within a certain
511 period are valuable to the understanding of the economic conditions of farm operators in that they show the economic achievement, or the internal saving, of these operators. In order to obtain exact figures, however, it is necessary that we have complete inventories of the farm families at the beginning as well as the end of the period. Since our data on inventories of the sample-families for 1948 and 1953 are incomplete, especially we are totally unaware of the quantitative debt situation in 1948, we cannot use the simple method of subtracting the net worth as of February, 1953 from that as of March, 1948 to determine net accumulation

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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434 was considered as spent in land purchase. If, however,
432 he made another partial payment of 2,000 baht during the
511 period covered by the study, a total of 3,000 baht was considered. Since purchases of gold and household equipment are normally made with cash, a total of cash spent on these three items (land, household equipment and gold) would seem to fairly well indicate the extent of internal saving of each family. The assumption here is that one would not
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426 borrow money to buy gold or a gun. With this correction
511 the figure remaining will represent a change in net assets, if we can assume no other changes in the debt situation. For those who bought these assets, it is very unlikely that any increase in outside debt occurred. The reason for this belief lies in interest rate differences: any person with some cash (which may be borrowed at low rate of interest in case he was about to buy land) would rather settle his high interest bearing debts first before buying household equipment or gold or making down payment for land. For those who did not buy these assets, some increase in debt for consumption purposes may have occurred. Both groups may have decreased debts during this period. The most likely assumption is that those buying land experienced a net decrease in debts other than those incurred in buying land, while those not buying such assets experienced a net increase in debts. The balance was probably one of some
[454] increase in debt in the village. Therefore, although these figures for net accumulation of assets provide a fair

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426 representation of internal savings in the community, they
454 probably overstate this increase somewhat.
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When calculated in the manner outlined above, the
511 net accumulation of assets of our 96 sample-families was
434 found to total 84,942 both during the period from March, 1948 to February, 1953, averaging 885 baht per family per year. The frequency distribution of this accumulation of assets is shown in Table 59.

It is seen that of 96 sample-families, 90 had positive accumulation while only 6 had negative accumulation. Fifty-six or more than half of the total number of families studied had an accumulation of assets in the class interval between 0 and 999 baht. The highest amount of accumulation was found to be 9,000 baht, while the lowest was -10,470 baht.

We should examine the figures of Table 59 more closely before drawing a sweeping conclusion from the mere fact that 90 out of 96 sample-families had positive accumulation. In the first place, the raw data show that of the 56 families reporting accumulation in the class interval of 0 - 999 baht, there were 42 families whose accumulation was 0. Thus the number of families with positive accumulation was really not 90, but actually 48 or only half of the total sample-
[435] families. Besides, consideration must be paid to the fact that gold is not only a kind of security but also an article of prestige as well, and a gold necklace of 15 - 30 gram weight valued at 500 - 1,000 baht is usually worn by a rural Thai who can afford one. When a person reappears in the

[TEXT CONTINUED ON PAGE 340]

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434 village after long absence, his achievement will be judged not by the words from his mouth but by whether he has less or more gold than the time he left the village. The importance of gold as a prestige item being as it is, it is not surprising at all to see that a farm operator who did not have any gold will tend to buy a necklace when he receives a lump sum from the sale of rice although he knows that the amount would not last until the next harvest even without that extra expense on the necklace. When this farm operator ran out of money say in July or August, he would rather go into debt than part with that necklace if it really is his only adornment. Tables 57 and 58 show that within the five-year period there were 48 families buying in gold as against only four families selling out gold and that the average for those buying in was 1,341 baht per family while the average for those selling out was 3,038 baht, indicating that when financial pressure arose it was the families having more gold than necessary for display that tend to sell it. Realizing this situation, the author thinks that it is justifiable to give an allowance of about 1,000 baht for gold purchased for prestige purposes. If we agree on this point, there would remain only 34 families demonstrating accumulation of wealth, possibly through internal savings.

Debt Situation

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511 In order to understand the debt situation in Bangchan, it is necessary to distinguish debts created by purchasing goods on credit, which we shall henceforth call credit

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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426 511 purchase, from debts created by loans. The tendency among policy makers and scholars to use the general term "debt" without specifying which is which has often led to confusion which we shall see later in this section.

128 Debts, both credit purchase and loans, are the most difficult subject of this study as far as information gathering is concerned. In a culture where prestige counts more heavily than profit, this is a delicate topic from which an ordinary informant usually shies away.

128 426 511 Although it was realized that farm indebtedness was very essential in the understanding of the economic condition of farm operators in Bangchan as well as elsewhere, in the first year of our study (during 1948-49) only fragmentary information was obtained and we were unable to present comprehensive statistical statements as to the incidence of particular types of credit in the preliminary report in which only categories were given. Since these categories are valuable as background information, they will be restated as follows:

Types of credit

1. According to length of the term
   a. Short term -- a few months
   b. Long term -- one or several years

2. According to amount
   a. Small -- less than 1,000 baht
   b. Large -- 1,000 baht or over

3. According to the nature of relationship between parties to the loan
   a. Among blood relationship or close friendship
   b. Others

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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4. According to type of security, if any
   a. Land
   b. Gold, jewelry, or other movable asset
   c. No security

5. According to the nature of the contract
   a. Oral contract
   b. Written contract

6. According to rate of interest
   a. High
      (1) For small loans, from 5 per cent per month and over
      (2) For large loans, from 2 1/2 per cent per month and over
   b. Low -- anything lower than above. Some rates would thus be considered low even though they were in excess of the maximum legal rate of 1 1/4 per cent per month
   c. No interest

Types of source of credit

1. According to location
   a. Local -- within the village or immediate neighborhood
   b. Near -- in more distant hamlets in Bangchan and Kannayao Communes, in the market town of Minburi, and in nearby villages like Bangkhuad or Wat Khoo.
   c. Far -- in Bangkok and such towns as Dhonburi or Nonburi.

2. According to lender
   a. Non-affluent persons who give the loan only on the appeal of a relative or friend in need
   b. Affluent farmers who lend money for interest as a secondary income
   c. Villagers whose primary source of income is money-lending
   d. Chinese rice dealers residing nearby who regularly buy local rice surpluses. These dealers lend money for the purposes of:
      (1) Gaining income from interest -- usually loans are small with high rate of interest
      (2) Promoting a rice trade relationship with borrowers -- usually loans are small with low rate of interest or no interest at all
   e. Local store-keepers sell items on credit -- the amount extended depends on character.
   f. Money-lenders in Bangkok and other large population centers -- usually mortgage term is required.

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In our second visit during 1952-53 our informants appeared to talk more freely on the topic of debts, especially when they were interviewed on the kinds and amounts of special expenses and receipts. At the beginning we did not ask our sample-operators direct questions on the amount of credit purchase or loan they were having. Only casual information pertaining to debts that arose during the discussion of related topics was noted and filed separately by the informant and also by the person referred to both as a lender and as a borrower. It was noticed that while most informants did not want to lay bare the whole situation of their debts, they were rather cooperative and sometimes even eager to make partial statements as long as an answer to the blunt question "How much do you owe now?" could be avoided. For example, one of the 96 sample-operators was telling the author the amounts of outstanding debts of some of his fellow operators (ranging from 3,000 baht to 15,000 baht) and proceeded on to generalize that rice farmers had to go into debts at one time or another. The author, thinking that that was the most opportune time to ask the man about his own debts, raised the blunt question just mentioned. The informant replied, "Just about the same amounts as these people are owing." He then changed the subject, indicating an unwillingness to give the exact amount of his outstanding debts. In the conversation that followed, however, he eagerly stated that he had been able since 1948 to clear off as much as 21,000 baht of debts. When asked how much a proportion

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that was to the total amount of his debts, he paused to calculate and then said it was exactly three-fourths of the total. The author then asked whether he was right in figuring that the man's current outstanding debt was 7,000 baht. The informant admitted that that was the correct figure.

There were, however, some twenty farm operators in our sample who took the author as one of their family members, and were thus very cooperative in giving any information that the author wished to have. Thus, by the end of 1952 we had a considerable amount of data on loans. Constantly checking available information in the files, from the dry season of 1953 onward the author put more effort in getting the debt situation of each of our 96 sample-families, concentrating first on the extent of loans and their respective interest rates. During the inundation period of 1953, effort was shifted to getting information about credit purchases and their respective rates of interest which were brought up to date as of December of the same year. Information on loans was also brought up to date at this same time which may be considered as the end of business year because the early varieties of rice were being harvested at this time of the year. Table 60 shows the classification of farm operators according to kind of debts involved as of the time immediately preceding the sale of the early varieties of rice.

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It is seen that there were only two non-responses out of the total of 96 sample-families. Among these 94 farm

[TEXT CONTINUED ON PAGE 346]

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TABLE 60

CLASSIFICATION OF 96 SAMPLE-OPERATORS ACCORDING TO OUTSTANDING DEBTS
AS OF DECEMBER, 1953
Bangchan, Thailand

Classification	Number of Operators	Amount of Debt in Baht		
		Long-term	Credit Purchase	Total
No debts of any kind	37	--	--	--
Long-term debts only	15	90,600	--	90,600
Credit purchase only	23	--	23,870	23,870
Long-term debts and credit purchase	19	65,850	13,850	79,700
No response	2	--	--	--
Total	96	156,450	37,720	194,170

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*128 • 426 511 operators reporting their debt situation, 37 had no debt of any kind, 15 had long-term debts only, 23 had credit purchases only, and 19 had both long-term debts and credit purchases. Frequency distributions of credit purchases and of long-term loans are shown in Tables 61 and 62 respectively.

426 829 511 The debt situation in Bangchan can be best revealed by quoting directly some of the remarks made by villagers as follows:

"Rice farmers must have debts. Whoever can so manage to avoid debts should be placed on the financially sound list."

"I have been thinking, all day and all night, of the way to avoid debts -- and all in vain. They finally come to a total of one thousand baht with five hundred baht interest every year. I clear them all every year also. Those who cannot clear this kind of debts are sure dead."

"I always pay cash -- afraid of debts."

"Money-flower[8] (a direct translation of the Thai word for interest) is really a peculiar kind of flower. It blooms best in times of drought and flood."

426 511 000 Apparently, the term "debts" as used in the above quotations refers primarily to credit purchases. It is not difficult to see how these credit purchases have become institutionalized in the rural areas of Thailand. Writing

8. Thai word for interest is dorg-bia (lit., flower of money).

[TEXT CONTINUED ON PAGE 349]

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TABLE 61

FREQUENCY DISTRIBUTION OF CREDIT PURCHASES
OF 96 SAMPLE-OPERATORS
Bangchan, Thailand, December, 1953

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Amounts in Baht	Number of Operators
3,500 and over	1
3,000 - 3,499	1
2,500 - 2,999	1
2,000 - 2,499	2
1,500 - 1,999	2
1,000 - 1,499	11
500 - 999	14
Under 500	10
No credit purchase	37
No response	17
Total	96

Mean . . . 898 baht for those reporting any credit purchase

Median . . 911 baht for those reporting any credit purchase

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 62

FREQUENCY DISTRIBUTION OF LONG-TERM LOANS
OF 96 SAMPLE-OPERATORS
Bangchan, Thailand, December, 1953

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Amounts in Baht	Number of Operators
30,000 and over	1
20,000 - 29,999	1
10,000 - 19,999	1
9,000 - 9,999	0
8,000 - 8,999	2
7,000 - 7,999	2
6,000 - 6,999	1
5,000 - 5,999	2
4,000 - 4,999	2
3,000 - 3,999	5
2,000 - 2,999	6
1,000 - 1,999	10
Under 1,000	1
No loans	60
No response	2
Total	96

Mean . . . 4,601 baht for those reporting any loan

Median . . 2,850 baht for those reporting any loan

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

Writing on economic change in Thailand since 1850, Ingram points out that soon after the Bowring Treaty (1854) the population of Thailand tended to specialize more and more in the production of one major crop (rice) and a small number of other primary products, selling these products for money, and using the money to buy various articles of consumption. "Money thus came to play an increasingly important role in an economy in which it had formerly been of but minor significance. When Western traders were freed by the Bowring Treaty to put such products as cheap cotton prints on the Thai market, the people bought these products and, if they could not buy they sought a source of money income. Money could most easily be acquired by producing some commodity for the export market. As villages and households turned to the production of money crops, and as they began to purchase bright-colored garments from the traders, the household crafts declined. Cotton fields were perhaps used for rice or abandoned in favor of land suitable for rice. With the money income earned through the export market, the farmer bought the goods he had formerly made for himself."[9] The money economy had brought along its inevitable companion -- credit, which had become accentuated by the fact that Thai rice farmers received their principal incomes only once a year. There has been a tendency to trace the perpetuation of farm indebtedness to farm poverty which is in turn traced to low productivity in underdeveloped areas. While this is

9. Ingram, op. cit., p. 36.

243 178 426 43 perfectly true especially among the under-sized farms in Bangchan, there is still to be explained why more affluent farm operators are also continually in debt. It has been observed that when people come into contact with superior goods or superior patterns of consumption, with new articles or new ways of meeting old wants, they are apt to feel after a while a certain restlessness and dissatisfaction. Their knowledge is extended, their imagination stimulated; new desires are aroused, the propensity to consume is shifted upward. This principle according to which individual consumption functions are interrelated was propounded by Duesenberry, who calls it the "demonstration effect."[10] When the list of new items of consumption is checked, it appears that this principle of demonstration effect has demonstrated itself very clearly in Bangchan.

426 432 (128) Table 63 shows that in the majority of cases credit purchases bear an interest of 50 per cent per season, ranging from 0 to 67 per cent. Information from sources other than our sample farm operators reveals that two methods of interest charging were practiced by Bangchan storekeepers and peddlers. One method was to charge 40 per cent interest on credit purchasesmade during March - May, 30 per cent during June - the first half of November, and no interest on purchases made in the second half of November and after; all these rates were charged on the assumption that accounts would

10. This is about the receipt from 8.4 rai in 1953.

[TEXT CONTINUED ON PAGE 352]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 63

CLASSIFICATION OF CREDIT PURCHASES ACCORDING TO RATE OF INTEREST CHARGED
Bangchan, Thailand, December, 1953

• 426

Rates of Interest In Per Cent Per Season	Number of Cases	Total Amount of Credit Purchase
		baht
0	4	1,100
15	1	3,000
50	37	33,320
67	1	300
Total	43*	37,720

* One operator reported two credit purchases at different rates of interest, so there were 42 operators involved.

426 be settled at harvesting time in December or January. If
432 buyers failed to settle their accounts at harvesting time, a flat rate of interest of 5 per cent per month would be charged on the total amount (principal plus interest) until the whole debt was settled.

Another method was more simple: 50 per cent interest was charged to the amount purchased regardless of the time of purchase. The only exception was that no interest was charged on purchases made after the first half of November. Here, again, the assumption was that accounts would be settled at harvesting time. In case buyers failed to settle their accounts at the specified time, the same rate of interest of 5 per cent per month was charged on the total as in the case of the first method.

Our records show that there were nine among our sample-operators who failed to clear their credit purchase accounts at the harvesting time of the 1951-52 crop. These accounts, principal as well as interest, were considered as loans with interest rate of 5 per cent per month or 60 per cent per year payable at the harvesting time of the next crop, that is the 1952-53 crop. The shifting of purchase accounts into loans was done in order to simplify bookkeeping work on the part of both debtor and creditor, for these delinquent customers were likely to start their credit purchases again in order to get by until the next harvest. The total account of these nine operators was 19,550 baht, averaging 2,172 baht per case. This appears

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

426 in Table 64 under the item of loans with 60 per cent interest.
432 It is seen that these operators would have to pay an average of 1,303 baht as annual interest for this account alone. This explains why it was claimed by the villagers themselves that "those who cannot clear this kind of debts are sure dead." One way to avoid this adversity was to seek a long-term loan at the ordinary rate of interest of two per cent per month (Table 64) to replace the high interest loan created by credit purchases. In the previous section on special receipts, it was mentioned that 16 of a total of 29 farm operators in our sample who had sought loans during the past five years said that the loans were needed to defray ordinary household expenses. Obviously, the nine operators had tried to get loans with lower rates of interest to settle their accounts with the storekeepers but they could not get any.

Table 60 shows that of a total outstanding debt of 194,170 baht, more than three-fourths was in the form of loans and less than one-fourth was in the form of credit purchases. Although the majority of cases of aquisition of loans were found to have as their purpose the clearing of higher interest bearing debts, quantitatively speaking each of these was a small loan. Most other loans were sought for land purchases and buffalo purchases. Although these latter were fewer in number, they were larger in amount. It may then be said that a major portion of loan monies were sought for investment or productive purposes while

[TEXT CONTINUED ON PAGE 355]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 64

CLASSIFICATION OF LONG-TERM LOANS
ACCORDING TO RATE OF INTEREST CHARGED
Bangchan, Thailand, December, 1953

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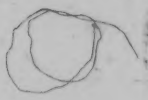
Rates of Interest in Per Cent Per Year	Number of Cases	Total Amount of Long-term Loans
		baht
0	1	700
12	6	21,666
15	2	5,667
18	1	1,600
24	15	82,267
30	1	3,000
60	9	19,550
not reported	2	22,000
Total	37*	156,450

* Two operators reported several loans of different rates of interest: one, three loans -- and the other, two such loans. So there were actually 34 operators involved.

426
432 credit purchases were almost entirely for consumption purposes. The distinction can then be drawn that whereas credit purchases with high rates of interest indicate a shortage of cash due primarily to poverty, loans with lower interest rates do not necessarily serve as such an indicator. Thus, any survey bringing out only the total amount of debts does not shed as much light on the economic situation of the area as it would if the debts are itemized into loans and credit purchases.

Another important point is that farmers tended to clear off their credit purchase accounts the moment they were in a position to do so because they did not want to bear the burden of a very high rate of interest. Even in cases where they had a more pressing need for the use of the cash in hand during harvesting time, their creditors would be around to demand the settlement of debts. To these creditors, a relatively high return of five per cent per month was no longer a good business, for it is obvious that those farmers who would not settle their high interest bearing accounts during harvesting time must certainly be hard up and hence a poor risk. Besides, it will take another full year to collect the debts if they could at all. As a result, most of credit purchase accounts were usually cleared in Januaryof each year when farmers started to sell their early varieties of rice. It is seen, then, that for each year the total amount of credit purchase accounts was highest in December and lowest by the end of January, if not nil.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan



426 Thus, figures of total debts alone are almost meaningless
432 unless they are itemized and the date when such accounts
*128 are outstanding is specified.

*128 Cash Situation and Role of Paddy
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It is not the purpose of this study to quantify the cash situation in the village. Even mere estimation would already be too ambitious a task for a study of this nature. We propose, therefore, to give only an outline of the cash situation with the hope that it may serve as background information for further research along this line.

434 1. Extent of money in circulation

a. Incoming

Village net exportable rice: Total crop -- seeds (1 1/2 tang per rai) -- amount consumed by the family (30 tang per man-unit) -- feed or amount consumed by poultry (4 tang per chicken-unit: rooster, 1 unit; layer, 1 unit; chic, 1/4 unit; duck, 1 unit).

Village net exportable poultry products: Total egg production -- amount locally consumed, and total young roosters (7 months old) -- amount saved for breeding purposes.

Money regularly earned from outside sources: wages and salaries (teachers, headmen, janitors, workers on highways, and other workers drawing pay from outside sources); rentals (paid to village residents owning lands in other villages); remittances from outside; dividends if any.

Exportation of other products: mushroom, lotus.

Loans obtained outside the village.

Settlement of loans extended to outsiders (very limited, if any at all).

Sales of lands, gold and jewelries, capital goods to outsiders.

432
426 It has been observed that most business transactions were done on credit. When the farmer went to town to receive payment for his paddy from the rice dealers, he would at the same time settle his accounts with the lumber yard and several dry-goods stores. So actually in many cases cash was not brought into the village except in limited amounts.

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[674] People do not like to carry a large amount of cash around in the village for inherent fear of robbery which rarely happens. Chinese rice dealers prefer to pay for the paddy they bought at their own home. If sellers insist that the money should be brought to them in the village, the dealers will break the total of say 5,000 baht into one or two thousand baht at each of three or four payments.

Villagers also do not like to keep a large amount of cash at home. In case the payment for paddy sold is to be made at the farmer's home, he would arrange for borrowers to come to his home at the same time so that the money will be immediately passed on to the others, thus avoiding risk involved in keeping cash. One of our sample operators said that he arranged a few years ago that a large sum of 10,000 baht be paid at his home so that he might pass the whole amount immediately to the owner of a parcel of land he agreed to buy. Everybody in his household was frantic when the money was received from the Chinese dealer but the

seller of the land did not show up until the next morning. Recruit had to be made for guns and men to guard the money for that whole long night.

3. Scarcity of money

Scarcity of money exists in Bangchan because there is, relative to the demand for purchased goods and services, only a small margin between the price received and the cash outlay of producing paddy. Another reason is that most farms are too small, thus yielding small net cash incomes to the majority of farm operators in the village. Small incomes of farm operators who constitute the core of village economy means also small incomes of the rest of the village population whose financial condition directly or indirectly depends on incomes of farm operators.

Scarcity of money is directly evidenced by shortage of money during theperiod from July to December. It is also indicated by high rates of interest on credit purchases and loans sought in the village.

The problem of scarcity of money has been rendered more acute by the fact that affluent farmers do not like to keep cash at home or put it in liquid form such as in saving bank in the nearby market town, but prefer to invest it in a more or less non-liquid form such as loans or land purchases. Some of those who had accumulated a large amount also tend to spend it on sponsoring of rituals costing as high as several

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thousand baht to more than ten thousand baht which is a real drain on the village cash supply.

These huge expenses are, however, partially compensated by such items as loans sought from outside or sale of lands and other assets. It cannot be expected, however, that these items would provide enough supply of cash to bring down the rate of interest in the village.

[426]

4. Role of paddy

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Paddy is extensively used in the village as a medium of exchange. It is used in both small transactions of a few baht and large transactions of several thousand baht. Thus paddy stock may almost be considered as equivalent of a bank balance.

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The most important consumption uses of paddy are as seeds and for human consumption. In order to make it really comparable to a bank balance, allowance must be made for the amount necessary for seeds and human consumption although the amount for chicken feed may be dispensed with because the farmer may choose to drop his poultry enterprise. On this basis, we have arbitrarily coined a term "index of capital formation potential with present levels of living" to represent the amount of paddy in tang which is left at the operator's disposal at the end of March after allowance for seeds and family consumption has been made. No allowance is made for special consumption expenses such

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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The lean time from the middle of February to the end of May is devoted by some villagers, mostly young men, to wage earning outside the village. The size of this temporary labor migration depends on the job opportunities, and these job opportunities depend largely on personal contact. Seasonal off farm jobs are: (a) crude carpentry work usually on nonpermanent construction where cheap temporary labor is preferred; and (b) plantation work in the sugar cane region of Cholburi some eighty miles east of Bangkok.

Inherent Excess of Expenses over Income

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The prevalence of debts in the form of credit purchases among Bangchan farmers indicates an excess of expenses over incomes. It has been shown that most cash loans were sought to clear high interest bearing credit purchase accounts, although some were for productive purposes. Even in this latter case, it has been observed that farmers usually borrowed no more than an amount that was immediately needed together with cash on hand to pay for the capital investment. This means that after such capital purchases there was less cash for the household and operating expenses, and so there would be a higher credit account to be settled in the following harvest.

Low incomes coupled with relatively high expenses leave little or no room for internal savings.

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The situation is aggravated by an increasing rate of consumption relative to the ability to produce. While

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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434 production method and farm organization remained the same throughout, there had arisen in the course of the past four or five years new items of consumption including wrist watches, fountain pens, hair do, Coco-cola, invitation cards, admission to Miss Thailand contest, etc., which demonstrate the operation of the principle of demonstration effect par excellence. It is not difficult to see, then, that any chance increase in cash incomes due to favorable weather and economic conditions tends to be absorbed in consumption.

While consumption correspondingly expends with an increase in income, it does not decline with a contraction of income -- at least not in the same proportion. This is the principal reason for farm poverty in rice growing areas where only a single-crop system is practiced and where fluctuation of crop yield is a normal phenomenon.

As a result, the excess of expenses over incomes
[426] tends to persist. High rates of interest also have made this excess greater and greater among those who fail to make proper adjustment in their credit situation. Thus, the less affluent farmers are not only poor but are actually getting poorer and poorer.

Population Pressure

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434 While low incomes and inherent excess of expenses over incomes are basic problems of Bangchan, discussions in the early chapters reveals that there are some factors contributing to the acuteness of the basic problems. One

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 161 178 464 Finally, it has been pointed out that the kind of training and the type of financial preparation given to young married couples have served only to confirm Bangchan people to their preference for rice cultivation. This together with limited job opportunities open to them elsewhere have tended to keep the villagers on the farms, and thus have tended to regenerate the condition of population pressure in Bangchan.

Lack of Effective Control and Regulation of Water Supply

243 458 Another contributing factor is the lack of effective control and regulation of water supply, which has caused annual fluctuation of rice crop. On the whole, this crop fluctuation is not as high as is the case in most of rice [731] growing areas elsewhere. Famine certainly has not been known in Bangchan. Nevertheless, it is a certain sector of rice growers -- the marginal farmers with limited ability to adjust or with relatively little command over capital -- who are seriously affected by annual fluctuation of rice crop.

243 426 When affluent farmers have a poor crop, their credit purchase accounts may go up beyond the normal level, but they are usually in a position to clear this type of high interest bearing debts at the end of the business year by their net cash incomes or at least by securing loans with lower rates of interest to pay the accounts. On the other hand, marginal farmers are not in a position to seek low interest bearing loans. In case of crop failure, therefore,

7: Janiekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 these marginal farmers who cannot settle their credit pur-
• 426 chase accounts have to bear the burden of high interests on their accounts which are carried over to the following year.

*243 Although weather conditions are not controllable,
312 water levels in Bangchan are subject to partial control through irrigationand drainage. The range of water adjustment for each farm is nevertheless small. At the beginning of the season, there is too little water in the main canals to be accessible to farmers. Thus, even though Bangchan operators are equipped with their own irrigation facilities, they still have to rely entirely on the rains to start their first step of field preparation. Again, during the inundation period the water level in the main canals, which are the only channel through which excess water may be drained away, is too high to permit any draining at all. It is seen, then, that the critical period is almost limited by weather conditions whichvary from year to year.

The problem stated above was recognized as early as 1903 when J. H. Van der Heide, a Dutch irrigation expert who was hired by the Thai Government to draw up an over-all irrigation plan for the nation, published his report suggesting an elaborate plan hinging on construction of a barrage across the Chao Phya River at Chainat.[1] Van der Heide pointed out that besides the improved yields of rice, the

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1. J. H. Van der Heide, General Report on Irrigation and Drainage in the Lower Menam Valley.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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Relative to the enormous problem created by export and exchange control, the internal marketing problem now appears to be small at least in its relative effect on rice growers. It is true that the Chinese combines in the forms of Rice Dealers' Association and Rice Mills' Association have consolidated economic influence in favor of the Chinese middlemen in Bangkok. But it is equally true that competition among the Chinese rice dealers and millers in the countryside also has worked to the advantage of growers.

It has been observed that the Chinese dealers in Bangchan offer prices to farmers that scarcely differ from prices that the farmers could get from the millers if they were to break the existing pattern and deal directly with the millers themselves. This would often be possible because most of the local farmers possess the large chala boats needed to convey paddy to the mills which are only a few miles away. Actually, the Chinese rice dealers and Bangchan farmers have been observed to be in a rather efficient state of economic symbiosis that compares favorably [186] with most inter-ethnic divisions of labor. Further attestation is found in that there appears to be extremely little anti-Chinese sentiment among the villagers, and this is despite the fact that the national government has from time to time taken somewhat spirited measures against the [426] Chinese. The favors, non-interest bearing loans, and good will gestures accorded the Thai farmers by local Chinese dealers should also be taken into consideration.

434 in the canals, some cash is also needed to last the farmers
453 through the festive and merit-making dry season.

Since most of Bangchan operators are farmers whose incomes are barely or not at all enough to cover their household expenses, very few could hold their paddy stock for sale in the second period when higher prices may be expected.

[454] It has been observed that Bangchan farmers do not want to keep cash in their homes for fear of robbery. This is probably another reason for the withholding of paddy from sale in the first period in addition to the prospect of better prices. These few affluent farmers who have some paddy for sale in the second period have to sell it all before the arrival of new crop which often floods the market and forces the prices down.

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[426] Farmers usually arrange that payment for their paddy be made in the market town where they immediately pass most of the cash on to their creditors or sellers of the goods they plan to buy on that date. On the way home, they would stop over at the village stores to settle their other accounts. Thus, by the time they are back at home there is not much cash on hand to worry about. The few affluent farmers would do the same thing in their early sales -- that is, they would sell only a small portion of their crop so that there will be only a small amount of cash left on hand by the time they are back at home. In their later sales, however, these farmers must have a large amount of cash. It has

43 been observed that arrangement is often made to pass the excess cash on to other people -- usually borrowers or sellers of land or capital goods.

It is seen, then, that only a part of cash payment for surplus paddy sold by Bangchan operators is brought into the village, and that the amount brought in would not stay long in the village either.

It is also seen that this dread of cash together with the normally low net cash return from rice because of relatively high cost of production have tended to keep the money supply in the village at the minimum level even during the harvesting season.

• 426 To offset the low money supply, credit is extensively used in the village, especially after July until December when cash received from the sale of paddy has been all used [436] up and the sale of the new crop has not started. Paddy is also used as medium of exchange.

It has been shown that debt is widespread in Bangchan, and that the modal interest rate was 24 per cent per year for loans and 50 per cent per year for credit purchase accounts. No matter how extensively credit is employed, these high rates of interest indicate that there is still a scarcity of credit itself and of credit facilities in the village.

Scarcity of credit is indicated not only by high apparent rates of interest but also by discounts and premiums of various forms. Some of these are: (a) Tog khao wherein

426 two tang of rice are required to pay at harvest time for one tang of rice borrowed during the cash-scarce work season; and (b) Toq reeng wherein an advanced payment of say 10 - 15 baht is made for a promise to harvest one rai of paddy which normally brings in a cash wage of 25 - 30 baht payable on the day the work is done.

Scarcity of credit and the consequent high interest rates naturally discourage productive investment, for those who need operating capital certainly cannot afford to pay for these high rates of interest and those who have cash at all would do much better by straight lending.

426 471 184 Scarcity of cash and credit in the village is a blow especially to the marginal farmers who comprise the majority of Bangchan operators. These are farmers with a low index of capital formation potential who are often found among the land-thirsty category of operators. It has been pointed out that farmers with a high index of capital formation potential could more easily adjust their credit situation and thus are able to avoid high interest bearing debts. The marginal farmers, on the other hand, cannot do likewise. Scarcity of cash and credit and its consequences -- high interest rates and discounts and premiums of various forms -- have certainly put these marginal farmers at a most disadvantageous spot of receiving less for the same unit of labor and product and of having to pay more for the same unit of goods. Under this circumstance, the gap between the affluent and the less affluent farmers is ever increasing.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.[6] As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

[6] It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1400 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 80 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack seasons. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. So also age and religious piety bring respect. Yet social structure is flexible enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order includes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

178 because four members of her family had just left her to
592 establish families of their own. The son-in-law accepted
621 this invitation and had since taken over the management of
[593] his mother-in-law's large 60-rai rice farm.

Case 10: In 1949, an old woman was living with two boys, one distantly related to her, the other without any
[427] blood relationship. She was operating a small rented rice
[792] farm. Some time in the past she had made a generous offer
[431] of her own house to the temple which was not acted upon by the receiving party. In 1953, the headpriest contemplated an expansion of one of the temple buildings and approached the woman for the gift. The woman complied with the request, had her house dismantled, saving only the kitchen, and sent all the building materials to the temple. Meanwhile, the two boys had left her; one went to live with his mother in
[593] the village, the other went to Bangkok. Later, the woman
[437] joined the household of her younger brother, who lived next door, with the understanding that the brother had free use of her buffalo in exchange for her room and board.

Case 11: In 1949, a woman was living in KYB with her aged mother and her baby born of her separated husband
[586] who was a policeman. Two years later, the woman married a
[537] widower, who lived in the same hamlet, and brought along her mother and son to live with her new husband.

With the exception of Case 6, a lone aged woman who was survived by none after her death, these cases may be grouped according to the nature of acceptance of the families

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

593 There was one item of parental gifts which is not
431 shown in Table 8 -- the household equipment. Two of the
415 63 families reported that they received a complete set of kitchen utensils, and two included jars in their gift lists. After checking the result of this survey with some informants, however, many admitted that they did not include these kitchen utensils in the list because they were obvious items. Nevertheless, there was no basis on which it could be inferred that every newly established family received a set of the kitchen utensils. It was therefore decided to omit the household equipment from the table.

593 Another form of parental gifts was the practice,
427 if the parents had enough land to spare, of letting the
423 couple work on some ten or twenty rai free of charge for the first two years. Rent might be charged after that, but there were also cases in which the couples continue to work on the parcel without paying any rent to their parents and finally took it for granted that the parcels belonged to them.

Economic Significance of the Family

59 Much space has been devoted to discussion of the family because of its significant role as the only organized producing unit in the village economy. Another important function of the family was mentioned in previous sections -- through privileges extended to the majority of newly wed couples during the nascent period, the old family facilitated

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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4. The operator may increase his acreage by renting in more rice land. It is highly improbable that the extra parcel would be one adjacent to the old parcels. This involves extra cost of irrigation and drainage and a buffalo shed. Yet the most important problem is how to lay a hand on the extra parcel, since the practice of most landowners is to rent their land out to their former tenants. When all cultivated land in the village has been tilled, an extra parcel to one naturally means a reduction of the same to another.

5. With limited land which has no prospect of intensification as far as rice production is concerned, the size of the family becomes the limiting factor of the level of living. This is rendered more acute by the customary practice of offspring continuing to live with their parents regardless of their age. When they get married, either spouse's parents are likely to suffer another mouth to feed, and in many cases the babies that will eventually arrive.

It is seen, then, that discussion of rice farming which is the core of the village economy cannot be separated from the context of the family.

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434 on a small plot that they own or rent, but all families
463 in this category derive their main income from wages.

3. Trader. Main income from the more or less regular sale, not production, of rather considerable amounts of goods. Perhaps somewhat arbitrarily, we have not included in this category those very few families who derive their main income from production of cookies or the like, even though such families might themselves perform the selling of their products to local consumers; such families are included in the 'home enterpriser' category below.

[426] 4. Investor. Main income from land rent, interest
[427] on loans, and/or speculative gain.

5. Professional. Main income from such specialties as midwifery or dramatic entertainment.

434 6. Public servant. Main income from, or majority of
647 working time spent in, government employment. This is the
463 only category in which we had to add the additional criterion of "majority of working time"; government pay is rather low, and one person who works full time in the employ of the government actually receives more income from other sources.
[875] This category includes regular government officials, teachers
[622] and school janitors. The hamlet headmen are not included, however, as their main incomes are otherwise derived and their remuneration from the government is extremely low. They maintain no daily routine as public servants. The headmen are all farm operators, except one who is an investor.

443 she wanted to spend more time collecting debts."

It should be noted that A's brief duration of peddl-
221 ing started in the harvesting season. During this time the
433 village cash supply was high, resulting in demand for such
434 a delicacy as pork which normally constituted a negligible
443 fraction of the diet of Bangchan people. This is a good
261 business period for the peddlers. Another good business
262 period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this latter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

443 It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

427 Five families were classified as investors in 1953.
434 All these families lived on rents from land, interest on
454 loans, and income from speculative sources such as buying
621 paddy when the price was low and selling it at high prices.
463 Actually, most of these five families were not among large
426 land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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427 434 454 621 463 426 the combined land of five leading farm operators of 693 rai, averaging 139 rai per operator and ranging from 83 to 235 rai. It must be remembered that our operational definition of occupations was based on the main source of income and that many of the villagers had more than one source of income. Investors as an occupational class in Bangchan should not be pictured as large landlords and large money lenders, possessing financial influences over their tenants and debtors. Rather, they were humble fellow villagers whose incomes were mainly derived from rents of small parcels of land or interest on small loans. To cite an extreme case, one aged woman was classified as an investor. She had only 17 rai which she rented out to her own son. She was living alone in an old shack and was too old to do any kind of work. She received as rent about a hundred tang of paddy a year which is equivalent to an annual income of only 800 baht. Thus she was considered one among the poor in the village.

198 463 621 322 There were three families whose occupations were classified as professional in 1949. The number was reduced to one in 1953. The head of this family was a Chinese carpenter who derived his income primarily from boat building. Again, it must be pointed out that reduction of the number of families primarily engaged in professional services does not mean that professional services had been declining. [385] On the contrary, they had been increasing. There were three barbers in 1953 as against only one in 1949. More traditional

#243 of village production and surplus of paddy (Table 16) there
433 were no comparable basis for our estimate of the other crops.
#121 Our estimates of these other crops should therefore be considered as crude estimates.

433 Tables 16 and 17 show that in 1953 Bangchan had
431 surpluses of 104,756 tang of paddy, 293,232 chicken eggs,
435 and 67,050 duck eggs, and a deficit of 4,945 kilograms of fish. Using the 1953 farm prices of 9 baht per tang of paddy, 0.40 baht per chicken egg, 0.50 baht per duck egg, and 5 baht per kilogram of fish, village exports may be estimated at 942,804 baht for paddy, 146,616 baht for chicken eggs, and 33,525 baht for duck eggs, and village import of fish may be estimated at 24,725 baht.

#243 Land Tenure

311 Table 18 shows that Bangchan residents owned an aggre-
423 gate area of 4,315 rai. Since their combined area planted
427 to rice was 6,722 rai, the balance of 2,407 rai had to be provided by absentee landowners. In fact an area larger than 2,407 rai had to be rented in because part of the area owned by local residents had to be used as homelots. Actually, the net area rented in was 2,438 rai (total area rented in of 3,641 rai minus total area of 1,203 rai rented out). It is not to be expected, however, that this extra area of 31 rai (an excess of 2,438 over 2,407 rai) is enough to accommodate the 298 homelots in the village. Inaccuracies might have arisen in cases of joint ownership of certain

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[TEXT CONTINUED ON PAGE 1311]

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 18

RICE AREAS WORKED, OWNED, RENTED IN, AND RENTED OUT
Bangchan, Thailand, 1953

Hamlet	Total Families	Total Population	Area In Rai			
			Worked	Owned	Rented In	Rented Out
BC4	40	236	801	849	413	458
BC5	28	136	497	305	261	65
BC6	47	270	1,102	576	531	--
KY5	63	356	1,295	963	834	487
KY6	31	168	850	585	354	95
KY7	42	250	1,016	597	527	108
KY8	47	278	1,161	440	721	--
Total	298	1,694	6,722	4,315	3,641	1,203
Areas per family			22.4	14.5	12.2	4.0
Areas per man			4.0	2.5	2.1	0.7

7: Janlekha X-4.5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 parcels by siblings who failed to include their share in
423 those parcels in the reporting of areas owned. For want
427 of a proper basis for adjustment, we chose to let the figures
128 stand as they were reported.

Table 19 shows that the combined area in rice of all the 216 farms in Bangchan was 6,638 rai, or almost 99 per cent of total area planted to rice by the residents, the balance of 84 rai being worked on by residents whose occupations were those other than farm operating. Of these 216 farms, 48 were classified as all owned, 88 part owned, and 80 all rented.

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The conventional system of classifying farms according to land tenure into all owned (owner-operator), part-owned (part-owner), and all rented (tenant) should not be used without modification as a classification of economic or social status in population pressure areas where an efficient size farm is usually an exception rather than a rule. In these areas, it does not hold, as it seems to imply, that an owner-operator has a superior economic status than a part-owner and that a part-owner is still in a better economic position than a tenant. There is a wide range in size of farm operation and hence of incomes within these categories.

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Within the category of owner-operator, there are major differences in size of operation and hence economic and social status. If a farmer -- to cite a specific case, Farmer A in BC4 -- owns the large area of rice of 235 rai,

[TEXT CONTINUED ON PAGE 133a]

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 19

DISTRIBUTION OF 216 FARMS ACCORDING TO LAND TENURE, BY CONVENTIONAL CLASSIFICATION
Bangchan, Thailand, 1953

Land Tenure	Number of Farms	Working Area				Average Number of Rai Operated
		Rai Owned	Rai Rented*	Total Rai Operated		
				Actual	Per Cent	
All owned**	48	1,589	--	1,589	23.9	33.1
Part owned	88	1,511	1,583	3,094	46.6	35.2
All rented	80	--	1,955	1,955	29.5	24.4
Total	216	3,100	3,538	6,638	100.0	30.7

* In cases where an operator both rents in and rents out some land, the net area rented in is used.

** Figures include only land owned and operated, land rented out is not included.

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TABLE 20

DISTRIBUTION OF 216 FARMS ACCORDING TO LAND TENURE,
BY SUGGESTED METHOD OF CLASSIFICATION
Bangchan, Thailand, 1953

Land Tenure	Number of Farms	Working Area				Average Number of Rai Operated
		Rai Owned	Rai Rented*	Total Rai Operated		
				Actual	Per Cent	
Landlord-operator	11	517	--	517	7.8	47.0
Owner-operator	79	2,131	513	2,644	39.8	33.5
Part-owner	23	227	325	552	8.3	24.0
Tenant	103	225	2,700	2,925	44.1	28.4
Total	216	3,100	3,538	6,638	100.0	30.7

* In cases where an operator both rents in and rents out some land, the net area rented in is used.

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he may rent out some and retain only the part he can operate well. In this case he chose to operate 65 rai in 1953, renting out the balance of 170 rai. On the other hand, another farmer -- Farmer B, also in BC4 -- who owns only a small parcel of nine rai may not be able to rent in additional land to make an efficient size farm. In this case, B was not able to rent in any land and had to work on only nine rai of his own in 1953. In an area of relatively low population pressure, the probability of failure to rent in some more land may be small, but it is not so small in the relatively high population pressure areas such as Bangchan. The difference between farmers owning a small area of land and a large area is so great from the standpoint of economics and social position as to warrant having two sub-divisions of the conventional "owner-operators".

Small "owner-operators" may increase their size of operation by renting in some more land and thus becoming part-owners. These farmers actually improve their socio-economic status if they are able to move from the group of owner-operators into the group of part-owners. To use another concrete example, Farmer B, mentioned in the preceding paragraph, who worked on the nine-rai parcel of his own, does not earn more farm income than Farmer C, also in BC4, who owned 20 rai and still rented in 30 more rai in order that his four family workers including himself might be fully employed with a 50-rai farm.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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It is seen, then, that the conventional system of land tenure classification is of very limited usefulness in areas where under-employment of farm labor is the general pattern. In an attempt to increase its usefulness mentioned above, a new classification system for land tenure is suggested in which the "owner-operator" category of the conventional system is sub-divided and arbitrary limits set to partially solve the problem of the third type of confusion.

The emphasis of the suggested method of classification lies in the functional aspect of each category. Thus, operators who own all the farm land they operate and still have some more land to rent out, an indication that they really have more than enough land for their farm operating occupation, are grouped under the landlord-operator category. This group resembles the conventional "owner-operator" in that in both the farmers do not rent in any more land, but differs from the latter in that they are really land saturated farmers while the latter may or may not be land saturated. Generally speaking, therefore, the new landlord-operator group are economically more secure than the conventional owner-operator group.

Operators who own all the farm land they operate but do not have any more land in the village or close neighborhood to rent out are grouped under the owner-operator category. To avoid confusion of the second two adjustments are made: (1) if a farmer owns two-thirds or more of his working area, he is included in this category; and (2) he

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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427 is also included in the category if he owns 20 rai or more of his working area regardless of how much land he rents in. It may be noticed that the non-renting section of this group resembles the conventional "owner-operator" and the renting section resemble the most affluent section of the conventional "part-owner". Generally speaking, however, the whole group represents farmers who own the majority of their working area, or, in cases of those operating fairly large farms, own at least 20 rai of the working area -- a moderate size which may well place them in the middle third of the conventional "owner-operator" group if they should choose not to rent in any land.[7]

Operators whose working areas are more or less equally split between their own lands and rented lands are grouped under the part-owner category. Arbitrarily and more specifically, these include all operators who own one-third to almost two-thirds of their working areas with the exception of those owning 20 rai or more who are already grouped under the new owner-operator category.

Finally, operators whose working areas are predominantly rented lands are grouped under the tenant category. More specifically and also arbitrarily, these include all operators owning less than one-third of their working areas with the exception of those owning 20 rai or more.

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7. Of a total of 136 operators owning land in Bangchan, there were 66 who owned less than 20 rai (Table 21).

*128 While this "functional" classification of land tenure
423 does not eliminate all of the shortcomings of the conventional
• 427 method which have been accentuated by land scarcity, it evidently helps to bring about a clearer economic picture of the farm. If the primary purpose of land tenure classification is merely to establish a plain typology of the land holding situation for its own sake only, the conventional method might suffice even in farm labor underemployment areas. On the other hand, if we want to probe further into the business aspect of the farm, as we propose to do in Part II of this study, then a more revealing system of classification is perhaps necessary.

*243 It has been mentioned earlier in this section that
423 of 6,722 rai planted to rice by Bangchan residents a total
427 of 4,315 rai was locally owned (Table 18) and that a total
463 area rented in from outside renters was some 2,407 rai.
621 Since the net area rented out by local renters was 1,186 rai (Table 21), the proportion of outside renters to local renters was roughly two to one. Table 21 shows that there were 21 local renters whose main occupations were distributed among landlord-operators, trader, investors, and public servants, and that an average area rented out by each local renter was 56.5 rai.

Table 22 shows a frequency distribution of land owned by operators, and Table 23 shows a frequency distribution of land owned by non-operators.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 21

NET AREAS RENTED OUT BY VARIOUS OCCUPATIONAL GROUPS
Bangchan, Thailand, 1953

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Occupation	Number	Total Area	Ave. Area	Range
		rai	rai	rai
Landlord-operator	10	683	68.3	5-170
Trader	5	189	37.8	17- 86
Investor	4	149	37.3	17- 76
Public servant	2	165	82.5	5-160
Total	21	1,186*	56.5	5-170

* This figure is slightly less than total area rented out of 1,203 rai in Table 18 because net figures are used here.

Rent of Rice Land

Tables 24 and 25 show different rental methods in 1948 and 1952. Figures in Table 24 were obtained from our records of the sample of 104 farms in operation in 1948, and figures in Table 25 were obtained from the same sample reduced in 1952 to 96 farms which had been continuously in operation until then, the other eight farms having ceased to operate by 1952.[8]

It is seen that with the exception of a single case of share-cropping there were two rental methods in 1948, in kind and in cash, the proportion of areas involved being fifteen rai of rent in kind to every rai of cash rent. In 1952 rental methods remained more or less the same, consisting principally of rent in kind and cash rent, the proportion of areas involved being slightly increased to nineteen rai of rent in kind to every rai of cash rent.

There was, however, a rapid rise in rent rates within this period of four years. It is seen that the average rate of 6.2 tang per rai in 1948 has risen to 8.1 tang per rai in 1952, an increase of 31 per cent in four years.

It is interesting to note that an increased rent rate was charged in spite of the decline in yield of 32.1 tang per rai in 1948 to 25.2 tang per rai in 1952, or from the record crop index of 111.4 in 1948 to 87.5 in 1952 (Table 14).

Another equally interesting point is that the increase in rent rate was charged in spite of the increases in the

8. See Chapter IV of the sampling technique.

[TEXT CONTINUED ON PAGE 143]

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 25

DIFFERENT RENTAL METHODS
Bangchan, Thailand, 1952

Rate Per Rai	Rate in Tang Equivalent	Number of Parcels Reported	Total Area	Total Rent*
			rai	baht
Kind				
6 tang	6.0	5	75	4,050.00
7 tang	7.0	16	353.50	22,270.50
8 tang	8.0	39	876	63,072.00
9 tang	9.0	3	39	3,159.00
10 tang	10.0	6	113	10,170.00
Cash				
40 baht	4.4	1	46	1,840.00
50 baht	5.6	3	15.50	775.00
70 baht	7.8	1	16	1,120.00
Free	--	4	(84)	--
Total	--	78	1,534	106,456.50
Average	8.1	-	1	72.66

* The price of 9 baht per tang was used. It should be noted, however, that while the farm price of 7.06 baht per tang used in Table 24 was a result of a day by day record of actual sales during the first selling period (December-March) comprising about two-thirds of marketable paddy of 104 operators studied in 1948-49, this price of 9 baht per tang was not as systematically arrived at because we could not afford as much time in the 1952-53 study. This 9 baht was simply a rounded modal price during the first selling period of the 1952-53 rice year (December 1952-March 1953).

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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178 other items of cost of producing paddy -- in other words,
• 427 in spite of a decline in profit (a great decline when a
434 reduced yield is also considered). In the preliminary study
435 in 1948-49, it was found that the average cost of producing a tang of paddy was 5.86 baht, all costs included except value of operators' labor.[9] When the value of the operators' labor of 1,000 baht for those operating ten rai or over and of 500 baht for those operating less than ten rai was included in the calculation, the cost of production was found to be 6.76 baht per tang, including 1.52 baht for rent, 3.46 baht for labor (values of operators' labor and family labor included), 0.38 baht for seeds and materials, 0.65 baht for depreciation, and 0.75 baht for interest on investment. As we shall see in the section on cost of producing paddy in Chapter VI, an estimate of cost using the 1952 prices, for time and opportunity did not permit a second cost of production study during our second period of field work in 1952-53, points toward an increase in every item of the cost of producing paddy in Bangchan.

An explanation for this abrupt rise in rental of rice land in Bangchan lies in the nature of the demand for and supply of rice land. Although rents may be surpluses

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9. Sharp et al, op. cit., p. 171. In this preliminary study, the cost of family labor was imputed (at going wage rate) from labor requirement based on acreage, the cost of the use of the operator's own land was imputed from going rent rate, and the depreciation cost was calculated by dividing the original cost of equipment by their respective expected length of service.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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178 from certain points of view, or for certain purposes, or
• 427 subject to certain interpretations, they are to the indi-
434 vidual producer no different from any other money expense.
435 They do not arise as a surplus from his own operations;
they are a cost rigidly imposed upon him by the competition
of his rivals for the use of the rent-yielding property.
They figure in the same way as do wages of labor and the
interest of capital in his computations as to the most ad-
vantageous proportion between the factors and as to the most
*[128] advantageous scale of operations.[10] Naturally, we are now
dealing with contractual rent, which is the actual sum paid
by the tenant to the landlord for the use of the land, not
the hypothetical economic rent of the classical economists.

*243 The preliminary study revealed that there was in
464 1948 under-employment on some Bangchan farms in terms of
rai worked per worker. This was shown by comparing the
number of rai worked per worker on 94 farms employing no
hired laborer with the number of rai worked per worker on
*[128] 10 farms employing one or more hired laborers. On the farms
where only family labor was used, the figure was 9.4 ad-
justed rai per worker; while on those farms which used
regularly hired laborers along with family labor, the figure
was 13.4 adjusted rai per worker. (Each rai of transplanted
rice was counted as one adjusted rai, while each rai planted
by the less-labor-requiring broadcast method was counted as
one-half of an adjusted rai.) An assumption was made that

10. Edward Chamberlin, The Theory of Monopolistic Competition (sixth edition; Cambridge: Harvard University Press, 1950), p. 22.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 As long as farm under-employment prevails and as
434 long as limited opportunity for an alternative occupation
464 is open to farm operators and farm laborers, we have reason
to believe that the demand for rice land is rather inelastic.
Another important factor contributing to this belief is the
operator's concept of cost of producing paddy which seemed
to include only explicit rent (actual amount paid to the
[435] landlord) and cash operating expenses. Thus, while our
calculation shows that the cost was 6.76 baht per tang or
215 baht per rai in 1948, the figure would be only 1.71
baht per tang or about 55 baht per rai according to the
operator's concept of the cost.

*243 Under the conditions of farm under-employment, a
• 427 tenant, part-owner, or even owner-operator is willing to
464 pay high rent for an additional parcel because a larger
178 worked area would cost him only the additional explicit
435 rent and a small increase in seeds and materials. Unless
the extra rented parcel is so large that extra labor must
be sought outside the family, he does not have to pay any
explicit wage at all for rice production in this additional
parcel. Landlord-operators, on the other hand, are under a
different situation, for they may rightly be considered land
saturated and fully employed. Hence, the individual demand
for working land on the part of a landlord-operator is
relatively more elastic than those of the other farm oper-
*243 ators. As rent rose from 6.2 tang per rai in 1948 to 8.1
427 tang per rai in 1952, it was observed in Table 26 below that
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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 26

RELATIVE SENSITIVITY TO CHANGE IN RENT RATES OF LANDLORD-OPERATORS AND OTHER GROUPS

Category	Area Operated					Decrease, 1948-52	
	1948	1949	1950	1951	1952	Actual	Per Cent
	rai	rai	rai	rai	rai	rai	
Landlord-operator							
Farmer A	110	100	80	70	65	45	41
Farmer B	80	80	50	8	8	72	90
Farmer C	75	75	75	75	75	0	0
Farmer D	65	70	60	70	60	5	8
Farmer E	47	47	47	47	47	0	0
Farmer F	26	26	26	5	5	21	80
Farmer G	24	0	0	0	0	24	100
Sub-total	427	398	338	275	260	167	39
Other groups of farm operators	2,981	2,732	2,764	2,764	2,786	195	7
All 104* operators	3,408	3,130	3,102	3,039	3,046	362	11

* The sample consists of 104 operators in 1948, 103 in 1949, 98 in 1950, 96 in 1951, and 96 in 1952.

landlord-operators were more sensitive to the change in rent rates than were the other groups of farm operators.

Limited opportunity for an alternative occupation was mentioned in the preceding paragraph as one of the factors contributing to the inelastic nature of demand for working land. It was also mentioned in the section on the occupational structure of Bangchan that farm laboring families as existing in the village were indigenous and were an outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent in any land. Limited opportunity for an alternative occupation in the village was also suggested in the same section when it was mentioned that the only possible alternative -- petty trading which was actually taken up by some former farm operators -- was limited by the fact that villagers bypassed local traders and went to the nearby market town of Minburi for major purchases and variety goods.

Limited opportunity for an alternative occupation outside the village, however, needs elaboration. It cannot be denied that wages in Bangkok, only twenty miles away and easily accessible through good road and bus services, were higher on the average than corresponding returns for labor in the village. It is important to note, however, that what will attract a villager to seek a job in Bangkok is not a higher average wage level in the city but a higher marginal wage there. Regarding the marginal wage, it is highly doubtful that a better condition exists in Bangkok.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

369 It should be noted also that once a villager has moved
167 into Bangkok he will be deprived of the privilege to
162 acquire free food from nature -- an important economic advantage of living in the village which counts heavily when emigration to the city is being seriously contemplated.

427 It is seen, then, that the demand for land on the
423 part of land-thirsty operators -- the tenants, part-owners, and owner-operators -- was high and inelastic, while the demand for land on the part of land-saturated landlord-operators was low and elastic. Since the combined demand of all landlord-operators constituted only a small fraction of the total demand (Table 20), it may be safely concluded that the aggregate demand for land in Bangchan at the period we are dealing with was high and inelastic.

311 Let us now consider the supply side of land. For
423 the purpose of this discussion we may differentiate four
427 sources of supply of a total of 6,722 rai considered to
463 represent our natural Bangchan area. They are:

1. Land-thirsty operators -- all for implicit rent.
   a, Owner-operators 2,131 rai
   b, Part-owners 227 rai
   c, Tenants 225 rai
   Sub-total 2,583 rai

2. Land-saturated operators (landlord-operators).
   a, For implicit rent 517 rai
   b, For explicit rent 683 rai
   Sub-total 1,220 rai

3. Local non-operators -- all for explicit rent.
   a, Traders 189 rai
   b, Investors 149 rai
   c, Public servants 165 rai
   Sub-total 503 rai

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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4. Non-indigenous landlords 2,416 rai (all for explicit rent).

To understand the working of the supply forces, it is necessary to break the non-indigenous landlords down into those living in the neighborhood of Bangchan, which we shall henceforth call the neighboring landlords, and those living far away, which we shall call the absentee landlords. It is regrettable that accurate figures for these breakdowns were not available, but it may be estimated on the basis of some known cases that they were roughly of the same proportion, that is, some 1,208 rai in this category were owned by neighboring landlords and the same amount by absentee landlords. On the basis of the same known cases, it may be generalized that the area of land owned by an average absentee landlord was larger than that owned by an average neighboring landlord.

It is obvious that the individual supply of land varies according to the type of the people who have command over it. Generally speaking, land-thirsty operators who supply part of their own working areas should provide an inelastic supply of land, for they will continue to offer to themselves all the land they own regardless of how the rent rate may change. All lands owned by land-thirsty operators yield only implicit rents, for if they are rented out for explicit rents, the landowners of the parcles in question would have changed their status to landlord-operators.

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TABLE 24

DIFFERENT RENTAL METHODS
Bangchan, Thailand, 1948*

Rate Per Rai	Rate in Tang Equivalent	Number of Parcels Reported	Total Area	Total Rent**
Kind			rai	baht
3 tang	3.0	1	11	259.38
5 tang	5.0	29	623.75	24,513.53
5 1/2 tang	5.5	1	15	648.45
6 tang	6.0	22	390	18,392.40
7 tang	7.0	15	313.50	17,248.77
8 tang	8.0	28	495.50	31,157.04
Cash				
12.50 baht	1.6	1	8	100.00
30.00 baht	3.8	6	91.50	2,745.00
41.38 baht	5.3	1	14.50	600.00
50.00 baht	6.4	1	6	300.00
Share				
50% of crop	--	1	10	--
Unspecified	--	1	20	--
Total	--	105	1,998.75	95,964.57
Average	6.2	--	1	48.89

* From the preliminary study of Bangchan, page 149.
** The 1949 farm price of 7.86 baht per tang was used.
-- Not available.

427 Inelasticity of supply for land among land-thirsty operators also varies with different sub-group (tenant, part-owner, or owner-operator) depending upon the degree of land thirst. Thus, supply for land among the tenants would be more inelastic than that of part-owners, and supply for land of part-owners would be more inelastic than that of owner-operators.

427 434 Landlord-operators, on the other hand, are sensitive to changes in rent rates which directly affect their incomes part of which are derived from rents. Although they will have to offer all of their lands either to themselves or to others, the proportions offered vary according to rent rates. If rent is low, they may increase their own working areas for the reason that incomes deriving from farm operation may be higher than prospective incomes from renting out the same parcels. If rent is high, they may reduce their own working areas since they may figure out that incomes from renting out those parcels are higher than the prospective incomes deriving from working on them. It is due to this capacity to adjust the proportion of working area and area rented out that landlord-operators' bidding power may be considered very strong. Other local landlords who are non-operators do not have this same capacity to increase or decrease areas offered for explicit rent. If rent is too low and they want to operate their lands instead of renting them out, they are still not as ready to do as the landlord-operators who already have the facilities for farming. The

427 neighboring landlords are under the same situation as the
434 non-operator landlords. Yet these two groups are in a better position than the absentee landlords, for they are already in the locality. They are used to farming, and at least they do not have to invest on housing if they should choose to operate their own lands instead of renting them out at low rent.

427 [435] It was observed in the preliminary study that rent rates charged by local landlords were higher than those charged by the absentee landlords, the former ranging from six to eight tang per rai while the latter was only five tang per rai.[13] The discrepancy was assigned to the fact that local landlords were in a better position to sense the competition for land among farmers desirous of obtaining more land than were landlords who lived in the city. Local landlords were thus quicker to adjust rent rates to their own benefit.

Another advantage of renting land from absentee landlords was pointed out by a Bangchan tenant who said that he preferred absentee landlords to local landlords. "If you don't want to pay too much rent," said he, " you may report to the absentee landlord that you got a poor crop even though it was the best crop you ever had. You cannot do so with a local landlord, for he knows as well as we know by a glance at the parcel how many tang of paddy we are going to get." "Besides," the man continued, "local landlords often make request after request for your free

13. Sharp et al., op. cit., p. 148.

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427 labor which is rather difficult to decline. There are many occasions for such request, for example, draining a pond, clearing a garden, and building and dismantling a house."

So far the arguments seem to point toward the relative leniency of absentee landlords. Condemnations of absentee ownership of land would seem, therefore, to fall
427 wide of the mark from an equity standpoint. There is still
434 another important point, however, that should be considered. Although we do not at present have accurate supporting data, our impression was that rents of rice land do not constitute a significant part of absentee landlords' income while they were a major consideration of the local landlords. If this impression is true, two diametrically opposite ramifications seem to follow. First, absentee landlords accept rents as they come to them and the rents tend to be lower than those accrued to local landlords' land. Second, since some absentee landlords can afford to offer their land at high rent at the risk of having no tenant to work on their land, the rents charged by these absentee landlords tend to be high. In this latter case, high rent rates on absentee landlords' land will induce a raise in the general rent rates in the village. We are now confronted with a rather difficult situation, for the actual outcome seems to depend entirely on the individual compunction of the absentee landlords.

427 Stories about both kindness and maliciousness of absentee landlords were heard in the village. On the one hand, they were looked up to as the people whose help can

427 be relied upon in time of financial crises or other sudden needs. On the other, they were pictured as a Shylock type of relentless money lenders who never let an opportunity to make a capital gain out of the villagers slip away. Our records show several cases where Bangchan tenants took the sick first to allandlord's home in Bangkok before sending him to the hospital. It was assumed that the landlord would provide food and medical care while the patient was waiting to be admitted into the hospital, and it was assumed also that the hospital bills would be paid by advances from the
427 landlord. Only one case of an unscrupulous absentee land-
556 lord was mentioned by Bangchan residents. This man is a nationalized Chinese who roamed around Bangchan some thirty years ago as a professional gambler. He enhanced his gains from gambling by lending money at high interest rates to the villagers on mortgage term and occasionally adding a zero to the amounts in the paper. Villagers said the he never hesitated to make good a foreclosure when the specified time expired, and as a result he is now in possession of about one thousand rai of land in the neighborhood of the Upper Bangchan Canal. Although he owns some land in our arbitrary Bangchan Village, the majority is out of our village limits, and thus the rent rate charged by him was not included in our rental investigation in the preliminary study. The villagers' account of this man's activities was confirmed by our Bangkok source of information who was a relative of the landlord. Surprisingly enough, it was the

427 author's father who gave this man an initial capital of 600
556 baht when he made his start in Bangchan some thirty years ago. He is now a millionaire and a father-in-law of a former top military officer.

427 Again it is the author's impression that, from the viewpoint of the villagers' best interests, the good side of absentee landism seems to outweigh the bad side.

427 Going back to the forces of demand for and supply of
434 rice land, it should be noticed that, as was so often the
435 case, free competition in the classical economist's sense did not exist in Bangchan where rents were often sticky. There was a wide range of different rent rates for fields of almost homogeneous nature as far as agronomic properties were concerned. Preference for prospective tenants was observed to have a personal rather than economic basis even on the part of the local landlords who were found to be most sensitive to rent rates. When a new higher rent rate was to be charged, it was observed that the most plausible excuse had to be found and presented to the tenants by the landlord. An example was the general raise of rent in 1953 when the new land tax was raised from 0.30 to 4.00 baht per rai, whereupon most local landlords immediately raised their rent from seven tang to eight tang per rai. One tang of
[651] paddy, however, was worth nine baht. It is seen, thus, that as a result of an increase of the government revenue of 3.70 baht per rai the local landlords also received an extra 5.30 baht per rai from their tenants who alone had to suffer an increase cost of nine baht per rai.

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In discussing the forces of demand for and supply of land in the few preceding pages, it is not the purpose of the author to quantify these forces and attempt to predict rent or the price paid by the tenant for the control of net income deriving from the use of the productive powers of the soil. Rather, the purpose is to confirm in this specific case Chamberlin's general notion that "the equilibrium of economic forces has been wrongly identified with an equilibrium between demand and supply. The latter is merely a special case of the former. Curves of demand and supply tell nothing, either by themselves or by their intersection, as to what price will be established, until other conditions are known."[14]

Prices of Land

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One of the most significant phenomena during the period covered by this study, from 1948 to 1953, is the rise of prices of land in Bangchan.

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*[123]

Records of major receipts and expenses of 96 farm operators who have been continuously working on an average area of 3,140 rai, or 47 per cent of the total area worked by Bangchan residents, show that during this six-year period two operators sold two parcels of land and ten operators bought eleven parcels of land. Since none of these involved transaction between one and the other in our sample of 96 operators, it can be said that there was a total of thirteen

14. Chamberlin, op. cit., p. 15.

182
423 cur informants, the insurance company owned hundreds of
435 rai of land in the vicinity. By spending only 20,000 baht
456 in boosting up land prices, the company thus set the stage
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369 for making a large profit through sale of their own land at inflated prices.

178 While the increase in land prices in Zone 1 was
429 attributable to the sudden assumption of residential land
435 prices, this explanation does not apply to the increases in land prices in the other zones which have remained agricultural throughout. Although less spectacular than the case of Zone 1, the rise in land prices in these six zones was also quite abrupt, averaging 560 per cent for the five-year period from 1948 to 1953 (Table 28).

429 Capitalized valuation of these farm lands (Zones
434 2-7) may shed some light on the situation, although there
427 is limitation especially to the cost concept. There are two ways by which a capitalized value of farm lands may be obtained: (1) by capitalizing income from the farm operation left after payment of all factor costs except land, and (2) by capitalizing income deriving from explicit rent of the land.

243 Receipt from one rai of rice land in 1948 may be cal-
435 culated from the crop of 32.1 tang at 252 baht, using that
434 year's average farm price of 7.86 baht per tang of paddy.
423 When the cost, including an imputed return to all labor but
427 excluding rent, of 166 baht per rai is deducted, a residual return to land of 86 baht per rai is obtained for the year.[15]

15. For want of sufficient data, it is assumed that the cost items other than rent remain the same.

243 In 1953, figure for the size of the crop was not
423 available, but we may use the 1948-52 average of 28.8 tang
434 per rai. With the year's farm price of 9.00 baht per tang,
435 receipt may be calculated at 259 baht per rai. Using the
427 same cost, again excluding rent, of 166 baht as in 1948, a residual return to land may be estimated at 93 baht per rai.

Capitalized value of land may be calculated from the formula $v = \frac{a}{r}$ where 'v' stands for capitalized value of land, 'a' for income from the land, 'r' for the rate of interest prevailing in the locality.[16]

When the calculated residual return to land is used, the capitalized value of farm land in Bangchan (Zones 2-7) is found to be 573 baht per rai in 1948, and 620 baht per rai in 1953. When income deriving from explicit rent is used in the calculation, however, the capitalized values become 327 baht per rai in 1948 and 487 baht per rai in 1953.

178 It is interesting to note that capitalized values of
423 land computed from these two different types of income were
434 closer to each other in 1953 (487 baht computed from income
427 deriving from explicit rent as against 620 baht computed
435 from the calculated residual return to land) than in 1948 (327 baht computed from income deriving from explicit rent as against 573 baht computed from the calculated residual return to land). In other words, landlords are now receiving a larger proportion of the residual after payment of all

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[426] 16. The rate of interest of 15 per cent per year is used. This is the minimum going rate with security. Without security, the rate may be as high as 30 to 50 per cent per year.

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178 423 434 427 435 factors, except land, at the going rate of return. A more interesting point to note is that the capitalized value of land in 1948 (327-573 baht per rai) was substantially higher by either method of calculation that the average price of farm land in that same year (240 baht per rai), while the capitalized value of land in 1953 by either method of calculation (487-620 baht per rai) was far below the average price of farm land in that same year (1,583 baht per rai).

The situation in 1953 indicates that the price of farm land in Bangchan has been bid up too high. The stickiness of rent rates in the locality mentioned earlier together with the fact that landlords are now receiving a larger proportion of the residual after payment of all factors, except land, at the going rate of return have led us to the belief that the proportionate share of the landlords will be increasing in the near future.

*243 16 178 463 Of the 48 families disappearing from the 1953 list of farm operators in the village, 21 moved out, 2 were annexed, and 25 were dropped from the list because they had changed their occupations to some other kinds. Among these last mentioned, four had become investors, three traders, thirteen laborers, one public servant, and four had obscure occupations.

Of the 35 new farm operating families, 17 were immigrants moving into the village during the period between 1949 and 1953, 14 had evolved from pre-existing families, and four were families already existing in the village in 1949 but were then having some occupations other than farm operating. Among the four families last mentioned, three were formerly farm laboring families, and one was formerly an investor family.

*243 178 463 The fact that there were as many as twenty-five families leaving farm operating occupation as against only four families entering it within the same period seemed to indicate that farm operation as an occupation had become less attractive in Bangchan during recent years.

It may be argued that former farm operators who had given up farming did so because of the force of special circumstances beyond their control, and that the change to other occupations was not due to the relative unattractiveness of farm operation. A tenant operator, for example, might have to leave the farm because his landlord no longer wanted him to work on the parcel. In fact one such case was

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243 reported where the tenant had to leave the farm in the
178 beginning of 1953 and had since become a hired laborer.
463 This was Laborer 12 shown in Table 34. In most cases of
[427] farm operators who had become farm laborers, however, they were marginal operators working on areas too small to provide decent incomes. It was found that the total working area in 1948 of thirteen farm operators who had become farm laborers was 94 rai, averaging only 7 rai per farm. It is possible to speculate, then, that low farm income was a major factor in the occupational shift among these thirteen families. To the extent that this speculation is acceptable, it may be inferred that the shift to the farm laboring profession among these thirteen cases was voluntary rather than a result of special circumstances beyond their control.

The relative unattractiveness of farm operation stands out clearly when the cases where former farm operators taking up new occupations other than farm laboring were considered. As mentioned earlier, there were twelve of these of which four had become investors, three traders, one a public servant, and four had obscure occupations. Among those having obscure occupations, two were families of old people apparently without any income, one family head was allegedly engaged in no occupation except gambling if this could be considered an occupation at all, and one family head -- the sole member of a one-man household -- was also a person of no known occupation. For obvious reason, these four cases should be left out of consideration, leaving only those who had

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*243 433 water conditions is also a major factor militating against investment on fertilizer. As it happens, therefore, fertilization does not prevail in the decision making of Bangchan operators.

If the operator has any positive role at all in the production plan, it is in the selection of rice varieties. This topic has already been dealt with in the section on labor adjustment devices of the preceding chapter.

*243 433 423 Finally, one of the most important organizational decisions involves the choice of the size of the farm. It has been observed that poverty in agriculture is as much a problem of farm size as of any other single factor. Most frequently, farm size is spoken of in terms of acres -- the land input. Although this measure is generally not sufficient, it serves the purpose quite well in single-crop farming areas such as Bangchan and all other rice areas in this country. In this study, therefore, farm size will be expressed in rai (two-fifths of an acre) devoted to rice.

Generally speaking, if the Bangchan operator is free [464 592] to choose the farm size that suits him best, his decision will be based almost entirely on the size of labor force under his command, which in turn depends largely on the size of his family labor. As it happens, most operators are not *243 free to do so. It was mentioned in the section on land tenure • 427 of Chapter III that it was only the landlord-operator group, 464 actually 11 out of a total of 216 farm operators in Bangchan, 423 that had demonstratively shown sign of land saturation and

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thus could freely choose the proper size of their farms.

To be sure, some of the other 205 operators in the land scarce group could rent in enough additional parcels to make an efficient-sized farm. The preliminary study in 1948-49, however, reveals that of 104 farms under study 87 were under-sized. The point we want to make in this section is that there are considerations other than economic interest which preclude the attainment of a most favorable farm size by some of these land scarce operators. In the study of labor utilization on Chom Farm, it was seen that preparation of the fields was finished long before the deadline, indicating that the land input could be increased or labor input could be decreased. If Chom wanted to rent in an additional parcel of five rai, the problem presented would not be simple. In the first place, all rice land in the village had been filled up, so Chom's additional parcel had to be one that had been operated by a neighbor of his. Unless this neighbor had expressed an intention to quit this parcel, conscience alone would prevent Chom from outbidding the other person for the parcel. Second, although lease of land was on a one-year basis, in practice the landlord usually rented his lands continuously to the same tenants. If the landlord wanted to operate a certain parcel himself, the former tenant might think that it was reasonable enough to abandon the parcel. But it was inconceivable that he should leave the parcel so that another tenant could operate it. Third, the additional parcel should not be too far away

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A 243 423 464 • 427 from the homelot because much time and energy would be wasted in daily walking to the field.

It would seem, then, that most rice farm operators had little opportunity to obtain a farm size they thought best and had to accept what was due them. Thus, their role in choosing the size of business, which is the most important role, is also limited.

A 243 221 431 2. Limited role in management: Inasmuch as management refers to the function of putting the scheme into operation, Bangchan operators certainly have a large part to play. A good rice crop depends largely on the relationship between the height of the young plant and the rising water level. Since the rise of water level is highly seasonal, depending on local rains as well as rains elsewhere that affect the general water level, scheduling the farm work and seeing to it that the schedule is followed becomes a most important function of the farm operator.

A 243 433 Management, however, refers also to the function of making those adjustments in the business which are necessary in order to obtain the maximum economic returns from the farm business as a whole. Inasmuch as this latter function is concerned, the operator's role has been limited as in the case of the organizational function. As previously stated, under the present stage of technological development in rice production in this country, not only the points of diminishing return of both labor and capital (farm equipment, at the present state of technical development in the village)

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*243 433 [427] 1. Land: This element represents 22 per cent of the total cost of producing paddy (Table 38). Of this, 15 per cent is actual payment for explicit rent while 9 per cent is assessed value of implicit rent.

Among the cost items in Table 38, cash expenses include actual rent (13%), wages for pieceworkers (3%), wages for hired laborers (3%) and seeds and materials (6%), while imputed expenses include implicit rent (9%), value of family labor (31%), value of the operator's labor (13%), depreciation (10%) and interest on investment (11%). It is seen that cash expenses comprise only 25 per cent, while imputed expenses comprise as high as 75 per cent of the total cost.

In view of the high proportion of imputed expenses, the method adopted in the imputation will be explained here.

[427] [435] 1. Rent: Going rate for 1948-49 of 6.2 tang (49 baht) per rai was used.

[592] [461] 2. Value of family labor: Labor requirement based on acreage was first calculated, using the standard factor of 13.4 adjusted rai to one fully employed worker (this was the 1949 average for farms with regularly hired laborers on which [435] workers were assumed to be fully employed). When the labor requirement in terms of number of fully employed laborers needed was known, imputed family labor cost was calculated at the going wage rate for the year of 1,600 baht (1,000 baht cash and 600 baht of food privilege).

3. Value of the operator's labor: In addition to

[TEXT CONTINUED ON PAGE 280]

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*243 433 It is often said that the underdeveloped areas are characterized by over-population and under-capitalization. While there is much truth in this, there is also a danger of oversimplification. Capital here includes a relatively small physical in put, but it is actually large in terms of cost per unit.

4. Management: We did not assign any value to the operator's managerial work; only the assessed value of his labor -- 1,000 baht annually, or 500 baht annually if he operated only 10 rai or less -- was included in the item of assessed value of family labor.

The role of management has already been discussed in the previous section of this chapter.

It has been observed that management is furnished by the Bangchan operator and his wife, and in some cases *243 their grown-up sons and daughters. Not a single case has 423 been known where the management on rented farm is shared 427 with the landlord or his agent. It is interesting to note that the absence of the landlord's part in management was exhibited in an environment that should normally create and regenerate his influence over the tenant -- the condition of land scarcity, the Thai respect for one's betters, and the ease in communication between the landlord and the tenant.

Actually, the absence of the landlord's part in management does not necessarily mean that he has no influence over his tenants. On the contrary, landlords in Thailand

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243 are as influential as most landlords in other countries.
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427 It is the limited role of organization and management, which has already been discussed, that has precluded their advisory contributions.

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It is seen that some of these measure farm business success more nearly, and some of them the success of the farm-family enterprise.

434 *128 To measure Bangchan operators' remuneration, the author thinks that operator's labor earnings is most suitable.and the next best measure is perhaps the labor income. It was mentioned that Professor Hunt devised labor income as a means of comparing the efficiency of management of individual farms in the same area, practicing about the same kind of farming, and with the same general level of land values and cash rentals. Bangchan conditions, as earlier described, seem to approximate circumstances which Professor Hunt had in mind when he devised this measure.

*243 434 *[128] Table 47 shows frequency distribution of labor income of the 104 sample-farms for the 1948-49 crop year. It is seen that only 57 of these 104 farms produced a positive labor income. Thus, even in the year which many Bangchan farmers considered to be the best rice year in their lives, more than four out of every ten farmers in the sample did not have anything left from the sale of their crop after deducting all farm business expenses and interest on the capital invested. It should be noted, however, that the family still has other incomes accruing to family labor (value of family labor), the use of family owned land (imputed rent), and the use of family owned equipment (interest), as well as the imputed returns to family labor deducted in the calculation of labor income. The family also has the subsistence production which it draws from the farm.

• [427]

*243 Of 47 farms which had negative labor incomes, 37
434 were in the class interval of from -1 to -2,000 baht, 9
[435] from -2,001 to -4,000 baht, and one -- the least efficient as far as this measurement is concerned -- produced as low a labor income as -8,006 baht. This last farm had to support a large family of eleven members. With an acreage of 40 rai, which was rather small relative to the size of the family (another family of ten was operating a 110-rai farm in that same year), it was natural that this farm did not have much rice to sell.

*243 In figuring farm expenses, we intentionally left
434 out the dwelling and included as farm buildings only the
342 ones that housed the buffaloes, farm equipment and materials.
[427] The main reason for this omission was that there was a wide
[435] range of dwelling facilities in Bangchan -- from a teak building valued at 30,000 baht to a dirt floor thatched shack valued at no more than a few hundred baht. Besides, rental for a dwelling in rural areas of the country is practically unknown. Since a family living in the village must have their own dwelling regardless of their occupation, it was considered in this study that dwellings should be separated from farm investment. This consideration was further substantiated by the fact that when a family gives up farming they continue to live in the dwelling while all the farm equipment may be sold.

*243 When the charge for dwelling is dispensed with for
434 the reasons given above, the only difference between labor
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*243 426 432 Differentiation in paddy prices is limited to cases where farmers have received in advance the payment for paddy to be delivered at harvesting time. This is a common practice which is called in Thai "tog khao" (lit., fall rice). Usually, the advance price received by the farmer is about half or not more than three-fifths of what he would normally receive. Considering that cash is usually received about a month or two before the delivery of the paddy, it would seem that tog khao is a kind of loan with as high a rate of interest as from 25 to 50 per cent per month.

*243 426 465 A similar practice is adopted with respect to advanced payment for piecework, where pieceworkers are committed to uproot, transplant, or harvest at about half of the prevailing rates. This is called tog raeng (lit., fall labor).

*243 128 427 Tables 24 and 25, in the section on land tenure of Chapter III, show a wide range of rental rates of rice lands which have not demonstrated any marked difference in crop producing ability.

Rates of interest in Bangchan vary greatly from 0 to 10 per cent per month. This topic will be discussed more fully in later sections of this chapter.

*243 434 556 The important point that should be observed in connection with these differentials in paddy prices, rates of interest, rentals, and wage is that it is the less affluent farmers who usually bear the burden of higher costs due to these practices. Thus, these differentiations serve only to widen the gap between poor and well-to-do farmers.

591 proportion for immediate establishment was 20 out of 54 or
184 37 per cent for those married before 1932, and 10 out of
178 37 or only 27 per cent for those married after 1932. A declining trend was thus observed of the ability to establish a new family immediately after marriage.

591 Table 7 also shows that the 'nascent' period of 50
592 families (that had ones) ranged from one to twenty years,
184 averaging four years, the mode being one year, and the median
178 two years. Among the fifteen non-separating families, eight headships were taken over by offspring while one or both of the parents were still alive (we shall call this 'type A'), four headships were taken over by offspring through the death of parents (we shall call this 'type B'), and three headships were taken over by spouses ('type C'). The last mentioned changing over of family headship (type C) occurred in three ways: through marriage of a man to a female head of a family whereby the husband automatically became the family head, death of the husband, and desertion of the husband.

591 The changing over of the family headship of the type
592 B in Table 7 was a natural process of inheritance. In type
184 A, it was found that senility accounted for seven out of
428 eight cases of the changing over, the one exception being
587 the case of a widower who wanted to have a second wife and who thought that the family assets originally belonged to his first wife's biological family and therefore an outside woman should not lay a hand on the 300,000 baht property.

In Bang Chan when donations for a new school building warranted buying the foundation materials, so that volunteer labor was solicited for their installation, some of the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

The spirit-offering, or the portions eaten by a participant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests. The pork was cut up and eaten with a hot sauce, or put into a "with-rice" dish. It was especially appropriate with liquor.

The use of food ritually was not limited to the ceremonial season nor to big events. The same purposes underlay the use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

The benefits of a (l)ngaan accrued to every participant down to the last worker and contributor according to the degree of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

One assistance in the financing was that every invited guest made a contribution, customarily 5 to 10 baht, which helped defray the costs. In 1952, household heads reported these contributions as totalling from 30 to 1,000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (l)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

443 peddling was conducted by a local resident of Bangchan.

"With a capital of 600 baht Nang A began to engage
443 in peddling on December 4, 1952. The first day she spent
• 43 150 baht on goods, mostly vegetables which she bought from Minburi. She made two rounds that day. At the end of the morning round she got 25 baht cash and 150 baht on credit. The rest of the vegetables were sold out in the afternoon round in which she received 8.50 baht cash and 29 baht on credit. This was the only time she bought goods from Minburi. From then on she took the 5 a.m. bus to Bangkok and returned to Bangchan with the goods about noon.

"Later she also dealt in pork, and her daily outlay rose to 220 baht. Out of this, she received 150 baht cash and 150 baht on credit. To date her credit accounts total 750 baht. Yesterday she was able to collect 150 baht cash and six tang of paddy (worth 54 baht) from her debtors. She said she expected to do the peddling for fifteen more days, after which the water level would be too low. She would then quit and start the same business next rice year, but she intended to start as early as the transplanting season (August-September).

"She took 200-300 chicken eggs to Bangkok every day. She sold these at a wholesale price of 55 satang each. Sometimes she sold them direct to Bangkok coffee shops and got a higher price of 65 satang a piece. 'If you are a peddler,'
443 she said, 'you must also deal in eggs.' She took time off today because 'shrimps are plentiful' in the canal. Besides,

4

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

Writing
*243 on economic change in Thailand since 1850, Ingram points
17 out that soon after the Bowring Treaty (1854) the popula-
• 43 tion of Thailand tended to specialize more and more in the production of one major crop (rice) and a small number of other primary products, selling these products for money, and using the money to buy various articles of consumption. "Money thus came to play an increasingly important role in an economy in which it had formerly been of but minor significance. When Western traders were freed by the Bowring Treaty to put such products as cheap cotton prints on the Thai market, the people bought these products and, if they could not buy they sought a source of money income. Money could most easily be acquired by producing some commodity for the export market. As villages and households turned to the production of money crops, and as they began to purchase bright-colored garments from the traders, the household crafts declined. Cotton fields were perhaps used for rice or abandoned in favor of land suitable for rice. With the money income earned through the export market, the farmer bought the goods he had formerly made for himself."[9] The
*243 money economy had brought along its inevitable companion --
178 credit, which had become accentuated by the fact that Thai
426 rice farmers received their principal incomes only once a
43 year. There has been a tendency to trace the perpetuation of farm indebtedness to farm poverty which is in turn traced to low productivity in underdeveloped areas. While this is

9. Ingram, op. cit., p. 36.

*243 178 426 43 perfectly true especially among the under-sized farms in Bangchan, there is still to be explained why more affluent farm operators are also continually in debt. It has been observed that when people come into contact with superior goods or superior patterns of consumption, with new articles or new ways of meeting old wants, they are apt to feel after a while a certain restlessness and dissatisfaction. Their knowledge is extended, their imagination stimulated; new desires are aroused, the propensity to consume is shifted upward. This principle according to which individual consumption functions are interrelated was propounded by Duesenberry, who calls it the "demonstration effect."[10] When the list of new items of consumption is checked, it appears that this principle of demonstration effect has demonstrated itself very clearly in Bangchan.

426 432 *[128] Table 63 shows that in the majority of cases credit purchases bear an interest of 50 per cent per season, ranging from 0 to 67 per cent. Information from sources other than our sample farm operators reveals that two methods of interest charging were practiced by Bangchan storekeepers and peddlers. One method was to charge 40 per cent interest on credit purchasesmade during March - May, 30 per cent during June - the first half of November, and no interest on purchases made in the second half of November and after; all these rates were charged on the assumption that accounts would

10. This is about the receipt from 8.4 rai in 1953.

[TEXT CONTINUED ON PAGE 352]

434 in the canals, some cash is also needed to last the farmers
453 through the festive and merit-making dry season.

Since most of Bangchan operators are farmers whose incomes are barely or not at all enough to cover their household expenses, very few could hold their paddy stock for sale in the second period when higher prices may be expected.

[454] It has been observed that Bangchan farmers do not want to keep cash in their homes for fear of robbery. This is probably another reason for the withholding of paddy from sale in the first period in addition to the prospect of better prices. These few affluent farmers who have some paddy for sale in the second period have to sell it all before the arrival of new crop which often floods the market and forces the prices down.

• 43
[426] Farmers usually arrange that payment for their paddy be made in the market town where they immediately pass most of the cash on to their creditors or sellers of the goods they plan to buy on that date. On the way home, they would stop over at the village stores to settle their other accounts. Thus, by the time they are back at home there is not much cash on hand to worry about. The few affluent farmers would do the same thing in their early sales -- that is, they would sell only a small portion of their crop so that there will be only a small amount of cash left on hand by the time they are back at home. In their later sales, however, these farmers must have a large amount of cash. It has

43 been observed that arrangement is often made to pass the excess cash on to other people -- usually borrowers or sellers of land or capital goods.

It is seen, then, that only a part of cash payment for surplus paddy sold by Bangchan operators is brought into the village, and that the amount brought in would not stay long in the village either.

It is also seen that this dread of cash together with the normally low net cash return from rice because of relatively high cost of production have tended to keep the money supply in the village at the midmum level even during the harvesting season.

426 To offset the low money supply, credit is extensively used in the village, especially after July until December when cash received from the sale of paddy has been all used [436] up and the sale of the new crop has not started. Paddy is also used as medium of exchange.

It has been shown that debt is widespread in Bangchan, and that the modal interest rate was 24 per cent per year for loans and 50 per cent per year for credit purchase accounts. No matter how extensively credit is employed, these high rates of interest indicate that there is still a scarcity of credit itself and of credit facilities in the village.

Scarcity of credit is indicated not only by high apparent rates of interest but also by discounts and premiums of various forms. Some of these are: (a) Tog khao wherein

843
844 "faked labor pains to hold down her errant husband!" or so a sour mother-in-law said (Hauck,ibid.).

844
789 Finally, one day, Dūan felt uncomfortable and decided not to go out to plow. Lek prepared for her hot-tasting medicine. When Song came in at eleven from work, he went to the garden, to the little house of the family's protecting spirit (san phra phūm), lighted incense and offered flowers, asking that it and the ancestors help his wife and keep away evil ghosts. He also prayed for help of the ancestors. Hī went to ask Sāi not to go far away that day and to ask in what exact direction to push over the woodpile. Sāi replied, "Push it over in the direction the snake lies today, so that Dūan and the wood lie parallel with their heads and its apex in the same direction to the north and east. Never let them be to the south and west." A passing boatman saw the wood go over. "There's news to tell!" he said. "The child is being born!" Dūan thought she ought to send away her little son, but he refused to go, and stayed by his mother the whole time. Song's sister came by for a visit, but stayed to help after getting word to their parents. It was no time for visitors, especially men, but any helpers, male or female, were welcome. Lek prepared the all-important ceremonial gift, the khwan khāo (soul-rice), for the midwife, which validated, and insured the use of, her private magic. She put a bunch of bananas, 7 betel pepper leaves, 7 areca nuts, flowers, incense sticks, a candle, and 20 baht into a bowl filled with dry rice grains. A little later she strung the holy thread around the 4 walls of the house. On each side she attached "yan," (Skr.: yantra). These protective cloths, about 10 inches square with magical letters and drawings, kept away the terrifying phi krasū spirits, seen as lights at night, who, attracted by bad smell and blood, would creep up the housepost, eat Dūan's blood, intestines, and faeces through her anus. Then Hī went again to Sāi to report that "the pain was increasing." These words were the signal to Sāi that it was time for her come.

[431
782]

As Dūan was to profit from the magic, it was better that she herself hand the midwife the khwan khāo bowl. Sāi lit the incense and offered the bowl in gratitude to the teacher who had given her her magic. She whispered in the direction of Dūan's head, "All good spirits in the high heavens and in the locality, help and do not obstruct at this delivery! Give happiness to mother and baby!" Placing the bowl on a high place to the side of Dūan's head, she said, "My teacher is long since dead, but will hear this request, and will pass the request and the khwan khāo to her teacher, and so on, back all those thousands

562 delivery, "her blood was purified to a white color to become
[827] the milk of the breast."[48] Nursing a child was the essence
[853] of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 In a wider context, not only all their household members
462 but people anywhere were the objects of women's nurture:
252 women were in charge of the cooking even if occasionally
264 helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor houshold, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry any more." She construed this as proof that she had ample
[1] 82 merit, but it also meant that she was a great donor who gave
[431] continuously and took little. Women usually offered the
[796] early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When
593 age pushed women past their mature capacities, they returned
888 to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 A desire to give tender care and nourishment was deemed
857 inborn in all women. Although sex was not strongly
[291] differentiated in babyhood,[49] by age 3 a hard-to-handle
[593] skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phûm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[856] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

426 Because of scattered farms and frequent shortage of cash, borrowing food and other items, and many exchanges of service were necessary. Blood-kin were easier to approach, and in the larger social unit, nearer. Borrowing from a non-kin neighbor was supposed to be less frequent, and the favor had to be returned more promptly and exactly.

434 Most opportunities for increasing cash income such as hiring out as temporary farm labor, digging canals, marketing eggs, mushrooms, or cooked snacks, took one out of the home, often overnight. In the small family, one partner was left at home. Both could not go because fear of theft forbade leaving a home unoccupied for any length of time.

The Buddhist Priesthood

792 At the temple lived twenty or thirty priests under the abbot, with a group of boys to serve them. The priesthood was maintained by daily voluntary offerings of food, with larger donations of food and commodities at certain times. Persons who thus "made merit," by supporting the priesthood, by giving to the needy, and adhering to the ethical tenets of the Buddhist religion, reaped a reward of health, happiness, wealth and eventually, freedom from rebirth. The immediacy of these beliefs must not be underestimated. Men only were ordained. They might resign at any time after three months, but some spent their lives in the priesthood.

792 262 431 In Bang Chan, throughout the year, the priests set out at dawn to receive cooked food for the day. They appeared at houses by more or less specific arrangement and were given a generous share of the food prepared by the family for its own use, sometimes with the addition of fruit and other delicacies. Each priest stopped at two or more houses. The food then was brought to the temple to be eaten at 8 and 11. For the rest of the day the priests fasted, i.e. they ate no solid food, but drank liquids such as tea, soft drinks, and recently, tinned milk and a fortified malted milk drink. Priests were also invited to eat in homes not only at large ceremonies, but at small merit-making occasions. Sporadic special food offerings were also received. If a buffalo died, much of the meat was usually given to the temple. Traditional practitioners, mid-wives, and ceremonialists always gave the priests a portion of the fees from their practice which consisted in 1 or 2 liters of milled rice, a bunch of bananas, and perhaps cash. On the numerous Buddhist holidays and at specially organized temple convocations, quantities of cooked, preserved and raw foods were brought to the temple and apportioned among the priests. From this bounty a meal was served to the priests, who ate while the villagers looked on in satisfaction.

One of the duties of the abbot was to coordinate the

792 village offers of regular service, the holiday offerings, home
262 invitations and sporadic gifts so that all priests had places
441 to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut[1] or hardship.

792 About mid-July, Buddhist Lent changed the food habits
796 somewhat. This three-month period corresponded with the height
262 of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering, and thereafter the priests went regularly on their appointed rounds.

796 On Buddhist holidays, the people did not usually eat any
261 of the food brought to the temple, but on (3)thaauad (2)ka-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bounteously.

792 Residing at Wat Bang Chan in 1954 were 22 boys, aged 10
857 to 16, sent to serve the priests, get their living and attend
262 school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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792 1. Amounts of food given usually exceeded the actual
262 needs of the priests and temple boys. One instance was noted
737 in which food was sent by the priests to a needy old person
235 nearby. Leftover rice was dried and sold for chicken feed.

114 2. The transcription used throughout this report is
104 that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

264 would not come willingly to work. When a family with a repu-
476 tation for stinginess diluted the (3)khaaw (3)tom too much,
[574] the group refused to eat any, thereby reminding the host of his obligation for hospitality.

574 Guests to whom meals were served fell into four categories: 1) kin, 2) visiting dignitaries, 3) priests and 4) drinking companions. Kinfolk who came as guests were married children, or those who were away at school or work, or kinsmen from Bangkok or elsewhere. The older the relative or the greater the distance travelled, the greater the honor accorded him. Foods were exchanged. Two visiting ladies travelling in a large boat, made an annual round of all their relatives, bringing certain "city" foods and receiving substantial gifts of rice, fish and fruit. They stayed for several days as guests of one family, then moved on. Every person from Bang
• [43] Chan who visited a relative in Bangkok carried big packages of food, usually rice or eggs, as gifts. With the inflated prices in Bangkok, it was advantageous to have a "country cousin" who might bring food. Visiting kinsmen always recognized the need for eventual reciprocity.

Visiting dignitaries were usually entertained by hamlet headmen. Meals served to visiting officials, policemen and others might be elaborate, involving cooperative help in preparation, but reciprocity, if any, rarely took the form of a return meal.

[792] Regular visits of the priests, as well as the invitation of priests to the house for special events, have been mentioned. Priests might also come from afar, usually staying at the temple but receiving generous offerings of food from people of the community.

[562] The custom of convivial get-togethers of either or both sexes was well established. Men traditionally enjoyed "stag" dinners of four up to twenty or more whenever the ingredients for a turtle, frog, cobra or other snake curry were available. Chicken curry might also be thus served, and once a catfish mash was prepared by a male visitor from the north. Those curries were cooked by men, and the host served liquor freely.
784 The all-male character of the occasion reflected the old re-
588 strictions on women's partaking of flesh foods (see p. 42),
273 but older women did not hesitate to join in the drinking.
524 Women also got together in drinking parties, sometimes to play cards.

In addition to sharing food with people in these four categories, the general rules of hospitality required that anyone who came to the house at meal time, should be offered food, or at least a drink of liquor, tea, or plain water.

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 8. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

177 244 cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

243 244 234 177 At the height of the boom, the demand for rice straw swept many of the fields clean of the stubble usually left there after harvest, thereby decreasing food for the roaming buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralis (1957) were 1) the cash outlay required was small, 2) returns were realized quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralis made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

262 435 796 431 792 875

Food for Homage-to-the-Teacher Rite Performed by a Buddhist Priest Who Was a Traditional Practitioner

Item	Amount	Cost in Baht	Item	Amount	Cost in Baht
Cereals and Legume Seeds:			Fish and Meat (cont.):		
Rice noodles		10.	Dried fish	6	gift
Soybeans & fermented vegetables	25 kg.	12.	Roasted fish	3 kg.	gift
			Shrimp paste	2 kg.	18.
			Lobsters		15.
Mung beans	10 lit.	25.	Lobsters (for soup)		7.50
Cassava flour		2.25			
			Pig's skin (for soup)		10.
Sugar and dessert:			Beef[1]	15 kg.	150.
Palm sugar	1 pail	67.	Ingredients for Mussel-man curry[1]		27.
Cane sugar	14 kg.	85.			
(2)Kha-(5)nom (3)tuaj-(1)foo	500 cups	35.	Boiled chickens[2]	2	22.
			Pig's head[2]	4 heads	222.
Fish and Meat:			Pork[2]	4 kg.	40.
Fish ((1)plaa (2)myk) for soup		6.			
Silurus and serpenthead	60 kg.	gift			

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

she gives it to me." In describing his relationship with his maternal grandparents, with whom he spent all but two of the first twelve years of his life, this same person says:

> My younger sister and I were born one year after the other. So mother gave me to grandmother to be weaned. I lived with her until I became a novice at the monastery at the age of twelve. I lived with grandmother, so I loved grandmother and grandfather more. I loved grandmother even more than my own mother and father. Wherever grandfather and grandmother went, I went too. Grandmother loved me: she always gave me sweets and toys. I had everything I wanted because I was the only young thing in the house. She loved me. She was going to give her property to me, land and gold, as much as she was going to give to her own children. But it was only a promise. I got the gold, but not the land, because when grandmother died, grandfather got a new wife. She was young. . . . I didn't quite like her. The young woman was too economical. . . . Sometimes she prevented grandfather from buying good things for me. When grandfather was going to buy gold or anything for me, she stopped him. She wanted him to buy for her more than for his grandchild.

This excerpt, taken from the biography of one of the life history informants and comprising almost the complete portrayal of the relationship between the informant and the individuals with whom he spent the crucial years of his childhood, is by no means atypical. The point is that of all the myriad elements in the relationship, or of all the loving characteristics that in his eyes the grandparents had, he chose to emphasize only the material gifts they had given him as the measure of their love. Other informants are no different: one man said he knew his father did not love him because when he died he left the family home to the Buddhist monastery; and a woman said she admired her father because "when he died there was property left. He was a good man: he did not abandon his children. He was worried about them." (Her other reason for *admiring* him was that "he was the person who brought me into the world.")

The other major form of familial love is evidenced in the camaraderie, warmth, and generosity that surrounds the family in planning and accomplishing the various tasks associated with rice farming. As indicated earlier, the cultivation and harvesting of rice is not only an economic operation in Bang Chan, but almost a way of life. When villagers must deal with the very real and complex problems of planting and bringing in the harvest, all the individualistic propensities, and even to an extent the authority patterns, with which they normally indulge themselves recede before the coöperative requirements of the task at hand. In a very real sense the functional requirements of the economic activity, particularly during

Question 42.c. (Cont'd)

Need for Money in Bangkok (Only happy there when have plenty of money)	6	125
Amount of effort in earning a living (Have to work every day there	4	369
Other reasons (Too many poor people there, many illnesses there, the life of the people there depends on the farmer, people from Bangkok always go to the country when anything bad happens, people can be happy both places, different people have different hearts)	12	829
No Answer	4	
Don't know	5	

Question 46.b. For what various activities did you contribute labor? 125

Earth work		653
Earth work at Wat	18	
Earth work at Mosque	7	
Earth work, unspecified (digging dirt, filling low places, digging Klong, loading and unloading earth and bricks)	53	
Cement Work		
Cement work at Wat (moved cement bags, laid concrete floor)	12	
Cement work, unspecified (building cement sidewalks, helped make concrete, poured concrete)	14	
Building and Repairs		
Building sala (pavilion, repairing pavilion)	51	
Building mosque (repairing Surao porch)	8	
Built priest house, construction work in wat, latrine in Wat, repair crematorium	18	
Building bridge	21	
Building road	13	
Constructionwork, unspecified (carried posts, repair a building, carpentry)	7	
Services		
At Wat fair (helped cook and serve, helped manage, sweeping)	27	
At Surao fair (helped cook and serve)	3	
Services, unspecified (boiled water, cooked, carried water)	15	
Guilding the gold leaf, miscellaneous labor at footprint guilding festival)	7	
Priest's funeral (cooked, helped at cremation)	7	
Other (served at Katlin ceremony, solicited money for Wat)	3	

Question 46.d. For what various activities did you contribute money or goods? 125

		431
To the Wat, unspecified	19	651
Contribution, unspecified	19	
Construction activities		
To build pavilion (sala), to repair pavilion	57	
To make path, build street on Wat grounds	27	

125 Question 46.d. (Cont'd)

431 Construction activities (Cont'd)
651 To the Wat (to repair Wat, construction in Wat, fixing walls) 27
Contribution for building materials (buy cement, concrete floor, wood and tin, for new cement sidewalks, water tank) 21
To Surao (general fund, repair) 9
To build a bridge 8
To buy a generator 6
To build priest's house bathroom 5
To build preaching hall 3

[796] Ceremonials
[764] For ceremonies, unspecified 12
To guild the golden leaf 27
To cremation (to build crematorium; to cremate father, people without relatives; to build corpse go-down; priest's funeral) 12
To Wat fair 10
Other (to Katlin, to revise the Buddhist sacred book, to ordain priest, for building Buddha figure, to New Year festival, for dancing girls) 11
To Surao fair 4

Food and related donations
Gave rice, unspecified 5
Gave rice (food) for Wat, priests 18
Gave rice for Wat fair 7
To buy utensils (including cooking utensils) for Wat 6
To buy utensils for Surao 6
Gave food to Surao 1

178 592 621 [593] because four members of her family had just left her to establish families of their own. The son-in-law accepted this invitation and had since taken over the management of his mother-in-law's large 60-rai rice farm.

Case 10: In 1949, an old woman was living with two boys, one distantly related to her, the other without any [427] [792] [431] blood relationship. She was operating a small rented rice farm. Some time in the past she had made a generous offer of her own house to the temple which was not acted upon by the receiving party. In 1953, the headpriest contemplated an expansion of one of the temple buildings and approached the woman for the gift. The woman complied with the request, had her house dismantled, saving only the kitchen, and sent all the building materials to the temple. Meanwhile, the two boys had left her; one went to live with his mother in [593] [437] the village, the other went to Bangkok. Later, the woman joined the household of her younger brother, who lived next door, with the understanding that the brother had free use of her buffalo in exchange for her room and board.

Case 11: In 1949, a woman was living in KY8 with her aged mother and her baby born of her separated husband [586] [587] who was a policeman. Two years later, the woman married a widower, who lived in the same hamlet, and brought along her mother and son to live with her new husband.

With the exception of Case 6, a lone aged woman who was survived by none after her death, these cases may be grouped according to the nature of acceptance of the families

591 A factor that should also be taken into account was that he
592 had a regular income of 450 baht a month from his job in the
434 Highways Department, which by the village standard was more than enough for him to live comfortably with his second wife.

591 Historical records of the 96 farm operating families do not contain information as to how the 50 families passing through nascent period were divided into those staying with wives' families and those staying with husbands' families. The 1953 census, however, reveals that of 48 married couples then living in 42 families of parents of either side (four such families included two couples and one family three couples), 23 were with husbands' parents and 25 with wives' parents. The proportion may thus be estimated at about one to one.

59 During the nascent period, the couple ordinarily
434 received from the parents they were staying with a kind of
• [431] annual bonus locally called lampai which varied according to the economic status as well as generosity of the parents. Lampai took several different forms. Thus, a couple might receive all the paddy harvested from a specified area of the field of three, five, or ten rai; they might be given a fixed quantity of the crop -- say 50 or 100 tang; they might receive cash -- say 500 baht or any other varying amount. In some cases, the couple were expected to earn their lampai outside the family farm after obligation to family work had been fulfilled. This took the form of piece-working or trivial trade.

59 If no lampai was given, the parents might give some gold in
[431]

59
[431] the form of a necklace as a token of appreciation. During this time, no matter how old they were, the couple should ask permission before going out or at least let the parents know where and why they wanted to go, and they were expected to help without having to be asked to in the family's field and in general housework.

Opinions of the villagers themselves on the advantages and disadvantages of the nascent period varied. On the one hand, staying with parents was viewed as a prolongation of a morally compulsory service to the old family which was economically disadvantageous to the newly wed couple. This was implicit in the following statement made by one villager concerning the length of the nascent period.

> There are many factors which determine the length of the nascent period:
>
> 1. Availability of family labor. If younger siblings are old enough to help the parents, the couple will spend only a short time with the old family.
>
> 2. Greed on the part of the couple. They want to have a share of the product of their labor. If they stay with parents, they are not supposed to get any unless the parents are willing to give it to them. They think, 'If we have a child, what would we have for him?' So they try to move out as soon as possible.
>
> 3. Lack of self-confidence on the part of the couple. This leads to a prolonged stay. Even when younger siblings are old enough to help the parents, the couple still may feel more secure to stay with the parents, for they do not want to take care of themselves.
>
> 4. Pride. Nang A married Nai B and continued to live with her parents. One day A was criticized for being sharp (she was accused of keeping part of the crop for her own). So A and B got together and planned to move outwith the intention of building

59 themselves up; financially to compete with A's parents.

The same informant said further, however, that usually it was up to the couple themselves to decide when to leave the old family. Parents, in his words, "rarely drive the offspring out. They also rarely resist the couple's decision to leave. The most they can do in case labor is badly needed is to ask the couple to stay a year or two longer."

591 494 On the other hand, a second informant, a headman as was the first, indicated that the five-year period he and his wife spent with his wife's parents immediately after their marriage in 1922 was their most prosperous time. As [431] lampai the couple were given the harvest from a 5-rai parcel each year. When he married, he already had five baht weight [426] of gold. With surplus income, he was engaged in lending for interest. Accumulation during their five years' stay with the parents included timber enough to construct the new home when they moved out, one hundred tang of paddy, and forty baht weight of gold.

As a matter of fact, there are several factors that should be taken into consideration in evaluating the advantages and disadvantages of a newly wed couple undergoing the nascent period. These are the lampai arrangement, willingness of the parents to let the couple earn extra income from sources outside the family, current wage rate and job opportunity, and, most important, the current profitability of the farming business which is assumed to be the alternative

591 if the couple do not choose to stay with the parents. In
434 any event, the fact that the couple are more or less free to leave the old family provides an opportunity for the couple to escape all the disadvantages that might be imposed upon them, leaving all the advantages to be acquired.[10] As for those who apparently discounted the merit of the nascent period, the author suspects that they neglected to consider the expected net income from farming and that they were unrealistic in thinking only of wage rate and in underestimating the more crucial problem of job opportunity.

59
• 431 In addition to their own wealth accumulated during the nascent period, gifts in the form of farm equipment,
434 paddy and land were usually given to the couple by their parents at the time they left them to establish an independent family. Of 80 separating families (Table 7), however, 17 reported that they received nothing whatsoever from their parents. Among the remaining 63 families that received something, there was a wide variation in the kind and the amount of the gift, ranging from a single buffalo with an incomplete set of farm equipment to 228 rai of rice land with a complete set of farm equipment as well as a stock of paddy to last the new family until the coming harvest. Parental gifts to newly established families are shown in Table 8.

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10. At least two cases were known where the couples, not ready to start a family of their own, left the old families and moved into families of the other spouses.

[TEXT CONTINUED ON PAGE 91]

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TABLE 8

PARENTAL GIFTS TO 63 NEWLY ESTABLISHED FAMILIES
Bangchan, Thailand, 1909-48

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Items	Number of Families Receiving	Range of Individual Gift	Total	Average for Those Receiving
F. implement*	63	1 set	63 sets	1 set
Buffalo	47	1-4 heads	73 heads	1.5 heads
Land	37	6-228 rai	1112 rai	30 rai
Paddy stock	32	40-1000 tang	4495 tang	140 tang
Building	12	1-2 bldg.	16 bldg.	1.3 bldg.
Cash	4	80-400 baht	760 baht	190 baht
Boat	3	1 boat	3 boats	1 boat
Gold	2	2-20 baht**	22 baht**	11 baht**

* Only basic items were included -- plow, harrow, sickle, etc.

** One baht weight of gold is equivalent to fifteen grams.

593 There was one item of parental gifts which is not
431 shown in Table 8 -- the household equipment. Two of the
415 63 families reported that they received a complete set of kitchen utensils, and two included jars in their gift lists. After checking the result of this survey with some informants, however, many admitted that they did not include these kitchen utensils in the list because they were obvious items. Nevertheless, there was no basis on which it could be inferred that every newly established family received a set of the kitchen utensils. It was therefore decided to omit the household equipment from the table.

593 Another form of parental gifts was the practice,
427 if the parents had enough land to spare, of letting the
423 couple work on some ten or twenty rai free of charge for the first two years. Rent might be charged after that, but there were also cases in which the couples continue to work on the parcel without paying any rent to their parents and finally took it for granted that the parcels belonged to them.

Economic Significance of the Family

59 Much space has been devoted to discussion of the family because of its significant role as the only organized producing unit in the village economy. Another important function of the family was mentioned in previous sections -- through privileges extended to the majority of newly wed couples during the nascent period, the old family facilitated

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243 463 [423] [431] Third, among the land owning class the newly established family usually received from their parents an outright gift of land or the benefit of free use of a certain area of land for two or more years. They would not receive this gift if they did not pursue rice farming.

It is seen, then, that while rice growing might have become less attractive as an occupation, there are still some cultural factors that have been working to confirm the Bangchan villagers in their preference for rice cultivation.

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511 needs at least two work suits in each rice season, one during the field preparation and another during the harvesting season.

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511 Kerosine is used every day for lighting purposes. We do not include in this category kerosine which is used in the farm work; but that used with the pressure lamp in fishing by spearing during the night is included in the ordinary household expenses, for we do not consider fishing as a farm enterprise but as a routine activity participated in by all Bangchan residents, farmers and non-farmers alike.

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511 Contributions to neighbors is a necessary item of expense in the village. These are cash gifts made by invited guests to the sponsor of such rituals as ordination, cremation, marriage, topnotch-cutting, and teacher worship.
[792]
[764]
[585] These rituals usually take place during the dry season following harvesting when cash is abundant in the village and are always followed by feasts, not uncommonly in a series of two or three days. Since all these rituals necessitate the participation of the priests, they have to be arranged in consultation with the temple to avoid conflicting schedules. Although few rituals have been noted to be in conflict with one another, usually they are spread throughout the dry season and m ost people are able to attend rituals to which they are invited. In cases where they cannot attend in person, they are obliged by conventional requirement to send in their cash contributions. The standard cash contribution is 5 - 10 baht. Usually, a

431 guest contributes exactly the same amount that was given
476 him by the man when he last attended his party. Written
796 account is always kept by the host specifying contributors
511 and respective amounts given. When invited to a ritual, the guest consults his book and takes along an appropriate amount of cash. It is on this basis of reciprocal help that a prospective sponsor of a ritual has been able to determine the size of cash contribution he would receive from neighbors. Since a guest normally contributes no more than ten baht and no less than five baht, his annual expense on this item depends largely on the number of parties he attends each year. Our records for 1952 show that this ranges from 30 to 1,000 baht, averaging 343 baht.

27
511 We include in the personal item of expenses the amounts spent on traveling, entertainment, coffee, liquor, etc. To be sure, some of these should be grouped under the stimulant item. We, however, intentionally put coffee and liquor here because the sequence seems to better fit the requirements of the persons responding to questions so that better answers might be obtained. Tobacco, betel, and areca, for example, appear to have somewhat constant rates of consumption. They are usually bought in large quantities which will last for a considerable length of time. As a result, informants are in a position to give more accurate rates of consumption of these items than those of liquor and coffee of which consumption is somewhat irregular and is difficult to estimate.

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511 c. The family's purchasing power. Certain goods considered as luxuries -- medicine, eggs, pork and beef, and white sugar -- were not consumed by poor families.

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276 d. Individual taste and preference. The Moslems would not consume any pork although they had enough money
261 to buy it. Some poor farmers spent more money on curry
182 essence than their more affluent neighbors because they
511 preferred highly flavored dishes, and some tobacco smokers did not spend a cent on tobacco binder because they preferred the home-grown banana leaf binder to the thatch leaf binder which had to be purchased.

182
511 e. Producing ability of the family. It was observed
[184] that those who caught more fish tended to consume more fish regardless of their financial conditions.

f. Health affected the consumption of medicine.

[431] g. Prestige affected the amount of cash contributions
[476] to neighbors.
[554]

h. Personal habits -- thrift, fun loving, indulgence, like or dislike of liquor -- affected the amount of personal expense.

i. Presence or absence of children of school age in the family affected the consumption of cookies.

Special Expenses

511 By special expenses we mean major items of expenses which do not occur regularly but which may arise in one time or another. Examples: purchases of land, gold and

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recovery of a boat stolen, 390 baht on "laxity", and 30,000 baht on a trip to Mecca. The gifts to offspring included only gifts presented when offspring left the family to start an independent family of their own.

Special Receipts

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By special receipts we mean major items of receipts in addition to those regularly obtained from crops, labor, rent, and interest on loans extended. These are counterparts of special expenses, and informations about them were obtained from the 96 sample-families in the same manner and almost concurrently. Examples of these special receipts are: sales of land, gold, and major farm equipment; loans obtained, full or partial settlement of loans extended; gifts and remittances; and odd receipts like those from government lottery prizes, running a gambling house, and laxity practices. Special receipts of the 96 sample-families during the period from March, 1948 to February, 1953 were shown in Table 58.

Some of these items of special receipts need explanation. Land sold by two farm operators were sold for cash needed for loan repayment. It is perhaps worth noting that one of these two operators was in the habit of heavy drinking and had been in recent years spending about two thousand baht annually on liquor alone, while the other was in the habit of gambling. All five operators reporting sales of gold gave the reason for the sale that cash was needed to either buy farm equipment (buffaloes) or to repay

[TEXT CONTINUED ON PAGE 333]

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361 rice land. Water-ways, however, were public areas, and any
[505] convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

262 Mushroom culture as a side line activity of rice far-
344 mers developed during the period when this study was in
433 progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

[434] As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

262 Relatively few foods were purchased, but some of these,
438 such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

262 Estimates of mean annual consumption and cost of pur-
435 chased foods, for 106 households in Bang Chan are shown in
128 Table 1.

262 The list of purchased foods presented by Janlekha (1955)
432 was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)ma-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23--Analyst]

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Table 1. Mean Annual Consumption and Cost of Purchased Foods, for 106 Households[1] in Bang Chan, 1953 (Adapted from Janlekha, 1955, p. 316)

Foods purchased	Estimated Amount	Estimated Cost baht[2]
Raw fish	16.6 kg.	83
Fish sauce (fishsoy)	36 bottles	54
Shrimp paste	6 kg.	27
Pork and beef	8.4 kg.	84
Vegetables	1 kg.	1
Onion[3]	11.3 kg.	34
Garlic[3]	11.3 kg.	34
Coconut[4]	196 fruit	292
Chilies, dried	7.6 kg.	53
Limes[4]	80 fruit	16
Tamarind[4]	6.3 kg.	19
Palm sugar[3]	71.4 kg.	152
White sugar	4 kg.	16
Total		865
Average cost per day		2.53
Average cash expenditure per person per day for food		0.44

1. Average size, 5.7 persons.

2. At the time of the study, one baht equaled about 5 cents.

3. Not produced in Bang Chan (Sharp et al., 1953, pp. 295 and 299).

4. Little production in Bang Chan.

262 preserved vegetables which were purchased and used frequently
432 by families participating in the dietary study.

262 435 The food costs reported by Janlekha (1955) were estimates recorded from memory at relatively frequent intervals. The average per capita cost, 0.44 baht per day, was similar to the average cash expenditure of 0.47 baht per person among 11 families participating in the dietary study (based on the average of 4 survey days for each family). Thus, in Bang Chan, cash expenditure for food appeared to be relatively small, i.e. farm families produced a large share of all food consumed. If money were not available to buy, they would still have enough to eat, but it might lack variety. One informant said, for instance, that he usually bought a coconut every other day, but during October, when cash was short, he bought none. Janlekha (1955) considered the estimates obtained for expenditures for fruits and vegetables less reliable than for items purchased more regularly.

262 511 In Table 2, the percentage distribution of food

Table 2. Division of Food Expenditures by Food Groups, for Eleven Families that Participated in the Dietary Study, 1953-54

	A 6 families[1] %	B 5 families[1] %
Animal foods	30.8	39.3
Fruits[2]	30.3	26.3
Vegetables[3]	28.7	17.0
Fats and Oils	3.3	8.4
Sugar	3.6	3.5
Pulses, nuts	--[4]	0.9
Spices, etc.	2.7	--[4]
Miscellaneous	0.7	4.5

1. Based on 4 days per family.

2. Primarily coconut.

3. Chiefly non-leafy

4. The dash indicates no purchase or a value of less than 0.1%.

252 Another, who had time during Round IV to prepare food twice a
262 day, preferred to prepare more in the morning when she expected
264 to offer food to her son who had just been ordained. In two
518 instances an evening meal was not prepared because the father
[525] and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

262 Cost of Food Purchased. - The lowest cash expenditure
435 for food by any household on a survey day was 0.12 baht, for
511 a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year pro-
262 gressed was apparent. Most of the rice was sold at the end
432 of Round III. The cash went for capital investments, not
[221] food, during Round IV. With time to drain ponds and to fish intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

146 Calorie and Nutrient Value of Foods Eaten. - The
221 seasonal variation in calorie and nutrient intake of the two
[28] groups of families is shown in Table 15. As one would expect, the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 --- Analyst]

concerning its culture and use. Tilapia culture was learned largely by trial and error, and was considered primarily as a source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

More home consumption of eggs would be desirable, but their ready sale and acceptability for barter may present an obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

Milk, as canned, dried or malted milk preparations, was considered an appropriate gift for the priests, who are forbidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to include milk among them. People gladly bought food for the priests and would probably accept on the authority of the head priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headmen were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

The importance of merit making and the relatively large cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

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In discussing the forces of demand for and supply of land in the few preceding pages, it is not the purpose of the author to quantify these forces and attempt to predict rent or the price paid by the tenant for the control of net income deriving from the use of the productive powers of the soil. Rather, the purpose is to confirm in this specific case Chamberlin's general notion that "the equilibrium of economic forces has been wrongly identified with an equilibrium between demand and supply. The latter is merely a special case of the former. Curves of demand and supply tell nothing, either by themselves or by their intersection, as to what price will be established, until other conditions are known."[14]

Prices of Land

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One of the most significant phenomena during the period covered by this study, from 1948 to 1953, is the rise of prices of land in Bangchan.

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Records of major receipts and expenses of 96 farm operators who have been continuously working on an average area of 3,140 rai, or 47 per cent of the total area worked by Bangchan residents, show that during this six-year period two operators sold two parcels of land and ten operators bought eleven parcels of land. Since none of these involved transaction between one and the other in our sample of 96 operators, it can be said that there was a total of thirteen

14. Chamberlin, op. cit., p. 15.

423 purchases (or sales) of land involving operators in our
432 sample as either sellers or buyers. The price and size as well as the time of sale of each parcel is shown in Table 27. Using the highest of each year as the basis, it is observed that land price in Bangchan has been rising steadily from 350 baht per rai in 1948 to 700 baht in 1949, to 1,100 baht in 1950 and 1951, and then rose skyhigh to 11,000 per rai in 1953. To be sure, this spectacular rise, especially from 1951 to 1953, was largely due to the changing over of former agricultural to residential land. Nevertheless, when residential land is excluded from consideration, it is seen that the average rise in agricultural land prices was 560 per cent during the period from 1948 to 1953 (Table 28).

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Perhaps a case of one large parcel in "Thung Nai Sab" in KY5 may serve to illustrate the way land prices rose in Bangchan during these past few years. The area of this parcel, which was owned by Lady Phung of Bangkok, was 100 rai. Our informant's father, Hajji Sa-ard of Bangchan Mosque, was interested in this parcel of land because it was adjacent to his land which was not far away from his home. In 1946, Lady Phung was willing to sell it at 300 baht per rai, but Sa-ard was reluctant or not quick enough to accept this offer for sale. In 1947, the lady raised her price to 350 baht and Sa-ard was ready to buy. This time it was hesitancy on Phung's part that prevented the proposed purchase from being consumated. In 1948, our

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243 426 432 Differentiation in paddy prices is limited to cases where farmers have received in advance the payment for paddy to be delivered at harvesting time. This is a common practice which is called in Thai "tog khao" (lit., fall rice). Usually, the advance price received by the farmer is about half or not more than three-fifths of what he would normally receive. Considering that cash is usually received about a month or two before the delivery of the paddy, it would seem that tog khao is a kind of loan with as high a rate of interest as from 25 to 50 per cent per month.

243 426 465 A similar practice is adopted with respect to advanced payment for piecework, where pieceworkers are committed to uproot, transplant, or harvest at about half of the prevailing rates. This is called tog raeng (lit., fall labor).

243 128 427 Tables 24 and 25, in the section on land tenure of Chapter III, show a wide range of rental rates of rice lands which have not demonstrated any marked difference in crop producing ability.

Rates of interest in Bangchan vary greatly from 0 to 10 per cent per month. This topic will be discussed more fully in later sections of this chapter.

243 434 556 The important point that should be observed in connection with these differentials in paddy prices, rates of interest, rentals, and wage is that it is the less affluent farmers who usually bear the burden of higher costs due to these practices. Thus, these differentiations serve only to widen the gap between poor and well-to-do farmers.

#128 511 crop year. Except for a few exceptional cases, no new item appeared during the few months that lapsed because rice farmers customarily make their major purchases during the dry season following harvesting time. Special expenses of the 96 continuing families during the period from March, 1948 to February, 1953 were shown in Table 57.

511 Some explanations are necessary for Table 57. In the first place, whereas ordinary household expenses are estimates based on experience of farm operators, these special expenses are actual amounts spent during the specified period of five years. Most of the expenses on land [432] purchases were down payments and subsequent partial payments. Of the four families reporting purchases of household equipment, three bought guns and one bought a sewing machine. [757] All major repairs were for dwellings. The major medical [755] expenses did not include small amounts of money regularly spent on drugs for headache and stomachache or even on delivery of babies which was done by traditional midwives whose fees were nominal. In fact, there were only three cases of major medical expenses. The largest one included [525] Bangkok hospital bills amounting to 14,000 baht. The 36,190 [484] baht of odd expenses included 3,000 baht on gambling(only [691] two operators reported expenses on this item, others admitted win and losses but did not give the amounts), 2,000 baht on purchases of government lotteries which are issued once a week and also on several other occasions, 500 baht on legal prosecution, 300 baht on reward for the

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434 the loans previously extended to them. Among the five operators reporting sales of farm equipment, one sold his part of the joint ownership of an engine in order to buy a new one for his own, three sold their old buffaloes and bought younger ones, and one -- the inventor of the propeller windmill mentioned earlier in this dissertation -- sold windmills and other farm implements he made for sale.

434 The average amount of money received from loan set-
426 tlement during the past five years of 1,700 baht appeared
• 432 to be too small considering that the amount of loans ex-
511 tended by the sample-families during the period was as high as 51,630 baht and that the ability of these sample-families to settle loans extended to them was 101,530 baht out of a total of 141,100 baht. An explanation for this lies in switching of debt responsibility. At least one case was known where an operator, who was in debt to a fellow farm operator, sold a parcel of land to a third party at 11,000 baht. This buyer, apparently not having enough cash, arranged that he would assume responsibility for the amount of 8,000 baht which the seller of the parcel owed the other farm operator and would pay only the balance of 3,000 baht to the seller in cash. Strictly speaking, the creditor should report that he received a certain amount as loan repayment (actually, 4,000 baht for the principal and 4,000 baht for interest of 25 per cent for four years) and spent this same amount on loan extension. Actually, however, only the seller of the parcel reported that he had sold a

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426 parcel of land and had cleared off his debt. The creditor
432 did not report anything about this deal, for he really did
511 not receive a cent out of the arrangement.

434 Loan obtained is the largest item of special receipts
426 involving 29 farm operators and 141,100 baht. The following
511 were the purposes of the loans sought as given by borrowers: land purchase, 7 cases; buffalo purchase, 3 cases; sponsoring rituals, 3 cases; to partially defray ordinary household expenses which exceeded cash incomes especially in years of poor crop, 16 cases; and to cover major medical expenses, 2 cases (two operators listed two combined purposes of the loan, hence the total becomes 31 instead of 29 if there is only one purpose for each case).

128 Net Accumulation of Assets

434 Figures of net accumulation of assets within a certain
511 period are valuable to the understanding of the economic conditions of farm operators in that they show the economic achievement, or the internal saving, of these operators. In order to obtain exact figures, however, it is necessary that we have complete inventories of the farm families at the beginning as well as the end of the period. Since our data on inventories of the sample-families for 1948 and 1953 are incomplete, especially we are totally unaware of the quantitative debt situation in 1948, we cannot use the simple method of subtracting the net worth as of February, 1953 from that as of March, 1948 to determine net accumulation

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The only livestock kept on rice farms other than buffalo, which were included under consideration of farm equipment, are chickens and ducks, which are raised "naturally." It was earlier mentioned that the size of the flock was more or less constant. Livestock, therefore, did not figure in significant inventory changes, and can also be left out.

*[243]

The only item of supplies on rice farms is paddy stock. This is used up and sold out each year. For more or less the same size of farm, and spreading over a series of five years, a difference in the average amount of paddy stock at about the same time of the year in 1948 and in 1953 would not figure significantly in inventory change.

It was also already mentioned that rice farmers did not want to keep cash at their homes for fear of robbery, and that any person receiving a large amount of cash quickly passed the money on to others. We can therefore assume that the amount of cash on hand at the same time of the year does not vary much. Cash, then, may also be left out of consideration.

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Of the items of assets enumerated above, there are now to be considered only land, household equipment, gold and accounts receivable (payable). In all purchases of land, gold, and household equipment, only the cash paid was recorded and considered as assets accumulated. For example, when an operator purchased a parcel of land at 7,000 baht and paid the down payment of 1,000 baht, only the 1,000 baht

434 was considered as spent in land purchase. If, however,
452 he made another partial payment of 2,000 baht during the
511 period covered by the study, a total of 3,000 baht was considered. Since purchases of gold and household equipment are normally made with cash, a total of cash spent on these three items (land, household equipment and gold) would seem to fairly well indicate the extent of internal saving of
434 each family. The assumption here is that one would not
426 borrow money to buy gold or a gun. With this correction
511 the figure remaining will represent a change in net assets, if we can assume no other changes in the debt situation. For those who bought these assets, it is very unlikely that any increase in outside debt occurred. The reason for this belief lies in interest rate differences: any person with some cash (which may be borrowed at low rate of interest in case he was about to buy land) would rather settle his high interest bearing debts first before buying household equipment or gold or making down payment for land. For those who did not buy these assets, some increase in debt for consumption purposes may have occurred. Both groups may have decreased debts during this period. The most likely assumption is that those buying land experienced a net decrease in debts other than those incurred in buying land, while those not buying such assets experienced a net increase in debts. The balance was probably one of some
[454] increase in debt in the village. Therefore, although these figures for net accumulation of assets provide a fair

*243 perfectly true especially among the under-sized farms in
178 Bangchan, there is still to be explained why more affluent
426 farm operators are also continually in debt. It has been
43 observed that when people come into contact with superior goods or superior patterns of consumption, with new articles or new ways of meeting old wants, they are apt to feel after a while a certain restlessness and dissatisfaction. Their knowledge is extended, their imagination stimulated; new desires are aroused, the propensity to consume is shifted upward. This principle according to which individual consumption functions are interrelated was propounded by Duesenberry, who calls it the "demonstration effect."[10] When the list of new items of consumption is checked, it appears that this principle of demonstration effect has demonstrated itself very clearly in Bangchan.

426 Table 63 shows that in the majority of cases credit
• 432 purchases bear an interest of 50 per cent per season, ranging
*[128] from 0 to 67 per cent. Information from sources other than our sample farm operators reveals that two methods of interest charging were practiced by Bangchan storekeepers and peddlers. One method was to charge 40 per cent interest on credit purchasesmade during March - May, 30 per cent during June - the first half of November, and no interest on purchases made in the second half of November and after; all these rates were charged on the assumption that accounts would

10. This is about the receipt from 8.4 rai in 1953.

[TEXT CONTINUED ON PAGE 352]

426 be settled at harvesting time in December or January. If
• 432 buyers failed to settle their accounts at harvesting time, a flat rate of interest of 5 per cent per month would be charged on the total amount (principal plus interest) until the whole debt was settled.

Another method was more simple: 50 per cent interest was charged to the amount purchased regardless of the time of purchase. The only exception was that no interest was charged on purchases made after the first half of November. Here, again, the assumption was that accounts would be settled at harvesting time. In case buyers failed to settle their accounts at the specified time, the same rate of interest of 5 per cent per month was charged on the total as in the case of the first method.

Our records show that there were nine among our sample-operators who failed to clear their credit purchase accounts at the harvesting time of the 1951-52 crop. These accounts, principal as well as interest, were considered as loans with interest rate of 5 per cent per month or 60 per cent per year payable at the harvesting time of the next crop, that is the 1952-53 crop. The shifting of purchase accounts into loans was done in order to simplify bookkeeping work on the part of both debtor and creditor, for these delinquent customers were likely to start their credit purchases again in order to get by until the next harvest. The total account of these nine operators was 19,550 baht, averaging 2,172 baht per case. This appears

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

426 in Table 64 under the item of loans with 60 per cent interest.
a 432 It is seen that these operators would have to pay an average of 1,303 baht as annual interest for this account alone. This explains why it was claimed by the villagers themselves that "those who cannot clear this kind of debts are sure dead." One way to avoid this adversity was to seek a long-term loan at the ordinary rate of interest of two per cent per month (Table 64) to replace the high interest loan created by credit purchases. In the previous section on special receipts, it was mentioned that 16 of a total of 29 farm operators in our sample who had sought loans during the past five years said that the loans were needed to defray ordinary household expenses. Obviously, the nine operators had tried to get loans with lower rates of interest to settle their accounts with the storekeepers but they could not get any.

Table 60 shows that of a total outstanding debt of 194,170 baht, more than three-fourths was in the form of loans and less than one-fourth was in the form of credit purchases. Although the majority of cases of aquisition of loans were found to have as their purpose the clearing of higher interest bearing debts, quantitatively speaking each of these was a small loan. Most other loans were sought for land purchases and buffalo purchases. Although these latter were fewer in number, they were larger in amount. It may then be said that a major portion of loan monies were sought for investment or productive purposes while

[TEXT CONTINUED ON PAGE 355]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

426 credit purchases were almost entirely for consumption
• 432 purposes. The distinction can then be drawn that whereas credit purchases with high rates of interest indicate a shortage of cash due primarily to poverty, loans with lower interest rates do not necessarily serve as such an indicator. Thus, any survey bringing out only the total amount of debts does not shed as much light on the economic situation of the area as it would if the debts are itemized into loans and credit purchases.

Another important point is that farmers tended to clear off their credit purchase accounts the moment they were in a position to do so because they did not want to bear the burden of a very high rate of interest. Even in cases where they had a more pressing need for the use of the cash in hand during harvesting time, their creditors would be around to demand the settlement of debts. To these creditors, a relatively high return of five per cent per month was no longer a good business, for it is obvious that those farmers who would not settle their high interest bearing accounts during harvesting time must certainly be hard up and hence a poor risk. Besides, it will take another full year to collect the debts if they could at all. As a result, most of credit purchase accounts were usually cleared in Januaryof each year when farmers started to sell their early varieties of rice. It is seen, then, that for each year the total amount of credit purchase accounts was highest in December and lowest by the end of January, if not nil.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

426 Thus, figures of total debts alone are almost meaningless
• 432 unless they are itemized and the date when such accounts
+128 are outstanding is specified.

*128 Cash Situation and Role of Paddy
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It is not the purpose of this study to quantify the cash situation in the village. Even mere estimation would already be too ambitious a task for a study of this nature. We propose, therefore, to give only an outline of the cash situation with the hope that it may serve as background information for further research along this line.

434 1. Extent of money in circulation

a. Incoming

Village net exportable rice: Total crop -- seeds (1 1/2 tang per rai) -- amount consumed by the family (30 tang per man-unit) -- feed or amount consumed by poultry (4 tang per chicken-unit: rooster, 1 unit; layer, 1 unit; chic, 1/4 unit; duck, 1 unit).

Village net exportable poultry products: Total egg production -- amount locally consumed, and total young roosters (7 months old) -- amount saved for breeding purposes.

Money regularly earned from outside sources: wages and salaries (teachers, headmen, janitors, workers on highways, and other workers drawing pay from outside sources); rentals (paid to village residents owning lands in other villages); remittances from outside; dividends if any.

Exportation of other products: mushroom, lotus.

Loans obtained outside the village.

Settlement of loans extended to outsiders (very limited, if any at all).

Sales of lands, gold and jewelries, capital goods to outsiders.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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*128 This was one of the easiest jobs of the whole study.
433 There were few cases where we did find anybody at home
434 and there were many more where only young children
[574] were seen. Since a Thai farm home is considered an open house to fellow villagers, we simply took liberty of walking right through and made an inspection by ourselves. Thus in a period of less than a week we were able to secure the figures of paddy stock on hand of every single operator in the sample.

The amount of paddy stock alone simply indicates but not represents sale in the second period, for a certain portion must be saved for seeds, consumption and feed. It is rather simple, however, to calculate the amount saved, for we were already in possession of work areas from which the amount of seeds may be estimated and we knew the size of the family (in terms of both actual number and consuming units) from which consumption may be figured.

*243
• 432 In this second period, sale was made when the farmer thought the price was high enough. Usually,
434 the prices of paddy were about 15 - 30 per cent higher during this period than in the first period when supply was high. The rate of shrinkage should be taken into consideration, however, for prices are expressed in volume. It is rather unfortunate that we do not have any official record for this vital rate of shrinkage. In our daily log, however, the following testimony appears:

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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Farmer A: "I put my paddy in the warehouse in the first half of the second lunar month (December 17-31, 1952). In the second half of the fourth lunar month (March 1-15, 1953) I sold it (and thus measured it ag in). I found that within these two and a half months of every 100 tang only 87 tang remained."

"Judging from experience, paddy starts decreasing its size and weight through the process of evaporation since the time of harvesting, and it is not before July that it becomes dry enough to retain its size and weight thereafter."

Farmer B: "Is it not possible that your 13 per cent loss was due to the chickens?"

Farmer A: "No. During that time (December-March) the chickens were well fed. There was a lot of paddy scattering in the home yard. They would not bother going up into the warehouse (mat bins)."

C (of Cornell group): "Lazy chickens might feed right in the mat bins with plenty of paddy."

Farmer A: "I don't think so. Lazy chickens would not take the trouble to fly. They'd rather prod around the home yard."

Another reason for sale during this second period, in addition to good prices, was a prospect of good investment, mostly loans, mortgages, or land purchases.

• 432 426 It has been observed that most business transactions were done on credit. When the farmer went to town to receive payment for his paddy from the rice dealers, he would at the same time settle his accounts with the lumber yard and several dry-goods stores. So actually in many cases cash was not brought into the village except in limited amounts.

432 [674] People do not like to carry a large amount of cash around in the village for inherent fear of robbery which rarely happens. Chinese rice dealers prefer to pay for the paddy they bought at their own home. If sellers insist that the money should be brought to them in the village, the dealers will break the total of say 5,000 baht into one or two thousand baht at each of three or four payments.

Villagers also do not like to keep a large amount of cash at home. In case the payment for paddy sold is to be made at the farmer's home, he would arrange for borrowers to come to his home at the same time so that the money will be immediately passed on to the others, thus avoiding risk involved in keeping cash. One of our sample operators said that he arranged a few years ago that a large sum of 10,000 baht be paid at his home so that he might pass the whole amount immediately to the owner of a parcel of land he agreed to buy. Everybody in his household was frantic when the money was received from the Chinese dealer but the

• 432 seller of the land did not show up until the next morning. Recruit had to be made for guns and men to guard the money for that whole long night.

3. Scarcity of money

243 434 Scarcity of money exists in Bangchan because there is, relative to the demand for purchased goods and services, only a small margin between the price received and the cash outlay of producing paddy. Another reason is that most farms are too small, thus yielding small net cash incomes to the majority of farm operators in the village. Small incomes of farm operators who constitute the core of village economy means also small incomes of the rest of the village population whose financial condition directly or indirectly depends on incomes of farm operators.

426 458 Scarcity of money is directly evidenced by shortage of money during theperiod from July to December. It is also indicated by high rates of interest on credit purchases and loans sought in the village.

434 454 The problem of scarcity of money has been rendered more acute by the fact that affluent farmers do not like to keep cash at home or put it in liquid form such as in saving bank in the nearby market town, but prefer to invest it in a more or less non-liquid form such as loans or land purchases. Some of those who had accumulated a large amount also tend to spend it on sponsoring of rituals costing as high as several

[796]

[P. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

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278 [563] The Chinese druggists, many of whom stocked among their traditional pharmacopeia a few modern medications, gave out occasionally to their customers information derived from the manufacturer's instructions for use. People with minor indispositions sometimes sought a druggist's advice. He suggested traditional or modern remedies, depending on the wishes of the customer. Thus, the druggists also acted as a bridge to the use of modern remedies.

484 Facets of Social Life Pertinent to Childbearing:

Communication and Transportation

People went to Mīnburī, and less often to Bangkok, to buy, sell, work, or visit relatives. A few adults had never been outside Bang Chan.

494 [484] [206] [493] Along the road buses passed Bang Chan every two or three hours during the daytime only. Mīnburī was a ten minute ride, Bangkok, an hour. Mīnburī had no taxis, and no telephone existed to call a taxi from Bangkok. Two or three persons owned bicycles.

505 484 Within Bang Chan, transportation varied with the season. From June to February travel was entirely by boat, even to a neighbor. A message to a local midwife, for instance, could be carried quickly by a speedy paddler in his skiff. If an emergency trip to the Mīnburī Health Center appeared necessary, a person could be rowed fairly comfortably along the canal that bordered the road. Going by boat to Bangkok, a whole day's row away, or four hours by the motor boat from Mīnburī, was not considered convenient even for passenger traffic, much less for a sick person or a woman in labor.

484 844 [494] The inconvenient time of year was the three month dry season. Boats then could hardly go on the canal that ran through the middle of Bang Chan, while the smaller canals became muddy or even dry. Walking barefoot over sharp stubble in tropical sun was hard. To transport a woman in labor, assuming she could stand it, an improvised stretcher could be made, but to subject her to the jolting bus was usually foolhardy. It was not customary to flag down passing cars. If things went wrong for a woman in labor during the hot, dry season, there was practically no chance of getting her to a hospital, and none of getting modern help to her.

243 Work Habits in the Economy

433 Because of the annual flood the land was admirably suited to growing a single bounteous crop of rice. After all needs for

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janlekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 16 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand [Kingshill 1960:73]).

Besides the work in rice-fields, women dug and cleaned

SUMMARY

A general description is given of conditions in a
105 Siamese rice village, 1952-54, as they relate to food supply
26 and food habits. Activities at various seasons of the year
[220] are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

105 Food was mostly home produced and an important factor
262 in the standard of living was the number of productive hands
433 available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods
[235] were used. Nearly all of the families in Bang Chan raised
[433] chickens, and some raised ducks, but about 3/5 of all eggs
[244] produced were sold. Every family had some sort of kitchen
[245] garden, including banana trees and other plants, but spices and chili were much more commonly grown than vegetables and
[227] fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

[443] Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, coconut, palm sugar and small amounts of vegetables.

[434] Many households increased their income by the sale of
[178] eggs, vegetables gathered from the canal and other items. Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

105 Preparation of some typical dishes, meal service and
264 techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

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132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [463] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [220] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [433] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part [028] of the Thai-Buddhist community. Information to be presented on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

193 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the 484 nearest market town, ran through one edge of the village. Bus 587 service was available along this road, to either Bangkok or [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

221 The year starts with May, the beginning of the rice-
132 year. At this time the rains began to soften the parched
241 ground, and the heat slackened. School re-opened. Farmers
512 turned to plowing, harrowing, raising the seedlings. Both
371 sexes worked about equally in field labor, boys from 14 and
468 girls from about 15 years of age performing tasks according
513 to skill and strength. Everyone was in the field at dawn.
The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy
249 day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third
[20] meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

221 With the rains, the canals had filled, so that by June
132 buyers with big rice boats could return. The few farmers who
501 could afford to hold onto a portion of their last year's crop
sold it for a better price at this time. Vegetables and
24 fruits which had died in the long drought were replaced, and trees were planted.

24 In July the heavy transplanting season began. Because
221 of cooperative work habits or hiring out, people worked
132 solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly con-
[342] trollable. Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School
[371] vacation was scheduled at this time so both teachers and
[857] children could help. Older children might work in the fields,
[871] while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food
[438] for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

which the leafy vegetable (2)phag (2)ka-(2)cheed is one, and digging a deep hole at its entry. At the proper time the opening was plugged. The fish grew in the pool and were taken as needed, sometimes, for convenience, several at a time, to be kept alive in a large pot near the house. By draining the pond fish were "harvested" (p. 12). Yields varied, but villagers had the impression that they had declined considerably over a period of years.[1] In 1952, at the suggestion of FAO, the Thai government tried to increase the supply by introducing tilapia culture. During the first three years of the experiment about one-third of the families in Bang Chan had tried to raise tilapia, but in the summer of 1957 members of the research group were told that no one had persisted (see Appendix A, p. 101).

Eggs. - Chickens were raised by about 90% of the families in Bang Chan, and over 70% owned 10 or more. In contrast, only 37% of the households had ducks, and only 13% had 10 or more (Goldsen and Ralis, 1957, p. 56). Ducks were regarded as trouble makers. Moreover, chickens could feed "naturally" and certainly helped themselves to paddy from the bin, whereas ducks did not eat paddy, but had to be provided with bran and broken rice.

Most of the eggs produced were sold. Janlekha (1955) estimated the annual production of chicken eggs in Bang Chan as 366,540, and that of duck eggs as 268,200 eggs. According to the information which Janlekha obtained from 106 households in 1953, about 4/5 of the chicken eggs were sold as a secondary source of farm income whereas more than 3/4 of the duck eggs were home consumed. Slightly over 2/5 of all eggs produced in the village were consumed there. On a per capita basis, the average annual consumption of 708 eggs for an average family size of 5.7 persons (Janlekha, 1955) amounted to a little over 1/3 of an egg per day. Home consumption of eggs might be less in households in which enough chickens were raised to make regular sale of eggs possible. Thus in 5 of the 31 households studied by Sharp et al. (1953, p. 197) all hen's eggs produced were consumed at home.[2] For these families, an average of 452 eggs per family per year or about 1-1/4 egg per family per day, were thus available. Home consumption in the 26 families which sold eggs amounted to an average of 215 per year or about 0.6 egg per family per day. One informant commented that a rich man could eat an egg every day, but she could not afford to do so. She said she sold eggs, when she had them, and bought foods to eat with rice.

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1. Sharp et al., 1953, pp. 191-192.

2. This probably means that eggs were not sold in quantity, not that none were used in barter (cf p. 5); thus the number of eggs available may be overestimated.

244 Vegetables and Fruit. - Although kitchen-gardening has been encouraged by the Thai government, vegetables and fruit were grown in Bang Chan to a limited extent only. Every family had some sort of kitchen garden, but many edible plants which can be grown in the village were grown by relatively few families. The list of fruits grown in Bang Chan in 1948-49 (Sharp et al., 1953) included four times as many items as were grown by one or more of the 11 families that participated in the dietary study. The list of vegetables and spice plants grown or gathered by these families included 27 items, as compared to 41 listed by Sharp et al. Spices and chili were more commonly grown than vegetables and fruit.[1]

244 One affluent household whose food expenditures for 1949
245 were reported by Sharp et al., (1953, pp. 214-215) produced
433 for home use, 125 kg. of palm sugar valued at 200 baht and 500 coconuts, valued at 450 baht. Home production of both of these was unusual. Few families in Bang Chan grew either sugar palms or coconut palms and expenditures for coconuts and palm sugar were usual. During the major flood of 1942, villagers noted that coconut palms survived whereas all other fruit trees were destroyed. After this, a number of farmers planted coconut palms, but they had not yet begun to produce.

361 In 1954, about 120 acres (300 rai) of the total of about
311 2800 acres (7000 rai) of land in the village were used for
351 home sites and home gardens for 336 households. Individual home sites usually varied in area from about one-quarter to one acre, and were occupied by buildings, threshing floor and space for poultry as well as trees and garden space. Portions of this might be under water for several months of the year. Increased home production of fruit and vegetables would in many cases necessitate increasing the size of the home site by purchase, mounding or both. Ordinarily, increased land for the kitchen garden was obtained at the expense of some of the

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245 1. In a typical farm garden in Bang Chan one would find
249 bananas growing, and a number of plants used for seasoning curry. Various kinds of chilies, lemongrass, bergamot, of which both rind and leaves are used, and galangal were grown by all families who participated in the dietary study. Both sweet and hairy basil were commonly grown. Many families grew
262 one or more varieties of gourds and of eggplant, some of which can be trained to grow on a tree or trellis. The inflorescence of the banana was also used as a vegetable. Leafy vegetables were not commonly cultivated but some families grew
262 (2)phag (2)ka-(2)cheed, a green water plant, in gardens staked
262 out at the edge of the canal, or in a pool, and some had trees,
262 the leaves of which were edible. Swamp cabbage or (2)phag
262 (3)bung grew wild along the edge of the canals and was the most commonly used green leafy vegetable. A few families
245 grew guava, jujube, star gooseberry, Manila tamarind, mango and pineapple.

rice land. Water-ways, however, were public areas, and any convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

Mushroom culture as a side line activity of rice farmers developed during the period when this study was in progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

Relatively few foods were purchased, but some of these, such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

Estimates of mean annual consumption and cost of purchased foods, for 106 households in Bang Chan are shown in Table 1.

The list of purchased foods presented by Janlekha (1955) was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)ma-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23--- Analyst]

in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953 and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 29 -- Analyst]

Table 5. Diet Classifications for 75 School Children in Bang Chan, and Percentage of Children with Each Diet Classification who Missed Lunch

(Adapted from Thorangkul, 1957)

Diet classification[1]	Percentage of children	Percentage of children who missed lunch	
Class I	8	Boys	46
		Girls	45
Class II	61	Boys	73
		Girls	68
Class III	31	Boys	81
		Girls	98

1. See text for basis of classification.

vegetables eaten, since items from these two food groups were not commonly eaten as snacks. Note, in the illustrative records presented in translation (Appendix A, p. 98), that the child whose diet was considered to be in Class III did not eat a regular lunch on any of the six days for which records were available, whereas the child whose diet was classified as I ate a regular lunch six times out of seven.

Family Food Shared With Others

Throughout the year families prepared especially good meals for persons who came to work cooperatively with them. Every rice-grower entertained his cooperative harvest crew, some the transplanters. Hired laborers were not usually served such feasts, but the conviviality of the harvest season called for a round of liquor even for them. One harvest dinner for 18 cost 50 baht, plus eels (60 baht) and rice. Cooperative home pounding of rice was still practiced in some households and thought to be fun. In one day enough rice to produce 40 tang (640 kg.) was pounded by groups of 15 to 20 workers; in an evening 20 tang were done. If 40 tang were milled, workers were served a full meal; if 20 tang, a dessert only. Other occasions were fish-pond draining, house raising and repair. Each participant in the fish-pond draining at Household 21 was fed (3)khaaw (3)tom (soupy rice) for lunch and "an enormous supper," in addition to receiving the traditional pot of fish. If good food were not served at these functions people

per day were calculated for Groups A and B by Round and for all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

Although our sample was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

From the viewpoint of parents, the "peak of life" was the time when children were no longer dependent, but productive, unmarried workers whose earnings stayed within the family. Household 16 was such a family, forward looking, progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analyst]

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from venders almost every day. They said "Some do not pay money to buy food, but pick or get it from the canal or gardens --this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

433 511 Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

243 645 256 262 Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

244 534 545 Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chilies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

222 262 Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)sa-(5)noo flowers were used by 3 families on one day each;

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

whole, depends in large part on one's frame of reference.[2] In the most general terms, the people of Bang Chan are like almost all ethnic Thai peasants (excepting on some counts Thai Moslems and some of the economically disenfranchised people of the Northeast) in that they have a keen sense of membership in the nation-state with a deep loyalty to the Crown, speak the Thai language, are Therevada Buddhists, are outwardly highly deferential to the authority of the Central government, and have a conception of the good life that stresses fun, physical comfort and security, intellectual simplicity and practicality, and a moral (as contrasted with a natural) ordering of the universe. Too, like the vast majority of their rural compatriots,[3] they are engaged in the production of rice, an activity which to them is not only an economic operation (Ingram 1955, Janlekha 1955) but almost a way of life, being bound up with their social structure, dietary habits, religious practices, and even their philosophical (J. R. Hanks 1961) and aesthetic conceptions.

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[2] For readers unfamiliar with Thailand, the nation-state, it should be noted that the country is predominantly rural; 84 percent of the total national labor force is in agriculture and there are only ten towns with populations of 20,000 people or more, in which 6 percent of the national population (1947 census) live. Although Bangkok has a population of approximately 1,200,000, the second largest city, Chiengmai, has only 60,000 (1957 estimate).

The nation also has a high degree of ethnic homogeneity, 82 percent of the population considering themselves native Thai (1957 estimate). The largest ethnic minority group is the overseas Chinese, comprising 11.3 percent of the population (1953 estimate, from Skinner 1957), the balance being Malays, Cambodians, and Indians; the so-called tribal groups number in toto only about 150,000 people.

The religious composition of the country is 94.1 percent Buddhist, 3.9 percent Moslem, 0.5 percent Christian, and 1.5 percent "others," many of whom are tribal animists. Thai Buddhism is of the Southern (Therevada, Hinayana, or "Lesser Vehicle") variety and as practiced by most Thai, has syncretized within it many Brahmanic and traditional Southeast Asian animistic elements (see the chapter on "Religion" in Sharp *et al.* 1956, and Textor 1960). The largest minority religion, Islam, is practiced by ethnic Malay living in the four southernmost provinces of Thailand, as well as by some ethnic Thai—many of them descendants of former Malay slaves or war prisoners—scattered through the areas north and east of Bangkok, including Bang Chan, where they comprise 9.8 percent of the local population. Relationships between Buddhists and Moslems, at least in Bang Chan, are quite amicable and except for ideal prohibitions against intermarriage and occasional off-hand remarks such as "Moslem women are loose" or "Moslems kill animals," there is little overt hostility between the two groups. Certainly few Bang Chaners ever distinguish between their Buddhist and Moslem neighbors when arranging a work group, selecting a drinking partner, or even compiling a guest list for a son's ordination.

[3] Janlekha (in Sharp *et al.* 1953: 110) indicates that 55 percent of the total national labor force is involved *solely* in the cultivation of rice—which occupies approximately 90 percent of the total cultivated land area—and as many as 92 percent of all agricultural households are rice households. The 55 percent figure excludes all those people who are involved in the transportation, milling, storing, and distribution of rice. Eighty-five percent of the population of Bang Chan (1953) are rice farmers.

*177
*178
243
433

The Innovations

A. Agricultural Innovations: During the past few years, certain innovations have come to Bang Chan which have increased agricultural productivity and improved the level of living. Some of these innovations are listed below.

402
*177
*178
[241]

1. The small motor. One innovation is the small engine, gasoline motor, which is used mainly as a water-lifting device for irrigation purposes. In 1950 only five small motors were found in Bang Chan.* Twenty-one per cent of the respondents in the 1955 survey, however, report owning these motors; the majority of the respondents (68 per cent) claim to have used this labor-saving device which is sometimes jointly owned by more than one household and is frequently loaned out.**

244
434
*177
*178

2. Straw mushroom growing. Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per cent of the respondents report that they have engaged in this activity***). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

One advantage in the culture of straw mushrooms is that it permits quickly realized returns. The cycle, from sowing spores in moistened straw to harvesting the mushrooms, takes about two to three weeks. Another advantage is that there is relatively little heavy work or investment required besides the acquisition of straw and spores. A third advantage is a ready market, for the plant is sought by Chinese dealers in Bangkok who supply hotels and restaurants. Bang Chan rice farmers who engage in mushroom growing as a sideline activity sell it either to local middlemen or directly to the Chinese in Bangkok.

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[113] * Sharp, L., H. M. Hauck, K. Janlekha, and R. B. Textor, Siamese Rice Villages, A Preliminary Study of Bang Chan. Thailand, Cornell Research Center, June, 1953.

[125] ** The questions: "Do you own a small engine motor or not? (If "NO"): Have you ever made use of one in your work?"

[125] *** The question: "Have you ever grown mushrooms, or not?"

*178
212
369
402
484

as apt to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	38%	(40)	86%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	50%	(67)	85%	(76)
One or more	57	(24)	88	(43)

*Male farmers only

[562]
[241]
[228]
[244]

However, no such relationship was discerned between these culture contacts and trying out either fertilizer, tilapia, or mushrooms.

*178
121
369
433

Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

*178
121
369
572

Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

[402]
[228]
[241]
[244]

The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertilizer or mushrooms.

7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things? [177* 178* 125]

1.	Fertilizer	9
2.	Small engine	4
3.	New rice seeds	3
4.	Tilapia	98
5.	Other fish, specified	13
6.	Fish, unspecified	80
7.	Mushrooms	45
8.	Poultry	179
9.	Pigs	21
X.	Other, specify	68
0.	Unascertainable	45

[241] [402] [243] [228] [244] [235] [231]

8. Here, some farmers get a lot more rice from one rai of land than others get. Generally speaking, what are the various reasons why this is so? [243] [433]

1.	Fertilizer	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify	53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify	25
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

16.a. ASK ONLY FARMERS: This year just now beginning, will you do anything for increasing your income, outside of rice farming? [125] [434]

3.	Does not apply	13
4.	Yes	162
5.	No	107
6.	Unascertainable	11

b. IF YES: What various things will you do? [224]

0.	Nothing	3
1.	Mushrooms	42 [235]
2.	Poultry	51
3.	Fish (Incl. tilapia)	10 [228]
4.	Fertilizer	2
5.	Other, specify_____	84 [241]
6.	Unascertainable	6

17. ASK ONLY FARMERS:

a. Last time you planted rice, how many rai of rice did you plant? [243] [433].

1.	4 rai or less	14
2.	5 to 9 rai	25
3.	10 to 19 rai	49
4.	20 to 29 rai	65
5.	30 to 39 rai	53
6.	40 to 49 rai	32
7.	50 to 59 rai	19
8.	60 to 69 rai	14
9.	70 to 79 rai	2
X.	90 rai or more	—
0.	Unascertainable	20

b. And what was the total yield?

1.	120 tang or less	15
2.	121 to 300 tang	28
3.	301 to 600 tang	59
4.	601 to 900 tang	59
5.	901 to 1200 tang	56
6.	1201 to 1500 tang	25
7.	1501 to 1800 tang	10
8.	1801 to 2100 tang	10
9.	2101 to 2700 tang	7
X.	2701 or more tang	3
0.	Unascertainable	21

c. Now about the year before--how many rai did you plant?

1.	4 rai or less	16
2.	5 to 9 rai	19
3.	10 to 19 rai	51
4.	20 to 29 rai	67
5.	30 to 39 rai	53
6.	40 to 49 rai	26
7.	50 to 59 rai	20
8.	60 to 69 rai	13
9.	70 to 89 rai	5
X.	90 rai or more	—
0.	Unascertainable	23

125
[243]
[433]

17.d. And what was the total yield at that time?

1.	120 tang or less	20
2.	121-300 tang	14
3.	301-600 tang	62
4.	601-900 tang	64
5.	901-1200 tang	50
6.	1201-1500 tang	23
7.	1501-1800 tang	10
8.	1801-2100 tang	8
9.	2101-2700 tang	7
X.	2701 or more tang	4
0.	Unascertainable	31

e. And how many rai did you plant two years back?

1.	4 rai or less	18
2.	5 to 9 rai	17
3.	10-19 rai	45
4.	20-29 rai	72
5.	30-39 rai	52
6.	40-49 rai	26
7.	50-59 rai	18
8.	60-69 rai	12
9.	70-89 rai	4
X.	90 rai or more	—
0.	Unascertainable	29

f. And what was the total yield that time?

1.	120 tang or less	20
2.	121-300 tang	24
3.	301-600 tang	48
4.	601-900 tang	69
5.	901-1200 tang	38
6.	1201-1500 tang	8
7.	1501-1800 tang	7
8.	1801-2100 tang	5
9.	2101-2700 tang	4
X.	2701 or more tang	1
0.	Unascertainable	69

[243]
[435]

18. ASK ONLY FARMERS:

a. Have the changes in the price of rice during the last two or three yea
caused you any worry, or not?

7.	Yes	156
8.	No	104
9.	Unascertainable	33

b. IF YES: What are you doing about it?
(See code at end)

[243]

19.a. Do you, at present, have your own home rice mill, or not?

X.	Yes	105
Y.	No	228

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

59 the establishment of a new family, virtually a new farm. It must be noted in this connection, however, that not all new families started out with financial resources. There are circumstances like incongenial relationship between the dependent couple and their parents or other members of the family, tight financial situation of the old family, or extreme optimism on the part of the young couple themselves that brought about premature fission.

243 The role of the family becomes more outstanding when
433 the following features of rice farming are considered:
59
[423] 1. In Bangchan, as elsewhere in the rice producing areas of Thailand, a farm means rice land available for the family to till because farm income depends more on rice acreage than anything else.

2. An operator is generally not in a position to reallocate his resources in order to obtain higher income. Usually he does not, for example, put in more labor to get a better crop, for crop under existing technology would not increase with more labor than normally used. He does not put in fertilizer, for it is not certain, in his thinking, that profit is assured in so doing. He does try to improve his rice strains for greater yield, however.

[444] 3. The only way to increase income from rice with no change in technology (other than improving strains), then, is to increase acreage utilizing the same amount of family labor. This is the case, as we shall see in a later chapter on farm organization and management, because of the existing under-employment of family labor.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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[427]

4. The operator may increase his acreage by renting in more rice land. It is highly improbable that the extra parcel would be one adjacent to the old parcels. This involves extra cost of irrigation and drainage and a buffalo shed. Yet the most important problem is how to lay a hand on the extra parcel, since the practice of most landowners is to rent their land out to their former tenants. When all cultivated land in the village has been tilled, an extra parcel to one naturally means a reduction of the same to another.

5. With limited land which has no prospect of intensification as far as rice production is concerned, the size of the family becomes the limiting factor of the level of living. This is rendered more acute by the customary practice of offspring continuing to live with their parents regardless of their age. When they get married, either spouse's parents are likely to suffer another mouth to feed, and in many cases the babies that will eventually arrive.

It is seen, then, that discussion of rice farming which is the core of the village economy cannot be separated from the context of the family.

443 she wanted to spend more time collecting debts."

221 433 434 443 261 262 It should be noted that A's brief duration of peddling started in the harvesting season. During this time the village cash supply was high, resulting in demand for such a delicacy as pork which normally constituted a negligible fraction of the diet of Bangchan people. This is a good business period for the peddlers. Another good business period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this latter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

443 It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

427 434 454 621 463 426 Five families were classified as investors in 1953. All these families lived on rents from land, interest on loans, and income from speculative sources such as buying paddy when the price was low and selling it at high prices. Actually, most of these five families were not among large land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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*243 464 621 161 178 per cent in 1949 to thirteen per cent in 1953 suggests that the problem of population pressure on land has become more acute, although it may also indicate changes in the cost structure of rice production which will be discussed in Chapter VI.

494 463 222 226 *[243] Concluding the discussion of this section, we may say that rice growing is the core of the occupational structure of Bangchan around which other occupations rotate. It is not uncommon that one family has several occupations, and in addition to income from these most families get "free" food in the forms of fish and uncultivated aquatic plants. This is the principal reason why families with apparently no cash income still thrive.

• 433 434 22 [136] It is conceivable that in years of poor rice crop the family put more effort in the secondary occupations; when such an attempt does not work out well -- for example, no work for manual labor and no capital for trivial trade -- an effort is made to obtain subsistence directly from nature.

[136] In any event, every family in the village is engaged in fishing in varying degree. It is because of this fact coupled with the fact that the village fish supply is decreasing that the problem of fish conservation is very important.

*243 Finally, the dynamic nature of rice farming, with varying efforts on getting extra jobs and securing free food outside the farm depending upon the increase and decrease of the rice crop, suggests that the economy of any rice

Rice Production

243 433 434 Rice is the single major crop of Bangchan. As of 1953 eighty-five per cent of Bangchan families derived their main source of income from rice production either as farm operators or as farm laborers (Table 11). Furthermore, rice was grown not only by farm operator and farm laborer families but also as a side line by families reporting other occupations. In Bangchan, as in all other rice growing villages, it can be said that rice is the source, direct or indirect, of income for every family. As earlier mentioned, rice growing is the core of the occupational structure around which other occupations rotate.

Table 14 shows that the village average yield, computed from crops of a sample of 96 rice farms during 1949-52, was 28.8 tang per rai.[3] On the basis of this figure, the village total rice crop from 6,722 rai of land worked by Bangchan residents in 1953 may be estimated at 193,594 tang or about 2,130 tons of paddy.[4]

243 433 In order to determine rice surplus in Bangchan, village rice consumption must be computed first. There are three principal uses of paddy -- as human food, poultry feed and as seeds. The village paddy consumption is shown in Table 15.

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3. See Chapter IV for the sampling technique.

4. One tang of paddy grown in Bangchan weighs approximately eleven kilograms.

[TEXT CONTINUED ON PAGE 122]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 14

VILLAGE RICE ACREAGE, CROP, AVERAGE YIELD, AND CROP INDEX BY YEAR, 1948-52

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Year	Area Planted to Rice	Total Crop	Av. Yield Per Rai	Crop Index*
	rai	tang	tang	
1948	3,384	108,760	32.1	111.4
1949	3,130	77,692	25.0	86.8
1950	3,102	99,225	32.0	111.1
1951	3,039	89,898	29.6	102.7
1952	3,046	76,670	25.2	87.5
Total	15,701	452,445	--	--
Average	3,140	90,489	28.8	100.0

* Average yield during 1948-1952 as 100.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 15

VILLAGE PADDY CONSUMPTION
Bangchan, Thailand, 1953

Item	Units of Consumption	Rate	Total Consumption
		tang	tang
Food	1,372 man equivalent	38.3	52,548
Feed	5,066 chicken equiv.	4.0	20,264
Seeds	7,682 rai equivalent	1.0	7,682
Total		--	80,494

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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In Table 15, units of consumption of paddy are arrived at by the following procedure:

1. Food. Children age 14 and under are considered to have one-half of the rate of consumption of adults and the old. Thus, 644 children in Table 2 comprise 322 man equivalent units of consumption. When 1,050 people over 14 years of age, each having one man equivalent unit of consumption, are added, a total of 1,372 units is obtained.

The rate of consumption of 38.3 tang per man equivalent was obtained from our consumption study of 106 families in 1953.

2. Feed. Due to the lack of adequate data for 1953, figures obtained by the poultry survey conducted in 1949 were used in the calculation for feed. Items in that survey include roosters, hens, chicks, and ducks. Information on poultry feed consumption was obtained from Luang Suwan, the poultry expert of Kasetsat University, Bangkok, who gave the following figures: roosters, hens and ducks, naturally raised, consume four tang of paddy per head per year; and a chick's paddy consumption, negligible at the beginning but gradually increasing with its age, is about three tang per year. Most of these chicks were disposed of at the age of seven months when each had consumed about one tang. One chicken equivalent is therefore assigned to each head of roosters, hens and ducks, and one-fourth chicken equivalent to each chick. On the basis of a stock of 17 chicken equivalents per family, which was found to be the case in 1949,

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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a total of 3,066 chicken equivalents was estimated for 1953.

3. Seeds. Since broadcast and transplanted rice require different amounts of seeds per rai, the total rice area planted to broadcast and transplanted rice must first be reduced into comparable figures -- the rai equivalent, or an area of one raidfor transplanted rice and two rai for broadcast rice. We do not know the actual proportion of broadcast area to transplanted area in 1953, but the proportion figure of 497 1/4 to 3,030 or roughly one to six for 1949 may be assumed.[5] Thus, the total area of 6,722 rai for both broadcast and transplant rice is changed into 7,682 rai equivalent for the purpose of estimating the amount of seeds required. It was found in 1949 that one tang of seed was used for each rai equivalent of rice field. This figure is used in the present calculation.

Table 16 shows that an annual surplus of 113,100 tang of paddy, or about 1,244 tons, was estimated for 1953 on the basis of past performance. This is about 58 per cent of the crop.

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5. Sharp et al., op. cit., pp. 145-46.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 16

ESTIMATED VILLAGE PADDY SURPLUS
Bangchan, Thailand, 1953

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Paddy Production		193,594 tang
Paddy Consumption		
As food	52,548	
As feed	20,264	
As seeds	7,682	
Sub-total		80,494 tang
Paddy Surplus		113,100 tang

Other Food Production

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433 Other food products which are produced in a considerable amount in Bangchan include chicken eggs, duck eggs, and fish. To a lesser extent, fruit and vegetables are also produced locally.

Practically every family in Bangchan raises chickens, and half raise ducks. In April, 1949, the author conducted a poultry survey covering 46 families whose homes were on the banks of Bangchan Canals. Of these, 45 families were found to be raising chickens and 23 families raising ducks.

Of 45 families raising chickens, 38 families from which data were available reported rates of egg production showing that for these families 53,750 eggs were produced annually from 376 laying hens, averaging 143 eggs per hen. [146] Of 31 families who gave information about sales, five con- [438] sumed all 2,260 chicken eggs produced; the other 26 families sold 31,040 eggs and consumed 5,590. The proportion of consumption to sale was thus 7,650 to 31,040 or approximately one to four.

There were 393 laying hens in the yards of 45 families, averaging 8.6 hens per family. Chicken egg production [434] was estimated at 1,230 per family. Assuming that four-fifths of these were sold at three for one baht, which was the local price in 1949, average cash income for these families from sale of chicken eggs was estimated at 326 baht annually. [415] With a higher price in 1953 of fifty satang a piece, the estimated income from sale of chicken eggs rose to 492 baht per family.

235 Of the 46 families covered by the survey, 23 or one-
433 half raised ducks with an average annual production of 155
434 eggs per duck, and an average of 11.7 ducks per family raising them. Egg production for each of these families thus averaged about 1,200 per year. Of these, 1,350 were consumed by the family and 450 sold at the same price as chicken eggs. It was estimated, then, that from duck eggs alone, the average cash income in 1949 was about 150 baht per family raising ducks.

226 After rice, fish were by far the most important
262 ingredient in the diet of Bangchan. In contrast to poultry,
413 however, fish did not constitute a source of cash income of
[434] the villagers. As a matter of fact, more fish were bought from the outside than the negligible amount that was exported from the village mainly by one or two very poor families who had availed themselves of this means of augmenting
[435] their income. From our consumption study of 106 families in 1953, it was found that of an aggregate amount of 17,786 kilograms consumed by these families in the previous year 16,027 kilograms were caught by the families while 1,759 kilograms were bought at five baht per kilogram. The rate of fish production may thus be estimated at 151 kilograms annually per family, or 44,998 kilograms for the entire village.

262 The same consumption study shows that the 106 fami-
244 lies consumed in 1953 a total of 18,402 kilograms of vegetables
433 all of which were produced or acquired by the families,

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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262 averaging 174 kilograms annually per family. It should
244 be noted here, as will be elaborated in the section on
• 433 consumption in Part II of this study, that while most respondents could fairly well estimate their rates of consumption of such items as rice and fish sauce which were somewhat constant, they were not as good in estimating their consumption of vegetables. Furthermore, while admitting that they did buy some vegetables during the year, they were reluctant to give any estimate of the purchase for fear of too much inaccuracy. At most, they were willing only to say that the amount of vegetables purchased was only a small fraction of what they produced or acquired freely from the canals.

245 Fruit production was even more difficult to estimate
433 than vegetable production, and we had to be content with only qualitative information which appears in the section on vegetation on pages 42-43 of this study. Our records show that a few families reported nominal incomes of some forty or fifty baht annually from sale of fruit to neighbors.

Table 17 shows estimated village production and surpluses of farm products other than rice, namely, chicken eggs, duck eggs, fish, vegetables, and fruit. The estimates are based on the poultry survey of 1949 and the consumption study of 1953.

*243 While the methods of selling and storing paddy enable
433 the farmer to know the exact amount of his crop, which condi-
*128 tion leads to our confidence in the accuracy of our estimate

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TABLE 17

ESTIMATED VILLAGE PRODUCTION AND SURPLUSES OF SECONDARY FARM PRODUCTS
Bangchan, Thailand, 1953

Items	Production	Consumption	Surplus
Chicken eggs	366,540 eggs	73,308 eggs	293,232 eggs
Duck eggs	268,200 eggs	201,500 eggs	67,050 eggs
Fish	44,998 kg.	59,943 kg.	-4,945 kg,
Vegetables	51,852 kg.	51,852 kg.	--
Fruit	not available	not available	not available

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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of village production and surplus of paddy (Table 16) there were no comparable basis for our estimate of the other crops. Our estimates of these other crops should therefore be considered as crude estimates.

Tables16 and 17 show that in 1953 Bangchan had surpluses of 104,756 tang of paddy, 293,232 chicken eggs, and 67,050 duck eggs, and a deficit of 4,945 kilograms of fish. Using the 1953 farm prices of 9 baht per tang of paddy, 0.40 baht per chicken egg, 0.50 baht per duck egg, and 5 baht per kilogram of fish, village exports may be estimated at 942,804 baht for paddy, 146,616 baht for chicken eggs, and 33,525 baht for duck eggs, and village import of fish may be estimated at 24,725 baht.

Land Tenure

Table 18 shows that Bangchan residents owned an aggregate area of 4,315 rai. Since their combined area planted to rice was 6,722 rai, the balance of 2,407 rai had to be provided by absentee landowners. In fact an area larger than 2,407 rai had to be rented in because part of the area owned by local residents had to be used as homelots. Actually, the net area rented in was 2,438 rai (total area rented in of 3,641 rai minus total area of 1,203 rai rented out). It is not to be expected, however, that this extra area of 31 rai (an excess of 2,438 over 2,407 rai) is enough to accommodate the 298 homelots in the village. Inaccuracies might have arisen in cases of joint ownership of certain

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Rent of Rice Land

*128 178 427 Tables 24 and 25 show different rental methods in 1948 and 1952. Figures in Table 24 were obtained from our records of the sample of 104 farms in operation in 1948, and figures in Table 25 were obtained from the same sample reduced in 1952 to 96 farms which had been continuously in operation until then, the other eight farms having ceased to operate by 1952.[8]

427 *243 178 It is seen that with the exception of a single case of share-cropping there were two rental methods in 1948, in kind and in cash, the proportion of areas involved being fifteen rai of rent in kind to every rai of cash rent. In 1952 rental methods remained more or less the same, consisting principally of rent in kind and cash rent, the proportion of areas involved being slightly increased to nineteen rai of rent in kind to every rai of cash rent.

*243 178 427 435 There was, however, a rapid rise in rent rates within this period of four years. It is seen that the average rate of 6.2 tang per rai in 1948 has risen to 8.1 tang per rai in 1952, an increase of 31 per cent in four years.

• [433] It is interesting to note that an increased rent rate was charged in spite of the decline in yield of 32.1 tang per rai in 1948 to 25.2 tang per rai in 1952, or from the record crop index of 111.4 in 1948 to 87.5 in 1952 (Table 14).

[434] Another equally interesting point is that the increase in rent rate was charged in spite of the increases in the

8. See Chapter IV of the sampling technique.

[TEXT CONTINUED ON PAGE 143]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Table 30 shows that the size of the sample has continuously decreased from 104 in 1948 to 103 in 1949, 98 in 1950, 96 in 1951, 96 in 1952, and finally 87 in 1953.[1] It should be noted, however, that we re-visited the village in 1952 and that most of our materials on business and living aspects of the farms were gathered from the sample-farms existing in that year; hence we occasionally referred to the sample of 96 continuing farms.

One way of minimizing the problem of declining size of the sample is to include in the sample new farm operating families which have branched out from the original sample-families. It was found that there were ten such families when we re-visited the village to continue the study in 1952. If this method were adopted, it would mean that the size of our sample would then be 106 farms, a figure which does not differ very much from the original size of 104 farms in 1948.

Another way of solving the problem is to abolish the continuing operator approach entirely in favor of the re-sampling approach -- that is, a fixed sample size is chosen and new sampling is done every time a new survey is to be conducted. This approach, however, has the drawback that

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[243] [178] 1. According to Table 14, crop indices were as low as 86.8 for 1949, and 87.5 for 1952; while those for 1948, 1950 and 1951 were 111.4, 111.1 and 102.7 respectively. It is worth noting that a relatively large number of farm [433] [463] operators changed their occupation (or moved out of the village) in 1950 and 1953. When Table 14 is studied together with Table 30, it is seen that there is a close correlation between change in occupation (or change of farming place) and crop failure in the preceding year. [182]

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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465 be of any help in the understanding of the hired laborer situation in Bangchan.

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46 Let us now turn to the last group of farm laborers -- the piece-workers. These laborers receive their remunerations in the form of cash paid at the completion of each job contracted. Four types of farm work were observed to have involved the utilization of piece-workers -- uprooting of rice seedlings, transplanting, harvesting, and digging earth and mounding. Uprooting, the heaviest of all rice growing steps because seedlings must be pulled up in budle and smashed against the shank of the worker, was limited to adult male workers. Transplanting, on the other hand, was the lightest of all these steps involving the itlization of piece-workers and may be done by all kinds of workers including the young. Harvesting and digging and mounding are too heavy for the young but not for the adult female workers to participate, so they are usually performed by adult workers of both sexes.

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[435] It was found in the cost of production study in 1948 that 104 farm operators in Bangchan spent a total of 4,434 baht on uprooting done by piece-workers, 7,951 baht on transplanting, and 13,310 baht on harvesting, or an average per farm of 43 baht for uprooting, 76 baht for transplanting, and 128 baht for harvesting. Although digging and mounding is generally considered a part of farm work since it is done primarily in order to keep the buffalo shed above the water level as well as to improve the home garden; it is not

243 621 433 included in the items of cost of producing paddy, and therefore we do not have the figure for this item of farm expenses.

It was earlier mentioned in the section on occupational structure in Bangchan that most villagers regardless 434 464 621 463 of their main occupations did perform some piece-work for either main or subsidiary incomes. It is almost impossible, then, to give an exact figure of the number of piece-workers in any one year. For the purpose of this study, however, we may arbitrarily differentiate between the "professional" and the "non-professional" piece-workers. Here, the classification suffers much overlapping -- even more than does the classification of the occupation of the villagers, for we cannot even use the concept of the main source of income as a criterion in this connection. It was mentioned that farm laborers existed in Bangchan not because of demand for their work but because they have no opportunity for other occupations (page 100). Thus, if the main source of income was used as the criterion for differentiating the "professional" piece-workers, this group would include, for example, the old woman described in Case 7 page 69, who after having been left alone had managed to get a small income from transplanting which was the only type of farm work she could perform. The main source of income was also not a good criterion considering the fact that most piece-work was done by family members after their obligation to the family 469 farm had been fulfilled. In a desperate attempt to differ- 463 entiate the professional from the non-professional piece-workers

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B. High-price

Noria	309.00	baht
Sampan boat	386.00	"
Windmill	429.00	"
Winnowing machine	498.00	"
Mard boat	1,046.00	"
Chala boat	1,400.00	"

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Prices of equipment used in rice farming give us only an idea of the initial investment necessary to start a rice farm and the cost of investment in this equipment, which may be calculated in terms of interest on that investment. Prices alone, however, do not determine the annual cost incurred in the use of farm equipment; for some items remain in service for several years while others have a relatively short life, and they all differ in the relative cost of repair and maintenance.

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In the 1948-49 survey of 104 farms, two types of schedules were used. The "early schedule" was administered to the first fifty respondents, and the "late schedule" was administered to the rest. The early schedule was more detailed than the late schedule. For example, in the early schedule there are detailed questions on the original cost and subsequent depreciation of each plow, and each detachable plow-part, owned by each of the fifty respondents in the early sample. On the basis of these responses, we calculated the average depreciation rate of plows. Each of the fifty-four respondents to the late schedule was asked only one question on plows, viz. the number of plows he owned. In the case of each plow of each respondent to the late schedule, we simply applied the average cost and depreciation figures resulting from the early

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CHAPTER VI

FARM ORGANIZATION AND MANAGEMENT

*128 241 Broadly speaking, a farm is one or more tracts of land held or operated as a unit for the production of agricultural products.[1] The subject of farm organization and farm management is usually treated under the more general term "farm management". A recognition of the distinction between these two functions of the farm operator is necessary. Organization refers specifically to the function of creating the general scheme or plan of production, whereas management refers to the function of putting the scheme into operation and of making those adjustments in the business which are necessary in order to obtain the maximum economic returns from the farm business as a whole.[2]

*243 433 44 Limited Role of Bangchan Operators

1. Limited role in organization: Discussions in the preceding chapters have indicated that at the present stage of technological development Bangchan operators have really not much choice in creating the general scheme or

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1. H. C. M. Case and Paul E. Johnston, Principles of Farm Management, J. B. Lippincott Company, Chicago, 1953. pp. 466.

2. G. W. Forster, Farm Organization and Management (New York: Prentice-Hall, Inc., 1950), p. 19.

243 433 44 plan of production. If a crop is to be produced for market in Bangchan, in all probability it must be rice. Since crop rotation is not practiced, there is no need for decision making as to the kinds of crops which are to be grown other than rice. The operator may have to decide how many chickens he should keep, but he normally settles on a flock of ten to fifteen, for it would be too much a burden to keep a larger flock and fewer heads of poultry would not be worth the time. The production function, or the choice of the best factor combination, also does not call for any serious consideration. For it has been observed that at the present stage of technological development of rice production in Thailand or even in the whole region of Southeast Asia the marginal product of labor has already approached zero. In other words, more labor applied to the same area under the same method of planting would not materially increase the crop harvested. It has been claimed, though, that a larger crop may be expected from the same parcel planted to broadcast rice by changing the planting method to the more labor intensive transplanting system. This claim has never been substantiated, however, by any systematic comparative study. Besides, the transplanting method is so universally adopted in Bangchan that it can almost be taken for granted to be the one in use by any rice farmer. Moreover, it was mentioned earlier that the planting method is not optional with the farmer but is governed by topography, expected condition of water supply, and availability of labor.

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*243 • 433 The preliminary study in 1948-49 shows that a well equipped farm has a higher crop yield than a poorly equipped farm. Yet the issue here is not one of deliberately choosing the best factor combination among several others. Rather, the lowly capitalized farm is so equipped because of the failure on the part of the operator to command enough capital to meet the required standard factor combination. It is seen, then, that if the operator had enough resources he would follow the established pattern of farm capitalization, thus there appears also to be not much choice either in the selection of the kinds and amount of farm equipment.

*243 242 433 The operator may decide on whether or not fertilizer is to be used, and this will certainly affect factor combination. It has been observed, however, that Bangchan farmers have never applied any commercial fertilizer to their rice fields of which plant nutrients have been replenished only by the annual inundation and natural deposition of buffalo manure. The reason for the rice farmer's disinclination to fertilization as given by the Thai Ministry of Agriculture was the relatively high price of commercial fertilizers.[3] In fact, progress reports on fertilizer, a study conducted by the ministry, indicate the possibility of profit from proper application of commercial fertilizer on rice fields, but operating on a narrow margin the rice farmer simply could not afford the risk. Uncertainty due to weather and

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3. Ministry of Agriculture, Problems in Thai Agriculture, op. cit.

*243 water conditions is also a major factor militating against
• 433 investment on fertilizer. As it happens, therefore, fertilization does not prevail in the decision making of Bangchan operators.

If the operator has any positive role at all in the production plan, it is in the selection of rice varieties. This topic has already been dealt with in the section on labor adjustment devices of the preceding chapter.

*243 Finally, one of the most important organizational
433 decisions involves the choice of the size of the farm. It
423 has been observed that poverty in agriculture is as much a problem of farm size as of any other single factor. Most frequently, farm size is spoken of in terms of acres -- the land input. Although this measure is generally not sufficient, it serves the purpose quite well in single-crop farming areas such as Bangchan and all other rice areas in this country. In this study, therefore, farm size will be expressed in rai (two-fifths of an acre) devoted to rice.

Generally speaking, if the Bangchan operator is free
[464 to choose the farm size that suits him best, his decision
592] will be based almost entirely on the size of labor force under his command, which in turn depends largely on the size of his family labor. As it happens, most operators are not
*243 free to do so. It was mentioned in the section on land tenure
427 of Chapter III that it was only the landlord-operator group,
464 actually 11 out of a total of 216 farm operators in Bangchan,
423 that had demonstratively shown sign of land saturation and

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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A 243 from the homelot because much time and energy would be
423 wasted in daily walking to the field.
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427 It would seem, then, that most rice farm operators had little opportunity to obtain a farm size they thought best and had to accept what was due them. Thus, their role in choosing the size of business, which is the most important role, is also limited.

A 243 2. Limited role in management: Inasmuch as manage-
224 ment refers to the function of putting the scheme into opera-
• 431 tion, Bangchan operators certainly have a large part to play. A good rice crop depends largely on the relationship between the height of the young plant and the rising water level. Since the rise of water level is highly seasonal, depending on local rains as well as rains elsewhere that affect the general water level, scheduling the farm work and seeing to it that the schedule is followed becomes a most important function of the farm operator.

A 243 Management, however, refers also to the function of
433 making those adjustments in the business which are necessary in order to obtain the maximum economic returns from the farm business as a whole. Inasmuch as this latter function is concerned, the operator's role has been limited as in the case of the organizational function. As previously stated, under the present stage of technological development in rice production in this country, not only the points of diminishing return of both labor and capital (farm equipment, at the present state of technical development in the village)

7: Janlekha X-4.5 (1948-1953)1956 AO7 Central Thai AO7
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have been long passed but also the marginal products of these two factors have already approached zero. Under this condition, the function of making adjustments of the farm operator is reduced to the minimum.

It is seen, then, that the farm operator's role in organization and management has been under Bangchan condition, reduced to scheduling and supervising with the possible exception of choosing rice varieties. Good management, in the village sense of the term, means finishing the planting work in time or well before the deadline set by water condition. This is likely to continue to be the case until there is such a radical change in the rice producing industry of this country as, for example, an introduction of a new equipment which commercially adopted, an availability of commercial fertilizer at a reasonably low price, an efficient method of soil amendment that allows another crop to be grown in rotation with rice, or a dependable water control system to the extent that damages due to flood or drought can be altogether eliminated.

Elements of Agricultural Production

The four elements of agricultural production -- land, labor, capital (farm equipment and materials), and management -- have all been discussed at various stages of this dissertation. In this section, these elements will be brought back into discussion again insofar as they have bearing on farm organization.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 • 433 [427] 1. Land: This element represents 22 per cent of the total cost of producing paddy (Table 38). Of this, 15 per cent is actual payment for explicit rent while 9 per cent is assessed value of implicit rent.

Among the cost items in Table 38, cash expenses include actual rent (13%), wages for pieceworkers (3%), wages for hired laborers (2%) and seeds and materials (6%), while imputed expenses include implicit rent (9%), value of family labor (31%), value of the operator's labor (13%), depreciation (10%) and interest on investment (11%). It is seen that cash expenses comprise only 25 per cent, while imputed expenses comprise as high as 75 per cent of the total cost.

In view of the high proportion of imputed expenses, the method adopted in the imputation will be explained here.

[427] [435] 1. Rent: Going rate for 1948-49 of 6.2 tang (49 baht) per rai was used.

[592] [461] 2. Value of family labor: Labor requirement based on acreage was first calculated, using the standard factor of 13.4 adjusted rai to one fully employed worker (this was the 1949 average for farms with regularly hired laborers on which [435] workers were assumed to be fully employed). When the labor requirement in terms of number of fully employed laborers needed was known, imputed family labor cost was calculated at the going wage rate for the year of 1,600 baht (1,000 baht cash and 600 baht of food privilege).

3. Value of the operator's labor: In addition to

[TEXT CONTINUED ON PAGE 280]

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TABLE 38

COST OF PRODUCING PADDY ON 104 SAMPLE-FARMS*
Bangchan, Thailand, 1948

Items	Total	Average	Per cent
	baht	baht	
1. Rent of land			
a. Actual	99,501.63	957	13.1
b. Assessed	70,604.54	679	9.3
Total	170,106.17	1,636	22.4
2. Labor			
a. Hired labor	24,757.00	238	3.3
b. Piecework	25,696.00	247	3.4
c. Assessed value of family labor	338,839.00	3,258	44.6
Total	389,292.00	3,743	51.3
3. Capital			
a. Seed and material	42,574.77	409	5.6
b. Depreciation	73,236.50	704	9.6
c. Interest on investment	84,590.22	813	11.1
Total	200,401.49	1,926	26.3
Grand Total	759,799.66	7,305	100.0

Total crop. . . . . 112,415 tang of paddy
Total acreage . . . 3,527.75 rai

Average cost per tang 6.76 baht
Average cost per rai 215 baht

* The cost figure in this table is slightly higher than the one given in the preliminary report because of the inclusion of the value of operators' labor.
The value of the operator's labor is estimated at 1,000 baht per year for those operating farms of 10 rai or more, and at 500 baht for those operating under 10 rai.

243 the value of family labor, the cost of managerial service of
433 the operator of 1,000 baht was arbitrarily charged for farms
[435] with the size of 10 rai or over. For farms under 10 rai, only 500 baht was arbitrarily charged as the cost of managerial service.

4. Depreciation: From the original cost of each item of equipment (including buffaloes) was deducted its residual value at the termination of its service, and the result was divided by the expected length of service in years of the equipment.

5. Interest on investment: The rate of 15 per cent per year was arbitrarily chosen. This was the maximum legal rate, and was also a minimum rate of return which any person in Bangchan might reasonably expect from his money if he chose to lend it out at any moment.

[128] Since much of these imputed expenses were arbitrarily chosen, the cost of producing paddy might naturally vary widely according to the assigned value of each item. Our cost of production figure, then, will be more meaningful, if the amounts of these arbitrarily imputed values are constantly kept in mind.

243
433 Farms in Bangchan are composed of from one to four
461 parcels of land. The characteristics of this fragmentation
423 are shown in Table 39. The size of a parcel ranges from one rai to 65 rai, averaging 18.8 rai. Fragmentation obviously brings about a waste of considerable time and energy spent in going from one parcel to another, and thus an increase in

[TEXT CONTINUED ON PAGE 282]

243 433 461 423 labor cost. Most farmers must go by foot or boat to work at places ranging from a hundred meters to two kilometers from home. This waste is the more serious during the period of preparation of the fields at the beginning of the season when the water level in the canals is not high enough to permit the effective use of a boat.

243 178 423 Table 40 shows the frequency distribution of areas worked by Bangchan operators in 1948 and 1952. It is seen that in both years work areas concentrate in the size groups between 10 to 40 rai, avereging 34.2 rai for 1948 and 31.7 rai for 1952. It is seen also that the work areas of 1948 have a wider range than that of 1952. There were 30 farms in 1948 whose areas were 40 rai and over, while the number of such farms was 28 in 1952.

Table 41 shows that of 96 continuing farms, 20 have increased their size during the five years period, 40 have decreased their size, while 35 farms have the same size throughout.

243 433 46 2. Labor: This element represents 51 per cent of the total cost of producing paddy (Table 38). Of this, only a small fraction is actually paid for -- 3.3 per cent to hired laborers and 3.4 per cent to pieceworkers. The bulk of labor is supplied by family workers (including the operator himself) whose labor value is assessed at 44.6 per cent of the total cost of producing paddy.

It is seen in Table 42 that the number of adjusted rai per worker is only 9.4 for farms which used only family

[TEXT CONTINUED ON PAGE 286]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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labor, while the corresponding number is 13.4 for farms which used regularly hired laborers along with family workers. We make the assumption that farms with hired laborers had full utilization of labor (otherwise there would be no need to hire an extra laborer) and that farms without any hired labor might or might not have full utilization of labor. The significantly larger area per worker for farms demonstrating full utilization of labor than that of farms which did not demonstrate such condition indicates that there was latent underemployment in terms of rai per worker on some Bangchan farms. Table 43 suggests that there might be as many as 87 of such farms out of 104 sample-farms in Bangchan in 1949.

While full utilization of labor is fairly well indicated by employment of regular hired laborers, it is not necessaryily the case that the family labor of farms which employ some pieceworkers had been fully utilized except during the peak period when the pieceworkers were employed. It has been observed that many of the apparently undersized farms had to engage some pieceworkers to do some uprooting, transplanting, and harvesting because the labor requirements for these steps are so highly seasonal that such labor adjustment devices as planting of several varieties of rice and cooperative work system could not amply spread the work of the family. The extra work sought from the pieceworkers is usually small, however.

7: Janiekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Buffaloes are considered as a kind of farm equipment, so the cost of buffalo labor appears under the item of cost of equipment. Buffalo labor is, however, so closely associated with man labor that it seems to be more appropriate to discuss it here.

It has been pointed out that the accomplishment of farm work during the critical period depends largely on buffalo labor. Farmers fully realize the importance of this draft animal, which is always given good treatment. Even in the busiest season of field preparation, when farmers work from dawn to dusk seven days a week, the buffalo has a full holiday each week (on Wan Phra, the Buddhist holiday) and has a four-hour noon recess, usually from 10 a.m. to 2 p.m., on work days.

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3. Farm equipment and supplies: This element represents 26 per cent of the total cost of producing paddy. Our records show that in 1948 the total value of farm equipment and materials of the 104 sample-farms amounted to 559,626 baht, averaging 5,381 baht per farm, and ranging from 443 to 16,733 baht. The frequency distribution of the value per farm of farm equipment and materials is shown in Table 44.

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Table 45 shows the frequency distribution of the value per rai of farm equipment and materials which ranges from 34 to 518 baht, averaging 159 baht. It is seen, in spite of this rather wide range, that three-fifths of the value per rai concentrate in the interval between 100 and 200 baht per rai.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 44

FREQUENCY DISTRIBUTION OF THE VALUE PER FARM OF EQUIPMENT AND MATERIALS OF 104 FARMS
Bangchan, Thailand, 1948

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Class Intervals	Number of Farms	Average Per Farm
baht		
Under- 1,000	2	460
1,000- 1,999	12	1,477
2,000- 2,999	8	2,596
3,000- 3,999	17	3,490
4,000- 4,999	11	4,511
5,000- 5,999	15	5,473
6,000- 6,999	11	6,380
7,000- 7,999	9	7,380
8,000- 8,999	4	8,307
9,000- 9,999	4	9,357
10,000-10,999	6	10,520
11,000-11,999	4	11,584
12,000-and over	1	16,733
Total	104	88,268

Mean . . . . . 5,381 baht

Median . . . . . 5,055 baht

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 45

FREQUENCY DISTRIBUTION OF THE VALUE PER RAI OF EQUIPMENT AND MATERIALS OF 104 FARMS
Bangchan, Thailand, 1948

Class Intervals	Number of Farms
baht	
Under- 50	1
50 - 99	11
100 --149	38
150 - 199	23
200 - 249	13
250 - 299	8
300 - 349	22
350 - 399	3
400 - 449	2
500 - 549	1
550 - 599	2
Total	104

Mean . . . . . .159 baht

Median . . . . . .152 baht

*243 • 433 It is often said that the underdeveloped areas are characterized by over-population and under-capitalization. While there is much truth in this, there is also a danger of oversimplification. Capital here includes a relatively small physical in put, but it is actually large in terms of cost per unit.

4. Management: We did not assign any value to the operator's managerial work; only the assessed value of his labor -- 1,000 baht annually, or 500 baht annually if he operated only 10 rai or less -- was included in the item of assessed value of family labor.

The role of management has already been discussed in the previous section of this chapter.

It has been observed that management is furnished by the Bangchan operator and his wife, and in some cases *243 423 427 their grown-up sons and daughters. Not a single case has been known where the management on rented farm is shared with the landlord or his agent. It is interesting to note that the absence of the landlord's part in management was exhibited in an environment that should normally create and regenerate his influence over the tenant -- the condition of land scarcity, the Thai respect for one's betters, and the ease in communication between the landlord and the tenant.

Actually, the absence of the landlord's part in management does not necessarily mean that he has no influence over his tenants. On the contrary, landlords in Thailand

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

121 lies the main problem of Southeast Asia -- the problem basically of transition. Writing in 1949, Paul Mus rightly states: "The traditional world was not dead; it still held sway in the countryside. A state of affairs, in which the people's livelihood is calculated in terms of one world and their taxes in those of quite another, cannot endure."[2]

* 128
• 433 Degree of Self-sufficiency

During 1952-53, a consumption study was made on 106 sample-farms, which include the 96 continuing sample-farms and 10 new farms branching off from the original sample-farms of 1948. Details of this consumption study will be discussed in the section on ordinary household expenses later in this chapter. For the purpose of the present discussion, Table 46 -- frequency distribution of degree of self-sufficiency of those 106 sample-farms -- is here introduced. By degree of self-sufficiency is meant the proportion of the value of home-grown products expressed as a percentage of the total value of annual consumption. Quantitatively speaking, it is seen that Bangchan farm families produce more than half of the things they ordinarily consume.

24 However, the number of different products consumed
433 which are produced by the family can be counted with the
[592] fingers of one hand. These are rice, fish, eggs, fruit and
000 vegetables. On the other hand, there are scores of items

2. Paul Mus, The Role of the Village in Vietnamese Politics.

[TEXT CONTINUED ON PAGE 296]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 46

FREQUENCY DISTRIBUTION OF DEGREE OF SELF SUFFICIENCY MEASURED IN MONETARY VALUE OF 106 SAMPLE-FARMS
Bangchan, Thailand, 1952

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Class Intervals in Per Cent	Number of Farm Families
21 - 25	1
26 - 30	2
31 - 35	3
36 - 40	5
41 - 45	18
46 - 50	12
51 - 55	24
56 - 60	19
61 - 65	18
66 - 70	5
Total	106
Mean	51 per cent
Median	52 per cent

*243 Of 47 farms which had negative labor incomes, 37
434 were in the class interval of from -1 to -2,000 baht, 9
[435] from -2,001 to -4,000 baht, and one -- the least efficient as far as this measurement is concerned -- produced as low a labor income as -8,006 baht. This last farm had to support a large family of eleven members. With an acreage of 40 rai, which was rather small relative to the size of the family (another family of ten was operating a 110-rai farm in that same year), it was natural that this farm did not have much rice to sell.

*243 In figuring farm expenses, we intentionally left
434 out the dwelling and included as farm buildings only the
342 ones that housed the buffaloes, farm equipment and materials.
[427] The main reason for this omission was that there was a wide
[435] range of dwelling facilities in Bangchan -- from a teak building valued at 30,000 baht to a dirt floor thatched shack valued at no more than a few hundred baht. Besides, rental for a dwelling in rural areas of the country is practically unknown. Since a family living in the village must have their own dwelling regardless of their occupation, it was considered in this study that dwellings should be separated from farm investment. This consideration was further substantiated by the fact that when a family gives up farming they continue to live in the dwelling while all the farm equipment may be sold.

*243 When the charge for dwelling is dispensed with for
434 the reasons given above, the only difference between labor
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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 434 433 income and operator's labor earnings lies in the value of farm produce consumed by the family. Earlier, five kinds of produce were listed -- rice, fish, eggs, fruit and vegetables. For technical reasons, we consider only rice and eggs as products of the farm, rice being the primary crop and eggs the secondary crop. Fish is not considered a farm product because Bangchan villagers fish for consumption, not for sale. Besides, fishing is done by every resident of the village, farmers and non-farmers alike. It is thus more of a way of life than an economic enterprise. The same is true for fruit and vegetable growing which is done in a very small scale.

If we agree on considering only rice and eggs as the products of the farm, it is not difficult to estimate the amount and value of farm produce consumed by the family for Bangchan operators can readily give a rather accurate information on their rates of consumption of these two products. Thus, under Bangchan condition the figure for operator's earnings is not as difficult to obtain as it appears to be the case among most American farms. The frequency distribution of operator's labor earnings of our 104 sample-farms is given in Table 48. It is seen that only 17 farms produced negative remuneration for the operator computed by this method as against 47 farms by the labor income method. As Professor Warren has said, of these two, labor earnings is a better measure of profits. It is especially so in Bangchan and perhaps in other agricultural regions in Southeast Asia

[TEXT CONTINUED ON PAGE 306]

7: Janlakha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 where farm families are relatively large and agricultural
434 workers are usually under-employed.
433
[171]

Since farming in Bangchan is basically a single-crop enterprise, the major crop (rice) heavily outweighing the secondary crop (poultry), we are in a position also in this study to use another measure of success -- returns from rice over the cost of producing it -- without entailing the difficulty of cost allocation. We simply charge all items of expenses including the values of family labor and the operator's labor to the rice enterprise, the only exception being the value of paddy consumed by chickens and/or ducks. By returns from rice is meant the market value of the total harvest of paddy. This measure is similar to the net farm income when the farm products used by the family are included in the receipts (in some states of the United States this is done, but ordinarily not, the main reason for leaving these out being the difficulty of imputing accurate money values to them).

243 Tables 49 and 50 shows respectively the frequency
128 distribution of the cost of producing paddy per tang and
434 per rai for the 104 sample-farms. It is seen that the coef-
433 ficient of variability of the cost per rai is lower than that of the cost per tang, the former being 19 per cent and the latter 27 per cent. This is to be expected, for on the basis of such a unit area as rai there are several items of cost that are somewhat fixed -- seeds, rent, human and buffalo labor in all steps of field preparation, planting, and

[TEXT CONTINUED ON PAGE 309]

TABLE 49

FREQUENCY DISTRIBUTION OF COST OF PRODUCING ONE TANG OF PADDY OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

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Class Intervals	Number of Farms
baht	
4.00 - 4.99	14
5.00 - 5.99	21
6.00 - 6.99	19
7.00 - 7.99	25
8.00 - 8.99	13
9.00 - 9.99	6
10.00 - 10.99	2
11.00 - 11.99	2
12.00 - 12.99	1
13.00 - 13.99	0
14.00 - 14.99	1
Total	104
Mean	6.76 baht
Median	6.92 baht
S.D.	1.87 baht
Coef. variability 27 per cent	

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 50

FREQUENCY DISTRIBUTION OF COST OF PRODUCING ONE RAI OF PADDY OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

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Class Intervals	Number of Farms
baht	
120 - 139	2
140 - 159	8
160 - 179	7
180 - 199	19
200 - 219	22
220 - 239	23
240 - 259	11
260 - 279	5
280 - 299	4
300 - 319	0
320 - 339	2
340 - 359	1
Total	104
Mean	215 baht
Median	215 baht
S.D.	41 baht
Coef. variability	19 per cent

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

harvesting. The only cost item that appears to vary with the size of the crop is the cost of threshing and winnowing which does not figure prominently in the cost of producing rice.

Table 51 shows the frequency distribution of returns over cost of producing rice of our 104 sample-farms.[5] It is seen that there were 79 farms which, according to this measur produced some profit ranging from 0 to some 10,500 baht, while there were at the same time 25 farms which produced a loss ranging from -1 to some -6,500 baht.

Factors Affecting Farm Profit

Farm profit depends on a number of factors. Among these are listed below by Hart and Warren as "what makes a farm pay."[6]

1. Prices
2. Quality of land
3. Size of business
4. Rates of production of crops and animals
5. Selection and combination of enterprises
6. Labor efficiency
7. Farm layout, farmstead and building arrangement

NEXT CONTINUED ON PAGE 311

5. Returns over cost was calculated by multiplying the rice crop by farm price and deducting the total cost from this total. Method of computing cost was described on page 143.

6. V. B. Hart and S. W. Warren, Farm Management Manual.

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TABLE 52

BREAKDOWNS OF COST OF PRODUCING RICE ON 104 SAMPLE-FARMS
Bangchan, Thailand, 1948
(Total area -- 3,528 rai; total crop -- 112,415 tang)

Items	Total	Average Per Farm	Average Per Rai	Average Per Tang	Per Cent
	baht	baht	baht	baht	
Rent					
Actual	99,500	957	28	0.88	13
Imputed	70,600	679	20	0.63	9
Total	170,100	1,636	48	1.51	22
Labor					
Actual					
Pieceworkers	25,700	247	7	0.23	3
Hired laborers	24,800	238	7	0.22	3
Sub-total	50,500	485	14	0.45	6
Imputed					
Family workers	237,800	2,287	67	2.11	31
Operator	101,000	971	29	0.90	13
Sub-total	338,800	3,258	96	3.01	44
Total	389,300	3,743	110	3.46	51
Seeds, materials	42,600	409	12	0.38	6
Depreciations	73,200	704	21	0.65	10
Interest on investments	84,600	813	24	0.75	11
Grand Total	759,800	7,305	215	6.76	100

243 and enhance income from the farm, but it would not sig-
434 nificantly affect the farm family income or income for the
461 family living (see definitions under Headings 7 and 8 of the section on the operator's remuneration and measures of success) unless more land is added.

243 In rice farming, rates of production of crops and
433 animals is reduced to rice yield per rai. At the present
434 stage of technological development in Bangchan, this is not as much a result of management as of nature -- the water condition and the quality of land (in both senses of soil fertility and levels of the fields). Since we already have quality of land as a factor, rates of production may thus be eliminated.

After eliminating factors that are either insignificant or duplicates of other factors under Bangchan conditions, the standard factors affecting farm profit are thus reduced to prices, quality of land, size of business, and markets and marketing. These influences are familiar to students in agricultural economics, and therefore do not need further elaboration here.

[171] In addition to these standard factors, there are certain special factors affecting farm profit which the author suspects to be appropriate not only to Bangchan but also to all other rice producing areas of Southeast Asia. These are the differentials in paddy prices, in rates of interest, rentals, and wage.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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[574]

This was one of the easiest jobs of the whole study. There were few cases where we did find anybody at home and there were many more where only young children were seen. Since a Thai farm home is considered an open house to fellow villagers, we simply took liberty of walking right through and made an inspection by ourselves. Thus in a period of less than a week we were able to secure the figures of paddy stock on hand of every single operator in the sample.

The amount of paddy stock alone simply indicates but not represents sale in the second period, for a certain portion must be saved for seeds, consumption and feed. It is rather simple, however, to calculate the amount saved, for we were already in possession of work areas from which the amount of seeds may be estimated and we knew the size of the family (in terms of both actual number and consuming units) from which consumption may be figured.

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In this second period, sale was made when the farmer thought the price was high enough. Usually, the prices of paddy were about 15 - 30 per cent higher during this period than in the first period when supply was high. The rate of shrinkage should be taken into consideration, however, for prices are expressed in volume. It is rather unfortunate that we do not have any official record for this vital rate of shrinkage. In our daily log, however, the following testimony appears:

434 thousand baht to more than ten thousand baht which
454 is a real drain on the village cash supply.
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These huge expenses are, however, partially compensated by such items as loans sought from outside or sale of lands and other assets. It cannot be [426] expected, however, that these items would provide enough supply of cash to bring down the rate of interest in the village.

4. Role of paddy

*243 Paddy is extensively used in the village as a
436 medium of exchange. It is used in both small transactions of a few baht and large transactions of several thousand baht. Thus paddy stock may almost be considered as equivalent of a bank balance.

*243 The most important consumption uses of paddy
• 433 are as seeds and for human consumption. In order to
436 make it really comparable to a bank balance, allowance
454 must be made for the amount necessary for seeds and human consumption although the amount for chicken feed may be dispensed with because the farmer may choose to drop his poultry enterprise. On this basis, we have

*128 arbitrarily coined a term "index ofcapital formation
*243 potentisl with present levels of living" to represent
433 the amount of paddy in tang which is left at the oper-
436 ator's disposal at the end of March after allowance
454 for seeds and family consumption has been made. No allowance is made for special consumption expenses such

*243 *128 • 433 436 454

as sponsoring of ordination and other rituals. Algebraically, the formula for the index of capital formation potential may be expressed as follows:

$$I = P - (R \times 1\ 1/2) - (C \times 30)$$

where,

I is index of capital formation potential
P is paddy stock at the end of the first phase of sale (about March 31)
R is area in rai devoted to rice
C is the family size expressed in consuming units, whereby adults age 15 years and over are considered to be one consuming unit each and children age 14 years and under are considered to be one-half unit each.

The formula is constructed under the following assumptions:

1. Creditors and landlords demand settlement of debts and rentals immediately after harvest.
2. Farmers prefer to keep paddy rather than cash.
3. Before the end of March, affluent farmers sell only a certain part of their crops which would bring just enough cash to last until the next sale in July or after.
4. Amount of seeds necessary to plant one rai of rice is 1 1/2 tang.
5. Paddy consumption is 38.3 tang annually per consuming unit (Table). The surplus held on March 31 must last for 9 1/2 months before the next harvest can be used. Consumption during these 9 1/2 months is calculated at 30 tang per concuming unit.

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The cost of producing rice in Bangchan of 6.76 baht per tang of paddy in 1948 (according to our method of calculation earlier described) appears to be rather high in relation to an average price of 7.86 baht received in the same year. A net gain of 1.10 baht per tang of paddy seems to be inadequate with an average annual output of 1,081 tang of paddy per farm; even though every farm operator still has in addition incomes for family labor (in terms of value of family labor including himself) and from ownership of farm equipment (in terms of interest), and some operators who work on their own land still have additional incomes from ownership of land (in terms of implicit rent). As things stand at the present, this calculated cost can hardly be reduced in the near future unless there is an abrupt change in technology.

Many Bangchan operators appeared to thrive well under this condition of high cost because about three-fourths of the total cost of production was imputed and did not require an immediately cash outlay. Some of these cost items were hidden in the form of gradual depreciations which were not actually provided for each year. These would certainly be realized, however, when for example buffaloes died or equipment broke down. Even the imputed cost for family labor could not indefinitely be postponed. Family workers did not demand a lump sum payment like wages for laborers, but they had to be fed and clothed, and certainly personal expenses had to be allowed for them. Some

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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The lean time from the middle of February to the end of May is devoted by some villagers, mostly young men, to wage earning outside the village. The size of this temporary labor migration depends on the job opportunities, and these job opportunities depend largely on personal contact. Seasonal off farm jobs are: (a) crude carpentry work usually on nonpermanent construction where cheap temporary labor is preferred; and (b) plantation work in the sugar cane region of Cholburi some eighty miles east of Bangkok.

Inherent Excess of Expenses over Incomes

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The prevalence of debts in the form of credit purchases among Bangchan farmers indicates an excess of expenses over incomes. It has been shown that most cash loans were sought to clear high interest bearing credit purchase accounts, although some were for productive purposes. Even in this latter case, it has been observed that farmers usually borrowed no more than an amount that was immediately needed together with cash on hand to pay for the capital investment. This means that after such capital purchases there was less cash for the household and operating expenses, and so there would be a higher credit account to be settled in the following harvest.

Low incomes coupled with relatively high expenses leave little or no room for internal savings.

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The situation is aggravated by an increasing rate of consumption relative to the ability to produce. While

243 178 433 434 production method and farm organization remained the same throughout, there had arisen in the course of the past four or five years new items of consumption including wrist watches, fountain pens, hair do, Coco-cola, invitation cards, admission to Miss Thailand contest, etc., which demonstrate the operation of the principle of demonstration effect par excellence. It is not difficult to see, then, that any chance increase in cash incomes due to favorable weather and economic conditions tends to be absorbed in consumption.

While consumption correspondingly expands with an increase in income, it does not decline with a contraction of income -- at least not in the same proportion. This is the principal reason for farm poverty in rice growing areas where only a single-crop system is practiced and where fluctuation of crop yield is a normal phenomenon.

As a result, the excess of expenses over incomes [426] tends to persist. High rates of interest also have made this excess greater and greater among those who fail to make proper adjustment in their credit situation. Thus, the less affluent farmers are not only poor but are actually getting poorer and poorer.

Population Pressure

161 434 While low incomes and inherent excess of expenses over incomes are basic problems of Bangchan, discussions in the early chapters reveals that there are some factors contributing to the acuteness of the basic problems. One

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

161
434 among these contributing factors is population pressure.

243
161 Disguised unemployment in the case of farm operators
434 and their family workers and actual unemployment in case of
464 farm laborers indicates a condition of over-population in Bangchan in the sense that a certain part of its population can be removed without materially reducing total production in the area.

178
226 In view of a continually decreasing supply of fish,
433 it may be said that the situation has reached the point where it not only affects the per capita income of Bangchan resi-
262 dents but actually exerts pressure on means of subsistence. There are several indications of decreasing supply of fish and other marine animals in the village. First, it is the consensus of opinion gathered by our daily informal talk with villagers non of whom was found to hold a contrary view. Second, a passage in our 1948 log, "X is very lazy. Everybody here in Bangchan catches shrimps and makes his own shrimp paste. He alone does not catch shrimps even though he is among the poorest," indicates that purchase of shrimp paste was in 1948 an exception rather than a rule. In 1952, however, it was found that a total of 22.7 kilograms of shrimp paste consumed in a year by an average family, 6 kilograms, or more than a quarter, was purchased. In this latter year, 83 baht worth of fish and 54 baht of fish sauce were purchased by an average family in addition to shrimp paste as against negligible amounts for the same items in 1948 (we did not conduct a systematic consumption

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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178 survey in 1948, the "negligible amounts" comes from daily
226 talk with Bangchan residents). Third, several informants
• 433 testified that the amount of fish caught from the same pool
[262] by the draining method had been decreasing each year. One of these gave the following comparative figures for fish caught from the same pool on April 8 - 10, 1953 and on approximately the same time of the year in 1952 as follows:

Kind of Fish	Number Caught in 1953	Number Caught in 1952
Pla Salid	400	800
Pla Salad	100	200
Pla Kasong	50	120
Pla Chado	6	15
Pla Krai	1	--
Pla Doog	50	50
Pla Mor	20	25
Pla Chorn	150	300
Large turtle	5	3
Small turtle	7	3
Eel	5	5

Others also gave the 1953 figures, but could not itemize the 1952 figures; they only said that they "got much more than this year."

226 There had been until 1952 no positive program for
654 fish conservation; only negative measures have been taken, such as the Ministry of Agriculture's ordinance against fishing by certain methods at certain times of the year. In 1952, however, the Government began an extensive program of introducing a new variety of fish, Pla Mor Thed, into rural areas of Thailand. This new variety has been claimed to grow faster than the native varieties. While this program cannot as yet be appraised, a point of observation may be

7. Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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226 made that any program of fish raising in a closed pond, no
654 matter how effective it may be, should not preclude the need for conservation of fish naturally existing in the open canal.

243 It has been pointed out that Bangchan operators
226 produce 52 per cent of the things they need for ordinary
433 consumption. Thus, rice growing may be seen as a farming-
434 to-reduce-cost enterprise where maximization of profit ceases to be the primary motive of production. It has been pointed out also that rice growing is a losing concern to many operators (in terms of labor income and operator's labor earnings), but the loss has been compensated by the privilege to fish
[146] which is open to all village residents. Since the amount of fish caught constitutes the main and probably the only source of protein intake and at the same time a considerable share in the diet of villagers, continually decreasing supply of fish therefore underscores the immediate need for an effective program for fish conservation as a means to prevent the standard of living of the villagers from falling below the minimum level of subsistence.

161 Over-population in an area of limited job opportuni-
464 ties naturally creates an over supply of labor, which in
465 turn results in low wages. This is further complicated by a wide variation of individual earning from labor of from two thousand baht annually to almost nothing, the latter being the case of transient members of farm operating families.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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permits sprang up. During 1951 the black-market price for such permits reached U. S. $35 per ton. Officials were obtaining permits for export against commercial contract and promptly selling them in the market. A permit for 10,000 tons meant $30,000 even at the low price of $3 per ton, and when the price hit $20-$30, the temptation to bribe the crucial officials was enormous. Millers were eager to get a cut also, and they were reluctant to make rice available unless they got some kind of a premium.[6]

By 1953, however, the world demand for marketable rice began to decline, and it may be said that the rice trade had shifted from sellers' market bo buyers' market. The primary reason for this decline was the recent increase in production in the deficit countries. As a rice exporting country, Thailand was naturally adversely affected. Her position was further aggravated by high production in Burma which offered lower prices in the international market.

In recent years, the export prices of Thai rice had been steadily raised. For a ton of white rice, 5 per cent broken, it was £47 5s in 1951, £50 5s in 1952, and £55 5s in 1953. The decline of demand forced the government to lower the export prices by £1 - £5 per ton for the first time in 1954, and finally to virtually abolish its monopoly over the export of rice in 1955.

Thus, rice export has now become "free", but actually under rigid rules and regulations especially with reference

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6. Ingram, op. cit., p. 91.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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*243 256 472 Although private rice millers in Bangkok operate with a rather high degree of collusion, in the countryside the many small millers compete actively on the basis of price charged for their services or price paid for paddy or both. The comparatively high capital investment of the enterprise has rendered inter-mill competition in the countryside very intense, and it is obvious that the farmer gains economically from such competition. If somehow the government could, by a carefully conceived gradual program, induce a large number of smaller mills to move from Bangkok to the countryside, the farmer will benefit all the more. Already, the trend has been for gradual business decline for Bangkok mills and business upswing for the countryside mills.[8]

*243 256 656 44 It is rather unfortunate, however, that the government has explicitly taken the view that small rice mills (capacity of five tons and under) in the countryside are detrimental to the interest of the farmer. It is officially held that small rice mills would bring about a large number of middlemen who would then combine to suppress the farm price. Actually, more middlemen tend to produce correspondingly keener competition in the marketing process which is beneficial, not detrimental, to rice growers.

*243 256 433 Small rice mills, which may be more conveniently erected in the villages and perhaps with local capital, will reduce the cost of transporting rice by a third, for about two-thirds of the weight of paddy is head rice, the other

8. The Economic Yearbook, edited by Luan Pannoi, Bangkok, 1951.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 256 433 comprising the by-products of milling -- broken rice, bran, and husk. There is still a further saving when paddy is milled where it is produced, for bran would not have to be moved away from the farm as part of paddy to distant mills and then moved back again to the farm where it is bought back to be utilized as feed.

If not hampered by unnecessary government restriction, small rice mill industry will provide opportunity for local investment to which internal savings among affluent farmers may be channelized. The relatively low capital requirement and the simplicity of operation of small movable rice mills have made it possible for many Thai farmers in the northern part of the country to become successful rice millers, and there is no reason to believe that farmers in the Central Plain cannot do likewise.

Scarcity of Cash and Credit

434 4-58 An important factor contributing to the acuteness of the basic economic problem of Bangchan is the scarcity of both cash and credit in the village. Bangchan farmers receive cash from the sale of paddy in two periods -- from January to March, and from July to October. Most sales are expedited in the first period, when rentals and credit accounts are expected to be settled. Farmers also need cash for the purchase of goods they have forgone during the previous work season when they had little or no cash. Since there will be no sale of paddy during April - June when paddy cannot be moved through the shallow water level

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

CHAPTER IX

CONCLUSIONS

*243 *128 • 433 In Chapter VIII, we have tried as far as we could to locate salient features of current economic problems of Bangchan, in an attempt to achieve the primary purpose of this dissertation. It is seen that those problems which have been brought to light by available evidences center around low incomes and excess of expenses over receipts. This basic problem is aggravated by population pressure, the lack of effective control of water, complications of the postwar marketing of rice, and the scarcity of cash and credit in the village.

It is seen also that those various points brought out in Chapter VIII have aspects of geographical, technological, social, institutional, and even personal nature. *243 433 On the whole, however, they are interrelated and often integrated. The problem of low incomes, for example, is closely associated with those of population pressure and limited earning opportunities, both of which are affected by soil and water conditions. These have been rendered more acute by suppressed farm prices brought about by the postwar marketing conditions. As a result, expenses tend to exceed incomes -- a condition leading to scarcity of cash

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

and credit, which in turn has caused the rates of interest to be rather high. High rates of interest discourage investment, forcing the farmer to rely solely on returns from rice which is not purely a business enterprise but also a way of life. Rice production is affected by the lack of effective control of water and the small size of the farm which is limited by population and other job opportunities. Low production and relatively low prices of rice result in low incomes, thus completing the circle.

This sort of circular relationships by which the perpetuation of poverty of rice farmers in the Central Plain of Thailand may be explained is known as the vicious circle of poverty. Already, we have uncovered the conditions circumscribing this vicious circle. The task ahead is to break this circle and create an economic environment necessary for the attainment of rural prosperity.

Housing

342 The type of house, whether big or lowly, made a difference in the comfort and care of women. The big houses were teak-paneled and floored with a good roof of thatch, tile or corrugated iron. Their high piles insured dryness during flood season. The sleeping and living space was a single airy open room, often with one or two sides balustraded rather than solid, and protected from the weather by the roof's overhang. The kitchen was sometimes a separate room. There was always one small enclosed room, perhaps ten feet square, or larger, with a door and a window. This room was used for keeping valuables under lock, and whenever privacy was desired: as a marriage chamber for bride and groom, or as a quiet room for a senile parent. Because of its almost solid walls, it was poorly ventilated and hot. Childbirth took place in this little room, [844] if convenient, or out in the main part of the house. The fire-rest was in this room so that the dreaded wind could be kept out.

342 The poor lived in modest earth-floored cottages of bamboo
184 frame, thatch sides and roof, with one or two raised wood plat-
352 forms for sleeping and sitting. In the rainy season, these
844 cottages could be damp. In fact, one October the water was observed ankle deep inside a house, and the wife splashed around at her chores. Under the latter conditions, a woman in childbirth would be moved to some kinsmen's house. Delivery took place on one of the sleeping platforms, and post-partum rest was on a plank raised off the earth floor, unless space permitted that the plank and temporary fire-floor be placed on the platform. On one observed occasion reed mats as protection from drafts were temporarily set up, making an enclosure about three feet high within which a mother lay in her post-partum rest period.

Cash

434 Cash was short to everyone. The poor felt very poor and
426 the rich did not feel rich. This was because the rice-money,
[556] which came in a lump sum once or twice a year, was at once turned over to clear debts, to make large purchases of agricultural equipment, to repair the house, or to perform elaborate ceremonies. What was left over was not kept around the house for day-to-day expenses for fear of robbery, but was immediately loaned out. Thus cash was not available for emergencies
434 which in childbirth might mean taxis or hospital care. Being
844 rich or poor made little difference in Bang Chan, however, as
556 to the quality of the obstetrical help given.

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 60 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, the younger generation. In the few polygynous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap. V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlakha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7
Bang Chan

SUMMARY

105 26 [22] A general description is given of conditions in a Siamese rice village, 1952-54, as they relate to food supply and food habits. Activities at various seasons of the year are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

105 262 433 Food was mostly home produced and an important factor in the standard of living was the number of productive hands available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods were used. [235] Nearly all of the families in Bang Chan raised [433] chickens, and some raised ducks, but about 3/5 of all eggs [244] produced were sold. Every family had some sort of kitchen [245] garden, including banana trees and other plants, but spices [227] and chili were much more commonly grown than vegetables and fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

[443] Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, cocomut, palm sugar and small amounts of vegetables.

[434] [078] Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

105 264 Preparation of some typical dishes, meal service and techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

594 What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the
• 434 families, living in tiny separate cottages.[1] Usually with in-
444 adequate or no land, they earned an irregular income by hiring
423 themselves out for farm or other work. At the other extreme,
596 in a hamlet-like cluster of dwellings, lived a closely affili-
532 ated group of kin. A senior couple more or less headed the
476 married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

855 Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or go to the store. Cooking was simplified, or food might be
[252] prepared once a day only. Respite came only when the first
596 born was able to help oversee a younger child, sometimes stay-
476 ing home from school to do so. Where the adult cooperative group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons
[871] could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

241 Plowing could be done by a man and wife, but for both
462 transplanting and harvesting which had to be done within a few
476 days, large groups were necessary. Two patterns of auxiliary
444 group labor prevailed: reciprocal cooperative work, and hiring of labor.

113
114 1. Janlekha, 1955, categorized families as 5% "one-
162 person," 59% nuclear, 8% limited extended (including one or
594 more parents of a spouse), 27% extended (including dependent
596 married couples or other collateral relatives), and the temple
423 residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

426 Because of scattered farms and frequent shortage of cash, borrowing food and other items, and many exchanges of service were necessary. Blood-kin were easier to approach, and in the larger social unit, nearer. Borrowing from a non-kin neighbor was supposed to be less frequent, and the favor had to be returned more promptly and exactly.

434 Most opportunities for increasing cash income such as hiring out as temporary farm labor, digging canals, marketing eggs, mushrooms, or cooked snacks, took one out of the home, often overnight. In the small family, one partner was left at home. Both could not go because fear of theft forbade leaving a home unoccupied for any length of time.

The Buddhist Priesthood

792 At the temple lived twenty or thirty priests under the abbot, with a group of boys to serve them. The priesthood was maintained by daily voluntary offerings of food, with larger donations of food and commodities at certain times. Persons who thus "made merit," by supporting the priesthood, by giving to the needy, and adhering to the ethical tenets of the Buddhist religion, reaped a reward of health, happiness, wealth and eventually, freedom from rebirth. The immediacy of these beliefs must not be underestimated. Men only were ordained. They might resign at any time after three months, but some spent their lives in the priesthood.

792 In Bang Chan, throughout the year, the priests set out
262 at dawn to receive cooked food for the day. They appeared
431 at houses by more or less specific arrangement and were given a generous share of the food prepared by the family for its own use, sometimes with the addition of fruit and other delicacies. Each priest stopped at two or more houses. The food then was brought to the temple to be eaten at 8 and 11. For the rest of the day the priests fasted, i.e. they ate no solid food, but drank liquids such as tea, soft drinks, and recently, tinned milk and a fortified malted milk drink. Priests were also invited to eat in homes not only at large ceremonies, but at small merit-making occasions. Sporadic special food offerings were also received. If a buffalo died, much of the meat was usually given to the temple. Traditional practitioners, mid-wives, and ceremonialists always gave the priests a portion of the fees from their practice which consisted in 1 or 2 liters of milled rice, a bunch of bananas, and perhaps cash. On the numerous Buddhist holidays and at specially organized temple convocations, quantities of cooked, preserved and raw foods were brought to the temple and apportioned among the priests. From this bounty a meal was served to the priests, who ate while the villagers looked on in satisfaction.

One of the duties of the abbot was to coordinate the

221 132 243 244 245 262 434 503 196 811

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ←WET→							←COOL→		←HOT→		
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	→heavy		moderate	←heavy→		←light→			←negligible→			
Canals	rising			high		(floods)			lowering fast		low,dry	
Cultivation of Rice	plowing→ seedbed grown			TRANSPLANTING		growing		early var. mature ←HARVEST→				
School	vacation							vacation			vacation	
Cash available Source	cash in hand→ rice					cash jobs→		←cash shortage→	main rice sale		cash in hand→	
Fruit;vegetables	→	←new planting→							←annuals die→			
Fish: Supplies	ponds drained→								←ponds drained→			
Maturation			←many varieties→						←best varieties→			
Preserving	←much→		←moderate→						←most→			
Ceremonies	ceremonies→			←Buddhist Lent→							←ceremonies→	
Dietary survey	→	←Round I→		←Round II→				←Round III→			←Round IV→	

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 18°F (10°C) in April and 22°F (12°C) in January.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

221 Despite the availability of fish and of vegetables in
435 the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

221 The two months of September and October during which
[512] the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit
[738] and take trips. A few might go on a pilgrimage. Therefore,
264 in this season, all family members were less often together
[22] at the evening meal. Fishing was a continuous occupation,
[43] with some preserving and home craft. Jobs such as selling
[854] food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

[342] High water caused time-consuming inconvenience only in
[33] earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

243 By November, the earliest varieties of rice matured.
221 Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could
[467] not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into
[226] the night. At this time also many varieties of fish matured
434 and men fished night after night. Just when the convenience
426 of purchased food was greatest, cash was exhausted. With
443 rice money in sight, venders might be generous with credit, but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

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[804] 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

There was an important psychological difference between
221 the two work seasons. At planting time, people were anxious;
243 at harvest they were happy. People saw cash just ahead, for
439 the crop was now safe. Each host of a cooperative work party
466 gave at least one big convivial feast, the best he could pro-
527 vide and even the hired laborers got a round of liquor. People
461 joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

221 When the crop was in, the people rested, fished, and be-
226 gan to prepare for big ceremonies demanding organized work.
527 Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fish-ponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

221 Most farmers sold their rice in February. Capital was
45 invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they
[871] were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

221 The land dried up and cracked, rainwater for drinking
132 gave out, and some canals were reduced to mud. Cherished
312 plants were kept alive by watering, but no new planting could
241 be done. Buffalo, which at other seasons were confined and
231 fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another.
796 Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather
[563] slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

311
361 rice land. Water-ways, however, were public areas, and any
[505] convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

262 Mushroom culture as a side line activity of rice far-
344 mers developed during the period when this study was in
433 progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

[434] As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

262 Relatively few foods were purchased, but some of these,
438 such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

262 Estimates of mean annual consumption and cost of pur-
435 chased foods, for 106 households in Bang Chan are shown in
128 Table 1.

262 The list of purchased foods presented by Janlekha (1955)
432 was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)ma-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23--- Analyst]

273 in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

433 434 443 Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

121 In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

221 262 122 123 From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953, and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 29 --- Analyst]

per day were calculated for Groups A and B by Round and for all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

Although our sample was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

From the viewpoint of parents, the "peak of life" was the time when children were no longer dependent, but productive, unmarried workers whose earnings stayed within the family. Household 16 was such a family, forward looking, progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 ··· Analyst]

511
592
62

Table 8. Summary of Economic Conditions of the Two Groups of Households Participating in Dietary Studies

Household Group and Code No.	Members	Land: Rai Worked	Land: Rai Owned	Buffalo[1]	Food Cost[2]: Total	Food Cost[2]: Per Cap.	No. of Priests Fed	Sources of Income
Group A								
222	5	0	0	0	2.96	0.59	0	Labor contractor; hired out as labor; boat repair; fishing; vegetables sold; canal digging.
12	3	12	0	1	2.70	0.90	0	Rice production; occasional work in Bangkok.
215	5	14	0	1	1.59	0.32	0	Rice production; wife, a medium.
67	5	16	6	1-0	2.52	0.50	0	Rice production; eggs sold; road jobs.
2	6[3]	20	0	2	3.97	0.66	3	Rice production; "professional cook".
103	8	47	12	5	2.04	0.26	2[4]	Rice production; eggs, fish, mushrooms sold; buffaloes raised.
Mean		18.2	3.0	1.6	2.37	0.49	0.7	
Group B								
23	8[3]	6	0	1	1.56	0.19	0	Rice production; selling fish and vegetables; masseur.
21	4	25	25	3	1.92	0.48	3	Rice production; headman
16	8	47	47	5	2.70	0.34	2	Rice production; vegetables, fruit sold; road jobs.
25	8	50	50	3	7.97	1.00	2	Rice production; eggs, mushrooms sold.
20	9	66	51	11	2.47	0.27	2	Rice production; ceremonialist; doctor; carpentry; trading; eggs collected and sold.
Mean		38.8	34.7	2.6[1]	3.32	0.45	1.8	

1. The buffalo belonging to Household 67 died during the year. In Household 20, the brother who moved in owned several buffalo, thus the total for Group B was more than the number shown.

2. Average cash expenditure per day, in baht. (One baht equalled about 5 cents) Household 222 received rice as part of wages.

3. Babies born during Round IV were not included. In Household 23, a 12-year old son served as temple boy and was away from home much of the time.

4. Rainy season only, when priests could come by boat; counted as 1 in computing average.

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 8. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

concerning its culture and use. Tilapia culture was learned largely by trial and error, and was considered primarily as a source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

More home consumption of eggs would be desirable, but their ready sale and acceptability for barter may present an obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

Milk, as canned, dried or malted milk preparations, was considered an appropriate gift for the priests, who are forbidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to include milk among them. People gladly bought food for the priests and would probably accept on the authority of the head priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headman were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

The importance of merit making and the relatively large cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

Notes on Tilapia Culture in Bang Chan

226 654 In 1952, the Thai government, at the suggestion of FAO, began to encourage tilapia culture. Fingerlings and some information on tilapia culture could be obtained from the Minburi district office, where a demonstration pond was maintained. Early in 1953, we learned from the records of the district officer that three persons in Bang Chan, two of them hamlet headmen, had obtained tilapia from this source. In 1953 the commune chief called a meeting in the village and explained the importance of tilapia raising. In May 1955 when Ralis conducted a survey in Bang Chan (Goldsen and Ralis, 1957), tilapia raising had been tried in nearly a third (31%) of the households, but was considered by 2/3 of the respondents to pay little.

The authors comment:

> From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply [434] rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months.

From the comments just quoted, tilapia culture appears to have been undertaken for the anticipated cash return. No [114] information was obtained by Ralis concerning the extent to which the villagers used tilapia to increase their supply of fish for home use. In the summer of 1957 members of the research group who visited Bang Chan found that no one was raising tilapia; they were neither a source of food nor of cash. Some indication was obtained that their flavor and texture were not agreeable. Clearly the attempt to introduce a rapidly growing but unfamiliar variety of fish failed in Bang Chan. An understanding of the reasons for this failure might help to prevent other costly failures in future.

Notes on Mushroom Culture in Bang Chan

177 244 Goldsen and Ralis (1957) commented as follows:

> Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. So also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

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*177
*178 The Innovations

243
433 A. Agricultural Innovations: During the past few years, certain innovations have come to Bang Chan which have increased agricultural productivity and improved the level of living. Some of these innovations are listed below.

1. The small motor. One innovation is the small engine, 402 gasoline motor, which is used mainly as a water-lifting device for irrigation purposes. In 1950 only five small motors were found in *177 Bang Chan.* Twenty-one per cent of the respondents in the 1955 *178 survey, however, report owning these motors; the majority of the [241] respondents (68 per cent) claim to have used this labor-saving device which is sometimes jointly owned by more than one household and is frequently loaned out.**

2. Straw mushroom growing. Three years ago the com- 244 mercial growing of mushrooms in Bang Chan was unknown. By 1955, • 434 the practice of growing mushrooms had reached into many homes *177 (44 per cent of the respondents report that they have engaged in *178 this activity***). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

One advantage in the culture of straw mushrooms is that it permits quickly realized returns. The cycle, from sowing spores in moistened straw to harvesting the mushrooms, takes about two to three weeks. Another advantage is that there is relatively little heavy work or investment required besides the acquisition of straw and spores. A third advantage is a ready market, for the plant is sought by Chinese dealers in Bangkok who supply hotels and restaurants. Bang Chan rice farmers who engage in mushroom growing as a sideline activity sell it either to local middlemen or directly to the Chinese in Bangkok.

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[113] * Sharp, L., H. M. Hauck, K. Janlekha, and H. D. Textor, Siamese Rice Village, A Preliminary Study of Bang Chan. Thailand, Cornell Research Center, June, 1953.

[125] ** The questions: "Do you own a small engine motor or not? (If "NO"): Have you ever made use of one in your work?"

[125] *** The question: "Have you ever grown mushrooms, or not?"

3. Tilapia raising. In 1951, FAO suggested to the Thai Government that cultivation of tilapia be encouraged to help meet the rising need for fish in Thailand. Tilapia is a species of fish which multiplies and grows relatively fast. The strain, which came originally from Africa, is popular in Malaya and was expected to be easily marketable, thus a source of added income in Thailand. The Thai Government followed the FAO suggestion in 1952: a few Bang Chan residents dug the special pools required for the fish culture and began to raise tilapia mainly for commercial purposes. About a third (31 per cent of the households*) reported in 1955 that they have engaged in this activity. 177* 178* 228

From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months. [434]

4. Artificial fertilizer. Artificial fertilizer has made its appearance in Bang Chan only recently. Informants in the community reported that only two farmers had tried artificial fertilizer in 1952. In the 1955 survey, 12 per cent of the farmers reported that they have used fertilizer or are using it. This fertilizer is mainly ammonium sulphate sold both by the government and commercial distributors. Only a few farmers (3 per cent) have ever employed it for all, or for the larger part of their fields. The remainder (9 per cent) have used it on a trial basis in only a small part of their fields.** 241 177* 178*

Fertilizer, then, has been tried out on a much smaller scale than either mushroom growing or raising tilapia. Apparently two important barriers operate against its wider acceptance. First, its high cost and the difficulty of purchase and transportation (66 per cent of farmers with ideas on the subject gave these reasons for not using fertilizers); second, popular opinion in Bang Chan declares that artificial fertilizer is not fit for low lands since it washes away and is thus wasted (29 per cent of the farmers with ideas on the subject advanced this as reason for not using fertilizer). In addition, fertilizer yields delayed returns.

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* The question: "Have you ever raised tilapia, or not?" [125]

** The question: "Have you ever used fertilizer or not? .. To what extent have you used fertilizer on your fields?" [125]

Economic Level

It could be, of course, that people on a higher economic level are in a better position to try agricultural innovations, since they might more easily afford not only an initial cost but also possible loss in trying out something new.

The survey data provide several indicators of economic level. Among other questions on this subject, all respondents were asked: "Here in your household how many buffaloes do you own?" About one-quarter reported owning no buffaloes at all; a little more than that proportion reported owning four or more; the median number of buffaloes reported was between two and three.

In Bang Chan buffalo are an indication of wealth, as is the amount of land planted to rice. Thus all farmers in the sample were also asked, "Last time you planted rice, how many rai* of rice did you plant?" About a third reported that they planted 19 rai or less; about one-fourth reported that they planted 40 rai or more; the median number of rai reported was 28.3.

If the reported number of buffalo owned is an adequate measure of economic level, then one would expect a high correlation between reported buffalo ownership and reported number of rai planted. If the expectation is borne out by the survey data the two indices may be used interchangeably. (Table 7 reports this relationship for the male farmers in the sample.)

TABLE 7. FARMERS# WHO OWN MORE BUFFALOES ARE MORE LIKELY TO CULTIVATE LARGER LAND HOLDINGS

"...how many buffaloes do you own?"

"...how many rai of rice did you plant?	None, one or two (99)	Three or more (112)
Less than 9	31%**	11
10-19	32	7
20-29	18	27
30-39	15	23
40-or more	3	41

Male farmers only
** Percentages may add to 99 or 101 owing to rounding of figures.

* A Thai land measure; 1 rai = 0.4 acres.

*177
*178
241
402
• 434
556

Decisions to use all these innovations--with the possible exception of the use of fertilizer--seem to be more widespread among the upper economic levels of the population. (See Table 8.) One wonders whether the initial link between use of the motor and readiness to try the innovations may actually disguise a more basic relationship based simply on ability to afford the investment and the risk.

*177
*178
228
231
241
244
434
402
556

TABLE 8. FARMERS* ON HIGHER SES LEVELS ARE MORE LIKELY THAN OTHERS TO HAVE USED THE MOTOR, TO HAVE GROWN MUSHROOMS AND TO HAVE RAISED TILAPIA

	Ownership of Buffaloes	
	2 or less (99)	3 or more (112)
Used motor		
Own	6%	37%
Use	53	45
Neither	41	18
Grew mushrooms		
Yes	30%	60%
No	70	40
Raised tilapia		
Yes	26%	42%
No	74	58
Used fertilizer		
Yes	12%	17%
No	78	83

* Male farmers only

The following table presents again the initial relationships between use of motor and readiness to try out other innovations. But this time the link is examined separately for persons on the different economic levels.

Table 9 was made by first dividing the population into two groups, those from high and those from low economic levels. The resulting two groups were then further subdivided on the basis of whether they owned (or used) a motor or whether they did not. In each of the four resultant groups the percentage that raised tilapia was then calculated. Thus among those of high economic level who own or use motors, 43 per cent raised tilapia, and we infer that 55 per cent did not raise tilapia. The same procedure was repeated to ascertain the percentage that has tried fertilizer and subsequently the percentage that has tried mushroom growing.

This table shows that in tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertiliser holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic Level			
	High*		Low**	
Owns or used motor (Proportion who have raised tilapia)				
Yes	45%	(89)	33%	(37)
No	25	(21)	17	(40)
Owns or used motor (Proportion who have tried fertiliser)				
Yes	20%	(89)	10%	(37)
No	5	(21)	*	(40)
Owns or used motor (Proportion who have tried mushroom growing)				
Yes	60%	(89)	36%	(37)
No	37	(21)	23	(40)

* Three buffaloes or more
** Two buffaloes or fewer

[231]

Literacy

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

TABLE 11. LITERATE FARMERS* ARE MORE LIKELY TO HAVE USED THE MOTOR AND TO HAVE TRIED MUSHROOM GROWING

	Illiterate (Cannot write a letter) (92)	Literate (Can write a letter) (118)
Motor		
Own	16%	26%
Use	35	40
Neither	48	34
Mushrooms		
Have tried	36%	53%
Have not	62	47
Fertilizer		
Have used	12%	17%
Have not	88	83
Tilapia		
Have tried	29%	39%
Have not	71	61

* Male farmers only

If Bang Chan were like certain areas of the United States and Europe, it might be objected that such a relationship between acceptance of innovations and literacy reflects a spurious link with economic level: that illiterates tend to come from the economically deprived strata of the population; hence an observed relationship with literacy may actually reflect the initial correlation with economic level. In Bang Chan, however, this is not the case. A Bang Chan farmer who is well-to-do is as likely to be illiterate as literate, as is illustrated by the table below.

TABLE 12. LITERACY AND ECONOMIC LEVELS ARE UNRELATED IN BANG CHAN*

	Literacy	
	Low (91)	High (119)
Economic Level		
Low	48%	36%
High	52	64

* Male farmers only

Hence the correlation between use of innovations and literacy may be taken at face value and does not reflect a spurious link with economic level.

TABLE 14. HIGH EXPOSURE TO COMMUNICATIONS MEDIA IS LINKED TO ACCEPTANCE OF THE MOTOR

	Exposure to Radio			
	High			Low
	Listens Daily (45)	Listens Occasionally (66)	Listens Seldom (148)	Never Listens (60)
Small Engine Motor				
Used it	89%	78%	64%	46%
Didn't use it	12	22	36	54

	Exposure to Movies			
	High			Low
	Ten times or more (161)	4-9 times (60)	1-3 times (75)	None (33)
Used it	76%	69%	59%	36%
Didn't use it	24	31	31	64

Of course it is important to check whether these relationships hold true when people on different economic levels are examined separately; for literates as well as for illiterates. We infer that the basic link between use of the motor and exposure to the media of communication holds for literate as well as illiterates; for poorer as well as for richer farmers. More specifically, the relationship between exposure to the communications media and decision to use the motor is even more marked for less well-to-do and for the illiterate farmers, in contrast to the better-off farmers and those who can read and write.

TABLE 15. EXPOSURE TO MOTION PICTURES IS LINKED TO ACCEPTANCE OF MOTOR ESPECIALLY FOR THE ILLITERATES AND FOR THE ECONOMICALLY LESS WELL-OFF*

	Exposure to Motion Pictures	
	High	Low
	(Percentage Using Motor)	
Economic Level		
Low	76% (47)	46% (33)
High	85 (66)	75 (45)
Literacy		
Illiterate	67% (36)	44% (33)
Literate	88 (77)	82 (61)

* Male Farmers Only

TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Patterns	
	With hands (342)	With fork and/or spoon (64)
Listens to radio		
Regularly (daily)	10%	25%
Occasionally	17	28
Seldom	31	33
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	13
2 - 4 times	29	23
5 or more times	28	55

When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive to urban influence are twice as likely as others to use fertiliser (21 per cent versus 9 per cent), one and a half times as likely to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per cent versus 61 per cent). There is no noticeable relationship, however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for those on high as well as low economic levels and also for the literate as well as illiterate farmers.

*178
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241
244
402
264

TABLE 17. VILLAGERS RESPONSIVE TO URBAN PATTERNS ARE MORE LIKELY THAN OTHERS TO USE AGRICULTURAL INNOVATIONS

Agricultural Innovations	Eat with fork and/or spoon	Eat with hands
Artificial fertilizer		
Tried it	21%	9%
Never did	79	91
Total cases*	(69)	(218)
Mushrooms		
Tried growing	57%	39%
Never did	43	61
Total cases	(84)	(242)
Small engine motor		
Own one or have used it	82%	61%
Never did	18	39
Total cases	(84)	(242)

* For farmers only; excludes all non-farmers

*178
369
212
244
402
434
264
556

TABLE 18. ACCEPTANCE OF URBAN PATTERNS IS LINKED TO ACCEPTANCE OF MOTOR AND MUSHROOM GROWING, IRRESPECTIVE OF ECONOMIC AND LITERACY LEVELS

	Economic Level				Literacy Level			
	Low		High		Illiterate		Literate	
Acceptance of urban patterns	(Proportion who used motor)							
Eat with hands	55%	(77)	76%	(73)	47%	(73)	83%	(76)
Fork or spoon	75	(20)	89	(34)	69%	(16)	90	(38)
	(Proportion who tried mushroom growing)							
Eat with hands	28%	(77)	58%	(73)	38%	(73)	47%	(76)
Fork or spoon	45	(20)	65	(34)	44	(16)	66	(40)
	(Proportion who used fertilizer)							
Eat with hands	11%	(77)	13%	(73)	10%	(73)	14%	(76)
Fork or spoon	19	(20)	26	(34)	3	(16)	23	(40)

*178
743
561

TABLE 26. INCIDENCE OF HOSPITAL AND CLINIC VISITS IS SIMILAR FOR ALL AGE GROUPS

Have you ever been to a clinic or a hospital?	20-29 (41)	30-39 (80)	40-49 (85)	50-59 (68)	60 or over (57)
No, never	31%	31%	36%	37%	41%
Yes, for treatment	39	44	39	31	31
Yes, for other reasons	29	25	25	32	28

*178
743
562

If the responses reflect primarily the need for medical care, women who bear children have a greater need for medical care than men, and one would therefore expect hospital use to be higher among women than men. But again, thus hunch is not clearly borne out by the results.

TABLE 27. INCIDENCE OF HOSPITAL AND CLINIC USE IS SIMILAR FOR MEN AND WOMEN

Have you ever been to a clinic or a hospital?	Women (90)	Men (243)
No, never	41%	35%
Yes, for treatment	31	39
Yes, for other reasons	28	26

There is, then, reasonable justification for inferring that reported use of clinics or hospitals reflects predisposition to use modern health facilities and not simply a need for medical care.

*178
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743

Economic Level

Although higher economic level was linked to the principal agricultural innovations, it is not related to use of hospital or clinic facilities.

*178
212
743

Literacy

On the other hand, just as literate persons were more disposed to use the major innovations (p. 19), in the same way those who can read and write report a greater incidence of hospital or clinic use.

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and acceptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike acceptors of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

197*
178*
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7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things?

1.	Fertiliser	9	[177]*
2.	Small engine	4	[178]*
3.	New rice seeds	3	125
4.	Tilapia	98	[241]
5.	Other fish, specified	13	[402]
6.	Fish, unspecified	80	[243]
7.	Mushrooms	45	[228]
8.	Poultry	179	[244]
9.	Pigs	21	[235]
X.	Other, specify	68	[231]
0.	Unascertainable	45	

8. Here, some farmers got a lot more rice from one rai of land than others got. Generally speaking, what are the various reasons why this is so? [243] [433]

1.	Fertiliser	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify _____	53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify _____	25
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

16.a. ASK ONLY FARMERS: This year just now beginning, will you do anything for increasing your income, outside of rice farming? [125] [434]

3.	Does not apply	13
4.	Yes	162
5.	No	107
6.	Unascertainable	11

b. IF YES: What various things will you do? [224] [235] [228] [241]

0.	Nothing	3
1.	Mushrooms	42
2.	Poultry	51
3.	Fish (Incl. tilapia)	10
4.	Fertiliser	2
5.	Other, specify_____	84
6.	Unascertainable	6

17. ASK ONLY FARMERS:

a. Last time you planted rice, how many rai of rice did you plant? [243] [433]

1.	4 rai or less	14
2.	5 to 9 rai	25
3.	10 to 19 rai	49
4.	20 to 29 rai	65
5.	30 to 39 rai	53
6.	40 to 49 rai	32
7.	50 to 59 rai	19
8.	60 to 69 rai	14
9.	70 to 79 rai	2
X.	90 rai or more	—
0.	Unascertainable	20

b. And what was the total yield?

1.	120 tang or less	15
2.	121 to 300 tang	28
3.	301 to 600 tang	59
4.	601 to 900 tang	59
5.	901 to 1200 tang	56
6.	1201 to 1500 tang	25
7.	1501 to 1800 tang	10
8.	1801 to 2100 tang	10
9.	2101 to 2700 tang	7
X.	2701 or more tang	3
0.	Unascertainable	21

c. How about the year before--how many rai did you plant?

1.	4 rai or less	16
2.	5 to 9 rai	19
3.	10 to 19 rai	51
4.	20 to 29 rai	67
5.	30 to 39 rai	53
6.	40 to 49 rai	26
7.	50 to 59 rai	20
8.	60 to 69 rai	13
9.	70 to 89 rai	5
X.	90 rai or more	—
0.	Unascertainable	23

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125

[787] 22. Have you consulted with a medium frequently, occasionally, seldom, or never?

1. Frequently	7
2. Occasionally	4
3. Seldom	66
4. Never	256

[775] 23. Have you been disturbed by a ghost frequently, occasionally, seldom, or never?

5. Frequently	6
6. Occasionally	8
7. Seldom	55
8. Never	264

[641] 24.a. Excuse me, could you tell me, who is now the prime minister of Thailand? If you know, could you please tell me his name?

1. Correct answer	193
2. Incorrect answer	29
3. DK, cannot recall	111

b. Excuse me, could you tell me, who is now the chief of police of Thailand? If you know, could you please tell me his name?

4. Correct answer	167
5. Incorrect answer	24
6. DK, cannot recall	142

25.a. IF R LIVES IN BC COMMUNE: Who is the district officer in Minburi? If you know, could you please tell me his name?

1. DA, as from Bangkapi	194
2. Correct name of present DO	9
3. Correct name of past DO	—
4. Incorrect name	16
5. DK, cannot recall	111
— No Answer	3

b. IF R LIVES IN KY COMMUNE: Who is the district officer in Bangkapi? If you know, could you please tell me his name?

6. DA, as from Minburi	141
7. Correct name of DO	10
8. Incorrect name	—
9. DK, cannot recall	154
— No Answer	28

[434] [829] [556] 26.a. Throughout the world and here in Bang Chan-Khanno Yao too, it is common among men that there must be some who are rich and some who are poor and some who are neither rich nor poor. How about you yourself? Are you rich, or poor or neither rich nor poor?

1. Rich	2
2. Poor	68
3. Neither	863

b. IF POOR: Here in BC-KY, do you think there are many or few people who are poorer than you?

5. Many	30
6. Few	31
7. Unascertainable	7

235 was slightly higher than that of chickens, averaging 155 eggs per laying duck.

178 231 Hogs: In 1949, two families were raising hogs which according to our observation did not seem to be well fed. When we returned to the village in 1952, not a single hog remained in Bangchan.

Fish

262 443 434 After rice, fish (and other marine animals) are by far the most important ingredient in the diet of Bangchan. More fish are bought from the outside than the very small amount that is exported from the village mainly by one or two very poor families who have availed themselves of this means of augmenting their income.

221 226 The villagers' annual cycle for fish-taking varies somewhat with the particular method used, and with the annual rice and ceremonial cycles: yet the maturation cycle of the principal types of fish is also a factor, and one which tends to give an overall orderliness to the annual cycle for fish in general. There is no time in the year when at least some fish are not available, nor is there any time in the year, even the busiest, when the family does not want fresh fish for its menu. For this reason, there is fishing the year round, at least in the form of the housewives simply setting nets in the canal and then tending them according to some schedule or whenever the noise of caught fish sloshing about in the water is heard. When a lull from the pressure of

178 laboring profession, limiting the work to transplanting only.
592 Apparently she did not earn enough. During this hard period
621 the young boy left her. The woman continued to live alone for two years. After the collapse of her shack in 1953 she went to live with a young couple in KY5 who are not related to her. In exchange for room and board and a nominal allowance, the old woman agreed to take care of the couple's baby.

178 Case 8: In 1949, a couple, both teachers in the Bang-
592 chan Primary School, were sharing the same dwelling with the
895 wife's mother's family, but having a separate food arrange-
• 434 ment for themselves and their two young daughters. Thus,
621 they appeared in the 1949 census as a separate family. In local standard, the combined income of these two teachers
[416] was quite high. The family lived well and was the only family in Bangchan that owned a camera. In the 1953 census this family became a part of the wife's mother's family because they had arranged to share the same food. The reason that was given for this new arrangement was that some time earlier the wife's brother, who had been living with his mother, got married and moved out to start an independent family, whereupon the old lady suggested that her daughter move in to fill the vacancy.

178 Case 9: In 1949, a family of three, consisting of
592 a young couple and their six years old daughter, worked as
621 farm hands for the wife's mother for fixed pay on which they
[593] were able to live independently. Two or three years later, the wife's mother asked this family to move into her household

591 A factor that should also be taken into account was that he
592 had a regular income of 450 baht a month from his job in the
434 Highways Department, which by the village standard was more than enough for him to live comfortably with his second wife.

591 Historical records of the 96 farm operating families do not contain information as to how the 50 families passing through nascent period were divided into those staying with wives' families and those staying with husbands' families. The 1953 census, however, reveals that of 48 married couples then living in 42 families of parents of either side (four such families included two couples and one family three couples), 23 were with husbands' parents and 25 with wives' parents. The proportion may thus be estimated at about one to one.

59 During the nascent period, the couple ordinarily
434 received from the parents they were staying with a kind of
[431] annual bonus locally called lampai which varied according to the economic status as well as generosity of the parents. Lampai took several different forms. Thus, a couple might receive all the paddy harvested from a specified area of the field of three, five, or ten rai; they might be given a fixed quantity of the crop -- say 50 or 100 tang; they might receive cash -- say 500 baht or any other varying amount. In some cases, the couple were expected to earn their lampai outside the family farm after obligation to family work had been fulfilled. This took the form of piece-working or trivial trade.

59 If no lampai was given, the parents might give some gold in
[431]

59 themselves up ; financially to compete with A's parents.

The same informant said further, however, that usually it was up to the couple themselves to decide when to leave the old family. Parents, in his words, "rarely drive the offspring out. They also rarely resist the couple's decision to leave. The most they can do in case labor is badly needed is to ask the couple to stay a year or two longer."

591 484 On the other hand, a second informant, a headman as was the first, indicated that the five-year period he and his wife spent with his wife's parents immediately after their marriage in 1922 was their most prosperous time. As [431] lampai the couple were given the harvest from a 5-rai parcel each year. When he married, he already had five baht weight [426] of gold. With surplus income, he was engaged in lending for interest. Accumulation during their five years' stay with the parents included timber enough to construct the new home when they moved out, one hundred tang of paddy, and forty baht weight of gold.

As a matter of fact, there are several factors that should be taken into consideration in evaluating the advantages and disadvantages of a newly wed couple undergoing the nascent period. These are the lampai arrangement, willingness of the parents to let the couple earn extra income from sources outside the family, current wage rate and job opportunity, and, most important, the current profitability of the farming business which is assumed to be the alternative

591 if the couple do not choose to stay with the parents. In
434 any event, the fact that the couple are more or less free to leave the old family provides an opportunity for the couple to escape all the disadvantages that might be imposed upon them, leaving all the advantages to be acquired.[10] As for those who apparently discounted the merit of the nascent period, the author suspects that they neglected to consider the expected net income from farming and that they were unrealistic in thinking only of wage rate and in underestimating the more crucial problem of job opportunity.

59 In addition to their own wealth accumulated during
431 the nascent period, gifts in the form of farm equipment,
434 paddy and land were usually given to the couple by their parents at the time they left them to establish an independent family. Of 80 separating families (Table 7), however, 17 reported that they received nothing whatsoever from their parents. Among the remaining 63 families that received something, there was a wide variation in the kind and the amount of the gift, ranging from a single buffalo with an incomplete set of farm equipment to 228 rai of rice land with a complete set of farm equipment as well as a stock of paddy to last the new family until the coming harvest. Parental gifts to newly established families are shown in Table 8.

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10. At least two cases were known where the couples, not ready to start a family of their own, left the old families and moved into families of the other spouses.

[TEXT CONTINUED ON PAGE 91]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 8

PARENTAL GIFTS TO 63 NEWLY ESTABLISHED FAMILIES
Bangchan, Thailand, 1909-48

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Items	Number of Families Receiving	Range of Individual Gift	Total	Average for Those Receiving
F. implement*	63	1 set	63 sets	1 set
Buffalo	47	1-4 heads	73 heads	1.5 heads
Land	37	6-228 rai	1112 rai	30 rai
Paddy stock	32	40-1000 tang	4495 tang	140 tang
Building	12	1-2 bldg.	16 bldg.	1.3 bldg.
Cash	4	80-400 baht	760 baht	190 baht
Boat	3	1 boat	3 boats	1 boat
Gold	2	2-20 baht**	22 baht**	11 baht**

* Only basic items were included -- plow, harrow, sickle, etc.

** One baht weight of gold is equivalent to fifteen grams.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

CHAPTER III

COMMUNITY ECONOMY

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Occupational Structure in Bangchan

At the completion of the 1949 census, by which time we had spent nine months in the village, we categorized Bangchan's 288 families primarily on the basis of the principal source of income of the family head. Though the categories derived suffered from some overlapping and ambiguity, we found them useful for survey and other purposes. The descriptions of each occupational category, as found in Tables 9, 10 and 11, appear on pages 111 through 113 of the primary report.[1] As they will be constantly referred to, they will be summarized here:

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1. Farm operator. Main income from growing rice on his own or rented land.

2. Farm laborer. Main income from working on local farm operators' farms, as regularly hired laborer for an entire rice season or at casual farm jobs for which wages are contracted on the basis of piece-work or days worked, for example, transplanting or harvesting rice, digging ditches, or deepening fish pools. Some families in this category supplement their real income with rice which they cultivate

1. Sharp, Hauck, Janlekha, and Textor, op. cit., pp. 111-13.

[TEXT CONTINUED ON PAGE 98]

*243
434 on a small plot that they own or rent, but all families
463 in this category derive their main income from wages.

3. Trader. Main income from the more or less regular sale, not production, of rather considerable amounts of goods. Perhaps somewhat arbitrarily, we have not included in this category those very few families who derive their main income from production of cookies or the like, even though such families might themselves perform the selling of their products to local consumers; such families are included in the 'home enterpriser' category below.

[426] 4. Investor. Main income from land rent, interest
[427] on loans, and/or speculative gain.

5. Professional. Main income from such specialties as midwifery or dramatic entertainment.

434 6. Public servant. Main income from, or majority of
647 working time spent in, government employment. This is the
463 only category in which we had to add the additional criterion of "majority of working time"; government pay is rather low, and one person who works full time in the employ of the government actually receives more income from other sources.
[875] This category includes regular government officials, teachers
[622] and school janitors. The hamlet headmen are not included, however, as their main incomes are otherwise derived and their remuneration from the government is extremely low. They maintain no daily routine as public servants. The headmen are all farm operators, except one who is an investor.

434 463 7. Home enterpriser. Main income from food or handicraft articles produced at home.

434 792 463 8. Priest or novice. Though priests and novices do not receive salaries or wages, their maintenance, which comes from the temple and directly from the people in the form of contributions, is their main income. This category includes only permanent priests and novice personnel. Excluded here are all residents who enter the priesthood more or less perfunctorily for just a few months. Since sexual abstinence is demanded of all monastic personnel, no wives or offspring are found in this category.

434 9. Miscellaneous. The main income source for the eight families in this category is obscure. The heads of these families are not known to have any steady occupations.

178 463 621 Table 9 shows the occupational distribution of Bangchan families as of 1949. It may be observed that some of the figures in this table differ slightly from those reported in the preliminary study previously cited. This is because errors such as duplications and omissions in the original census have been detected and corrected.

Table 10 shows the same distribution as of 1953, and Table 11 the change in the occupational structure of the village that took place during the four intervening years. In 1949, 80 per cent of Bangchan families were farm operators. Four years later, the figure was reduced to 73 per cent. While there was no percentage change in the figures for public servants, miscellaneous, and priest or

178 novice; there were noticeable increases in those for farm
463 laborers and traders, and a slight increase in that for
621 investors, which were offset by a marked decrease in figures for farm operators and slight drops in those for the professional and home enterprisers. In order to understand these changes in the occupational structure of the village, more information on some of these occupation than that given in our operational definitions at the beginning of this chapter is necessary.

*243 Farm operation is a traditional way of life in the
• 434 village. The primary motive is to secure enough rice for
463 consumption. A secondary motive is to have cash from sale of surplus rice to buy goods that are not produced locally.

*243 Farm laboring as a profession is limited to the poor.
464 Farm laborers, occupying the lowest status in the village,
554 are the most unstable and socially disintegrated group.
621 They are not fully employed even during the work seasons
463 of the year because there are too many of them in the locality. Thus, they exist in the village not because of demand for their work but because they have no opportunity for other occupations.

621 There were twenty-one families that were classified
463 as traders in 1953. Of these, nine were permanent store-
443 keepers, and twelve were peddlers selling food stuffs from door to door. Stores were situated at strategic places in the village -- two at the crossing of Minburi Road and Bangchan Canal which is the natural entrance into the village,

443 she wanted to spend more time collecting debts."

It should be noted that A's brief duration of peddling started in the harvesting season. During this time the village cash supply was high, resulting in demand for such a delicacy as pork which normally constituted a negligible fraction of the diet of Bangchan people. This is a good business period for the peddlers. Another good business period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this latter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

Five families were classified as investors in 1953. All these families lived on rents from land, interest on loans, and income from speculative sources such as buying paddy when the price was low and selling it at high prices. Actually, most of these five families were not among large land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

427 the combined land of five leading farm operators of 693
434 rai, averaging 139 rai per operator and ranging from 83
454 to 235 rai. It must be remembered that our operational
621 definition of occupations was based on the main source of
463 income and that many of the villagers had more than one
426 source of income. Investors as an occupational class in Bangchan should not be pictured as large landlords and large money lenders, possessing financial influences over their tenants and debtors. Rather, they were humble fellow villagers whose incomes were mainly derived from rents of small parcels of land or interest on small loans. To cite an extreme case, one aged woman was classified as an investor. She had only 17 rai which she rented out to her own son. She was living alone in an old shack and was too old to do any kind of work. She received as rent about a hundred tang of paddy a year which is equivalent to an annual income of only 800 baht. Thus she was considered one among the poor in the village.

198 There were three families whose occupations were
463 classified as professional in 1949. The number was reduced
621 to one in 1953. The head of this family was a Chinese car-
322 penter who derived his income primarily from boat building. Again, it must be pointed out that reduction of the number of families primarily engaged in professional services does not mean that professional services had been declining.
[305] On the contrary, they had been increasing. There were three barbers in 1953 as against only one in 1949. More traditional

178 463 621 doctors were practicing in 1953 than in 1949, while there was no change in the number of midwives. In most cases, however, these professional services had ceased to be the main sources of income of the families engaging in them.

621 434 463 647 [875] In 1953, occupation defined as public service included the jobs of an educational supervisor, one teacher, two school janitors, two workers in the government-owned Bangkok wharf, and one policeman. Actually, there were five Bangchan residents who were teaching in 1953. Only one of these, however, was a family head. Two of the other four teachers were husband and wife living with the wife's mother who was classified as an investor -- the most prosperous of the investors mentioned earlier in this section. Another teacher, a wife, was also living with her mother who was also an investor. The last teacher, also a wife, was living independently with her husband who was operating a rice farm, and the occupation of the family was thus classified as farm operating. With the possible exception of the policeman, all these public servants were well paid in the village standard, ranging from some four hundred baht a month for a janitor to eight hundred baht for the educational supervisor. After the 1953 census was taken, more regular jobs were opened to Bangchan residents by the Highways Department, and also more people took up regular jobs of a public service nature in Bangkok while retaining residence in Bangchan by commuting daily between the village and their offices. Thus, [178] although the percentage figures remain constant during

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434 1949-53, in actuality public service as an occupation is
463 increasing in Bangchan.
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There were four home enterprisers in 1949, mostly engaged in making cookies. As in case of the professional, this activity still existed in Bangchan, but by 1953 it had degenerated into a secondary income, leaving the lone case of basket making in the home enterprise category.

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285 Only one family head was classified in 1953 as a home-enterpriser. The family was engaged in making takraw -- a cane utensil used in picking mangoes from the tree. On January 27, 1953 we met A, the head of this family, who was taking 103 takraws of various sizes to sell in Bangkok.

[435] A gave the amounts and prices of these takraws as follows: 56 large size, @ 3.00 baht; 31 medium size, @ 2.50 baht; 16 small size, @ 2.00 baht. A said he and his wife worked on these 103 takraws alone, and finished them in twelve days, using 50 baht worth of materials including cane, wood, and binders. Ordinarily, they started making takraws in December and continued through May. They were able to make about 3,000 baht within this period. They also made other things like baskets, but takraws were their main source of income. In rice growing season, they also did some piece working. They did not operate a farm. Piece working and basketry during rice growing season brought them a combined income of about 2,000 baht. The amount of each kind of

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463 basketry they made was not as constant as takraws. It depended more on which paid best. Their total annual income

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

434 amounted to somewhere around 5,000 baht, which was about
469 four times as much as the labor earnings of an average rice
621 farm operator as we shall see later.

178 The present occupational situation and accounts of
463 the changes in the past few years alone may not be enough to give us a complete picture of occupational development since the beginning of the history of Bangchan. Fourtunately, however, since settlement in the village in a considerable scale took place only some eighty years ago, evidence from genealogical studies has provided us with ample materials on which a reconstruction of the past development may be made.

[175] When Bangchan was being settled in the 1870's, as a probable consequence of the increasing national and international demand for rice and the revolutionary change in Thai society, every family was naturally a farm operator family. As long as there was land available for clearing, opportunity would be open for every new family, either branching off from the old ones or moving in from the outside, to operate a rice farm.

(161] Eventually, population grew up to a size large enough
(194] to support a temple in 1895. Population growth and the
[196] emergence of a village center at the temple prompted occupational specialization. At the beginning, investing, trading, professional servicing, and home enterprising probably took the forms of secondary occupations, while farm operating remained the primary occupation throughout. In time, these secondary occupations became more and more specialized and

178 finally, for a few families, took precedence over rice
463 growing. The relative importance of these new occupations remained low, however, since only a few families were needed to meet the village requirements for such services.

• 434 The establishment of the primary school some thirty
647 years ago opened up new jobs as teachers and janitors for
875 some educated villagers who were given preference over out-
[372] siders. It should be noted, nevertheless, that at the beginning the primary school teachers were not considered as regular officials and their pay was as low as six baht a month during the prewar years. Even during the war, they did not get as proportionately large a cost-of-living raise as did other regular officials. It was only after the war that they were made regular officials and that their pay rose almost a hundred times to 450 to 550 baht a month with provision for a steady raise to more than one thousand baht
[48] a month. This new occupation in public service also increased with the extension of the central government employment into the rural areas and with improved transportation facilities which permitted an individual to commute daily between his office in Bangkok and his home in Bangchan. Thus, a Bangchan resident is now serving as an educational supervisor in the nearby Minburi District and a few others are on the regular payroll of the government-owned Bangkok Wharf.

• 243 With the background knowledge of the situation of
464 Bangchan farm laborers previously described in mind, we may
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463

per cent in 1949 to thirteen per cent in 1953 suggests that the problem of population pressure on land has become more acute, although it may also indicate changes in the cost structure of rice production which will be discussed in Chapter VI.

Concluding the discussion of this section, we may say that rice growing is the core of the occupational structure of Bangchan around which other occupations rotate. It is not uncommon that one family has several occupations, and in addition to income from these most families get "free" food in the forms of fish and uncultivated aquatic plants. This is the principal reason why families with apparently no cash income still thrive.

It is conceivable that in years of poor rice crop the family put more effort in the secondary occupations; when such an attempt does not work out well -- for example, no work for manual labor and no capital for trivial trade -- an effort is made to obtain subsistence directly from nature.

In any event, every family in the village is engaged in fishing in varying degree. It is because of this fact coupled with the fact that the village fish supply is decreasing that the problem of fish conservation is very important.

Finally, the dynamic nature of rice farming, with varying efforts on getting extra jobs and securing free food outside the farm depending upon the increase and decrease of the rice crop, suggests that the economy of any rice

Rice Production

*243 433 • 434 Rice is the single major crop of Bangchan. As of 1953 eighty-five per cent of Bangchan families derived their main source of income from rice production either as farm operators or as farm laborers (Table 11). Furthermore, rice was grown not only by farm operator and farm laborer families but also as a side line by families reporting other occupations. In Bangchan, as in all other rice growing villages, it can be said that rice is the source, direct or indirect, of income for every family. As earlier mentioned, rice growing is the core of the occupational structure around which other occupations rotate.

Table 14 shows that the village average yield, computed from crops of a sample of 96 rice farms during 1949-52, was 28.8 tang per rai.[3] On the basis of this figure, the village total rice crop from 6,722 rai of land worked by Bangchan residents in 1953 may be estimated at 193,594 tang or about 2,130 tons of paddy.[4]

*243 433 In order to determine rice surplus in Bangchan, village rice consumption must be computed first. There are three principal uses of paddy -- as human food, poultry feed and as seeds. The village paddy consumption is shown in Table 15.

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3. See Chapter IV for the sampling technique.

4. One tang of paddy grown in Bangchan weighs approximately eleven kilograms.

[TEXT CONTINUED ON PAGE 122]

Other Food Production

235 433 Other food products which are produced in a considerable amount in Bangchan include chicken eggs, duck eggs, and fish. To a lesser extent, fruit and vegetables are also produced locally.

Practically every family in Bangchan raises chickens, and half raise ducks. In April, 1949, the author conducted a poultry survey covering 46 families whose homes were on the banks of Bangchan Canals. Of these, 45 families were found to be raising chickens and 23 families raising ducks.

Of 45 families raising chickens, 38 families from which data were available reported rates of egg production showing that for these families 53,750 eggs were produced annually from 376 laying hens, averaging 143 eggs per hen. [146] [438] Of 31 families who gave information about sales, five consumed all 2,260 chicken eggs produced; the other 26 families sold 31,040 eggs and consumed 5,590. The proportion of consumption to sale was thus 7,850 to 31,040 or approximately one to four.

There were 393 laying hens in the yards of 45 families, averaging 8.6 hens per family. Chicken egg production [434] was estimated at 1,230 per family. Assuming that four-fifths of these were sold at three for one baht, which was the local price in 1949, average cash income for these families from sale of chicken eggs was estimated at 326 baht annually. [435] With a higher price in 1953 of fifty satang a piece, the estimated income from sale of chicken eggs rose to 492 baht per family.

235 Of the 46 families covered by the survey, 23 or one-
433 half raised ducks with an average annual production of 155
434 eggs per duck, and an average of 11.7 ducks per family raising them. Egg production for each of these families thus averaged about 1,800 per year. Of these, 1,350 were consumed by the family and 450 sold at the same price as chicken eggs. It was estimated, then, that from duck eggs alone, the average cash income in 1949 was about 150 baht per family raising ducks.

226 After rice, fish were by far the most important
262 ingredient in the diet of Bangchan. In contrast to poultry,
433 however, fish did not constitute a source of cash income of
[434] the villagers. As a matter of fact, more fish were bought from the outside than the negligible amount that was exported from the village mainly by one or two very poor families who had availed themselves of this means of augmenting
[435] their income. From our consumption study of 106 families in 1953, it was found that of an aggregate amount of 17,786 kilograms consumed by these families in the previous year 16,027 kilograms were caught by the families while 1,759 kilograms were bought at five baht per kilogram. The rate of fish production may thus be estimated at 151 kilograms annually per family, or 44,998 kilograms for the entire village.

262 The same consumption study shows that the 106 fami-
244 lies consumed in 1953 a total of 18,402 kilograms of vegetables
433 all of which were produced or acquired by the families,

243 parcels by siblings who failed to include their share in
423 those parcels in the reporting of areas owned. For want
427 of a proper basis for adjustment, we chose to let the figures
128 stand as they were reported.

Table 19 shows that the combined area in rice of all the 216 farms in Bangchan was 6,638 rai, or almost 99 per cent of total area planted to rice by the residents, the balance of 84 rai being worked on by residents whose occupations were those other than farm operating. Of these 216 farms, 48 were classified as all owned, 88 part owned, and 80 all rented.

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184 The conventional system of classifying farms accord-
423 ing to land tenure into all owned (owner-operator), part-
554 owned (part-owner), and all rented (tenant) should not be
427 used without modification as a classification of economic
128 or social status in population pressure areas where an efficient size farm is usually an exception rather than a rule. In these areas, it does not hold, as it seems to imply, that an owner-operator has a superior economic status than a part-owner and that a part-owner is still in a better eco-
[434] nomic position than a tenant. There is a wide range in size of farm operation and hence of incomes within these categories.

Within the category of owner-operator, there are major differences in size of operation and hence economic and social status. If a farmer -- to cite a specific case, Farmer A in BC4 -- owns the large area of rice of 235 rai,

[TEXT CONTINUED ON PAGE 133a]

Rent of Rice Land

*128 178 427 Tables 24 and 25 show different rental methods in 1948 and 1952. Figures in Table 24 were obtained from our records of the sample of 104 farms in operation in 1948, and figures in Table 25 were obtained from the same sample reduced in 1952 to 96 farms which had been continuously in operation until then, the other eight farms having ceased to operate by 1952.[8]

427 *243 178 It is seen that with the exception of a single case of share-cropping there were two rental methods in 1948, in kind and in cash, the proportion of areas involved being fifteen rai of rent in kind to every rai of cash rent. In 1952 rental methods remained more or less the same, consisting principally of rent in kind and cash rent, the proportion of areas involved being slightly increased to nineteen rai of rent in kind to every rai of cash rent.

*243 178 427 435 There was, however, a rapid rise in rent rates within this period of four years. It is seen that the average rate of 6.2 tang per rai in 1948 has risen to 8.1 tang per rai in 1952, an increase of 31 per cent in four years.

[433] It is interesting to note that an increased rent rate was charged in spite of the decline in yield of 32.1 tang per rai in 1948 to 25.2 tang per rai in 1952, or from the record crop index of 111.4 in 1946 to 87.5 in 1952 (Table 14).

[434] Another equally interesting point is that the increase in rent rate was charged in spite of the increases in the

8. See Chapter IV of the sampling technique.

[TEXT CONTINUED ON PAGE 143]

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*243
178 other items of cost of producing paddy -- in other words,
427 in spite of a decline in profit (a great decline when a
• 434 reduced yield is also considered). In the preliminary study
435 in 1948-49, it was found that the average cost of producing a tang of paddy was 5.86 baht, all costs included except value of operators' labor.[9] When the value of the operators' labor of 1,000 baht for those operating ten rai or over and of 500 baht for those operating less than ten rai was included in the calculation, the cost of production was found to be 6.76 baht per tang, including 1.52 baht for rent, 3.46 baht for labor (values of operators' labor and family labor included), 0.38 baht for seeds and materials, 0.65 baht for depreciation, and 0.75 baht for interest on investment. As we shall see in the section on cost of producing paddy in Chapter VI, an estimate of cost using the 1952 prices, for time and opportunity did not permit a second cost of production study during our second period of field work in 1952-53, points toward an increase in every item of the cost of producing paddy in Bangchan.

An explanation for this abrupt rise in rental of rice land in Bangchan lies in the nature of the demand for and supply of rice land. Although rents may be surpluses

*[128]

9. Sharp et al, op. cit., p. 171. In this preliminary study, the cost of family labor was imputed (at going wage rate) from labor requirement based on acreage, the cost of the use of the operator's own land was imputed from going rent rate, and the depreciation cost was calculated by dividing the original cost of equipment by their respective expected length of service.

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178 from certain points of view, or for certain purposes, or
427 subject to certain interpretations, they are to the indi-
434 vidual producer no different from any other money expense.
435 They do not arise as a surplus from his own operations;
they are a cost rigidly imposed upon him by the competition
of his rivals for the use of the rent-yielding property.
They figure in the same way as do wages of labor and the
interest of capital in his computations as to the most ad-
vantageous proportion between the factors and as to the most
*[128] advantageous scale of operations.[10] Naturally, we are now
dealing with contractual rent, which is the actual sum paid
by the tenant to the landlord for the use of the land, not
the hypothetical economic rent of the classical economists.

*243 The preliminary study revealed that there was in
464 1948 under-employment on some Bangchan farms in terms of
rai worked per worker. This was shown by comparing the
number of rai worked per worker on 94 farms employing no
hired laborer with the number of rai worked per worker on
*[128] 10 farms employing one or more hired laborers. On the farms
where only family labor was used, the figure was 9.4 ad-
justed rai per worker; while on those farms which used
regularly hired laborers along with family labor, the figure
was 13.4 adjusted rai per worker. (Each rai of transplanted
rice was counted as one adjusted rai, while each rai planted
by the less-labor-requiring broadcast method was counted as
one-half of an adjusted rai.) An assumption was made that

10. Edward Chamberlin, The Theory of Monopolistic Competition (sixth edition; Cambridge: Harvard University Press, 1950), p. 22.

*243 As long as farm under-employment prevails and as
• 434 long as limited opportunity for an alternative occupation
464 is open to farm operators and farm laborers, we have reason to believe that the demand for rice land is rather inelastic. Another important factor contributing to this belief is the operator's concept of cost of producing paddy which seemed to include only explicit rent (actual amount paid to the
[435] landlord) and cash operating expenses. Thus, while our calculation shows that the cost was 6.76 baht per tang or 215 baht per rai in 1948, the figure would be only 1.71 baht per tang or about 55 baht per rai according to the operator's concept of the cost.

*243 Under the conditions of farm under-employment, a
427 tenant, part-owner, or even owner-operator is willing to
464 pay high rent for an additional parcel because a larger
178 worked area would cost him only the additional explicit
435 rent and a small increase in seeds and materials. Unless the extra rented parcel is so large that extra labor must be sought outside the family, he does not have to pay any explicit wage at all for rice production in this additional parcel. Landlord-operators, on the other hand, are under a different situation, for they may rightly be considered land saturated and fully employed. Hence, the individual demand for working land on the part of a landlord-operator is relatively more elastic than those of the other farm oper-
*243 ators. As rent rose from 6.2 tang per rai in 1948 to 8.1
427 tang per rai in 1952, it was observed in Table 26 below that
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[TEXT CONTINUED ON PAGE 148]

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427 Inelasticity of supply for land among land-thirsty operators also varies with different sub-group (tenant, part-owner, or owner-operator) depending upon the degree of land thirst. Thus, supply for land among the tenants would be more inelastic than that of part-owners, and supply for land of part-owners would be more inelastic than that of owner-operators.

427 434 Landlord-operators, on the other hand, are sensitive to changes in rent rates which directly affect their incomes part of which are derived from rents. Although they will have to offer all of their lands either to themselves or to others, the proportions offered vary according to rent rates. If rent is low, they may increase their own working areas for the reason that incomes deriving from farm operation may be higher than prospective incomes from renting out the same parcels. If rent is high, they may reduce their own working areas since they may figure out that incomes from renting out those parcels are higher than the prospective incomes deriving from working on them. It is due to this capacity to adjust the proportion of working area and area rented out that landlord-operators' bidding power may be considered very strong. Other local landlords who are non-operators do not have this same capacity to increase or decrease areas offered for explicit rent. If rent is too low and they want to operate their lands instead of renting them out, they are still not as ready to do as the landlord-operators who already have the facilities for farming. The

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427 neighboring landlords are under the same situation as the
• 434 non-operator landlords. Yet these two groups are in a better position than the absentee landlords, for they are already in the locality. They are used to farming, and at least they do not have to invest on housing if they should choose to operate their own lands instead of renting them out at low rent.

427 [435] It was observed in the preliminary study that rent rates charged by local landlords were higher than those charged by the absentee landlords, the former ranging from six to eight tang per rai while the latter was only five tang per rai.[13] The discrepancy was assigned to the fact that local landlords were in a better position to sense the competition for land among farmers desirous of obtaining more land than were landlords who lived in the city. Local landlords were thus quicker to adjust rent rates to their own benefit.

Another advantage of renting land from absentee landlords was pointed out by a Bangchan tenant who said that he preferred absentee landlords to local landlords. "If you don't want to pay too much rent," said he, " you may report to the absentee landlord that you got a poor crop even though it was the best crop you ever had. You cannot do so with a local landlord, for he knows as well as we know by a glance at the parcel how many tang of paddy we are going to get." "Besides," the man continued, "local landlords often make request after request for your free

13. Sharp et al., op. cit., p. 148.

427 labor which is rather difficult to decline. There are many occasions for such request, for example, draining a pond, clearing a garden, and building and dismantling a house."

So far the arguments seem to point toward the relative leniency of absentee landlords. Condemnations of absentee ownership of land would seem, therefore, to fall wide of the mark from an equity standpoint. There is still another important point, however, that should be considered. Although we do not at present have accurate supporting data, our impression was that rents of rice land do not constitute a significant part of absentee landlords' income while they were a major consideration of the local landlords. If this impression is true, two diametrically opposite ramifications seem to follow. First, absentee landlords accept rents as they come to them and the rents tend to be lower than those accrued to local landlords' land. Second, since some absentee landlords can afford to offer their land at high rent at the risk of having no tenant to work on their land, the rents charged by these absentee landlords tend to be high. In this latter case, high rent rates on absentee landlords' land will induce a raise in the general rent rates in the village. We are now confronted with a rather difficult situation, for the actual outcome seems to depend entirely on the individual compunction of the absentee landlords.

427 Stories about both kindness and maliciousness of absentee landlords were heard in the village. On the one hand, they were looked up to as the people whose help can

427 author's father who gave this man an initial capital of 600
556 baht when he made his start in Bangchan some thirty years ago. He is now a millionaire and a father-in-law of a former top military officer.

427 Again it is the author's impression that, from the viewpoint of the villagers' best interests, the good side of absentee landism seems to outweigh the bad side.

427 Going back to the forces of demand for and supply of
434 rice land, it should be noticed that, as was so often the
435 case, free competition in the classical economist's sense did not exist in Bangchan where rents were often sticky. There was a wide range of different rent rates for fields of almost homogeneous nature as far as agronomic properties were concerned. Preference for prospective tenants was observed to have a personal rather than economic basis even on the part of the local landlords who were found to be most sensitive to rent rates. When a new higher rent rate was to be charged, it was observed that the most plausible excuse had to be found and presented to the tenants by the landlord. An example was the general raise of rent in 1953 when the new land tax was raised from 0.30 to 4.00 baht per rai, whereupon most local landlords immediately raised their rent from seven tang to eight tang per rai. One tang of
[451] paddy, however, was worth nine baht. It is seen, thus, that as a result of an increase of the government revenue of 3.70 baht per rai the local landlords also received an extra 5.30 baht per rai from their tenants who alone had to suffer an increase cost of nine baht per rai.

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423 our informants, the insurance company owned hundreds of
435 rai of land in the vicinity. By spending only 20,000 baht
456 in boosting up land prices, the company thus set the stage
178 for making a large profit through sale of their own land
367 at inflated prices.

178 While the increase in land prices in Zone 1 was
429 attributable to the sudden assumption of residential land
435 prices, this explanation does not apply to the increases in land prices in the other zones which have remained agricultural throughout. Although less spectacular than the case of Zone 1, the rise in land prices in these six zones was also quite abrupt, averaging 560 per cent for the five-year period from 1948 to 1953 (Table 28).

429 Capitalized valuation of these farm lands (Zones
434 2-7) may shed some light on the situation, although there
427 is limitation especially to the cost concept. There are two ways by which a capitalized value of farm lands may be obtained: (1) by capitalizing income from the farm operation left after payment of all factor costs except land, and (2) by capitalizing income deriving from explicit rent of the land.

243 Receipt from one rai of rice land in 1948 may be cal-
435 culated from the crop of 32.1 tang at 252 baht, using that
434 year's average farm price of 7.86 baht per tang of paddy.
423 When the cost, including an imputed return to all labor but
427 excluding rent, of 166 baht per rai is deducted, a residual return to land of 86 baht per rai is obtained for the year.[15]

15. For want of sufficient data, it is assumed that the cost items other than rent remain the same.

243 In 1953, figure for the size of the crop was not
423 available, but we may use the 1948-52 average of 28.8 tang
434 per rai. With the year's farm price of 9.00 baht per tang,
435 receipt may be calculated at 259 baht per rai. Using the
427 same cost, again excluding rent, of 166 baht as in 1948, a residual return to land may be estimated at 93 baht per rai.

Capitalized value of land may be calculated from the formula $v = \frac{a}{r}$ where 'v' stands for capitalized value of land, 'a' for income from the land, 'r' for the rate of interest prevailing in the locality.[16]

When the calculated residual return to land is used, the capitalized value of farm land in Bangchan (Zones 2-7) is found to be 573 baht per rai in 1948, and 620 baht per rai in 1953. When income deriving from explicit rent is used in the calculation, however, the capitalized values become 327 baht per rai in 1948 and 487 baht per rai in 1953.

178 It is interesting to note that capitalized values of
423 land computed from these two different types of income were
434 closer to each other in 1953 (487 baht computed from income
427 deriving from explicit rent as against 620 baht computed
435 from the calculated residual return to land) than in 1948 (327 baht computed from income deriving from explicit rent as against 573 baht computed from the calculated residual return to land). In other words, landlords are now receiving a larger proportion of the residual after payment of all

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[426] 16. The rate of interest of 15 per cent per year is used. This is the minimum going rate with security. Without security, the rate may be as high as 30 to 50 per cent per year.

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factors, except land, at the going rate of return. A more interesting point to note is that the capitalized value of land in 1948 (327-573 baht per rai) was substantially higher by either method of calculation that the average price of farm land in that same year (240 baht per rai), while the capitalized value of land in 1953 by either method of calculation (467-620 baht per rai) was far below the average price of farm land in that same year (1,583 baht per rai).

The situation in 1953 indicates that the price of farm land in Bangchan has been bid up too high. The stickiness of rent rates in the locality mentioned earlier together with the fact that landlords are now receiving a larger proportion of the residual after payment of all factors, except land, at the going rate of return have led us to the belief that the proportionate share of the landlords will be increasing in the near future.

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Remunerations for Farm Work

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• 434 At the beginning of this chapter, four groups of farm workers were mentioned -- the farm operators, family workers, hired laborers, and piece-workers.

The farm operator receives his remuneration for the farm work mainly in the form of farm income, which is the difference between total farm receipts and total farm expenses. It is the reimbursement of the farm operator and owner of the capital for labor and management and the use of capital.

There are several other ways of measuring the operator's remuneration. Net cash return, for example, is the difference between cash farm receipts and cash farm expenses. Here, increase and decrease in inventory are not considered, and neither is the unpaid labor. Averaged over a long period, the difference between farm income and net cash income due to including inventory items in one and not in the other would tend to disappear.

Two most widely used measures of the operator's remuneration, however, are labor income and labor earnings. Labor income is what a farmer receives for his year's work after paying all farm business expenses and interest on the capital invested, and in addition he has a house and farm products used in the household. Labor earnings is labor income plus the value of housing privilege and farm products used in the household.

In the American experience, it is rather difficult to estimate the value of farm products used in the farm

243 household. Although labor earnings is a truer measure of
434 a farmer's return, it is less widely used than labor income because no such estimation is involved in this latter measure and because prequisites are much less important in the United States. On Thai rice farms, however, it is not as difficult to estimate the value of farm products used in the household because generally only one kind of farm product -- rice -- is involved and the consumption of rice, although in large amount, can be precisely determined. To a much lesser extent poultry products may be used, but it is also fairly easy to estimate.

583 In theory, the remuneration for family workers'
465 effort is imputed at the going wage rate on their actual contribution in the farm work, when labor earning is calculated. In practice, however, Bangchan family workers receive in addition to board and lodging a certain amount of cash from their family head who is also the farm operator and who pays this amount from farm net cash return. The amount an individual family worker receives varies according to individual need and often to the whim of the family head. To be sure, there is no such thing as a fixed allowance because yearly fluctuation of farm income does not permit
593 such arrangement. One Bangchan farmer put it this way,
434 "Hired labor is usually more expensive than family labor
465 except in good years, for you can't help giving generous gifts to the family in a good year. This year (1949, the year following a bumper 1948-49 crop) I gave my two daughters

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434 465 593 300 baht for clothing, 500 baht which they spent mostly on a pilgrimage to the Temple of Buddha's Footprint, and 670 baht for two gold necklaces. That's a total of 1470 baht for the two of them. My wife alone took 1,100 baht received from the sale of the early variety, and I don't want to take the trouble to ask where the money went."

It has been observed that farm income varies greatly from farm to farm as well as from year to year. Farm household expense, on the other hand, has been observed to be less variable. Although the remunerations for farm operators and family workers are directly related to farm income, it would seem unwise to discuss farm income without bringing in first the discussion on farm technology and farm organization and management. We propose, therefore, to limit at the time being our discussion of the remunerations of farm operators and family workers to indicating their respective sources only. We shall have occasion to deal with their patterns and magnitudes in Chapter VII, which will be exclusively devoted to income and consumption of farm operators.

465 178 The hired laborer receives his remuneration for the farm work in the form of annual wage which is paid by his employer, the farm operator, according to the provision of the oral contract made before each working season. It was found in 1948 that this annual wage was paid in either cash or kind, and in addition the laborer received free board and lodging and one or two working suits. Of 13 hired laborers covered by the 1948 survey, five were paid a cash wage

243 included in the items of cost of producing paddy, and there-
621 fore we do not have the figure for this item of farm expenses.
433

It was earlier mentioned in the section on occupa-
tional structure in Bangchan that most villagers regardless
434 of their main occupations did perform some piece-work for
464 either main or subsidiary incomes. It is almost impossible,
621 then, to give an exact figure of the number of piece-workers
463 in any one year. For the purpose of this study, however,
we may arbitrarily differentiate between the "professional"
and the "non-professional" piece-workers. Here, the classi-
fication suffers much overlapping -- even more than does the
classification of the occupation of the villagers, for we
cannot even use the concept of the main source of income as
a criterion in this connection. It was mentioned that farm
laborers existed in Bangchan not because of demand for their
work but because they have no opportunity for other occupa-
tions (page 100). Thus, if the main source of income was
used as the criterion for differentiating the "professional"
piece-workers, this group would include, for example, the
old woman described in Case 7 page 69, who after having been
left alone had managed to get a small income from trans-
planting which was the only type of farm work she could
perform. The main source of income was also not a good
criterion considering the fact that most piece-work was
done by family members after their obligation to the family
464 farm had been fulfilled. In a desperate attempt to differ-
463 entiate the professional from the non-professional piece-workers

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There are reasons to believe that newly established indigenous families had tended to take up farming. First, rice growing is probably the only profession that these newly wed couples had been properly trained for.[5] Second, during their nascent period their financial preparation had been oriented toward starting a rice farm. This is best illustrated by a remark of a Bangchan operator whose daughter and her husband were about to start an independent family:

> A (informant's son-in-law) is now (1954) 24 years old. I have known him since 1948 when he was a transient family member of B. A married my daughter C in 1952 and has since been living with me. He is a very diligent man who works even in the dry season -- digging earth and that sort of thing (for his own lampai).
>
> I gave the couple 200 tang of paddy for their lampai for last year's work. I am going to give them the product from 10 rai for this year's work.
>
> Already the couple have accumulated from their lampai the following: two baht weight of gold, lumber enough to construct a farm house, and 100 tang of paddy. I told them not to keep their money in cash. When they receive a certain amount of money, I instruct them to buy durable goods like lumber or buffaloes. But if they want to lend out money, it's all right with me. Any way, they are not to keep cash. By the way, they have loaned out the 100 tang of paddy, so they will have more paddy when that amount is returned with interest.
>
> The couple will leave me next year. They have most of the things they need for starting a family now. In fact they wanted to start out this year, but I asked them to stay on another year.
>
> When they leave me next year, I will give them the customary parental gifts -- one buffalo, one plow, one harrow, one clothing container, and paddy for seed and for consumption.

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5. See the section on training for farm work.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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It is seen that some of these measure farm business success more nearly, and some of them the success of the farm-family enterprise.

• 434 *128 To measure Bangchan operators' remuneration, the author thinks that operator's labor earnings is most suitable.and the next best measure is perhaps the labor income. It was mentioned that Professor Hunt devised labor income as a means of comparing the efficiency of management of individual farms in the same area, practicing about the same kind of farming, and with the same general level of land values and cash rentals. Bangchan conditions, as earlier described, seem to approximate circumstances which Professor Hunt had in mind when he devised this measure.

*243 434 *[128] Table 47 shows frequency distribution of labor income of the 104 sample-farms for the 1948-49 crop year. It is seen that only 57 of these 104 farms produced a positive labor income. Thus, even in the year which many Bangchan farmers considered to be the best rice year in their lives, more than four out of every ten farmers in the sample did not have anything left from the sale of their crop after deducting all farm business expenses and interest on the [427] capital invested. It should be noted, however, that the family still has other incomes accruing to family labor (value of family labor), the use of family owned land (imputed rent), and the use of family owned equipment (interest), as well as the imputed returns to family labor deducted in the calculation of labor income. The family also has the subsistence production which it draws from the farm.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 47

FREQUENCY DISTRIBUTION OF LABOR INCOME
OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

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Class Intervals	Number of Farms
baht	
9,000 - 9,999	1
8,000 - 8,999	0
7,000 - 7,999	0
6,000 - 6,999	1
5,000 - 5,999	2
4,000 - 4,999	2
3,000 - 3,999	7
2,000 - 2,999	6
1,000 - 1,999	12
0 - 999	26
-1,000 to -1	25
-2,000 to -1,001	12
-3,000 to -2,001	3
-4,000 to -3,001	4
-5,000 to -4,001	2
-6,000 to -5,001	00
-7,000 to -6,001	0
-8,000 to -7,001	0
-9,000 to -8,001	1
Total	104
Mean	356 baht
Median	212 baht

243 Of 47 farms which had negative labor incomes, 37
434 were in the class interval of from -1 to -2,000 baht, 9
[435] from -2,001 to -4,000 baht, and one -- the least efficient as far as this measurement is concerned -- produced as low a labor income as -8,006 baht. This last farm had to support a large family of eleven members. With an acreage of 40 rai, which was rather small relative to the size of the family (another family of ten was operating a 110-rai farm in that same year), it was natural that this farm did not have much rice to sell.

243 In figuring farm expenses, we intentionally left
434 out the dwelling and included as farm buildings only the
342 ones that housed the buffaloes, farm equipment and materials.
[427] The main reason for this omission was that there was a wide
[435] range of dwelling facilities in Bangchan -- from a teak building valued at 30,000 baht to a dirt floor thatched shack valued at no more than a few hundred baht. Besides, rental for a dwelling in rural areas of the country is practically unknown. Since a family living in the village must have their own dwelling regardless of their occupation, it was considered in this study that dwellings should be separated from farm investment. This consideration was further substantiated by the fact that when a family gives up farming they continue to live in the dwelling while all the farm equipment may be sold.

243 When the charge for dwelling is dispensed with for
434 the reasons given above, the only difference between labor
433

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 income and operator's labor earnings lies in the value of
434 farm produce consumed by the family. Earlier, five kinds
433 of produce were listed -- rice, fish, eggs, fruit and vege-
[235] tables. For technical reasons, we consider only rice and
eggs as products of the farm, rice being the primary crop
[226] and eggs the secondary crop. Fish is not considered a farm
product because Bangchan villagers fish for consumption,
not for sale. Besides, fishing is done by every resident
of the village, farmers and non-farmers alike. It is thus
[244] more of a way of life than an economic enterprise. The same
[245] is true for fruit and vegetable growing which is done in a
very small scale.

If we agree on considering only rice and eggs as the products of the farm, it is not difficult to estimate the amount and value of farm produce consumed by the family for Bangchan operators can readily give a rather accurate information on their rates of consumption of these two products. Thus, under Bangchan condition the figure for operator's earnings is not as difficult to obtain as it appears to be the case among most American farms. The frequency distribution of operator's labor earnings of our 104 sample-farms is given in Table 48. It is seen that only 17 farms produced negative remuneration for the operator computed by this method as against 47 farms by the labor income method. As Professor Warren has said, of these two, labor earnings is a better
[171] measure of profits. It is especially so in Bangchan and perhaps in other agricultural regions in Southeast Asia

[TEXT CONTINUED ON PAGE 306]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 48

FREQUENCY DISTRIBUTION OF LABOR EARNINGS
OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

Class Intervals	Number of Farms
baht	
11,000 - 11,999	1
10,000 - 10,999	0
9,000 - 9,999	0
8,000 - 8,999	0
7,000 - 7,999	2
6,000 - 6,999	4
5,000 - 5,999	4
4,000 - 4,999	7
3,000 - 3,999	7
2,000 - 2,999	18
1,000 - 1,999	27
0 - 999	17
-1,000 to -1	12
-2,000 to -1,001	3
-3,000 to -2,001	1
-4,000 to -3,001	0
-5,000 to -4,001	0
-6,000 to -5,001	1
Total	104
Mean	1,980 baht
Median	1,685 baht

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 where farm families are relatively large and agricultural
434 workers are usually under-employed.
433
[171]

Since farming in Bangchan is basically a single-crop enterprise, the major crop (rice) heavily outweighing the secondary crop (poultry), we are in a position also in this study to use another measure of success -- returns from rice over the cost of producing it -- without entailing the difficulty of cost allocation. We simply charge all items of expenses including the values of family labor and the operator's labor to the rice enterprise, the only exception being the value of paddy consumed by chickens and/or ducks. By returns from rice is meant the market value of the total harvest of paddy. This measure is similar to the net farm income when the farm products used by the family are included in the receipts (in some states of the United States this is done, but ordinarily not, the main reason for leaving these out being the difficulty of imputing accurate money values to them).

243 Tables 49 and 50 shows respectively the frequency
128 distribution of the cost of producing paddy per tang and
434 per rai for the 104 sample-farms. It is seen that the coef-
433 ficient of variability of the cost per rai is lower than that of the cost per tang, the former being 19 per cent and the latter 27 per cent. This is to be expected, for on the basis of such a unit area as rai there are several items of cost that are somewhat fixed -- seeds, rent, human and buffalo labor in all steps of field preparation, planting, and

[TEXT CONTINUED ON PAGE 309]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 49

FREQUENCY DISTRIBUTION OF COST OF PRODUCING ONE TANG OF PADDY OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

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Class Intervals	Number of Farms
baht	
4.00 - 4.99	14
5.00 - 5.99	21
6.00 - 6.99	19
7.00 - 7.99	25
8.00 - 8.99	13
9.00 - 9.99	6
10.00 - 10.99	2
11.00 - 11.99	2
12.00 - 12.99	1
13.00 - 13.99	0
14.00 - 14.99	1
Total	104
Mean	6.76 baht
Median	6.92 baht
S.D.	1.87 baht
Coef. variability 27 per cent	

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 50

FREQUENCY DISTRIBUTION OF COST OF PRODUCING ONE RAI OF PADDY OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

Class Intervals	Number of Farms
baht	
120 - 139	2
140 - 159	8
160 - 179	7
180 - 199	19
200 - 219	22
220 - 239	23
240 - 259	11
260 - 279	5
280 - 299	4
300 - 319	0
320 - 339	2
340 - 359	1
Total	104
Mean	215 baht
Median	215 baht
S.D.	41 baht
Coef. variability	19 per cent

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

harvesting. The only cost item that appears to vary with the size of the crop is the cost of threshing and winnowing which does not figure prominently in the cost of producing rice.

Table 51 shows the frequency distribution of returns over cost of producing rice of our 104 sample-farms.[5] It is seen that there were 79 farms which, according to this measure, produced some profit ranging from 0 to some 10,500 baht, while there were at the same time 25 farms which produced a loss ranging from -1 to some -6,500 baht.

Factors Affecting Farm Profit

Farm profit depends on a number of factors. Among these are listed below by Hart and Warren as "what makes a farm pay."[6]

1. Prices
2. Quality of land
3. Size of business
4. Rates of production of crops and animals
5. Selection and combination of enterprises
6. Labor efficiency
7. Farm layout, farmstead and building arrangement

[TEXT CONTINUED ON PAGE 311]

5. Returns over cost was calculated by multiplying the rice crop by farm price and deducting the total cost from this total. Method of computing cost was described on page 143.

6. V. B. Hart and S. W. Warren, Farm Management Manual.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 51

FREQUENCY DISTRIBUTION OF RETURNS OVER COST OF PRODUCING PADDY OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

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Class Intervals	Number of Farms
baht	
10,000 - 10,999	1
9,000 - 9,999	0
8,000 - 8,999	0
7,000 - 7,999	1
6,000 - 6,999	1
5,000 - 5,999	4
4,000 - 4,999	4
3,000 - 3,999	6
2,000 - 2,999	11
1,000 - 1,999	20
0 - 999	31
-1,000 to - 1	12
-2,000 to -1,001	88
-3,000 to -2,001	3
-4,000 to -3,001	0
-5,000 to -4,001	1
-6,000 to -5,001	0
-7,000 to -6,001	1
Total	104
Mean	1,190 baht
Median	887 baht

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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8. Efficiency in the use of farm equipment

9. Markets and marketing

While these nine points may appropriately be considered as standard factors affecting farm profit, it is obvious that the extent of their respective effect varies with location, type of farming, and the stage of technological development of the area in question. In Bangchan, we may immediately rule out as an important variable the selection and combination of enterprises because there is only one enterprise -- rice. Farm layout, farmstead and building arrangement is also a rather insignificant factor as a variable affecting the profit of rice farms, although we have earlier noted that parcelization may have increased the cost of labor and irrigation. Efficiency in the use of farm equipment may also be considered as an insignificant variable factor in Bangchan; for the equipment units are usually small although numerous, hence farm equipment tend to be fully utilized.

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Labor efficiency needs more explanation than mere passing comment. Table 52 shows that labor constitutes 51 per cent of the total cost of producing rice. It should be noted, however, that of 3,743 baht that goes to labor for each farm only 485 baht is actually spent, the balance of 3,258 baht being imputed values of family's labor and the operator's labor. It is seen, then, that a reduction in labor cost would involve largely only imputed values. It certainly will correspondingly reduce the total cost

[TEXT CONTINUED ON PAGE 313]

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TABLE 52

BREAKDOWNS OF COST OF PRODUCING RICE ON 104 SAMPLE-FARMS
Bangchan, Thailand, 1948
(Total area -- 3,528 rai; total crop -- 112,415 tang)

Items	Total	Average Per Farm	Average Per Rai	Average Per Tang	Per Cent
	baht	baht	baht	baht	
Rent					
Actual	99,500	957	28	0.88	13
Imputed	70,600	679	20	0.63	9
Total	170,100	1,636	48	1.51	22
Labor					
Actual					
Pieceworkers	25,700	247	7	0.23	3
Hired laborers	24,800	238	7	0.22	3
Sub-total	50,500	485	14	0.45	6
Imputed					
Family workers	237,800	2,287	67	2.11	31
Operator	101,000	971	29	0.90	13
Sub-total	338,800	3,258	96	3.01	44
Total	389,300	3,743	110	3.46	51
Seeds, materials	42,600	409	12	0.38	6
Depreciations	73,200	704	21	0.65	10
Interest on investments	84,600	813	24	0.75	11
Grand Total	759,800	7,305	215	6.76	100

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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243 and enhance income from the farm, but it would not sig-
434 nificantly affect the farm family income or income for the
461 family living (see definitions under Headings 7 and 8 of the section on the operator's remuneration and measures of success) unless more land is added.

243 In rice farming, rates of production of crops and
433 animals is reduced to rice yield per rai. At the present
434 stage of technological development in Bangchan, this is not as much a result of management as of nature -- the water condition and the quality of land (in both senses of soil fertility and levels of the fields). Since we already have quality of land as a factor, rates of production may thus be eliminated.

After eliminating factors that are either insignificant or duplicates of other factors under Bangchan conditions, the standard factors affecting farm profit are thus reduced to prices, quality of land, size of business, and markets and marketing. These influences are familiar to students in agricultural economics, and therefore do not need further elaboration here.

[171] In addition to these standard factors, there are certain special factors affecting farm profit which the author suspects to be appropriate not only to Bangchan but also to all other rice producing areas of Southeast Asia. These are the differentials in paddy prices, in rates of interest, rentals, and wage.

243 426 432 Differentiation in paddy prices is limited to cases where farmers have received in advance the payment for paddy to be delivered at harvesting time. This is a common practice which is called in Thai "tog khao" (lit., fall rice). Usually, the advance price received by the farmer is about half or not more than three-fifths of what he would normally receive. Considering that cash is usually received about a month or two before the delivery of the paddy, it would seem that tog khao is a kind of loan with as high a rate of interest as from 25 to 50 per cent per month.

243 426 465 A similar practice is adopted with respect to advanced payment for piecework, where pieceworkers are committed to uproot, transplant, or harvest at about half of the prevailing rates. This is called tog raeng (lit., fall labor).

243 128 427 Tables 24 and 25, in the section on land tenure of Chapter III, show a wide range of rental rates of rice lands which have not demonstrated any marked difference in crop producing ability.

Rates of interest in Bangchan vary greatly from 0 to 10 per cent per month. This topic will be discussed more fully in later sections of this chapter.

243 434 556 The important point that should be observed in connection with these differentials in paddy prices, rates of interest, rentals, and wage is that it is the less affluent farmers who usually bear the burden of higher costs due to these practices. Thus, these differentiations serve only to widen the gap between poor and well-to-do farmers.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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recovery of a boat stolen, 390 baht on "laxity", and 30,000 baht on a trip to Mecca. The gifts to offspring included only gifts presented when offspring left the family to start an independent family of their own.

Special Receipts

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By special receipts we mean major items of receipts in addition to those regularly obtained from crops, labor, rent, and interest on loans extended. These are counterparts of special expenses, and informations about them were obtained from the 96 sample-families in the same manner and almost concurrently. Examples of these special receipts are: sales of land, gold, and major farm equipment; loans obtained, full or partial settlement of loans extended; gifts and remittances; and odd receipts like those from government lottery prizes, running a gambling house, and laxity practices. Special receipts of the 96 sample-families during the period from March, 1948 to February, 1953 were shown in Table 58.

Some of these items of special receipts need explanation. Land sold by two farm operators were sold for cash needed for loan repayment. It is perhaps worth noting that one of these two operators was in the habit of heavy drinking and had been in recent years spending about two thousand baht annually on liquor alone, while the other was in the habit of gambling. All five operators reporting sales of gold gave the reason for the sale that cash was needed to either buy farm equipment (buffaloes) or to repay

[TEXT CONTINUED ON PAGE 333]

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TABLE 58

SPECIAL RECEIPTS OF 96 SAMPLE-FAMILIES DURING MARCH, 1948 -- FEBRUARY, 1953
Bangchan, Thailand

Items	Amount	Number of Families Reporting	Average for Family Reporting	Ranges
	baht		baht	baht
Sale of land	18,700	2	9,350	7,700 - 11,000
Sale of gold	12,150	4	3,038	250 - 6,000
Sale of farm equip.	6,500	5	1,300	500 - 3,000
Loan settlements	1,700	2	850	200 - 1,500
Loans obtained	141,100	29	4,866	400 - 30,000
Remittances	6,200	2	3,100	200 - 5,000
Odd receipts	6,500	3	2,167	1,500 - 3,000
Total	192,850			

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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434 the loans previously extended to them. Among the five operators reporting sales of farm equipment, one sold his part of the joint ownership of an engine in order to buy a new one for his own, three sold their old buffaloes and bought younger ones, and one -- the inventor of the propeller windmill mentioned earlier in this dissertation -- sold windmills and other farm implements he made for sale.

434 The average amount of money received from loan set-
426 tlement during the past five years of 1,700 baht appeared
432 to be too small considering that the amount of loans ex-
511 tended by the sample-families during the period was as high as 51,630 baht and that the ability of these sample-families to settle loans extended to them was 101,530 baht out of a total of 141,100 baht. An explanation for this lies in switching of debt responsibility. At least one case was known where an operator, who was in debt to a fellow farm operator, sold a parcel of land to a third party at 11,000 baht. This buyer, apparently not having enough cash, arranged that he would assume responsibility for the amount of 8,000 baht which the seller of the parcel owed the other farm operator and would pay only the balance of 3,000 baht to the seller in cash. Strictly speaking, the creditor should report that he received a certain amount as loan repayment (actually, 4,000 baht for the principal and 4,000 baht for interest of 25 per cent for four years) and spent this same amount on loan extension. Actually, however, only the seller of the parcel reported that he had sold a

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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426 parcel of land and had cleared off his debt. The creditor
432 did not report anything about this deal, for he really did
511 not receive a cent out of the arrangement.

434
426 Loan obtained is the largest item of special receipts
511 involving 29 farm operators and 141,100 baht. The following were the purposes of the loans sought as given by borrowers: land purchase, 7 cases; buffalo purchase, 3 cases; sponsoring rituals, 3 cases; to partially defray ordinary household expenses which exceeded cash incomes especially in years of poor crop, 16 cases; and to cover major medical expenses, 2 cases (two operators listed two combined purposes of the loan, hence the total becomes 31 instead of 29 if there is only one purpose for each case).

Net Accumulation of Assets

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511 Figures of net accumulation of assets within a certain period are valuable to the understanding of the economic conditions of farm operators in that they show the economic achievement, or the internal saving, of these operators. In order to obtain exact figures, however, it is necessary that we have complete inventories of the farm families at the beginning as well as the end of the period. Since our data on inventories of the sample-families for 1948 and 1953 are incomplete, especially we are totally unaware of the quantitative debt situation in 1948, we cannot use the simple method of subtracting the net worth as of February, 1953 from that as of March, 1948 to determine net accumulation

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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of assets during this five-year period. At best, we can only attempt at estimates based on certain known figures from records of special receipts and special expenses described in the two preceding sections.

Assets may conveniently be broken down into land, dwellings, household equipment, farm buildings, farm equipment, livestock, supplies, gold, cash, and accounts receivable (payable). We shall see that some of these may be left out of consideration in our method of calculating net accumulation of assets from records of special receipts and special expenses during March, 1948 and February, 1953.

It was observed that all the sample-families used the same dwelling throughout the period. Any cash outlay in repair should not be considered as an increase in inventory at least as average over the whole sample, for it can be reasonably assumed to be an amount necessary to maintain the dwelling at its original value at the beginning of the five-year period.

Assuming no change in technology, as was observed to be the case, farm buildings and farm equipment can also be left out of consideration for the same reason as the case of dwellings. It was observed that farm operators in Bangchan kept no more farm equipment than necessary. New purchases can thus be assumed to be replacement for worn-out equipment, and should not be considered as inventory increase, again when averaging over the whole sample.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

The only livestock kept on rice farms other than buffalo, which were included under consideration of farm equipment, are chickens and ducks, which are raised "naturally." It was earlier mentioned that the size of the flock was more or less constant. Livestock, therefore, did not figure in significant inventory changes, and can also be left out.

The only item of supplies on rice farms is paddy stock. This is used up and sold out each year. For more or less the same size of farm, and spreading over a series of five years, a difference in the average amount of paddy stock at about the same time of the year in 1948 and in 1953 would not figure significantly in inventory change.

It was also already mentioned that rice farmers did not want to keep cash at their homes for fear of robbery, and that any person receiving a large amount of cash quickly passed the money on to others. We can therefore assume that the amount of cash on hand at the same time of the year does not vary much. Cash, then, may also be left out of consideration.

Of the items of assets enumerated above, there are now to be considered only land, household equipment, gold and accounts receivable (payable). In all purchases of land, gold, and household equipment, only the cash paid was recorded and considered as assets accumulated. For example, when an operator purchased a parcel of land at 7,000 baht and paid the down payment of 1,000 baht, only the 1,000 baht

434 was considered as spent in land purchase. If, however, 432 he made another partial payment of 2,000 baht during the 511 period covered by the study, a total of 3,000 baht was considered. Since purchases of gold and household equipment are normally made with cash, a total of cash spent on these three items (land, household equipment and gold) would seem to fairly well indicate the extent of internal saving of each family. The assumption here is that one would not 434 426 borrow money to buy gold or a gun. With this correction 511 the figure remaining will represent a change in net assets, if we can assume no other changes in the debt situation. For those who bought these assets, it is very unlikely that any increase in outside debt occurred. The reason for this belief lies in interest rate differences: any person with some cash (which may be borrowed at low rate of interest in case he was about to buy land) would rather settle his high interest bearing debts first before buying household equipment or gold or making down payment for land. For those who did not buy these assets, some increase in debt for consumption purposes may have occurred. Both groups may have decreased debts during this period. The most likely assumption is that those buying land experienced a net decrease in debts other than those incurred in buying land, while those not buying such assets experienced a net increase in debts. The balance was probably one of some increase in debt in the village. Therefore, although these [454] figures for net accumulation of assets provide a fair

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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426 representation of internal savings in the community, they
454 probably overstate this increase somewhat.
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When calculated in the manner outlined above, the
511 net accumulation of assets of our 96 sample-families was
434 found to total 84,942 both during the period from March, 1948 to February, 1953, averaging 885 baht per family per year. The frequency distribution of this accumulation of assets is shown in Table 59.

It is seen that of 96 sample-families, 90 had positive accumulation while only 6 had negative accumulation. Fifty-six or more than half of the total number of families studied had an accumulation of assets in the class interval between 0 and 999 baht. The highest amount of accumulation was found to be 9,000 baht, while the lowest was -10,470 baht.

We should examine the figures of Table 59 more closely before drawing a sweeping conclusion from the mere fact that 90 out of 96 sample-families had positive accumulation. In the first place, the raw data show that of the 56 families reporting accumulation in the class interval of 0 - 999 baht, there were 42 families whose accumulation was 0. Thus the number of families with positive accumulation was really not 90, but actually 48 or only half of the total sample-
[435] families. Besides, consideration must be paid to the fact that gold is not only a kind of security but also an article of prestige as well, and a gold necklace of 15 - 30 gram weight valued at 500 - 1,000 baht is usually worn by a rural Thai who can afford one. When a person reappears in the

[TEXT CONTINUED ON PAGE 340]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 59

FREQUENCY DISTRIBUTION OF NET ACCUMULATION OF ASSETS*
BY 96 SAMPLE-FAMILIES
Bangchan, Thailand, March, 1948 -- February, 1953

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Accumulation in Baht	Number of Families
9,000 - 9,999	1
8,000 - 8,999	1
7,000 - 7,999	2
6,000 - 6,999	1
5,000 - 5,999	1
4,000 - 4,999	3
3,000 - 3,999	3
2,000 - 2,999	9
1,000 - 1,999	13
0 - 999	56
-1,000 to -1	2
-2,000 to -1,001	0
-3,000 to -2,001	0
-4,000 to -3,001	0
-5,000 to -4,001	1
-6,000 to -5,001	1
-7,000 to -6,001	0
-8,000 to -7,001	1
-9,000 to -8,001	0
-10,000 to -9,001	0
-11,000 to -10,001	1
Total	96

Mean . . . . . 885 baht
Median . . . . . 113 baht

* Includes net purchases of land, gold, and major household equipment.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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434 village after long absence, his achievement will be judged not by the words from his mouth but by whether he has less or more gold than the time he left the village. The importance of gold as a prestige item being as it is, it is not surprising at all to see that a farm operator who did not have any gold will tend to buy a necklace when he receives a lump sum from the sale of rice although he knows that the amount would not last until the next harvest even without that extra expense on the necklace. When this farm operator ran out of money say in July or August, he would rather go into debt than part with that necklace if it really is his only adornment. Tables 57 and 58 show that within the five-year period there were 48 families buying in gold as against only four families selling out gold and that the average for those buying in was 1,341 baht per family while the average for those selling out was 3,038 baht, indicating that when financial pressure arose it was the families having more gold than necessary for display that tend to sell it. Realizing this situation, the author thinks that it is justifiable to give an allowance of about 1,000 baht for gold purchased for prestige purposes. If we agree on this point, there would remain only 34 families demonstrating accumulation of wealth, possibly through internal savings.

Debt Situation

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511 In order to understand the debt situation in Bangchan, it is necessary to distinguish debts created by purchasing goods on credit, which we shall henceforth call credit

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426 Thus, figures of total debts alone are almost meaningless
432 unless they are itemized and the date when such accounts
+128 are outstanding is specified.

*128 Cash Situation and Role of Paddy

• 434 It is not the purpose of this study to quantify the cash situation in the village. Even mere estimation would already be too ambitious a task for a study of this nature. We propose, therefore, to give only an outline of the cash situation with the hope that it may serve as background information for further research along this line.

434 1. Extent of money in circulation

a. Incoming

Village net exportable rice: Total crop -- seeds (1 1/2 tang per rai) -- amount consumed by the family (30 tang per man-unit) -- feed or amount consumed by poultry (4 tang per chicken-unit: rooster, 1 unit; layer, 1 unit; chic, 1/4 unit; duck, 1 unit).

Village net exportable poultry products: Total egg production -- amount locally consumed, and total young roosters (7 months old) -- amount saved for breeding purposes.

Money regularly earned from outside sources: wages and salaries (teachers, headmen, janitors, workers on highways, and other workers drawing pay from outside sources); rentals (paid to village residents owning lands in other villages); remittances from outside; dividends if any.

Exportation of other products: mushroom, lotus.

Loans obtained outside the village.

Settlement of loans extended to outsiders (very limited, if any at all).

Sales of lands, gold and jewelries, capital goods to outsiders.

434 Cdd receipts: lottery prizes, gambling, etc.

b. Outgoing

Imports: Several items of food, clothing, stimulants, medicine, toilet, fuel; building materials; buffaloes, farm implement, farm materials; gold and jewelries and other articles of adornment; stationary (very limited); ordination and other ritual items.

Outsiders' regular earnings in the village: rentals of land owned by outsiders, interest on loans and equivalent extended by outsiders, wage paid to outsiders (limited to peripheral areas).

Taxes, contributions and fees: land taxes, fees and contributions paid to outsiders.

Purchases of lands owned by outsiders.

Settlement of loans extended to outsiders.

Investment outside the village (one Bangchan resident owns shares of an electricity concern in Minburi totalling 5,000 baht, the same person had invested a total of 10,000 baht on a fishing enterprise in a coastal town).

Remittances: for educationof children sent to Bangkok.

Travelling expenses and pilgrimage.

434
458 2. Seasonal fluctuation of money supply

Money supply fluctuates very highly in the village because of pronounced periods of sale of paddy and of the method of payment for it. There are two periods of sale: during late December and March, and during July and November. There is practically no sale between March and July because canals are impassable during this more or less dry period. Actually, it is dry from March to May; after that although rain has started, the water level in the canals is not high

434 458 enough for efficient movement of paddy.

The general practice was that right after harvest immediate sale of paddy was necessary for settlement of credit purchase accounts and rentals. Another sale was perhaps necessary a few days later for living expenses which had been postponed during the cash-scarce [796] period before harvesting. Then another sale might be made in order to have cash to pay for building materials needed for repair work which was usually done during this time. Just before March a final sale for this first period was made in order that the family may have cash enough to last through July. The money was to cover contributions to various rituals to which the family had already been invited, and perhaps to cover ritual sponsor by the family itself. Besides, there was still need for cash for each family member to carry around during this period of festivals.

243 434 458 Villagers said that few farm operators had any paddy left for sale in the second period (July - November). This was contrary to our findings as shown later in Table 65. Perhaps, they were thinking of conspicuous sales of large amounts by farmers having say over 500 tang of paddy for sale in the second period.

* [128] During the last few days of March, 1953, when paddy sale had apparently ceased, we made a round call covering the homes of all 96 sample-families and checked the amount of paddy on hand as of the end of March.

[TEXT CONTINUED ON PAGE 360]

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TABLE 65

FREQUENCY DISTRIBUTION OF INDICES OF CAPITAL FORMATION POTENTIAL OF 96 SAMPLE-OPERATORS
Bangchan, Thailand, March 31, 1953

Class Intervals tang	Frequency
2,000 and over	1
1,000 - 1,999	1
900 - 999	1
800 - 899	0
700 - 799	2
600 - 699	0
500 - 599	1
400 - 499	6
300 - 399	5
200 - 299	8
100 - 199	15
0 - 99	22
-100 to -1	25
-200 to -101	9
Total	96
Mean	145 tang
Median	65 tang

• 434

*243
*128 This was one of the easiest jobs of the whole study.
433 There were few cases where we did find anybody at home
434 and there were many more where only young children
[574] were seen. Since a Thai farm home is considered an open house to fellow villagers, we simply took liberty of walking right through and made an inspection by ourselves. Thus in a period of less than a week we were able to secure the figures of paddy stock on hand of every single operator in the sample.

The amount of paddy stock alone simply indicates but not represents sale in the second period, for a certain portion must be saved for seeds, consumption and feed. It is rather simple, however, to calculate the amount saved, for we were already in possession of work areas from which the amount of seeds may be estimated and we knew the size of the family (in terms of both actual number and consuming units) from which consumption may be figured.

*243 In this second period, sale was made when the
432 farmer thought the price was high enough. Usually,
434 the prices of paddy were about 15 - 30 per cent higher during this period than in the first period when supply was high. The rate of shrinkage should be taken into consideration, however, for prices are expressed in volume. It is rather unfortunate that we do not have any official record for this vital rate of shrinkage. In our daily log, however, the following testimony appears:

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Farmer A: "I put my paddy in the warehouse in the first half of the second lunar month (December 17-31, 1952). In the second half of the fourth lunar month (March 1-15, 1953) I sold it (and thus measured it ag in). I found that within these two and a half months of every 100 tang only 87 tang remained."

"Judging from experience, paddy starts decreasing its size and weight through the process of evaporation since the time of harvesting, and it is not before July that it becomes dry enough to retain its size and weight thereafter."

Farmer B: "Is it not possible that your 13 per cent loss was due to the chickens?"

Farmer A: "No. During that time (December-March) the chickens were well fed. There was a lot of paddy scattering in the home yard. They would not bother going up into the warehouse (mat bins)."

C (of Cornell group): "Lazy chickens might feed right in the mat bins with plenty of paddy."

Farmer A: "I don't think so. Lazy chickens would not take the trouble to fly. They'd rather prod around the home yard."

Another reason for sale during this second period, in addition to good prices, was a prospect of good investment, mostly loans, mortgages, or land purchases.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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432 seller of the land did not show up until the next morning. Recruit had to be made for guns and men to guard the money for that whole long night.

3. Scarcity of money—

243 434 Scarcity of money exists in Bangchan because there is, relative to the demand for purchased goods and services, only a small margin between the price received and the cash outlay of producing paddy. Another reason is that most farms are too small, thus yielding small net cash incomes to the majority of farm operators in the village. Small incomes of farm operators who constitute the core of village economy means also small incomes of the rest of the village population whose financial condition directly or indirectly depends on incomes of farm operators.

426 458 Scarcity of money is directly evidenced by shortage of money during theperiod from July to December. It is also indicated by high rates of interest on credit purchases and loans sought in the village.

434 454 The problem of scarcity of money has been rendered more acute by the fact that affluent farmers do not like to keep cash at home or put it in liquid form such as in saving bank in the nearby market town, but prefer to invest it in a more or less non-liquid form such as loans or land purchases. Some of those who had accumulated a large amount also tend to spend it on sponsoring of rituals costing as high as several

[796]

434 454 796 thousand baht to more than ten thousand baht which is a real drain on the village cash supply.

These huge expenses are, however, partially compensated by such items as loans sought from outside or sale of lands and other assets. It cannot be expected, however, that these items would provide enough supply of cash to bring down the rate of interest in the village.

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4. Role of paddy

*243 436 Paddy is extensively used in the village as a medium of exchange. It is used in both small transactions of a few baht and large transactions of several thousand baht. Thus paddy stock may almost be considered as equivalent of a bank balance.

*243 433 436 454 The most important consumption uses of paddy are as seeds and for human consumption. In order to make it really comparable to a bank balance, allowance must be made for the amount necessary for seeds and human consumption although the amount for chicken feed may be dispensed with because the farmer may choose to drop his poultry enterprise. On this basis, we have arbitrarily coined a term "index of capital formation potential with present levels of living" to represent the amount of paddy in tang which is left at the operator's disposal at the end of March after allowance for seeds and family consumption has been made. No allowance is made for special consumption expenses such

*128 *243 433 436 454

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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CHAPTER VIII

SALIENT FEATURES OF ECONOMIC PROBLEMS OF BANGCHAN

*128 Problems of economic significance have been constantly brought out during the course of discussions in Part I and Part II, some explicitly and others implicitly. In this chapter we shall undertake to restate these problems and summarize their salient features.

Low Incomes

*243 ● 434 Data earlier presented show that the basic problem of Bangchan is that incomes of farm operators are low. Low income is due on the one hand to low return from rice, and on the other to limited earning opportunity from other sources.

Return from rice depends on yield, cost, price received, and size of the farm. Among these four factors, yield did not appear to be an immediate problem contributing to low return of Bangchan farms, since a five-year average of 28.8 tang per rai for Bangchan can be favorably compared to those of most of the other rice growing areas in the country. Yearly fluctuation of yield, nevertheless, shows that there is room for yield improvement through application of fertilizer, use of better seeds, and more efficient control of water supply.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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The cost of producing rice in Bangchan of 6.76 baht per tang of paddy in 1948 (according to our method of calculation earlier described) appears to be rather high in relation to an average price of 7.86 baht received in the same year. A net gain of 1.10 baht per tang of paddy seems to be inadequate with an average annual output of 1,081 tang of paddy per farm; even though every farm operator still has in addition incomes for family labor (in terms of value of family labor including himself) and from ownership of farm equipment (in terms of interest), and some operators who work on their own land still have additional incomes from ownership of land (in terms of implicit rent). As things stand at the present, this calculated cost can hardly be reduced in the near future unless there is an abrupt change in technology.

Many Bangchan operators appeared to thrive well under this condition of high cost because about three-fourths of the total cost of production was imputed and did not require an immediately cash outlay. Some of these cost items were hidden in the form of gradual depreciations which were not actually provided for each year. These would certainly be realized, however, when for example buffaloes died or equipment broke down. Even the imputed cost for family labor could not indefinitely be postponed. Family workers did not demand a lump sum payment like wages for laborers, but they had to be fed and clothed, and certainly personal expenses had to be allowed for them. Some

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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243 Some farmers had artificially reduced their operational cost by
474 utilizing free labor of transient members of the family,
464 who would not stay long if they were not adequately taken care of. These farmers would have to resort to pieceworkers or hired laborers when transient members decided to leave them.

243 The farm price of paddy was adversely affected by
434 the government control of rice export. It was estimated
655 that huge profits of no less than 100 per cent had been made each year by the government through its monopoly over and later control of rice export and foreign exchange control. This will be dealt with separately later in this chapter.

243 Although the average size of farm of 30.7 rai for
474 Bangchan can be favorably compared to the average of 23.1
423 rai for the Central Plain, this does not mean that size of farm is not a problem contributing to low returns from rice.
[444] It was pointed out earlier that there was a condition of disguised unemployment among Bangchan operators. Small size elsewhere simply indicates the widespread nature of the problem of disguised unemployment among farm operators in the Central Plain.

243 Limited earning opportunity for incomes from sources
434 other than rice is due to the fact that at the present stage of technological development no other crop can be profitably grown in rotation with rice because of agronomic limitations.

243 The inundation period from the middle of September
434 to early December, during which time no work is needed on
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243 the rice enterprise, cannot be devoted to gainful utiliza-
221 tion of labor because: (a) there is not enough space in
414 the homelot, the only place above water; (b) poultry is not
a competing crop as long as it is raised naturally in limited
number. It becomes a competing crop when it is raised com-
[235] mercially. Commercial raising of poultry in Bangchan is
handicapped by locational reasons (far from market and far
from sources of feeds other than paddy). It is further
handicapped by a higher chance of contamination which is
true in such a geographical condition as prevailing in Bang-
chan; (c) another factor limiting an opportunity for growing
a secondary crop during this period is that cash is most
scarce in this time of the year and interest rate is highest.
Any cash outlay for investment is thus discouraged. Farmers
who have any cash at all will do much better by straight
lending, or disguised lending in the form of petty trade
on credit putting a high premium on credit purchases of
50 per cent extra on articles payable in two or three months;
and (d) opportunity for wage earnings is also limited during
this period because farmers do not need any help at this
time of the year, and because successive rains prevent
extensive public work and large scale construction.

It cannot be said, however, that there is no possible way for farmers to be gainfully employed during this period of inundation. Researches along this line are needed, ones that should take into consideration details of climatic, technical, economic, and social conditions of the village.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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The lean time from the middle of February to the end of May is devoted by some villagers, mostly young men, to wage earning outside the village. The size of this temporary labor migration depends on the job opportunities, and these job opportunities depend largely on personal contact. Seasonal off farm jobs are: (a) crude carpentry work usually on nonpermanent construction where cheap temporary labor is preferred; and (b) plantation work in the sugar cane region of Cholburi some eighty miles east of Bangkok.

Inherent Excess of Expenses over Incomes

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The prevalence of debts in the form of credit purchases among Bangchan farmers indicates an excess of expenses over incomes. It has been shown that most cash loans were sought to clear high interest bearing credit purchase accounts, although some were for productive purposes. Even in this latter case, it has been observed that farmers usually borrowed no more than an amount that was immediately needed together with cash on hand to pay for the capital investment. This means that after such capital purchases there was less cash for the household and operating expenses, and so there would be a higher credit account to be settled in the following harvest.

Low incomes coupled with relatively high expenses leave little or no room for internal savings.

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The situation is aggravated by an increasing rate of consumption relative to the ability to produce. While

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434 production method and farm organization remained the same throughout, there had arisen in the course of the past four or five years new items of consumption including wrist watches, fountain pens, hair do, Coco-cola, invitation cards, admission to Miss Thailand contest, etc., which demonstrate the operation of the principle of demonstration effect par excellence. It is not difficult to see, then, that any chance increase in cash incomes due to favorable weather and economic conditions tends to be absorbed in consumption.

While consumption correspondingly expands with an increase in income, it does not decline with a contraction of income -- at least not in the same proportion. This is the principal reason for farm poverty in rice growing areas where only a single-crop system is practiced and where fluctuation of crop yield is a normal phenomenon.

As a result, the excess of expenses over incomes
426 tends to persist. High rates of interest also have made this excess greater and greater among those who fail to make proper adjustment in their credit situation. Thus, the less affluent farmers are not only poor but are actually getting poorer and poorer.

Population Pressure

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434 While low incomes and inherent excess of expenses over incomes are basic problems of Bangchan, discussions in the early chapters reveals that there are some factors contributing to the acuteness of the basic problems. One

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among these contributing factors is population pressure.

Disguised unemployment in the case of farm operators and their family workers and actual unemployment in case of farm laborers indicates a condition of over-population in Bangchan in the sense that a certain part of its population can be removed without materially reducing total production in the area.

In view of a continually decreasing supply of fish, it may be said that the situation has reached the point where it not only affects the per capita income of Bangchan residents but actually exerts pressure on means of subsistence. There are several indications of decreasing supply of fish and other marine animals in the village. First, it is the consensus of opinion gathered by our daily informal talk with villagers non of whom was found to hold a contrary view. Second, a passage in our 1948 log, "X is very lazy. Everybody here in Bangchan catches shrimps and makes his own shrimp paste. He alone does not catch shrimps even though he is among the poorest," indicates that purchase of shrimp paste was in 1948 an exception rather than a rule. In 1952, however, it was found that a total of 22.7 kilograms of shrimp paste consumed in a year by an average family, 6 kilograms, or more than a quarter, was purchased. In this latter year, 83 baht worth of fish and 54 baht of fish sauce were purchased by an average family in addition to shrimp paste as against negligible amounts for the same items in 1948 (we did not conduct a systematic consumption

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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made that any program of fish raising in a closed pond, no matter how effective it may be, should not preclude the need for conservation of fish naturally existing in the open canals.

It has been pointed out that Bangchan operators produce 52 per cent of the things they need for ordinary consumption. Thus, rice growing may be seen as a farming-to-reduce-cost enterprise where maximization of profit ceases to be the primary motive of production. It has been pointed out also that rice growing is a losing concern to many operators (in terms of labor income and operator's labor earnings), but the loss has been compensated by the privilege to fish which is open to all village residents. Since the amount of fish caught constitutes the main and probably the only source of protein intake and at the same time a considerable share in the diet of villagers, continually decreasing supply of fish therefore underscores the immediate need for an effective program for fish conservation as a means to prevent the standard of living of the villagers from falling below the minimum level of subsistence.

Over-population in an area of limited job opportunities naturally creates an over supply of labor, which in turn results in low wages. This is further complicated by a wide variation of individual earning from labor of from two thousand baht annually to almost nothing, the latter being the case of transient members of farm operating families.

243 256 433 comprising the by-products of milling -- broken rice, bran, and husk. There is still a further saving when paddy is milled where it is produced, for bran would not have to be moved away from the farm as part of paddy to distant mills and then moved back again to the farm where it is bought back to be utilized as feed.

If not hampered by unnecessary government restriction, small rice mill industry will provide opportunity for local investment to which internal savings among affluent farmers may be channelized. The relatively low capital requirement and the simplicity of operation of small movable rice mills have made it possible for many Thai farmers in the northern part of the country to become successful rice millers, and there is no reason to believe that farmers in the Central Plain cannot do likewise.

Scarcity of Cash and Credit

434 437 An important factor contributing to the acuteness of the basic economic problem of Bangchan is the scarcity of both cash and credit in the village. Bangchan farmers receive cash from the sale of paddy in two periods -- from January to March, and from July to October. Most sales are expedited in the first period, when rentals and credit accounts are expected to be settled. Farmers also need cash for the purchase of goods they have forgone during the previous work season when they had little or no cash. Since there will be no sale of paddy during April - June when paddy cannot be moved through the shallow water level

434 in the canals, some cash is also needed to last the farmers
453 through the festive and merit-making dry season.

Since most of Bangchan operators are farmers whose incomes are barely or not at all enough to cover their household expenses, very few could hold their paddy stock for sale in the second period when higher prices may be expected.

[454] It has been observed that Bangchan farmers do not want to keep cash in their homes for fear of robbery. This is probably another reason for the withholding of paddy from sale in the first period in addition to the prospect of better prices. These few affluent farmers who have some paddy for sale in the second period have to sell it all before the arrival of new crop which often floods the market and forces the prices down.

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[426] Farmers usually arrange that payment for their paddy be made in the market town where they immediately pass most of the cash on to their creditors or sellers of the goods they plan to buy on that date. On the way home, they would stop over at the village stores to settle their other accounts. Thus, by the time they are back at home there is not much cash on hand to worry about. The few affluent farmers would do the same thing in their early sales -- that is, they would sell only a small portion of their crop so that there will be only a small amount of cash left on hand by the time they are back at home. In their later sales, however, these farmers must have a large amount of cash. It has

Despite the availability of fish and of vegetables in the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

The two months of September and October during which the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit and take tripe. A few might go on a pilgrimage. Therefore, in this season, all family members were less often together at the evening meal. Fishing was a continuous occupation, with some preserving and home craft. Jobs such as selling food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

High water caused time-consuming inconvenience only in earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

By November, the earliest varieties of rice matured. Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience of purchased food was greatest, cash was exhausted. With rice money in sight, venders might be generous with credit, but they could navigate only the larger canals, so were not available to many.

There was an important psychological difference between

1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

rice land. Water-ways, however, were public areas, and any convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

Mushroom culture as a side line activity of rice farmers developed during the period when this study was in progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

Relatively few foods were purchased, but some of these, such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

Estimates of mean annual consumption and cost of purchased foods, for 106 households in Bang Chan are shown in Table 1.

The list of purchased foods presented by Janlekha (1955) was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)ma-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23:--Analyst]

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7
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Table 1. Mean Annual Consumption and Cost of Purchased Foods, for 106 Households[1] in Bang Chan, 1953

(Adapted from Janlekha, 1955, p. 316)

Foods purchased	Estimated Amount	Estimated Cost baht[2]
Raw fish	16.6 kg.	83
Fish sauce (fishsoy)	36 bottles	54
Shrimp paste	6 kg.	27
Pork and beef	8.4 kg.	84
Vegetables	1 kg.	1
Onion[3]	11.3 kg.	34
Garlic[3]	11.3 kg.	34
Coconut[4]	196 fruit	292
Chilies, dried	7.6 kg.	53
Limes[4]	80 fruit	16
Tamarind[4]	6.3 kg.	19
Palm sugar[3]	71.4 kg.	152
White sugar	4 kg.	16
Total		865
Average cost per day		2.53
Average cash expenditure per person per day for food		0.44

1. Average size, 5.7 persons.

2. At the time of the study, one baht equaled about 5 cents.

3. Not produced in Bang Chan (Sharp et al., 1953, pp. 295 and 299).

4. Little production in Bang Chan.

262 preserved vegetables which were purchased and used frequently
432 by families participating in the dietary study.

262 The food costs reported by Janlekha (1955) were esti-
435 mates recorded from memory at relatively frequent intervals. The average per capita cost, 0.44 baht per day, was similar to the average cash expenditure of 0.47 baht per person among 11 families participating in the dietary study (based on the average of 4 survey days for each family). Thus, in Bang Chan, cash expenditure for food appeared to be relatively small, i.e. farm families produced a large share of all food consumed. If money were not available to buy, they would still have enough to eat, but it might lack variety. One informant said, for instance, that he usually bought a coconut every other day, but during October, when cash was short, he bought none. Janlekha (1955) considered the estimates obtained for expenditures for fruits and vegetables less reliable than for items purchased more regularly.

262 In Table 2, the percentage distribution of food
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Table 2. Division of Food Expenditures by Food Groups, for Eleven Families that Participated in the Dietary Study, 1953-54

	A 6 families[1] %	B 5 families[1] %
Animal foods	30.8	39.3
Fruits[2]	30.3	26.3
Vegetables[3]	28.7	17.0
Fats and Oils	3.3	8.4
Sugar	3.6	3.5
Pulses, nuts	--[4]	0.9
Spices, etc.	2.7	--[4]
Miscellaneous	0.7	4.5

1. Based on 4 days per family.

2. Primarily coconut.

3. Chiefly non-leafy

4. The dash indicates no purchase or a value of less than 0.1%.

Table 5. Diet Classifications for 75 School Children in Bang Chan, and Percentage of Children with Each Diet Classification who Missed Lunch

(Adapted from Thorangkul, 1957)

Diet classification[1]	Percentage of children	Percentage of children who missed lunch	
Class I	8	Boys	46
		Girls	45
Class II	61	Boys	73
		Girls	68
Class III	31	Boys	81
		Girls	98

1. See text for basis of classification.

vegetables eaten, since items from these two food groups were not commonly eaten as snacks. Note, in the illustrative records presented in translation (Appendix A, p. 98), that the child whose diet was considered to be in Class III did not eat a regular lunch on any of the six days for which records were available, whereas the child whose diet was classified as I ate a regular lunch six times out of seven.

Family Food Shared With Others

Throughout the year families prepared especially good meals for persons who came to work cooperatively with them. Every rice-grower entertained his cooperative harvest crew, some the transplanters. Hired laborers were not usually served such feasts, but the conviviality of the harvest season called for a round of liquor even for them. One harvest dinner for 8 cost 50 baht, plus eels (60 baht) and rice. Cooperative home pounding of rice was still practiced in some households and thought to be fun. In one day enough rice to produce 40 tang (640 kg.) was pounded by groups of 15 to 20 workers; in an evening 20 tang were done. If 40 tang were milled, workers were served a full meal; if 20 tang, a dessert only. Other occasions were fish-pond draining, house raising and repair. Each participant in the fish-pond draining at Household 21 was fed (3)khaaw (3)tom (soupy rice) for lunch and "an enormous supper," in addition to receiving the traditional pot of fish. If good food were not served at these functions people

In Bang Chan when donations for a new school
264 building warranted buying the foundation materials, so that
476 volunteer labor was solicited for their installation, some of
546 the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

782 The spirit-offering, or the portions eaten by a partic-
864 ipant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests.
262 The pork was cut up and eaten with a hot sauce, or put into a
282 "with-rice" dish. It was especially appropriate with liquor.

262 The use of food ritually was not limited to the ceremon-
755 ial season nor to big events. The same purposes underlay the
852 use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

43 The benefits of a (1)ngaan accrued to every participant
554 down to the last worker and contributor according to the degree
796 of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

796 One assistance in the financing was that every invited
876 guest made a contribution, customarily 5 to 10 baht, which
435 helped defray the costs. In 1952, household heads reported these contributions as totalling from 30 to 1,000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (1)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (1)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

435 Some information as to the cost in baht of the larger
796 ceremonies held in 1954, and their scale, was obtained from
[126] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[774] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000. Guests gave 2300.
[583] B: Rite of forgiveness after elopement: a meal, with 5 bottles of liquor.
[184] C: Moslem: 2 buffalo slaughtered. 400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
[583] sugar cane, fruits, sweetmeats and other things. At more modest weddings and the rite of forgiveness for a couple who had eloped, food might differ from the usual fare only by including the three essentials of a wedding: pork, chicken and alcohol.

273 Increased consumption of alcoholic beverages during the
796 ceremonial season was indicated by the sales of one local
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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[574] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

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592
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Table 8. Summary of Economic Conditions of the Two Groups of Households Participating in Dietary Studies

Group and Code No.	Household Members	Land: Rai Worked	Land: Rai Owned	Buffalo[1]	Food Cost[2]: Total	Food Cost[2]: Per Cap.	No. of Priests Fed	Sources of Income
Group A								
222	5	0	0	0	2.96	0.59	0	Labor contractor; hired out as labor; boat repair; fishing; vegetables sold; canal digging.
12	3	12	0	1	2.70	0.90	0	Rice production; occasional work in Bangkok.
215	5	14	0	1	1.59	0.32	0	Rice production; wife, a medium.
67	5	16	6	1-0	2.52	0.50	0	Rice production; eggs sold; road jobs.
2	6[3]	20	0	2	3.97	0.66	3	Rice production; "professional cook".
103	8	47	12	5	2.04	0.26	2[4]	Rice production; eggs, fish, mushrooms sold; buffaloes raised.
Mean		18.2	3.0	1.6	2.37	0.49	0.7	
Group B								
23	8[3]	6	0	1	1.56	0.19	0	Rice production; selling fish and vegetables; masseur.
21	4	25	25	3	1.92	0.48	3	Rice production; headman
16	8	47	47	5	2.70	0.34	2	Rice production; vegetables, fruit sold; road jobs.
25	8	50	50	3	7.97	1.00	2	Rice production; eggs, mushrooms sold.
20	9	66	51	2[1]	2.47	0.27	2	Rice production; ceremonialist; doctor; carpentry; trading; eggs collected and sold.
Mean		38.8	34.7	2.6[1]	3.32	0.45	1.8	

1. The buffalo belonging to Household 67 died during the year. In Household 20, the brother who moved in owned several buffalo, thus the total for Group B was more than the number shown.

2. Average cash expenditure per day, in baht. (One baht equalled about 5 cents) Household 222 received rice as part of wages.

3. Babies born during Round IV were not included. In Household 23, a 12-year old son served as temple boy and was away from home much of the time.

4. Rainy season only, when priests could come by boat; counted as 1 in computing average.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

146 For items used less frequently, the figures are correspond-
262 ingly less than the usual amount eaten. Thus, sweet potato, which is represented as 18 grams per day per person in Group A, actually appeared on 3 records only. One family of 8 persons ate 1200 grams of sweet potato at one meal and a substantial amount later the same day. Most items appear on the lists for both groups, but sweet potato, sweet basil and bananas were included on the list for Group A only, and glutinous rice which is used as a sweet in this area, appears on the list for Group B only. Note that a few common foods account for most of the nutrients in the diets of both groups. These common foods account for only about 80% of the calcium and vitamin A value and slightly less of the ascorbic acid in the diets of Group A. The list for Group B accounts for about 70% of the calcium and 60% of the ascorbic acid in the diets of this group. The variety of green leaves used once or twice only on survey days by Group B, and the number of different seasonal fruits used by both groups in small amounts as snacks, probably account for this.

264 Contribution of Snacks to the Nutrient Content of Diets. -
[259] On the average, 4 out of 5 children had one snack per day,
262 whereas only one adult in 6 did so. The following items appeared most commonly: various kinds of fruit, 40 times (orange 7, banana 6, pineapple, watermelon and mango each 5 times, guava, jujube and Manila tamarind each 2 times, olives, rambutan, rambai, star gooseberry, (2)ta-(1)koo and Thai nutmeg each once,) coconut and bread each 13 times, glutinous rice 8, mung bean 7, truffles 6, products made of rice flour 6 times, and a variety of other items including rice noodles, sweet potato, taro, bean sprouts, lotus stalks, lotus seeds, popcorn, products made of cassava flour, sugar cane, pork and milk from 1 to 4 times each. Salt, and/or palm sugar were
[146] eaten with a number of the snacks. Although they contributed only about 2% of the total calories, and from 1 to 3% of most nutrients, snacks contributed 16% of the total ascorbic acid for Group A and 11% for Group B.

Seasonal Variation in Food Preparation, Meal Patterns, Food Costs and Calorie and Nutrient Value of Foods Eaten

128 In Table 14, a summary including the number of meals
252 prepared, time spent in meal preparation, number of "with-
264 rice" dishes, and cash expenditures for food is given by
[493] rounds, for families in each group.

252 Number of Meals Prepared. - Food was cooked twice on
512 each survey day in 3 of 6 households in Group A and 3 of 5 households in Group B. Heavy farm work or vending which kept the mother away from the house sometimes accounted for once-
[443] a-day food preparation. One housewife who took food to market in Bangkok, cooked food twice a day only during the period shortly before the birth of a child, when she was not vending.

[Text continues on page 79 --- Analysis]

Table 14. Summary Concerning Meal Preparation, by Rounds[1] for Two Groups of Households Studied

Description of Items	Group A				Group B			
	Round I	Round II	Round III	Round IV	Round I	Round II	Round III	Round IV
No. of meals prepared - 2	5	4	4	4	4	4	5	3
- 1	1	2	2	2	1	1	0	2
Range of cooking time, hrs.	0.8-6.0[2]	1.0-2.6	1.3-2.7	1.3-4.0	1.7-3.2	1.4-4.1	2.2-3.1	1.0-3.2
Average cooking time, hrs.	3.7	2.0	1.8	2.4	2.5	3.1	2.8	2.0
Range of no. of dishes prepared	2-8	2-5	1-4	1-4	2-5	2-7	2-6	2-5
Average no. of dishes prepared[3]	5	3	3	3	3	5	3	3
Range of no. of hot dishes	0-3	0-2	0-2	1-3	0-2	1-2	1-2	0-2
Average no. of hot dishes	1	1	1	2	1	2	1	1
Range of no. of mild dishes	2-7	0-3	0-3	0-3	1-3	1-5	1-4	1-3
Average no. of mild dishes	4	2	2	1	2	3	2	2
Range of cash expenditure for meals/day (bahts)[4]	1.53-4.45	0.61-6.30	0.12-4.52	0.66-2.88	0.71-16.24	1.07-11.86	1.12-4.13	0.45-3.47
Average cash expenditure for meals/day (bahts)	3.01	2.96	2.39	1.70	4.85	4.11	2.61	1.36

1. For dates, see Table 7, p. 58.

2. If time waiting for a vender was not counted, the range of cooking time would be 0.8-4.1 and the average would be 3.2 hours.

3. "With-rice" dishes only. Rice is always cooked whenever a Thai meal is prepared.

4. One baht was equal to 5 cents at the time of studies.

257 Another, who had time during Round IV to prepare food twice a
262 day, preferred to prepare more in the morning when she expected
264 to offer food to her son who had just been ordained. In two
512 instances an evening meal was not prepared because the father
525 and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

262 Cost of Food Purchased. - The lowest cash expenditure
495 for food by any household on a survey day was 0.12 baht, for
511 a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year progressed was apparent. Most of the rice was sold at the end
247 of Round III. The cash went for capital investments, not
532 food, during Round IV. With time to drain ponds and to fish
[illegible] intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

164 Calorie and Nutrient Value of Foods Eaten. - The
221 seasonal variation in calorie and nutrient intake of the two
[illegible] groups of families is shown in Table 15. As one would expect, the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 --- Analyst].

cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

At the height of the boom, the demand for rice straw swept many of the fields clean of the stubble usually left there after harvest, thereby decreasing food for the roaming buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralis (1957) were 1) the cash outlay required was small, 2) returns were realised quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralis made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

Food for Homage-to-the-Teacher Rite Performed by a Buddhist Priest Who Was a Traditional Practitioner

Item	Amount	Cost in Baht	Item	Amount	Cost in Baht
Cereals and Legume Seeds:			**Fish and Meat (cont.):**		
Rice noodles		10.	Dried fish	6	gift
Soybeans & fermented vegetables	25 kg.	12.	Roasted fish	3 kg.	gift
			Shrimp paste	2 kg.	18.
Mung beans	10 lit.	25.	Lobsters		15.
Cassava flour		2.25	Lobsters (for soup)		7.50
Sugar and dessert:			Pig's skin (for soup)		10.
Palm sugar	1 pail	67.	Beef[1]	15 kg.	150.
Cane sugar	14 kg.	85.	Ingredients for Mussel-man curry[1]		27.
(2)Kha-(5)nom (3)tuaj-(1)fee	300 cups	35.	Boiled chickens[2]	2	22.
Fish and Meat:			Pig's head[2]	4 heads	222.
Fish ((1)plaa (2)nya) for soup		6.	Pork[2]	4 kg.	40.
Silurus and serpenthead	60 kg.	gift			

Food for Homage-to-the-Teacher Rite (cont.)

Item	Amount	Cost in Baht
Fruit:		
Bananas ((3)klua; (4)nam-(4)waa)	5 bun.	from father
Chico[2]		5.
Coconut	150	180.
Coconut (young, to make dessert)	30	30.
Job's tears	1 lit.	3.
Plums, yellow[2]		5.
Pomeloe[2]		6.
Rose apples[2]		2.
Tamarind		7.50
Tomato sauce		8.
Young palm fruit[4]	7 bun.	3.
Vegetables (non leafy):		
Bamboo shoots, cooked	1 pail	28.
Cucumber		--3
Egg plants		--3
Garlic	5 kg.	26.50
Gourd, white		1.
Onion, fragrant[5]		6.
Onion[3]	4 kg.	4.
Onion, welsh[5]		--3
Mushrooms		3.
Radish, white		--3
Vegetables (leafy green and yellow):		
Cabbages		--3
Chinese kale		--3
Chili, green		7.50
Vegetables (leafy green & yellow) cont.:		
Lettuce		--3
Parsley		--3
Pumpkin	3 fruits	12.
Sweet basil leaves		1.
Sweet potatoes	6 kg.	6.
(3)Tang-(5)co		--3
Seasonings etc.:		
Vinegar	1 bottle	1.
Fishsoy	1 jar	10.
(2)Ka-(1)chaaj	2½ kg.	12.50
Sodium glutamate		5.
Pepper		14.
Agar	400 gms.	36.
Miscellaneous:		
Cola beverage	72 bottles	72.
Liquor	16 bottles	80.[6]
Ice		30.
Cigarettes	2 pkgs.	--6
Tobacco	1 heap	--6
Betel pepper		9.
Fresh areca nut		10.
Dried areca nut		8.
Dried palm leaves	1 big bundle	2.
Firewood		50.
	Total	1577.75

1. For Moslem guests.
2. Food items placed on a tray and used in the ceremony proper.
3. Items so marked cost a total of 140 baht.
4. Not identified.
5. Several kinds of onions, both fresh and dried, are commonly used.
6. Prices not stated; estimate for liquor.

Food Preparation and Consumption — Sept. 25, 1953 — Household No. 21

Menu 1	Raw Ingredients: Kind 2	Wt. A.P. 3	Cost 4: Bt.	Cost 4: Stg.	Ined. Ref. 5	E.P. 6	Cooked Foods: Dish 7	Dish Food 8	Food 9
Meal Time 4:30 a.m.							800	2990	2190
		2180-800					120	1280	1160
Cooked rice	Polished	= 1380					190	850	660
									5010T[1]
(1) Bauaun stew	(leftover)						470	915	465
(2) Sa-(5)noo stew	Coconut meat (to make milk)	700-180 = 520		90		520			
	Dried chilies	24		15		24			
	Onion	8		4		8			
	Galangal (HG)[2]	8				8			
	Garlic	4		2		4			
	Lemongrass (HG)	12				12			
	Bergamot rind (G)[2]	4				4	490	1390	900
	Salt	30				30	130	312	182
	Serpenthead (C)[2]	320-120=200				200	130	300	170
	Shrimp paste	6		3		6	130	260	130
	(2)Sa-(5)noo flowers (G)	550			580-520 = 60	640-150 = 490			14027
	Coconut milk					1220-450 = 770			
	Palm sugar	240-200= 40		24		40			
Cooked rice	(leftover)						520	800	280
Fried duck egg	1 Duck egg	76			21	240-185 = 55			
	Coconut oil	16		8		16			
	Onion	4		2		4			
	Fishsoy	10		5		10	130	260	80

1. T equals total weight.
2. HG, G and C stand for home grown, gathered and caught, respectively.

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RF5 [illegible] 2 [illegible] 4 [illegible]

K. Snacks

Person eating 1	Time 2	Kind and description 3	Weight (or approx. wt.) A.P. 4	Imed. ref. 5	E.P. 6	Cost 7 Bt.	Stg.
June 4/53			g.	g.	g.		
Girl, 8 yrs.	12:00n	She ate a half fruit of pineapple at home. It was bought from the selling boat.	(375)	(195)	(180)		20
June 5/53							
Girl, 8 yrs. Boy, 10 yrs. Girl, 13 yrs.	All day	7:40 - The pot of truffles (gathered from the fields) is put on fire. It is boiled with water and salt. Truffles: 525-72 = 453 gm. Salt: 35 gm. It is finished at 8:28.	453				
Boy, 10 yrs.	8:46	He eats boiled banana (HG)	48				
Girl, 13 yrs.	Early a.m.	She drinks coffee which is bought from the store near the Wat.					40
Father	10:13	He drinks one glass of milk which is bought from the store near Wat.					50

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad, national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.[4] As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

[4] It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

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[243]
[433]

17.d. And what was the total yield at that time?

1.	120 tang or less	20
2.	121-300 tang	14
3.	301-600 tang	62
4.	601-900 tang	64
5.	901-1200 tang	50
6.	1201-1500 tang	23
7.	1501-1800 tang	10
8.	1801-2100 tang	8
9.	2101-2700 tang	7
X.	2701 or more tang	4
0.	Unascertainable	31

e. And how many rai did you plant two years back?

1.	4 rai or less	18
2.	5 to 9 rai	17
3.	10-19 rai	45
4.	20-29 rai	72
5.	30-39 rai	52
6.	40-49 rai	26
7.	50-59 rai	18
8.	60-69 rai	12
9.	70-89 rai	4
X.	90 rai or more	—
0.	Unascertainable	29

f. And what was the total yield that time?

1.	120 tang or less	20
2.	121-300 tang	24
3.	301-600 tang	48
4.	601-900 tang	69
5.	901-1200 tang	38
6.	1201-1500 tang	8
7.	1501-1800 tang	7
8.	1801-2100 tang	5
9.	2101-2700 tang	5
X.	2701 or more tang	1
0.	Unascertainable	69

[243]
[435]

18. ASK ONLY FARMER:

a. Have the changes in the price of rice during the last two or three years caused you any worry, or not?

7.	Yes	156
8.	No	104
9.	Unascertainable	33

b. IF YES: What are you doing about it?
(See code at end)

[243]

19.a. Do you, stepresent, have your own home rice mill, or not?

X.	Yes	105
Y.	No	228

	Qu 11	Qu 12	Qu 13	
1. Positive, no evidence: very good, good, nice	103	114	77	125 241
2. Positive, with evidence: good results, specific statements	47	120	95	244
3. Neutral or mixed	11	20	6	228
4. Negative, no evidence: no good, bad, of no use	9	5	15	
5. Negative, with evidence: difficult to apply in deep water, must keep using it, too expensive, some results as without fertiliser	33	13	80	
6. Positive, qualified: Fertiliser too expensive	13	—	1	
7. Positive, qualified otherwise: only for high land; very hard to purchase; require to keep on using it	32	18	18	
8. Respondent states he has no opinion	54	31	26	
X. Negative, qualified: It's not quite good, it depends on the soil	4	4	3	
0. No answer	4	3	1	
9. Respondent's attitude not ascertainable	23	5	11	

Qu 12B		
0. D.A.	85	125 241
1. Too expensive	78	
2. Difficult to purchase	15	
3. Not fit for low land	39	
4. Soil not suitable	3	
5. No ascertainable reason given	28	
6. Too little land	7	
7. Other reasons	56	
8. Have never used it before. Do not now either	12	
X. N.A.	105	
9.	21	

Qu 13B		
X. N.A. Unascertainable	60	125 243 435 458
0. D.A.	151	
1. Nothing, cannot do anything	70	
2. Grow mushrooms	12	
3. Raise poultry	15	
4. Raise fish (including Tilapia	7	
5. Use fertiliser	—	
6. Find job as labourers	6	
7. Other: try to find new seed, sell vegetables, borrow money from neighbors, keep rice until price goes up, economize, send sons to work	24	

583 the sanction of parents or guardians of either party. The latter case took the form of elopement -- the man taking the woman away from her family usually during the night and returning for pardon (normally granted) a few days after-
587 ward. Another intermediate type of marriage was common among independent family heads, usually widows and widowers, in which case the man and woman simply came to live with each other. Marriage between widows and widowers who had been living in their respective families as dependent mem-
583 bers also took this simplified form. Finally there was also marriage by capture, one case of which was reported during 1949-53 when a daughter of a laboring family in BC4 was kidnapped by a group of men who were allegedly helping a friend of theirs take the woman as his wife. Although this dramatic kind of marriage by capture was often spoken of, actually it rarely happened in the village. Even in the single case just mentioned, there was doubt on the part of fellow villagers that the victim was really ignorant of the plan.

583 In our records of major expenses of 96 families of
585 farm operators[8] during the period from 1949 to 1953, three
435 families reported expenses for conventional marriages. These expenses were for 1700, 6200, 7500 and 7500 baht for four sons which were dowries, in gold and cash. They were handed over to the brides' parents on the wedding day. Another family reported an expense of 5,300 baht for the marriage

8. See Chapter 6 as to how sampling for these 96 families was done.

583 of their adopted daughter, of which some 300 baht went to
535 bedding materials and 5,000 baht to the wedding feast which
435 the bride's parents alone were supposed to give. It should be noted, however, that in this last case the bride's parents received as dowry from the bridegroom's parents 4,000 baht in cash and two baht[9] weight of gold worth about a thousand baht, and they also received from the guests an aggregate customary contribution of 2,380 baht. Thus, the bride's parents came out with a net gain of 1,080 baht plus the gold which was to be given to the bride.

583 While the conventional marriage was somewhat costly especially for the bridegroom's party, the popular marriage by elopement was much less expensive. Our records show that in addition to nominal ceremonial materials of white cloth, candles and incense, the bridegroom had to pay a fine of only a few hundred baht to his wife's parents when the couple came to receive formal forgiveness from them.

We do not have comparative figures for the occurrence of conventional marriage and elopement, but the latter appeared very frequently in our daily field notes as against very few cases of the former.

581
184 There are two types of establishment of new families after marriage: (a) immediately after marriage, and (b) some years after staying with parents of either party.

It was observed that immediate establishment of new families after marriage was common among couples originating from farm laboring families and families of poor farm operators.

[204] 9. One baht weight is equivalent to fifteen grams.

178
434 1949-53, in actuality public service as an occupation is
463 increasing in Bangchan.
621
647 There were four home enterprisers in 1949, mostly
engaged in making cookies. As in case of the professional,
434 this activity still existed in Bangchan, but by 1953 it had
443 degenerated into a secondary income, leaving the lone case
463 of basket making in the home enterprise category.
621
285 Only one family head was classified in 1953 as a
home-enterpriser. The family was engaged in making takraw
-- a cane utensil used in picking mangoes from the tree.
On January 27, 1953 we met A, the head of this family, who
was taking 103 takraws of various sizes to sell in Bangkok.
• [435] A gave the amounts and prices of these takraws as follows:
56 large size, @ 3.00 baht; 31 medium size, @ 2.50 baht;
16 small size, @ 2.00 baht. A said he and his wife worked
on these 103 takraws alone, and finished them in twelve
days, using 50 baht worth of materials including cane, wood,
and binders. Ordinarily, they started making takraws in
December and continued through May. They were able to make
about 3,000 baht within this period. They also made other
things like baskets, but takraws were their main source of
income. In rice growing season, they also did some piece
working. They did not operate a farm. Piece working and
basketry during rice growing season brought them a combined
income of about 2,000 baht. The amount of each kind of
621 basketry they made was not as constant as takraws. It de-
434 pended more on which paid best. Their total annual income
463

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

Other Food Production

235 433 Other food products which are produced in a considerable amount in Bangchan include chicken eggs, duck eggs, and fish. To a lesser extent, fruit and vegetables are also produced locally.

Practically every family in Bangchan raises chickens, and half raise ducks. In April, 1949, the author conducted a poultry survey covering 46 families whose homes were on the banks of Bangchan Canals. Of these, 45 families were found to be raising chickens and 23 families raising ducks.

Of 45 families raising chickens, 38 families from which data were available reported rates of egg production showing that for these families 53,750 eggs were produced annually from 376 laying hens, averaging 143 eggs per hen. [446] [438] Of 31 families who gave information about sales, five consumed all 2,260 chicken eggs produced; the other 26 families sold 31,040 eggs and consumed 5,590. The proportion of consumption to sale was thus 7,850 to 31,040 or approximately one to four.

There were 393 laying hens in the yards of 45 families, averaging 8.6 hens per family. Chicken egg production [434] was estimated at 1,230 per family. Assuming that four-fifths of these were sold at three for one baht, which was the local price in 1949, average cash income for these families from sale of chicken eggs was estimated at 326 baht annually. [435] With a higher price in 1953 of fifty satang a piece, the estimated income from sale of chicken eggs rose to 492 baht per family.

235 Of the 46 families covered by the survey, 23 or one-
433 half raised ducks with an average annual production of 155
434 eggs per duck, and an average of 11.7 ducks per family raising them. Egg production for each of these families thus averaged about 1,800 per year. Of these, 1,350 were consumed by the family and 450 sold at the same price as chicken eggs. It was estimated, then, that from duck eggs alone, the average cash income in 1949 was about 150 baht per family raising ducks.

226 After rice, fish were by far the most important
262 ingredient in the diet of Bangchan. In contrast to poultry,
433 however, fish did not constitute a source of cash income of
[434] the villagers. As a matter of fact, more fish were bought from the outside than the negligible amount that was exported from the village mainly by one or two very poor families who had availed themselves of this means of augmenting
[435] their income. From our consumption study of 106 families in 1953, it was found that of an aggregate amount of 17,786 kilograms consumed by these families in the previous year 16,027 kilograms were caught by the families while 1,759 kilograms were bought at five baht per kilogram. The rate of fish production may thus be estimated at 151 kilograms annually per family, or 44,998 kilograms for the entire village.

262 The same consumption study shows that the 106 fami-
244 lies consumed in 1953 a total of 16,402 kilograms of vegetables
433 all of which were produced or acquired by the families.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 of village production and surplus of paddy (Table 16) there
433 were no comparable basis for our estimate of the other crops.
121 Our estimates of these other crops should therefore be considered as crude estimates.

433 Tables 16 and 17 show that in 1953 Bangchan had
418 surpluses of 104,756 tang of paddy, 293,232 chicken eggs,
435 and 67,050 duck eggs, and a deficit of 4,945 kilograms of fish. Using the 1953 farm prices of 9 baht per tang of paddy, 0.40 baht per chicken egg, 0.50 baht per duck egg, and 5 baht per kilogram of fish, village exports may be estimated at 942,804 baht for paddy, 146,616 baht for chicken eggs, and 33,525 baht for duck eggs, and village import of fish may be estimated at 24,725 baht.

243 Land Tenure

311 Table 18 shows that Bangchan residents owned an aggre-
423 gate area of 4,315 rai. Since their combined area planted
427 to rice was 6,722 rai, the balance of 2,407 rai had to be provided by absentee landowners. In fact an area larger than 2,407 rai had to be rented in because part of the area owned by local residents had to be used as homelots. Actually, the net area rented in was 2,438 rai (total area rented in of 3,641 rai minus total area of 1,203 rai rented out). It is not to be expected, however, that this extra area of 31 rai (an excess of 2,438 over 2,407 rai) is enough to accommodate the 298 homelots in the village. Inaccuracies might have arisen in cases of joint ownership of certain

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TEXT CONTINUED ON PAGE 1911

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

Rent of Rice Land

*128 178 427 Tables 24 and 25 show different rental methods in 1948 and 1952. Figures in Table 24 were obtained from our records of the sample of 104 farms in operation in 1948, and figures in Table 25 were obtained from the same sample reduced in 1952 to 96 farms which had been continuously in operation until then, the other eight farms having ceased to operate by 1952.[8]

427 *243 178 It is seen that with the exception of a single case of share-cropping there were two rental methods in 1948, in kind and in cash, the proportion of areas involved being fifteen rai of rent in kind to every rai of cash rent. In 1952 rental methods remained more or less the same, consisting principally of rent in kind and cash rent, the proportion of areas involved being slightly increased to nineteen rai of rent in kind to every rai of cash rent.

*243 178 427 • 435 There was, however, a rapid rise in rent rates within this period of four years. It is seen that the average rate of 6.2 tang per rai in 1948 has risen to 8.1 tang per rai in 1952, an increase of 31 per cent in four years.

[433] It is interesting to note that an increased rent rate was charged in spite of the decline in yield of 32.1 tang per rai in 1948 to 25.2 tang per rai in 1952, or from the record crop index of 111.4 in 1948 to 87.5 in 1952 (Table 14).

[434] Another equally interesting point is that the increase in rent rate was charged in spite of the increases in the

8. See Chapter IV of the sampling technique.

[TEXT CONTINUED ON PAGE 143]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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TABLE 24

DIFFERENT RENTAL METHODS
Bangchan, Thailand, 1948*

Rate Per Rai	Rate in Tang Equivalent	Number of Parcels Reported	Total Area	Total Rent**
			rai	baht
Kind				
3 tang	3.0	1	11	259.38
5 tang	5.0	29	623.75	24,513.53
5 1/2 tang	5.5	1	15	648.45
6 tang	6.0	22	390	18,392.40
7 tang	7.0	15	313.50	17,248.77
8 tang	8.0	28	495.50	31,157.04
Cash				
12.50 baht	1.6	1	8	100.00
30.00 baht	3.8	6	91.50	2,745.00
41.38 baht	5.3	1	14.50	600.00
50.00 baht	6.4	1	6	300.00
Share				
50% of crop	--	1	10	--
Unspecified	--	1	20	--
Total	--	105	1,998.75	95,964.57
Average	6.2	--	1	48.89

* From the preliminary study of Bangchan, page 149.
** The 1949 farm price of 7.86 baht per tang was used.
-- Not available.

7: Fanichka X-4-5 (1948-1953)p956 AO7 Central Thai AO7 Bangchan

178 584 427 243

TABLE 25

DIFFERENT RENTAL METHODS
Bangchan, Thailand, 1952

Rate Per Rai	Rate in Tang Equivalent	Number of Parcels Reported	Total Area	Total Rent*
Kind			rai	baht
6 tang	6.0	5	75	4,050.00
7 tang	7.0	16	353:50	22,270.50
8 tang	8.0	39	876	63,072.00
9 tang	9.0	3	39	3,159.00
10 tang	10.0	6	113	10,170.00
Cash				
40 baht	4.4	1	46	1,840.00
50 baht	5.6	3	15.50	775.00
70 baht	7.8	1	16	1,120.00
Free	--	4	(84)	--
Total	--	78	1,534	106,456:50
Average	8.1	-	1	72.66

* The price of 9 baht per tang was used. It should be noted, however, that while the farm price of 7.06 baht per tang used in Table 24 was a result of a day by day record of actual sales during the first selling period (December-March) comprising about two-thirds of marketable paddy of 104 operators studied in 1948-49, this price of 9 baht per tang was not as systematically arrived at because we could not afford as much time in the 1952-53 study. This 9 baht was simply a rounded modal price during the first selling period of the 1952-53 rice year (December 1952-March 1953).

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243
178 other items of cost of producing paddy -- in other words,
427 in spite of a decline in profit (a great decline when a
434 reduced yield is also considered). In the preliminary study
435 in 1948-49, it was found that the average cost of producing a tang of paddy was 5.86 baht, all costs included except value of operators' labor.[9] When the value of the operators' labor of 1,000 baht for those operating ten rai or over and of 500 baht for those operating less than ten rai was included in the calculation, the cost of production was found to be 6.76 baht per tang, including 1.52 baht for rent, 3.46 baht for labor (values of operators' labor and family labor included), 0.38 baht for seeds and materials, 0.65 baht for depreciation, and 0.75 baht for interest on investment. As we shall see in the section on cost of producing paddy in Chapter VI, an estimate of cost using the 1952 prices, for time and opportunity did not permit a second cost of production study during our second period of field work in 1952-53, points toward an increase in every item of the cost of producing paddy in Bangchan.

An explanation for this abrupt rise in rental of rice land in Bangchan lies in the nature of the demand for and supply of rice land. Although rents may be surpluses

*[128]

9. Sharp et al, op. cit., p. 171. In this preliminary study, the cost of family labor was imputed (at going wage rate) from labor requirement based on acreage, the cost of the use of the operator's own land was imputed from going rent rate, and the depreciation cost was calculated by dividing the original cost of equipment by their respective expected length of service.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243
178 from certain points of view, or for certain purposes, or
427 subject to certain interpretations, they are to the indi-
434 vidual producer no different from any other money expense.
• 435 They do not arise as a surplus from his own operations;
they are a cost rigidly imposed upon him by the competition
of his rivals for the use of the rent-yielding property.
They figure in the same way as do wages of labor and the
interest of capital in his computations as to the most ad-
vantageous proportion between the factors and as to the most
*[128] advantageous scale of operations.[10] Naturally, we are now
dealing with contractual rent, which is the actual sum paid
by the tenant to the landlord for the use of the land, not
the hypothetical economic rent of the classical economists.

*243 The preliminary study revealed that there was in
464 1948 under-employment on some Bangchan farms in terms of
rai worked per worker. This was shown by comparing the
number of rai worked per worker on 94 farms employing no
hired laborer with the number of rai worked per worker on
*[128] 10 farms employing one or more hired laborers. On the farms
where only family labor was used, the figure was 9.4 ad-
justed rai per worker; while on those farms which used
regularly hired laborers along with family labor, the figure
was 13.4 adjusted rai per worker. (Each rai of transplanted
rice was counted as one adjusted rai, while each rai planted
by the less-labor-requiring broadcast method was counted as
one-half of an adjusted rai.) An assumption was made that

10. Edward Chamberlin, The Theory of Monopolistic Competition (sixth edition; Cambridge: Harvard University Press, 1950), p. 22.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 434 464 As long as farm under-employment prevails and as long as limited opportunity for an alternative occupation is open to farm operators and farm laborers, we have reason to believe that the demand for rice land is rather inelastic. Another important factor contributing to this belief is the operator's concept of cost of producing paddy which seemed to include only explicit rent (actual amount paid to the [435] landlord) and cash operating expenses. Thus, while our calculation shows that the cost was 6.76 baht per tang or 215 baht per rai in 1948, the figure would be only 1.71 baht per tang or about 55 baht per rai according to the operator's concept of the cost.

*243 427 464 178 435 Under the conditions of farm under-employment, a tenant, part-owner, or even owner-operator is willing to pay high rent for an additional parcel because a larger worked area would cost him only the additional explicit rent and a small increase in seeds and materials. Unless the extra rented parcel is so large that extra labor must be sought outside the family, he does not have to pay any explicit wage at all for rice production in this additional parcel. Landlord-operators, on the other hand, are under a different situation, for they may rightly be considered land saturated and fully employed. Hence, the individual demand for working land on the part of a landlord-operator is relatively more elastic than those of the other farm operators. As rent rose from 6.2 tang per rai in 1948 to 8.1 tang per rai in 1952, it was observed in Table 26 below that

*243 427 435 178

[TEXT CONTINUED ON PAGE 148]

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 26

RELATIVE SENSITIVITY TO CHANGE IN RENT RATES OF LANDLORD-OPERATORS AND OTHER GROUPS

Category	Area Operated					Decrease, 1948-52	
	1948	1949	1950	1951	1952	Actual	Per Cent
	rai	rai	rai	rai	rai	rai	
Landlord-operator							
Farmer A	110	100	80	70	65	45	41
Farmer B	80	80	50	8	8	72	90
Farmer C	75	75	75	75	75	0	0
Farmer D	65	70	60	70	60	5	8
Farmer E	47	47	47	47	47	0	0
Farmer F	26	26	26	5	5	21	80
Farmer G	24	0	0	0	0	24	100
Sub-total	427	398	338	275	260	167	39
Other groups of farm operators	2,981	2,732	2,764	2,764	2,786	195	7
All 104* operators	3,408	3,130	3,102	3,039	3,046	362	11

* The sample consists of 104 operators in 1948, 103 in 1949, 98 in 1950, 96 in 1951, and 96 in 1952.

landlord-operators were more sensitive to the change in rent rates than were the other groups of farm operators.

Limited opportunity for an alternative occupation was mentioned in the preceding paragraph as one of the factors contributing to the inelastic nature of demand for working land. It was also mentioned in the section on the occupational structure of Bangchan that farm laboring families as existing in the village were indigenous and were an outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent in any land. Limited opportunity for an alternative occupation in the village was also suggested in the same section when it was mentioned that the only possible alternative -- petty trading which was actually taken up by some former farm operators -- was limited by the fact that villagers bypassed local traders and went to the nearby market town of Sinburi for major purchases and variety goods.

Limited opportunity for an alternative occupation outside the village, however, needs elaboration. It cannot be denied that wages in Bangkok, only twenty miles away and easily accessible through good road and bus services, were higher on the average than corresponding returns for labor in the village. It is important to note, however, that what will attract a villager to seek a job in Bangkok is not a higher average wage level in the city but a higher marginal wage there. Regarding the marginal wage, it is highly doubtful that a better condition exists in Bangkok.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

427 neighboring landlords are under the same situation as the
434 non-operator landlords. Yet these two groups are in a better position than the absentee landlords, for they are already in the locality. They are used to farming, and at least they do not have to invest on housing if they should choose to operate their own lands instead of renting them out at low rent.

427 It was observed in the preliminary study that rent
[435] rates charged by local landlords were higher than those charged by the absentee landlords, the former ranging from six to eight tang per rai while the latter was only five tang per rai.[13] The discrepancy was assigned to the fact that local landlords were in a better position to sense the competition for land among farmers desirous of obtaining more land than were landlords who lived in the city. Local landlords were thus quicker to adjust rent rates to their own benefit.

Another advantage of renting land from absentee landlords was pointed out by a Bangchan tenant who said that he preferred absentee landlords to local landlords. "If you don't want to pay too much rent," said he, " you may report to the absentee landlord that you got a poor crop even though it was the best crop you ever had. You cannot do so with a local landlord, for he knows as well as we know by a glance at the parcel how many tang of paddy we are going to get." "Besides," the man continued, "local landlords often make request after request for your free

13. Sharp et al., op. cit., p. 148.

427 author's father who gave this man an initial capital of 600
556 baht when he made his start in Bangchan some thirty years ago. He is now a millionaire and a father-in-law of a former top military officer.

427 Again it is the author's impression that, from the viewpoint of the villagers' best interests, the good side of absentee landism seems to outweigh the bad side.

427 Going back to the forces of demand for and supply of
434 rice land, it should be noticed that, as was so often the
435 case, free competition in the classical economist's sense did not exist in Bangchan where rents were often sticky. There was a wide range of different rent rates for fields of almost homogeneous nature as far as agronomic properties were concerned. Preference for prospective tenants was observed to have a personal rather than economic basis even on the part of the local landlords who were found to be most sensitive to rent rates. When a new higher rent rate was to be charged, it was observed that the most plausible excuse had to be found and presented to the tenants by the landlord. An example was the general raise of rent in 1953 when the new land tax was raised from 0.30 to 4.00 baht per rai, whereupon most local landlords immediately raised their rent from seven tang to eight tang per rai. One tang of
[851] paddy, however, was worth nine baht. It is seen, thus, that as a result of an increase of the government revenue of 3.70 baht per rai the local landlords also received an extra 5.30 baht per rai from their tenants who alone had to suffer an increase cost of nine baht per rai.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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In discussing the forces of demand for and supply of land in the few preceding pages, it is not the purpose of the author to quantify these forces and attempt to predict rent or the price paid by the tenant for the control of net income deriving from the use of the productive powers of the soil. Rather, the purpose is to confirm in this specific case Chamberlin's general notion that "the equilibrium of economic forces has been wrongly identified with an equilibrium between demand and supply. The latter is merely a special case of the former. Curves of demand and supply tell nothing, either by themselves or by their intersection, as to what price will be established, until other conditions are known."[14]

Prices of Land

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One of the most significant phenomena during the period covered by this study, from 1948 to 1953, is the rise of prices of land in Bangchan.

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432
[123]

Records of major receipts and expenses of 96 farm operators who have been continuously working on an average area of 3,140 rai, or 47 per cent of the total area worked by Bangchan residents, show that during this six-year period two operators sold two parcels of land and ten operators bought eleven parcels of land. Since none of these involved transaction between one and the other in our sample of 96 operators, it can be said that there was a total of thirteen

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14. Chamberlin, op. cit., p. 15.

423 purchases (or sales) of land involving operators in our
432 sample as either sellers or buyers. The price and size as well as the time of sale of each parcel is shown in
178 Table 27. Using the highest of each year as the basis,
• 435 it is observed that land price in Bangchan has been rising
423 steadily from 350 baht per rai in 1948 to 700 baht in 1949, to 1,100 baht in 1950 and 1951, and then rose skyhigh to 11,000 per rai in 1953. To be sure, this spectacular rise, especially from 1951 to 1953, was largely due to the changing over of former agricultural to residential land. Nevertheless, when residential land is excluded from consideration, it is seen that the average rise in agricultural land prices was 560 per cent during the period from 1948 to 1953 (Table 28).

Perhaps a case of one large parcel in "Thung Nai Sab" in KY5 may serve to illustrate the way land prices rose in Bangchan during these past few years. The area of this parcel, which was owned by Lady Phung of Bangkok, was 100 rai. Our informant's father, Hajji Sa-ard of Bangchan Mosque, was interested in this parcel of land because it was adjacent to his land which was not far away from his home. In 1946, Lady Phung was willing to sell it at 300 baht per rai, but Sa-ard was reluctant or not quick enough to accept this offer for sale. In 1947, the lady raised her price to 350 baht and Sa-ard was ready to buy. This time it was hesitancy on Phung's part that prevented the proposed purchase from being consumated. In 1948, our

[TEXT CONTINUED ON PAGE 160]

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TABLE 27

PRICES OF RICE LAND ACTUALLY SOLD OR PURCHASED
Bangchan, Thailand, 1948-53

Year	Parcel Size	Price Per Rai	Highest Price of the Year	Average Price of the Year
	rai	baht	baht	baht
1948	11	350	350	223
	12	180		
	16	138		
1949	10	700	700	700
	10	700		
	10	700		
	10	700		
1950	1	1,100	1,100	850
	10	600		
1951	19 1/2	1,100	1,100	721
	10 1/2	1,000		
	19 1/2	250		
1952	--	--	--	--
1953	1	11,000	11,000	11,000

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 28

ESTIMATED PRICES OF BANGCHAN LAND BY ZONE
SHOWING PRICE CHANGES FROM 1948 TO 1953
Bangchan, Thailand, 1948-53

Zone*	Location	1948-Price baht/rai	1953-Price baht/rai	Increase baht/rai	Increase Per cent
Residential:					
1	Roadside** (200 m. depth)	300	12,000	11,700	3,900
Agricultural:					
2	"Thung Nai Sab"-	270	1,500	1,230	456
3	"Thung Nai Pho"	280	1,800	1,520	543
4	"Thung Kl. Kred"	250	2,000	1,750	700
5	Kl. Kred - Kl. Bangchan	230	1,500	1,270	552
6	Kl. Krached-Kl. Bangchan	210	1,500	1,290	614
7	Kl. Bangchan-Kl. Kralog	200	1,200	1,000	500
	Av. for ag. land	240	1,583	1,343	560

* See Map I.
** In 1948, this zone was still considered agricultural land -- not residential land as it was in 1953.

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435 informant said that some of the lady's tenants who had been renting the parcel told her that she should not let it go under 500 baht per rai. Our informant thought that these tenants did not want to see any transfer of the ownership of the parcel for fear that it might adversely affect their prospective tenure. Lady Phung therefore raised her price to 550 baht. At this price Sa-ard gave up his intention of buying the land. In 1949, four tenants (all are included in our sample of 96 farm operators, hence the purchases are shown in Table 27) jointly purchased 40 rai of this parcel, and one Nai Ma of Klong 13 bought the remaining 60 rai of the 100-rai parcel at 700 baht per rai. The four tenants divided the land equally among themselves (10 rai each) and paid 7,000 baht each with borrowed money. In 1952 an offer to buy at 1,000 baht per rai was made for the same parcel but none of the new owners wanted to sell any of his land. In 1953 the price rose to 1,500-2,000 baht per rai and again none of the owners contemplated selling his land. Of the four tenants, Farmer A was luckiest because his share was attached to the Minburi Road and the price of this specific portion has risen to somewhere around 12,000 baht per rai.

The case just mentioned shows one significant point regarding the price of land in Bangchan other than the steady rise -- that nearness to the road was not a factor of price distinction until after 1949, for if it was, there would certainly have been some difficulty in dividing the 40-rai piece among the four tenants.

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Table 28 shows estimated prices of land in Bangchan in 1948 and in 1953. These prices are estimates made by our informant who is a son of Hajji Sa-ard mentioned in an earlier paragraph. He is one of the best informed persons in the village, has visited Mecca, and has received a higher education than any other person in Bangchan with the possible exception of one store-keeper who had spent a few years in the Military Academy in the 1910's.

Our informant, who will henceforth be called by his real name -- Hajji Direg, based his estimates of land prices in Bangchan on what he was willing to pay. He was aware of locational variation in prices of land in the village. Strictly speaking, this is not contradictory to our assumption of homogeneous nature of soils in Bangchan, for slight variation in Direg's estimated prices was due, according to him, to differences in the land levels which affected the cost of irrigation and drainage. Direg divided Bangchan into seven land-price zones (Table 28 and Map I). It is seen in this table that the 1948 price ranged from 200 baht per rai in Zone 7 to 300 baht per rai in Zone 1, averaging 249 baht per rai.

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Table 28 shows that the average price of agricultural land in Bangchan rose from 240 baht per rai in 1948 to 1,583 baht in 1953, an increase of more than five times in six years. Most remarkable was the increase of the price of land in Zone 1 from 300 baht per rai to 12,000 baht per rai. The increase in the price of land in Zone 1 shows that land

[TEXT CONTINUED ON PAGE 163]

178 in this zone has since been considered as residential land
423 although there has not been any apparent change in land
435 utilization.

178 It should be noted in this connection that during
423 the same period of 1948-53 there has been a steady rise in
435 the price of residential land in Bangkok at a highly varying rate depending upon location. For the purpose of our discussion, we may consider only the price of land in the northern suburb of Bangkok, on each side of Paholyotin Road (the popular Bangkok-Donmuang Road) which branches off at Kilometer 20 into Minburi Road which cuts across Bangchan Canal at Kilometer 13 (Crossing of Paholyotin and Minburi Roads as Km.0). It has been observed that the price of land on each side of Paholyotin Road has been increasing rapidly: a parcel at Km. 11 which was valued at 50,000 baht per rai in 1952, for example, was sold at 150,000 baht per rai in 1954. It has also been observed that price of land in this section of the Bangkok suburb declines with the distance from Bangkok proper: the 1954 price was 150,000 per rai at Km. 11, and 50,000 baht per rai at Km. 20 where the Minburi Road begins. If the Minburi Road is considered as a continuation of Paholyotin Road, it is only natural that the price of land would gradually decline to 12,000 baht per rai at Km. 13.

192 It is conceivable that the recent increase in Bangkok
423 population is one among several factors causing the rapid
435 rise of residential land prices. When the rapidity of the
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423 rate of increase in land price is considered, however, it
435 is reasonable to believe that population increase is cer-
369 tainly not the only factor.

[121] It is not the purpose of this study to deal with the price of urban land. Neither the problem of land utilization nor the whole economy of Bangchan can be clearly understood, however, without some account of the rapid building up of urban land prices in recent years. It is thus necessary to digress at this point into some factors accountable for this rapid rise.

369 It has been observed that the volume of domestic
454 saving in Thailand is small because of the low level of in-
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435 come, and that such saving as does take place tends to be
178 put into real estate and gold and jewelry. Concentration
182 of income resulting from the postwar phenomenon of shifting of political and economic power into the hands of few people, however, has somewhat increased the proportion of saving; but this is again used largely to purchase real estate. The natural result is the boosting up of urban land prices especially in the suburban sections where there has been a relatively high degree of improvement in road construction since the war.

This investment in land purchase has more than ever
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45 before assumed a speculative nature. This is largely due
178 to the experience of inflation initiated by World War II
369 whereby huge and easy profits could be made from buying
182 and selling of land. Corruption in the sale and purchase

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423 of government real estates has no doubt increased these
45 speculative activities. The process has also been greatly
178 accelerated by an enormous increase since the war of banking
369 facilities, which traditionally extend loans on mortgage of
182 real estate. It should be noted in this connection that the demand for loans in Bangkok has been so great as to allow most commercial banks to adopt a highly discriminating policy of extending loans only to their favored customers who are often willing to give as much as five per cent of the loan sought to bank officials as a customary "tea-money".

182 A third factor is that some organized financial
423 institutions have actively been engaged in deliberate at-
435 tempts to boost up land prices for their own speculative
455 gains. This was the immediate cause of the rise of land
178 price in Zone 1 from 300 baht per rai in 1948 to 12,000 baht
369 per rai in 1953. According to several informants in Bangchan, a representative of an insurance company in Bangkok came to the village in 1952 and offered to buy land on each side of Minburi Road at 10,000 baht per rai. This man was able to buy 20 rai of land at Km. 8, Minburi Road, which is in the immediate neighborhood of our arbitrary Bangchan Village, at his offered price of 10,000 baht per rai. At the time of the signing of the purchase contract, he made a 10 per cent down payment of 20,000 baht. Although the balance of 180,000 baht was not paid and the contract was later forfeited, the proposed purchase immediately pushed land prices in Zone 1 up to 10,000 baht per rai or over. According to

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423 our informants, the insurance company owned hundreds of
435 rai of land in the vicinity. By spending only 20,000 baht
456 in boosting up land prices, the company thus set the stage
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367 for making a large profit through sale of their own land at inflated prices.

178 While the increase in land prices in Zone 1 was
429 attributable to the sudden assumption of residential land
435 prices, this explanation does not apply to the increases in land prices in the other zones which have remained agricultural throughout. Although less spectacular than the case of Zone 1, the rise in land prices in these six zones was also quite abrupt, averaging 560 per cent for the five-year period from 1946 to 1953 (Table 28).

429 Capitalized valuation of these farm lands (Zones
434 2-7) may shed some light on the situation, although there
427 is limitation especially to the cost concept. There are two ways by which a capitalized value of farm lands may be obtained: (1) by capitalizing income from the farm operation left after payment of all factor costs except land, and (2) by capitalizing income deriving from explicit rent of the land.

243 Receipt from one rai of rice land in 1948 may be cal-
435 culated from the crop of 32.1 tang at 252 baht, using that
434 year's average farm price of 7.86 baht per tang of paddy.
423 Then the cost, including an imputed return to all labor but
427 excluding rent, of 166 baht per rai is deducted, a residual return to land of 86 baht per rai is obtained for the year.[15]

15. For want of sufficient data, it is assumed that the cost items other than rent remain the same.

In 1953, figure for the size of the crop was not available, but we may use the 1948-52 average of 28.8 tang per rai. With the year's farm price of 9.00 baht per tang, receipt may be calculated at 259 baht per rai. Using the same cost, again excluding rent, of 166 baht as in 1948, a residual return to land may be estimated at 93 baht per rai.

Capitalized value of land may be calculated from the formula $v = \frac{a}{r}$ where 'v' stands for capitalized value of land, 'a' for income from the land, 'r' for the rate of interest prevailing in the locality.[16]

When the calculated residual return to land is used, the capitalized value of farm land in Bangchan (Zones 2-7) is found to be 573 baht per rai in 1948, and 620 baht per rai in 1953. When income deriving from explicit rent is used in the calculation, however, the capitalized values become 327 baht per rai in 1948 and 487 baht per rai in 1953.

It is interesting to note that capitalized values of land computed from these two different types of income were closer to each other in 1953 (487 baht computed from income deriving from explicit rent as against 620 baht computed from the calculated residual return to land) than in 1948 (327 baht computed from income deriving from explicit rent as against 573 baht computed from the calculated residual return to land). In other words, landlords are now receiving a larger proportion of the residual after payment of all

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16. The rate of interest of 15 per cent per year is used. This is the minimum going rate with security. Without security, the rate may be as high as 30 to 50 per cent per year.

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factors, except land, at the going rate of return. A more interesting point to note is that the capitalized value of land in 1948 (327-573 baht per rai) was substantially higher by either method of calculation that the average price of farm land in that same year (240 baht per rai), while the capitalized value of land in 1953 by either method of calculation (467-620 baht per rai) was far below the average price of farm land in that same year (1,583 baht per rai).

The situation in 1953 indicates that the price of farm land in Bangchan has been bid up too high. The stickiness of rent rates in the locality mentioned earlier together with the fact that landlords are now receiving a larger proportion of the residual after payment of all factors, except land, at the going rate of return have led us to the belief that the proportionate share of the landlords will be increasing in the near future.

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465 be of any help in the understanding of the hired laborer situation in Bangchan.

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46 Let us now turn to the last group of farm laborers -- the piece-workers. These laborers receive their remunerations in the form of cash paid at the completion of each job contracted. Four types of farm work were observed to have involved the utilization of piece-workers -- uprooting of rice seedlings, transplanting, harvesting, and digging earth and mounding. Uprooting, the heaviest of all rice growing steps because seedlings must be pulled up in budle and smashed against the shank of the worker, was limited to adult male workers. Transplanting, on the other hand, was the lightest of all these steps involving the itlization of piece-workers and may be done by all kinds of workers including the young. Harvesting and digging and mounding are too heavy for the young but not for the adult female workers to participate, so they are usually performed by adult workers of both sexes.

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[435] It was found in the cost of production study in 1948 that 104 farm operators in Bangchan spent a total of 4,434 baht on uprooting done by piece-workers, 7,951 baht on transplanting, and 13,310 baht on harvesting, or an average per farm of 43 baht for uprooting, 76 baht for transplanting, and 128 baht for harvesting. Although digging and mounding is generally considered a part of farm work since it is done primarily in order to keep the buffalo shed above the water level as well as to improve the home garden; it is not

592 a transient member of the family. This was rather unusual,
464 however. The pattern was that a transient member was
[561] accepted when he is rather young. If he was quite mature,
he might also be accepted; but the expressed motive of the
592 accepting family would then be somewhat different. When
465 approached by a mature prospective transient member, the
464 family head would most probably say that he could not afford to keep a hired laborer but he would be glad to let the man or woman stay with him as a member of the family, and that they might as well "share in the food, and share in the work".

It has been observed that transient family workers received much less from the family than the standard wage
• [435] of hired laborers. While the latter received an annual wage of 1,000 baht or the crop from 5 rai, the former might be given only 50 or 100 baht a year. To farm operators of moderate or large rice farms, transient family workers were certainly an economic advantage. It was quite natural that these operators would try to keep them in the family as long as possible. Among the several methods observed were the following: (1) adoption; (2) promise to sponsor ordination of the young male transient member; and (3) giving a certain amount of lampai.

592 It was mentioned in the section on the family in
464 Chapter II that adoption as practiced in Bangchan did not
[597] involve legal registration of the adopted child, and that
[792] maltreatment of adopted children was not infrequent. To sponsor an ordination was in fact not quite as expensive

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A. Indispensable: Shovel, spade, hoe, plow, harrow, roller, yoke, weeding knife, sickle, boat, pitchfork, rake, broom, wooden spatula, basket, mat bin, box bin.

B. Dispensable, but essential for good crop production: Windmill, noria.

C. Unnecessary, but contributing to convenience: Engine, winnowing machine, and others

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Price of various items of farm equipment varies from as low as 0.25 baht a piece for a broom to two thousand baht for a good boat. To avoid confusion, we shall use only the average of different prices for 1948 reported by our sample farm operators for the same item of equipment in order to eliminate variations due to quality. We may arbitrarily categorize farm equipment into low-price and high-price equipment, considering items costing under 100 baht as low-price equipment and items costing 100 baht or over as high-price equipment. On this basis, various farm equipment used by the 104 farm operators in 1948 are listed below.

Items	Average prices (1948)
A. Low-price	
Coconut broom	0.25 baht
Pitchfork	1.50 "
Shovel	3.16 "
Rake	4.75 "
Chinese broom	12.00 "
Yoke	12.06 "
Hoe	13.50 "
Basket	15.00 "
Weeding knife	19.00 "
Sickle	24.00 "
Harrow	30.00 "
Box bin	43.00 "
Mat bin	51.50 "
Plow	80.00 "

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B. High-price

Noria	309.00 baht
Sampan boat	386.00 "
Windmill	429.00 "
Winnowing machine	498.00 "
Nard boat	1,046.00 "
Chala boat	1,400.00 "

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Prices of equipment used in rice farming give us only an idea of the initial investment necessary to start a rice farm and the cost of investment in this equipment, which may be calculated in terms of interest on that investment. Prices alone, however, do not determine the annual cost incurred in the use of farm equipment; for some items remain in service for several years while others have a relatively short life, and they all differ in the relative cost of repair and maintenance.

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In the 1948-49 survey of 104 farms, two types of schedules were used. The "early schedule" was administered to the first fifty respondents, and the "late schedule" was administered to the rest. The early schedule was more detailed than the late schedule. For example, in the early schedule there are detailed questions on the original cost and subsequent depreciation of each plow, and each detachable plow-part, owned by each of the fifty respondents in the early sample. On the basis of these responses, we calculated the average depreciation rate of plows. Each of the fifty-four respondents to the late schedule was asked only one question on plows, viz. the number of plows he owned. In the case of each plow of each respondent to the late schedule, we simply applied the average cost and depreciation figures resulting from the early

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243 schedule. Thus, in our late sample much laborious detail was
435 obviated.

On the basis of responses from fifty farm operators, annual depreciation for each item of farm equipment used in 1948-49 was calculated below:

Items	Depreciation baht/year
1. Coconut broom	0.25
2. Pitchfork	0.33
3. Yoke	1.17
4. Weeding knife	1.67
5. Hoe	2.51
6. Shovel	2.79
7. Basket	3.00
8. Rake	3.39
9. Harrow	3.42
10. Mat bin	3.85
11. Sickle	8.90
12. Box bin	10.32
13. Chinese broom	12.00
14. Plow	16.88
15. Winnowing machine	42.69
16. Noria	57.95
17. Sampan boat	65.83
18. Nard boat	84.81
19. Windmill	85.00
20. Chala boat	86.10

Several methods of computing depreciation were adopted. In most cases, where the equipment was valueless at the end of its servicable life, the annual depreciation was calculated by simply dividing the original cost of each item by its expected length of service in years. In cases where the equipment consisted of detachable parts, e.g., plows and windmills, the cost of replacement of each part was first determined and then reduced into annual replacement cost, then the annual replacement costs of all parts were added together to make the

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A243 annual depreciation of the equipment in question. In cases
435 where the equipment still had some market values at the end of their servicable lives, these residual values were first deducted from the original costs before they were divided by the length of service. The most complicated cases were those of chala and mard boats and the noria, which involved annual maintenance and minor repair as well as periodical major repair in say every four or five years before they were finally and totally worn out at the end of their rather long services of from twenty to fifty years. In each of these cases, all items of such expenses -- annual maintenance and minor repairs as well as periodical major repairs -- were added to the original cost and the total was divided by the entire length of service in order to arrive at the annual depreciation figure.

A243 With few exceptions, all farm equipment enumerated
178 above have been used by Thai farmers for centuries. Thus, since the establishment of the village there has been no change in the use of such basic agricultural tools as the plow, harrow, hoe, weeding knife and sickle. Moreover, it may be said also that there have been only slight modifications, if any at all, in these equipment during the long course of their usage. The plow, harrow, or sickle which is now being used in Bangchan is perhaps of the same type and appearance as would have been seen centuries ago.

A243 Standing in contrast to these basic agricultural tools,
177 the first known propeller windmill in Thailand, according to
178 testimonies by Bangchan informants, was invented by Nai Yong
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231 section on livestock, Chapter 2. The method of buffalo feed has also been mentioned in the section on land utilization, Chapter 3.

*243 231 Inasmuch as draft animals, or more specifically buffaloes, provide services in rice production, they may very well be considered a kind of farm equipment. They are used in all steps of breaking and leveling the soil and also in threshing. They are absolutely indispensable on rice farms.

231 *435 An average purchased value of a work buffalo was 985 baht per head. According to the 1948 survey, buffaloes began their farm work at the age of 4-5 years and remained in service [237] for an average of 10½ years. When they are dead, their meat is consumed and the hide is dired and made into rope. Some farmers sold the buffalo carcass on the spot and received an average price of 250 baht in 1948. When the original cost of 985 baht was subtracted by the residual value of 250 baht and the result was divided by the length of service of 10½ years, the annual depreciation so obtained was found to be 70 baht. This method of computation for depreciation when adopted for buffaloes appears to be rather crude, for the maintenance cost was neglected and some buffaloes might be bought at the age over 5 years (at varying prices) in which case their length of service might be expected to be shorter than 10½ years. The general pattern, however, was that farmers bought buffaloes which were freshly brought in from the northeast at the age between 4 and 5 years.

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*243 433 [427] 1. Land: This element represents 22 per cent of the total cost of producing paddy (Table 38). Of this, 15 per cent is actual payment for explicit rent while 9 per cent is assessed value of implicit rent.

Among the cost items in Table 38, cash expenses include actual rent (13%), wages for pieceworkers (3%), wages for hired laborers (3%) and seeds and materials (6%), while imputed expenses include implicit rent (9%), value of family labor (31%), value of the operator's labor (13%), depreciation (10%) and interest on investment (11%). It is seen that cash expenses comprise only 25 per cent, while imputed expenses comprise as high as 75 per cent of the total cost.

In view of the high proportion of imputed expenses, the method adopted in the imputation will be explained here.

[427] [435] 1. Rent: Going rate for 1948-49 of 6.2 tang (49 baht) per rai was used.

[532] [461] 2. Value of family labor: Labor requirement based on acreage was first calculated, using the standard factor of 13.4 adjusted rai to one fully employed worker (this was the 1949 average for farms with regularly hired laborers on which [435] workers were assumed to be fully employed). When the labor requirement in terms of number of fully employed laborers needed was known, imputed family labor cost was calculated at the going wage rate for the year of 1,600 baht (1,000 baht cash and 600 baht of food privilege).

3. Value of the operator's labor: In addition to

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*243 the value of family labor, the cost of managerial service of
433 the operator of 1,000 baht was arbitrarily charged for farms
• [435] with the size of 10 rai or over. For farms under 10 rai, only 500 baht was arbitrarily charged as the cost of managerial service.

4. Depreciation: From the original cost of each item of equipment (including buffaloes) was deducted its residual value at the termination of its service, and the result was divided by the expected length of service in years of the equipment.

5. Interest on investment: The rate of 15 per cent per year was arbitrarily chosen. This was the maximum legal rate, and was also a minimum rate of return which any person in Bangchan might reasonably expect from his money if he chose to lend it out at any moment.

*[128] Since much of these imputed expenses were arbitrarily chosen, the cost of producing paddy might naturally vary widely according to the assigned value of each item. Our cost of production figure, then, will be more meaningful, if the amounts of these arbitrarily imputed values are constantly kept in mind.

*243 Farms in Bangchan are composed of from one to four
433 parcels of land. The characteristics of this fragmentation
461 are shown in Table 39. The size of a parcel ranges from one
423 rai to 65 rai, averaging 18.8 rai. Fragmentation obviously brings about a waste of considerable time and energy spent in going from one parcel to another, and thus an increase in

[TEXT CONTINUED ON PAGE 282]

Buffaloes are considered as a kind of farm equipment, so the cost of buffalo labor appears under the item of cost of equipment. Buffalo labor is, however, so closely associated with man labor that it seems to be more appropriate to discuss it here.

It has been pointed out that the accomplishment of farm work during the critical period depends largely on buffalo labor. Farmers fully realize the importance of this draft animal, which is always given good treatment. Even in the busiest season of field preparation, when farmers work from dawn to dusk seven days a week, the buffalo has a full holiday each week (on Wan Phra, the Buddhist holiday) and has a four-hour noon recess, usually from 10 a.m. to 2 p.m., on work days.

3. Farm equipment and supplies: This element represents 26 per cent of the total cost of producing paddy. Our records show that in 1948 the total value of farm equipment and materials of the 104 sample-farms amounted to 559,626 baht, averaging 5,381 baht per farm, and ranging from 443 to 16,733 baht. The frequency distribution of the value per farm of farm equipment and materials is shown in Table 44.

Table 45 shows the frequency distribution of the value per rai of farm equipment and materials which ranges from 34 to 518 baht, averaging 159 baht. It is seen, in spite of this rather wide range, that three-fifths of the value per rai concentrate in the interval between 100 and 200 baht per rai.

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TABLE 44

FREQUENCY DISTRIBUTION OF THE VALUE PER FARM OF EQUIPMENT AND MATERIALS OF 104 FARMS
Bangchan, Thailand, 1948

Class Intervals	Number of Farms	Average Per Farm
baht		
Under- 1,000	2	460
1,000- 1,999	12	1,477
2,000- 2,999	8	2,596
3,000- 3,999	17	3,490
4,000- 4,999	11	4,511
5,000- 5,999	15	5,473
6,000- 6,999	11	6,380
7,000- 7,999	9	7,380
8,000- 8,999	4	8,307
9,000- 9,999	4	9,357
10,000-10,999	6	10,520
11,000-11,999	4	11,584
12,000-and over	1	16,733
Total	104	88,268

Mean . . . . . 5,381 baht

Median . . . . . 5,055 baht

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TABLE 45

FREQUENCY DISTRIBUTION OF THE VALUE PER RAI OF EQUIPMENT AND MATERIALS OF 104 FARMS
Bangchan, Thailand, 1948

Class Intervals	Number of Farms
baht	
Under- 50	1
50 - 99	11
100 --149	38
150 - 199	23
200 - 249	13
250 - 299	8
300 - 349	22
350 - 399	3
400 - 449	2
500 - 549	1
550 - 599	2
Total	104

Mean . . . . . .159 baht

Median . . . . . .152 baht

243 434 [435] Of 47 farms which had negative labor incomes, 37 were in the class interval of from -1 to -2,000 baht, 9 from -2,001 to -4,000 baht, and one -- the least efficient as far as this measurement is concerned -- produced as low a labor income as -8,006 baht. This last farm had to support a large family of eleven members. With an acreage of 40 rai, which was rather small relative to the size of the family (another family of ten was operating a 110-rai farm in that same year), it was natural that this farm did not have much rice to sell.

243 434 342 [427] [435] In figuring farm expenses, we intentionally left out the dwelling and included as farm buildings only the ones that housed the buffaloes, farm equipment and materials. The main reason for this omission was that there was a wide range of dwelling facilities in Bangchan -- from a teak building valued at 30,000 baht to a dirt floor thatched shack valued at no more than a few hundred baht. Besides, rental for a dwelling in rural areas of the country is practically unknown. Since a family living in the village must have their own dwelling regardless of their occupation, it was considered in this study that dwellings should be separated from farm investment. This consideration was further substantiated by the fact that when a family gives up farming they continue to live in the dwelling while all the farm equipment may be sold.

243 434 433 When the charge for dwelling is dispensed with for the reasons given above, the only difference between labor

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426 representation of internal savings in the community, they
454 probably overstate this increase somewhat.
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When calculated in the manner outlined above, the
511 net accumulation of assets of our 96 sample-families was
434 found to total 84,942 both during the period from March, 1948 to February, 1953, averaging 885 baht per family per year. The frequency distribution of this accumulation of assets is shown in Table 59.

It is seen that of 96 sample-families, 90 had positive accumulation while only 6 had negative accumulation. Fifty-six or more than half of the total number of families studied had an accumulation of assets in the class interval between 0 and 999 baht. The highest amount of accumulation was found to be 9,000 baht, while the lowest was -10,470 baht.

We should examine the figures of Table 59 more closely before drawing a sweeping conclusion from the mere fact that 90 out of 96 sample-families had positive accumulation. In the first place, the raw data show that of the 56 families reporting accumulation in the class interval of 0 - 999 baht, there were 42 families whose accumulation was 0. Thus the number of families with positive accumulation was really not 90, but actually 48 or only half of the total sample-
[435] families. Besides, consideration must be paid to the fact that gold is not only a kind of security but also an article of prestige as well, and a gold necklace of 15 - 30 gram weight valued at 500 - 1,000 baht is usually worn by a rural Thai who can afford one. When a person reappears in the

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the export price was expressed in foreign exchange. The Rice Office figured its accounts at the official rate of exchange, and the price in foreign currency was fixed at such a level that even when converted at the official rate the Rice Office could buy rice from millers and still make a 20 per cent profit on the transaction. The foreign exchange proceeds were turned over to the Bank of Thailand. The bank in turn might sell part of the foreign exchange at the official rate, e.g., for certain imports, but it also sold part at the open-market rate of exchange. On this portion it made an additional profit equal to the difference between the two rates. Ingram estimates that for each metric ton of white rice, 15 per cent broken, for which the gross price to miller was 1,306 baht in 1951, the total government profit was 1,304 baht, of which 248 baht was trading profit and 1,056 baht was exchange profit.[4] Another writer estimates that the government's profit from each metric ton of white rice, 5 per cent broken, was 1,650 baht.[5]

In 1951, the Ministry of Commerce began to issue a number of permits to export rice against commercial contracts. Since the world price of rice was still above the prices fixed in government contracts, exporters were eager to obtain the private permits, and a lively market for

4. Ibid., pp. 89-90.

5. M. R. Anuporn, "Rice and the Thai Government," Prachatipatti February 5, 1955.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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permits sprang up. During 1951 the black-market price for such permits reached U. S. $35 per ton. Officials were obtaining permits for export against commercial contract and promptly selling them in the market. A permit for 10,000 tons meant $30,000 even at the low price of $3 per ton, and when the price hit $20-$30, the temptation to bribe the crucial officials was enormous. Millers were eager to get a cut also, and they were reluctant to make rice available unless they got some kind of a premium.[6]

By 1953, however, the world demand for marketable rice began to decline, and it may be said that the rice trade had shifted from sellers' market bo buyers' market. The primary reason for this decline was the recent increase in production in the deficit countries. As a rice exporting country, Thailand was naturally adversely affected. Her position was further aggravated by high production in Burma which offered lower prices in the international market.

In recent years, the export prices of Thai rice had been steadily raised. For a ton of white rice, 5 per cent broken, it was L47 5s in 1951, L50 5s in 1952, and L55 5s in 1953. The decline of demand forced the government to lower the export prices by L1 - L5 per ton for the first time in 1954, and finally to virtually abolish its monopoly over the export of rice in 1955.

Thus, rice export has now become "free", but actually under rigid rules and regulations especially with reference

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6. Ingram, op. cit., p. 91.

243 439 655 435 to the control of foreign exchange. By abolishing its monopoly over rice export the government simply gives up its trading profit but still retains the huge exchange profit.

It is seen that the government had been strengthening its finances and increasing its revenues through the operations of rice monopoly and exchange control, and at the same time the internal prices of rice were kept at a low level. The largest share of the burden has no doubt fallen on the rice farmer, who receives less than one-half of the paddy price he would have received in a really free market. The lively market for export permits and frequent reported incidents of irregularities by crucial officials mean that the difference between the price that the farmer should receive and the price he actually receives has not all gone to the government revenue. This difference, amounting to no less than a billion baht annually, cannot therefore be expected to be channelized back to the farm. The worst part of the system, however, is that in practice there has been a kind of an upper limit without any corresponding lower limit for farm prices of paddy. Thus, while export prices steadily rose, the farm price of paddy in Bangchan was maintained at 900-1,000 baht per ton during the period from 1950 to 1952. When the export price began to decline in 1953, but in fact it was still well over the 1951 level, the Bangchan paddy price dropped abruptly to 600 baht.

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243 441 Before War II, the problem in rice marketing had been one of alleged usurpation by the Chinese middlemen -- the rice dealers and the millers. Expert organizational ability, it has been observed, has put the Chinese in control over the internal rice trade of the country. Even now, all the five rice dealers operating in Bangchan are Chinese, and the three largest rice mills in the market town of Minburi are owned and operated by the Chinese. The other rice mill -- the smallest of the four in operation in Minburi -- is owned by a Moslem.

243 441 436 563 Ingram observes that the postwar system has had the effect of increasing the number of Thai middlemen and exporters. The fixed buying price of the Rice Office introduced a degree of stability into the paddy market and enabled Thai middlemen to compete with the Chinese. Formerly, the price of paddy fluctuated wildly from place to place and from month to month because of the variety of measures used in buying it, because of seasonal variations, and because of the many transactions involving merchandise or loans. Thai middlemen did not have the working capital, the experience, or the trading ability to compete with the Chinese under those conditions. But when the millers' buying prices became fixed within narrow limits for long periods, the middleman function was greatly simplified. No doubt other factors were involved, but people in the rice trade consider the greater stability of prices to be of major importance in the rise of Thai middlemen.[7]

7. Ibid., p. 92.

434 thousand baht to more than ten thousand baht which
454 is a real drain on the village cash supply.
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These huge expenses are, however, partially compensated by such items as loans sought from outside or sale of lands and other assets. It cannot be [426] expected, however, that these items would provide enough supply of cash to bring down the rate of interest in the village.

4. Role of paddy

243 Paddy is extensively used in the village as a
436 medium of exchange. It is used in both small transactions of a few baht and large transactions of several thousand baht. Thus paddy stock may almost be considered as equivalent of a bank balance.

243 The most important consumption uses of paddy
433 are as seeds and for human consumption. In order to
436 make it really comparable to a bank balance, allowance
454 must be made for the amount necessary for seeds and human consumption although the amount for chicken feed may be dispensed with because the farmer may choose to drop his poultry enterprise. On this basis, we have
128 arbitrarily coined a term "index of capital formation
243 potential with present levels of living" to represent
433 the amount of paddy in tang which is left at the oper-
436 ator's disposal at the end of March after allowance
454 for seeds and family consumption has been made. No allowance is made for special consumption expenses such

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as sponsoring of ordination and other rituals. Algebraically, the formula for the index of capital formation potential may be expressed as follows:

$$I = P - (R \times 1\ 1/2) - (C \times 30)$$

where,

I is index of capital formation potential
P is paddy stock at the end of the first phase of sale (about March 31)
R is area in rai devoted to rice
C is the family size expressed in consuming units, whereby adults age 15 years and over are considered to be one consuming unit each and children age 14 years and under are considered to be one-half unit each.

The formula is constructed under the following assumptions:

1. Creditors and landlords demand settlement of debts and rentals immediately after harvest.
2. Farmers prefer to keep paddy rather than cash.
3. Before the end of March, affluent farmers sell only a certain part of their crops which would bring just enough cash to last until the next sale in July or after.
4. Amount of seeds necessary to plant one rai of rice is 1 1/2 tang.
5. Paddy consumption is 38.3 tang annually per consuming unit (Table). The surplus held on March 31 must last for 9 1/2 months before the next harvest can be used. Consumption during these 9 1/2 months is calculated at 30 tang per concuming unit.

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Table 65 shows the frequency distribution of index of capital formation potential of 96 sample-operators as of March 31, 1953.

It is seen that the median index of capital formation potential is 65 tang. The abnormally high indices of two operators, one over 1,000 tang and the other over 2,000 tang, have pushed the mean index up to 145 tang. It is seen also that there are 34 operators whose indices of capital formation potential are negative. Since there 34 operators constitute more than one-third of the sample, the situation may be said to be rather disheartening. This means that a good proportion of farm operators do not produce enough paddy even for their own consumption after having to pay for debts, rentals, and other immediate requirements.

In the opinion of the author, index of capital formation potential in the sense that is here used is a very useful device for a quick survey of economic condition of most rice growing areas of Thailand where the single-crop system is practiced and where there is relatively little secondary income.

43 been observed that arrangement is often made to pass the excess cash on to other people -- usually borrowers or sellers of land or capital goods.

It is seen, then, that only a part of cash payment for surplus paddy sold by Bangchan operators is brought into the village, and that the amount brought in would not stay long in the village either.

It is also seen that this dread of cash together with the normally low net cash return from rice because of relatively high cost of production have tended to keep the money supply in the village at the midmum level even during the harvesting season.

426 To offset the low money supply, credit is extensively used in the village, especially after July until December when cash received from the sale of paddy has been all used [436] up and the sale of the new crop has not started. Paddy is also used as medium of exchange.

It has been shown that debt is widespread in Bangchan, and that the modal interest rate was 24 per cent per year for loans and 50 per cent per year for credit purchase accounts. No matter how extensively credit is employed, these high rates of interest indicate that there is still a scarcity of credit itself and of credit facilities in the village.

Scarcity of credit is indicated not only by high apparent rates of interest but also by discounts and premiums of various forms. Some of these are: (a) Tog khao wherein

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APPENDIX A

TERMS USED IN THIS STUDY

Measurement

1. Rough rice or paddy: Grains of rice after they have been threshed but before they have been milled.
2. Milled rice or clean rice: Grains of rice after they have been milled.
3. One rai equals two-fifths of an acre.
4. One tang equals twenty litres. It is the standard measurement for both paddy and rice. The weight of one tang of paddy varies from one locality to another. On the average, Bangchan paddy weighs about eleven kilograms per tang. The weight of one tang of milled rice does not vary significantly from place to place, the average being sixteen kilograms.
5. One baht (weight for gold and silver) equals fifteen grams.

Currency

The basic monetary unit is the baht. During the period of the study, Thailand maintained a so-called open market exchange rate which served largely as the going and legal rate for all commercial transactions other than exported rice and a few specified items of export and import. At the time of the study, this open market rate was about 20.25 baht to one U. S. dollar.

The official rate of exchange during the early post-war period was 10 baht to one U.S. dollar. Following the

436 devaluation of the pound sterling in September, 1949, this official rate was changed to 12.50 baht to one U. S. dollar.

Geographical Administrative Units

The area of Thailand is divided into 71 changwad, which we shall translate as "provinces". Each of these is under an official whose title we shall translate as "commissioner". In each province are a varying number of amphur, or districts, each under a Nai Amphur, or "district officer". In each district are many tambol, or "communes", each under a kamnan, or "commune chief". In each commune are many mu-ban, or "hamlets", each under a puyai-ban, or "headman". The hamlet is the lowest administrative unit.

443 noodles. Their prices were higher than in Minburi or Bangkok, but their service was such a convenience that many people rarely went to town. Some adults in Bang Chan had never been to Bangkok though almost all had visited Minburi, about 3
[437] miles from the temple. Venders often extended credit, and also accepted items such as fresh fish, fruit, and eggs on a barter basis, thus providing an outlet for small amounts of home products. When the subsidiary canals were dry, however, venders could not get to some parts of the village.

Home Sites and Houses

General Arrangement

361 487 Since the canals provided the chief means of local transportation for much of the year, and also supplied water for many household uses, houses were built near the canal, usually within sight of a neighbor's. Home sites were mounded up to a level of two or three feet above that of the fields, but even so, water might cover the mound at the peak of the rainy season. Old wooden houses were set in a grove of bamboo, bananas and other fruit trees and vines, occa-
343 sionally betel and coconut palms. Nearby might be a shed for the water buffalo which were the draught animals used in farming. Rarely one saw a walled privy.[1] On the same mound might be a cottage built by parents for married children or by an affluent farmer for a hired hand. In this case, the threshing floor, firewood from trees on the mound, and area
342 for kitchen garden would be shared. Many houses were built on stilts to avoid flooding when the water level was high. If the house was elevated sufficiently, the area underneath provided a relatively cool shelter during the hot season for the buffalo, and even for family members for some of their daytime activities.

Depending on the resources of the family, houses were built of either thatch or wood, roofed with thatch, galvan-
352 ized iron or occasionally, tile. Split bamboo or matting might be used for dividing walls if the house had more than one room. Wooden flooring was usual, but in simpler thatched houses with dirt floors, the buffalo might be sheltered under the same roof with the family. In such a house, one or more low wooden platforms were built for sitting and sleeping. Wide cracks between floor boards conveniently permitted betel
364 chewers to spit without the need for a spittoon. Those who
267 were preparing food or clearing up after a meal could also thus discard refuse or dispose of leftover food that was to
364 be given to chickens, without leaving the kitchen. Some

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1. cf. Hauck, 1956, p. 5-6 for description of latrine facilities.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

The observer often had
126 opportunity to make notes on foods eaten by various family
262 members. Two examples of these are included in Appendix A, p. 97.

Snacks

262 We have noted that various family members ate the morn-
264 ing meal, in particular, at different times, and that children
855 especially might eat leftover food between meals. Most Bang
Chan school children[1] ate snacks, which were usually different
443 from foods eaten at a regular meal. Doubtless most of them were purchased from one of the venders who were to be seen on the school grounds daily. Fruits and "desserts" were most commonly eaten, although a variety of other foods, not a part of the usual Thai meal, were also listed. Sweets were listed about 450 times on the 539 records obtained. Many of them had a base of rice, rice flour or glutinous rice with sugar, and included coconut, banana or other fruit. Some were made with legumes, and a few contained egg. Fried bananas, fried sweet potato slices, bananas or beans cooked in syrup, and bananas cooked in sweetened coconut milk were also listed. A few items such as ices, flavored syrup poured over shaved ice, and candies, had little nutrient value other than caloric content.

272 A glass of milk, and milk with coffee, were each listed
once. These might have been obtained at the store adjoining
the school grounds. These instances are worth noting primar-
ily because, although dried and tinned milks were obtainable, milk was seldom given to village children after weaning.

262 Many children were given a bit of cash each day, and
437 Janlekha (1955) commented that some children who did not have
855 any might barter an egg for snacks. One could tell fairly
261 well from the children's records what the venders offered for sale on a given day. Some influence of season was apparent; thus ices and syrup over shaved ice were eaten more often during the hot dry season, and cooked foods such as fried Chinese noodles appeared primarily in the cool season.

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126 1. With the cooperation of teachers of the third and fourth grades in the Bang Chan elementary school, records of food eaten during 24-hour periods were obtained from children in these grades at intervals of about one month during the school year. This was a regular activity in the health class. A total of 539 records (from 1 to 8 for each child) were obtained from 75 boys and 72 girls. To facilitate recording, each child was given a sheet of paper, with spaces for his name, the date, and kinds of food other than rice, eaten at the morning, noon and evening meals, and as snacks. These records were collected primarily for information on meal patterns of village families for comparison with the limited sample in the dietary survey, and on seasonal use of various foods.

000 concerning its culture and use. Tilapia culture was learned
[434] largely by trial and error, and was considered primarily as a
[225] source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been
[262] different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

262 More home consumption of eggs would be desirable, but
[437] their ready sale and acceptability for barter may present an
[437] obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak
[432] season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented
[264] as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

272 Milk, as canned, dried or malted milk preparations, was
792 considered an appropriate gift for the priests, who are for-
788 bidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to in-
000 clude milk among them. People gladly bought food for the
[829] priests and would probably accept on the authority of the head
[792] priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headmen were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

[796] The importance of merit making and the relatively large
[882] cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

178 592 621 [593] because four members of her family had just left her to establish families of their own. The son-in-law accepted this invitation and had since taken over the management of his mother-in-law's large 60-rai rice farm.

Case 10: In 1949, an old woman was living with two boys, one distantly related to her, the other without any [427] [792] [431] blood relationship. She was operating a small rented rice farm. Some time in the past she had made a generous offer of her own house to the temple which was not acted upon by the receiving party. In 1953, the headpriest contemplated an expansion of one of the temple buildings and approached the woman for the gift. The woman complied with the request, had her house dismantled, saving only the kitchen, and sent all the building materials to the temple. Meanwhile, the two boys had left her; one went to live with his mother in [593] [437] the village, the other went to Bangkok. Later, the woman joined the household of her younger brother, who lived next door, with the understanding that the brother had free use of her buffalo in exchange for her room and board.

Case 11: In 1949, a woman was living in KY8 with her aged mother and her baby born of her separated husband [586] [587] who was a policeman. Two years later, the woman married a widower, who lived in the same hamlet, and brought along her mother and son to live with her new husband.

With the exception of Case 6, a lone aged woman who was survived by none after her death, these cases may be grouped according to the nature of acceptance of the families

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Other Food Production

235 433 Other food products which are produced in a considerable amount in Bangchan include chicken eggs, duck eggs, and fish. To a lesser extent, fruit and vegetables are also produced locally.

Practically every family in Bangchan raises chickens, and half raise ducks. In April, 1949, the author conducted a poultry survey covering 46 families whose homes were on the banks of Bangchan Canals. Of these, 45 families were found to be raising chickens and 23 families raising ducks.

Of 45 families raising chickens, 38 families from which data were available reported rates of egg production showing that for these families 53,750 eggs were produced annually from 376 laying hens, averaging 143 eggs per hen. [146] Of 31 families who gave information about sales, five con- [438] sumed all 2,260 chicken eggs produced; the other 26 families sold 31,040 eggs and consumed 5,590. The proportion of consumption to sale was thus 7,850 to 31,040 or approximately one to four.

There were 393 laying hens in the yards of 45 families, averaging 8.6 hens per family. Chicken egg production [434] was estimated at 1,230 per family. Assuming that four-fifths of these were sold at three for one baht, which was the local price in 1949, average cash income for these families from sale of chicken eggs was estimated at 326 baht annually. [435] With a higher price in 1953 of fifty satang a piece, the estimated income from sale of chicken eggs rose to 492 baht per family.

*243 of village production and surplus of paddy (Table 16) there
433 were no comparable basis for our estimate of the other crops.
*128 Our estimates of these other crops should therefore be considered as crude estimates.

433 Tables 16 and 17 show that in 1953 Bangchan had
438 surpluses of 104,756 tang of paddy, 293,232 chicken eggs,
435 and 67,050 duck eggs, and a deficit of 4,945 kilograms of fish. Using the 1953 farm prices of 9 baht per tang of paddy, 0.40 baht per chicken egg, 0.50 baht per duck egg, and 5 baht per kilogram of fish, village exports may be estimated at 942,804 baht for paddy, 146,616 baht for chicken eggs, and 33,525 baht for duck eggs, and village import of fish may be estimated at 24,725 baht.

*243 Land Tenure

311 Table 18 shows that Bangchan residents owned an aggre-
423 gate area of 4,315 rai. Since their combined area planted
427 to rice was 6,722 rai, the balance of 2,407 rai had to be provided by absentee landowners. In fact an area larger than 2,407 rai had to be rented in because part of the area owned by local residents had to be used as homelots. Actually, the net area rented in was 2,438 rai (total area rented in of 3,641 rai minus total area of 1,203 rai rented out). It is not to be expected, however, that this extra area of 31 rai (an excess of 2,438 over 2,407 rai) is enough to ac-
*128 commodate the 298 homelots in the village. Inaccuracies might have arisen in cases of joint ownership of certain

[TEXT CONTINUED ON PAGE 1311]

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438 511 On the other hand, there are scores of items that have to be bought for daily consumption. These are: [262] [263] [273] [276] [372] [515] (a) Food -- fish, fish sauce, shrimp paste, meat, coconut, onions, garlic, dried chili, curry essence, limes, tamarind, palm sugar, white sugar, salt, and cookies: (b) Stimulant -- dried areca, betel, lime, tobacco, tobacco binder, and liquor; (c) Clothing; (d) Medicine; (e) Soap; (f) Fuel -- Kerosine, matches, charcoal, and fire wood. The list includes only standard items appearing on our check list. Actually, there are more of such items as coffee, tea, lemonade, coca-cola, and pepsi-cola. Articles that are bought [128] [272] but do not appear on the check list for ordinary household expenses for certain technical reasons which will be discussed in the section on consumption later in this chapter are building materials, machinery, farm equipment, furniture and household utensils.

000 The Operator's Remuneration and Measures of Success

From almost the beginning of the study of farm management in the United States, much effort has been given to measuring the success of farming businesses, or of farm-family undertakings or enterprises, and then of correlating various factors with these, such as size of business, yields per acre or per animal, or work-efficiency measured perhaps as crop acres per man or per horse or per tractor, with a view to discovering some general farm management principles or rules for a farmer or farm family to follow in becoming more successful. Black, Clawson, Sayre and Wilcox give the

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Problems in the Marketing of Rice

Another factor which has aggravated the basic economic problem of Bangchan lies in the marketing of rice. In order to meet its contract commitments, as well as to obtain control over the price of rice to domestic consumers, the Thai government declared a monopoly on rice export at the end of World War II. This monopoly enabled the government to appropriate a large part of the high prices received for rice exports. Surplus rice had to be sold to the Government Rice Office at prices fixed in baht. Mills were allowed to sell rice for local consumption, but the entire surplus over domestic needs had to be sold to the government, which resold it to foreign buyers. Internal transport of rice and paddy was strictly controlled, and provincial surpluses of milled rice were delivered to warehouses in Bangkok. The government did not control the price of paddy. It merely bought milled rice for export, and the paddy price was determined by the competition of millers and middlemen, the willingness of growers to sell their paddy, and the rice prices paid by the Rice Office.[3]

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Government profits arose in two ways. First, the Rice Office sold rice to shippers for about 20 per cent more than the price it paid to the millers. This trading profit was considerable because both the purchase and sale by the government were paper transactions involving little expense. Second, a potential exchange profit arose from the fact that

3. Ibid., p. 88.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 439 655 the export price was expressed in foreign exchange. The Rice Office figured its accounts at the official rate of exchange, and the price in foreign currency was fixed at such a level that even when converted at the official rate the Rice Office could buy rice from millers and still make a 20 per cent profit on the transaction. The foreign exchange proceeds were turned over to the Bank of Thailand. The bank in turn might sell part of the foreign exchange at the official rate, e.g., for certain imports, but it also sold part at the open-market rate of exchange. On this portion it made an additional profit equal to the difference between the two rates. Ingram estimates that for each metric ton of white rice, 15 per cent broken, for which the gross price to miller was 1,306 baht in 1951, the total government profit was 1,304 baht, of which 248 baht was trading profit and 1,056 baht was exchange profit.[4] Another writer estimates that the government's profit from each metric ton of white rice, 5 per cent broken, was 1,650 baht.[5]

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243 435 439 655 661 permits sprang up. During 1951 the black-market price for such permits reached U. S. $35 per ton. Officials were obtaining permits for export against commercial contract and promptly selling them in the market. A permit for 10,000 tons meant $30,000 even at the low price of $3 per ton, and when the price hit $20-$30, the temptation to bribe the crucial officials was enormous. Millers were eager to get a cut also, and they were reluctant to make rice available unless they got some kind of a premium.[6]

243 439 433 By 1953, however, the world demand for marketable rice began to decline, and it may be said that the rice trade had shifted from sellers' market bo buyers' market. The primary reason for this decline was the recent increase in production in the deficit countries. As a rice exporting country, Thailand was naturally adversely affected. Her position was further aggravated by high production in Burma which offered lower prices in the international market.

243 435 439 655 In recent years, the export prices of Thai rice had been steadily raised. For a ton of white rice, 5 per cent broken, it was £47 5s in 1951, £50 5s in 1952, and £55 5s in 1953. The decline of demand forced the government to lower the export prices by £1 - £5 per ton for the first time in 1954, and finally to virtually abolish its monopoly over the export of rice in 1955.

Thus, rice export has now become "free", but actually under rigid rules and regulations especially with reference

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6. Ingram, op. cit., p. 91.

7: Janlekha X.4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 to the control of foreign exchange. By abolishing its
439 monopoly over rice export the government simply gives up
655 its trading profit but still retains the huge exchange
435 profit.

It is seen that the government had been strengthening its finances and increasing its revenues through the operations of rice monopoly and exchange control, and at the same time the internal prices of rice were kept at a low level. The largest share of the burden has no doubt fallen on the rice farmer, who receives less than one-half of the paddy price he would have received in a really free market. The lively market for export permits and frequent reported incidents of irregularities by crucial officials mean that the difference between the price that the farmer should receive and the price he actually receives has not all gone to the government revenue. This difference, amounting to no less than a billion baht annually, cannot therefore be expected to be channelized back to the farm. The worst part of the system, however, is that in practice there has been a kind of an upper limit without any corresponding lower limit for farm prices of paddy. Thus, while export prices steadily rose, the farm price of paddy in Bangchan was maintained at 900-1,000 baht per ton during the period from 1950 to 1952. When the export price began to decline in 1953, but in fact it was still well over the 1951 level, the Bangchan paddy price dropped abruptly to 600 baht.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

CHAPTER VI

FARM ORGANIZATION AND MANAGEMENT

Broadly speaking, a farm is one or more tracts of land held or operated as a unit for the production of agricultural products.[1] The subject of farm organization and farm management is usually treated under the more general term "farm management". A recognition of the distinction between these two functions of the farm operator is necessary. Organization refers specifically to the function of creating the general scheme or plan of production, whereas management refers to the function of putting the scheme into operation and of making those adjustments in the business which are necessary in order to obtain the maximum economic returns from the farm business as a whole.[2]

Limited Role of Bangchan Operators

1. Limited role in organization: Discussions in the preceding chapters have indicated that at the present stage of technological development Bangchan operators have really not much choice in creating the general scheme or

1. H. C. M. Case and Paul E. Johnston, Principles of Farm Management, J. B. Lippincott Company, Chicago, 1953. pp. 466.

2. G. W. Forster, Farm Organization and Management (New York: Prentice-Hall, Inc., 1950), p. 19.

243 433 44 plan of production. If a crop is to be produced for market in Bangchan, in all probability it must be rice. Since crop rotation is not practiced, there is no need for decision making as to the kinds of crops which are to be grown 235 other than rice. The operator may have to decide how many chickens he should keep, but he normally settles on a flock of ten to fifteen, for it would be too much a burden to keep a larger flock and fewer heads of poultry would not 243 433 be worth the time. The production function, or the choice of the best factor combination, also does not call for any serious consideration. For it has been observed that at the present stage of technological development of rice production in Thailand or even in the whole region of Southeast Asia the marginal product of labor has already approached zero. In other words, more labor applied to the same area under the same method of planting would not materially increase the crop harvested. It has been claimed, though, that a larger crop may be expected from the same parcel planted to broadcast rice by changing the planting method to the more labor intensive transplanting system. This claim has never been substantiated, however, by any systematic comparative study. Besides, the transplanting method is so universally adopted in Bangchan that it can almost be taken for granted to be the one in use by any rice farmer. Moreover, it was mentioned earlier that the planting method is not optional with the farmer but is governed by topography, expected condition of water supply, and availability of labor.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 Problems in the Marketing of Rice
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655

Another factor which has aggravated the basic economic problem of Bangchan lies in the marketing of rice. In order to meet its contract commitments, as well as to obtain control over the price of rice to domestic consumers, the Thai government declared a monopoly on rice export at the end of World War II. This monopoly enabled the government to appropriate a large part of the high prices received for rice exports. Surplus rice had to be sold to the Government Rice Office at prices fixed in baht. Mills were allowed to sell rice for local consumption, but the entire surplus over domestic needs had to be sold to the government, which resold it to foreign buyers. Internal transport of rice and paddy was strictly controlled, and provincial surpluses of milled rice were delivered to warehouses in Bangkok. The government did not control the price of paddy. It merely bought milled rice for export, and the paddy price was determined by the competition of millers and middlemen, the willingness of growers to sell their paddy, and the rice prices paid by the Rice Office.[3]

*243
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Government profits arose in two ways. First, the Rice Office sold rice to shippers for about 20 per cent more than the price it paid to the millers. This trading profit was considerable because both the purchase and sale by the government were paper transactions involving little expense. Second, a potential exchange profit arose from the fact that

3. Ibid., p. 88.

*243 256 472 Although private rice millers in Bangkok operate with a rather high degree of collusion, in the countryside the many small millers compete actively on the basis of price charged for their services or price paid for paddy or both. The comparatively high capital investment of the enterprise has rendered inter-mill competition in the countryside very intense, and it is obvious that the farmer gains economically from such competition. If somehow the government could, by a carefully conceived gradual program, induce a large number of smaller mills to move from Bangkok to the countryside, the farmer will benefit all the more. Already, the trend has been for gradual business decline for Bangkok mills and business upswing for the countryside mills.[8]

*243 256 656 44 It is rather unfortunate, however, that the government has explicitly taken the view that small rice mills (capacity of five tons and under) in the countryside are detrimental to the interest of the farmer. It is officially held that small rice mills would bring about a large number of middlemen who would then combine to suppress the farm price. Actually, more middlemen tend to produce correspondingly keener competition in the marketing process which is beneficial, not detrimental, to rice growers.

*243 256 433 Small rice mills, which may be more conveniently erected in the villages and perhaps with local capital, will reduce the cost of transporting rice by a third, for about two-thirds of the weight of paddy is head rice, the other

8. The Economic Yearbook, edited by Luan Pannoi, Bangkok, 1951.

close touch with each other's activities and needs. 621

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time. 621 844 592 844 476 593 [462]

Wealth Differences:

Way of Life 556 875 441

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable. [464] 556 511 178 369

125
[513] f. During the last year, did it occur to you frequently, sometimes, or never that you had a nightmare?

4.	Frequently	16
5.	Occasionally	120
6.	Never	197

[546] 35. In your life, how many times have you seen a movie, or haven't you ever seen one?

5.	Ten times and more	161
6.	4 to 9 times	60
7.	1 to 3 times	75
8.	Never	33
—	No Answer	4

[426] 36.a. Excuse me, I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?

5.	Yes	192
6.	No	140
7.	Unascertainable	1

b. IF YES: Is your debt now higher, or lower, or about the same as it was two years ago?

8.	Higher	68
9.	Lower	95
X.	About the same	28
Y.	Unascertainable	1

c. IF NO: How about two years ago, did you have a debt then or not?

9.	Yes	61
X.	No	78
Y.	Unascertainable	—
—	No Answer	1

[441] 37.a. Do you or anybody in your household buy certain products in order to resell them at a profit?

9.	Yes	85
X.	No	242
Y.	Unascertainable	2
—	No Answer	4

b. IF YES: Do (you/they) sell things regularly, occasionally or just at festival times?

7.	Regularly	31
8.	Occasionally	49
9.	Just at festival times	5
X.	Unascertainable	—

[241] 38.a. And now, I would like to know a little more about fertiliser. Do you think fertiliser is very good, fairly good or bad?

1.	Very good	106
2.	Fairly good	149
3.	Bad	15
4.	Unascertainable	63

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 441 Before War II, the problem in rice marketing had been one of alleged usurpation by the Chinese middlemen -- the rice dealers and the millers. Expert organizational ability, it has been observed, has put the Chinese in control over the internal rice trade of the country. Even now, all the five rice dealers operating in Bangchan are Chinese, and the three largest rice mills in the market town of Minburi are owned and operated by the Chinese. The other rice mill -- the smallest of the four in operation in Minburi -- is owned by a Moslem.

243 441 435 563 Ingram observes that the postwar system has had the effect of increasing the number of Thai middlemen and exporters. The fixed buying price of the Rice Office introduced a degree of stability into the paddy market and enabled Thai middlemen to compete with the Chinese. Formerly, the price of paddy fluctuated wildly from place to place and from month to month because of the variety of measures used in buying it, because of seasonal variations, and because of the many transactions involving merchandise or loans. Thai middlemen did not have the working capital, the experience, or the trading ability to compete with the Chinese under those conditions. But when the millers' buying prices became fixed within narrow limits for long periods, the middleman function was greatly simplified. No doubt other factors were involved, but people in the rice trade consider the greater stability of prices to be of major importance in the rise of Thai middlemen.[7]

7. Ibid., p. 92.

*243 • 441 663

Relative to the enormous problem created by export and exchange control, the internal marketing problem now appears to be small at least in its relative effect on rice growers. It is true that the Chinese combines in the forms of Rice Dealers' Association and Rice Mills' Association have consolidated economic influence in favor of the Chinese middlemen in Bangkok. But it is equally true that competition among the Chinese rice dealers and millers in the countryside also has worked to the advantage of growers.

It has been observed that the Chinese dealers in Bangchan offer prices to farmers that scarcely differ from prices that the farmers could get from the millers if they were to break the existing pattern and deal directly with the millers themselves. This would often be possible because most of the local farmers possess the large chala boats needed to convey paddy to the mills which are only a few miles away. Actually, the Chinese rice dealers and Bangchan farmers have been observed to be in a rather efficient state of economic symbiosis that compares favorably [186] with most inter-ethnic divisions of labor. Further attestation is found in that there appears to be extremely little anti-Chinese sentiment among the villagers, and this is despite the fact that the national government has from time to time taken somewhat spirited measures against the [426] Chinese. The favors, non-interest bearing loans, and good will gestures accorded the Thai farmers by local Chinese dealers should also be taken into consideration.

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janlekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 15 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand [Kingshill 1960:73]).

Besides the work in rice-fields, women dug and cleaned

Bang Chan Canal bissected

the community and joined, about one mile south, Sāensāeb Canal, a broad old waterway connecting Bangkok and Minburī with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Minburī, two miles east, cut through one side of the area. On it lay Bang Khūat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō paet," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Minburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Minburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Minburī, Kilō paet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoe), one located in Minburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided, reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

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1. A new large school has since been built away from the temple compound.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7
Bang Chan

SUMMARY

A general description is given of conditions in a 105 Siamese rice village, 1952-54, as they relate to food supply 26 and food habits. Activities at various seasons of the year [220] are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

105 Food was mostly home produced and an important factor 262 in the standard of living was the number of productive hands 433 available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods [235] were used. Nearly all of the families in Bang Chan raised [433] chickens, and some raised ducks, but about 3/5 of all eggs [244] produced were sold. Every family had some sort of kitchen [245] garden, including banana trees and other plants, but spices and chili were much more commonly grown than vegetables and [222] fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

[443] Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, coconut, palm sugar and small amounts of vegetables.

[434] Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. [178] Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

105 Preparation of some typical dishes, meal service and 264 techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

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132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [463] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [220] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [433] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part of the Thai-Buddhist community. Information to be presented [028] on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

133 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the nearest market town, ran through one edge of the village. Bus 484 service was available along this road, to either Bangkok or 487 [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

443 noodles. Their prices were higher than in Minburi or Bangkok, but their service was such a convenience that many people rarely went to town. Some adults in Bang Chan had never been to Bangkok though almost all had visited Minburi, about 3 [437] miles from the temple. Venders often extended credit, and also accepted items such as fresh fish, fruit, and eggs on a barter basis, thus providing an outlet for small amounts of home products. When the subsidiary canals were dry, however, venders could not get to some parts of the village.

Home Sites and Houses

General Arrangement

361 489 Since the canals provided the chief means of local transportation for much of the year, and also supplied water for many household uses, houses were built near the canal, usually within sight of a neighbor's. Home sites were mounded up to a level of two or three feet above that of the fields, but even so, water might cover the mound at the peak of the rainy season. Old wooden houses were set in a grove of bamboo, bananas and other fruit trees and vines, occa- 343 sionally betel and coconut palms. Nearby might be a shed for the water buffalo which were the draught animals used in farming. Rarely one saw a walled privy.[1] On the same mound might be a cottage built by parents for married children or by an affluent farmer for a hired hand. In this case, the threshing floor, firewood from trees on the mound, and area 342 for kitchen garden would be shared. Many houses were built on stilts to avoid flooding when the water level was high. If the house was elevated sufficiently, the area underneath provided a relatively cool shelter during the hot season for the buffalo, and even for family members for some of their daytime activities.

Depending on the resources of the family, houses were built of either thatch or wood, roofed with thatch, galvan- 352 ized iron or occasionally, tile. Split bamboo or matting might be used for dividing walls if the house had more than one room. Wooden flooring was usual, but in simpler thatched houses with dirt floors, the buffalo might be sheltered under the same roof with the family. In such a house, one or more low wooden platforms were built for sitting and sleeping. Wide cracks between floor boards conveniently permitted betel 364 chewers to spit without the need for a spittoon. Those who 264 were preparing food or clearing up after a meal could also thus discard refuse or dispose of leftover food that was to 364 be given to chickens, without leaving the kitchen. Some

1. cf. Hauck, 1956, p. 45-6 for description of latrine facilities.

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

22 The year starts with May, the beginning of the rice-
132 year. At this time the rains began to soften the parched
241 ground, and the heat slackened. School re-opened. Farmers
512 turned to plowing, harrowing, raising the seedlings. Both
871 sexes worked about equally in field labor, boys from 14 and
462 girls from about 15 years of age performing tasks according
983 to skill and strength. Everyone was in the field at dawn. The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy
264 day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third
1264 meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

221 With the rains, the canals had filled, so that by June
132 buyers with big rice boats could return. The few farmers who
501 could afford to hold onto a portion of their last year's crop
442 sold it for a better price at this time. Vegetables and
241 fruits which had died in the long drought were replaced, and trees were planted.

24 In July the heavy transplanting season began. Because
221 of cooperative work habits or hiring out, people worked
132 solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly con-
1312 trollable. Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School
871 vacation was scheduled at this time so both teachers and
857 children could help. Older children might work in the fields,
888 while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food
433 for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

221 435 Despite the availability of fish and of vegetables in the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

221 512 The two months of September and October during which the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit and take trips. A few might go on a pilgrimage. Therefore, in this season, all family members were less often together at the evening meal. Fishing was a continuous occupation, with some preserving and home craft. Jobs such as selling food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

343 331 High water caused time-consuming inconvenience only in earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

243 221 By November, the earliest varieties of rice matured. Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could 461 not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into 226 the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience 434 of purchased food was greatest, cash was exhausted. With 426 rice money in sight, venders might be generous with credit, 443 but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

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804 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Nalis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

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1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

which the leafy vegetable (2)phag (2)ka-(2)cheed is one, and digging a deep hole at its entry. At the proper time the opening was plugged. The fish grew in the pool and were taken as needed, sometimes, for convenience, several at a time, to be kept alive in a large pot near the house. By draining the pond fish were "harvested" (p. 12). Yields varied, but villagers had the impression that they had declined considerably over a period of years.[1] In 1952, at the suggestion of FAO, the Thai government tried to increase the supply by introducing tilapia culture. During the first three years of the experiment about one-third of the families in Bang Chan had tried to raise tilapia, but in the summer of 1957 members of the research group were told that no one had persisted (see Appendix A, p. 101).

Eggs. - Chickens were raised by about 90% of the families in Bang Chan, and over 70% owned 10 or more. In contrast, only 37% of the households had ducks, and only 13% had 10 or more (Goldsen and Ralis, 1957, p. 56). Ducks were regarded as trouble makers. Moreover, chickens could feed "naturally" and certainly helped themselves to paddy from the bin, whereas ducks did not eat paddy, but had to be provided with bran and broken rice.

Most of the eggs produced were sold. Janlekha (1955) estimated the annual production of chicken eggs in Bang Chan as 366,540, and that of duck eggs as 268,200 eggs. According to the information which Janlekha obtained from 106 households in 1953, about 4/5 of the chicken eggs were sold as a secondary source of farm income whereas more than 3/4 of the duck eggs were home consumed. Slightly over 2/5 of all eggs produced in the village were consumed there. On a per capita basis, the average annual consumption of 708 eggs for an average family size of 5.7 persons (Janlekha, 1955) amounted to a little over 1/3 of an egg per day. Home consumption of eggs might be less in households in which enough chickens were raised to make regular sale of eggs possible. Thus in 5 of the 31 households studied by Sharp et al. (1953, p. 197) all hen's eggs produced were consumed at home.[2] For these families, an average of 452 eggs per family per year or about 1-1/4 egg per family per day, were thus available. Home consumption in the 26 families which sold eggs amounted to an average of 215 per year or about 0.6 egg per family per day. One informant commented that a rich man could eat an egg every day, but she could not afford to do so. She said she sold eggs, when she had them, and bought foods to eat with rice.

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1. Sharp et al., 1953, pp. 191-192.

2. This probably means that eggs were not sold in quantity, not that none were used in barter (cf p. 5); thus the number of eggs available may be overestimated.

262 expenditures by food groups is shown for the 11 families that
511 participated in the dietary study.

Consumption of canned foods was negligible. Some canned fish and fruits were on sale at stores in the village, in 1952-54, but were seldom seen in homes.

262 Sweetened condensed milk, which was served in coffee
272 sold at the stores, was occasionally bought for the children.
854 On one occasion, a woman was seen buying milk diluted with
855 hot water as a beverage. Among 526 records of food eaten by school children during 24 hour periods, milk appeared twice only, once with coffee. Dried milk, for infant feeding, was used occasionally. During 1952-54, several instances were noted in which dried milk, mixed with water, was used to feed an infant while the mother was at work in the field or engaged in vending, but we encountered one case only of an infant who was not breast fed. This was an infant whose mother died when he was five days old, and who was reared by grandparents.

262 Relatively few items of food were available at the vil-
443 lage stores. In the inventory of the largest of the three
[27] stores in the village in 1948-49 (Sharp et al., 1953, pp. 211-212) the following items of food were listed: big dried chilies, shrimp paste, onion, garlic, fish sauce (fishsoy), salted fish, fresh chilies, limes, coconut, coconut oil[1], brown (palm) sugar, tea, coffee, condensed milk, orangeade and lemonade (carbonated), sweets, liquor, ingredients (including a lime paste) used together in betel chewing.[2]

New stock received in December by a local vender who kept a few items for sale at her house included mature green beans, black beans, peanuts, sweet potatoes, salted turnip, pickled garlic and tomato sauce.

272 Larger stores served as informal men's clubs where tea,
443 coffee with condensed milk, and carbonated beverages were
515 sold primarily for consumption on the premises. The proprietor of a new store, built in December 1952, sold no liquor.

273 We have no estimate of the amount of liquor sold in Bang
[44] Chan, although for those who drank it, its caloric value might be of significance.[3] About 9% of the householders interviewed

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[354] 1. Listed by Sharp et al. with non-food items, as much of it was burned in lamps.

2. Included here as food since some calcium may be obtained from this source.

3. One observer estimated the intake of certain village men who drank regularly as at least 2 oz. of rice liquor (28-35% alcohol) per day, representing about 100 calories. The estimated intake of women who drank regularly was about 1 oz. per day.

273 in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

433 434 443 Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary [142] study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

121 In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

221 267 122 [124] From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953, and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 29 ··· Analyst]

The observer often had
126 opportunity to make notes on foods eaten by various family
262 members. Two examples of these are included in Appendix A,
p. 97.

Snacks

262 We have noted that various family members ate the morn-
264 ing meal, in particular, at different times, and that children
855 especially might eat leftover food between meals. Most Bang
Chan school children[1] ate snacks, which were usually different
[447] from foods eaten at a regular meal. Doubtless most of them
were purchased from one of the venders who were to be seen on
the school grounds daily. Fruits and "desserts" were most
commonly eaten, although a variety of other foods, not a part
of the usual Thai meal, were also listed. Sweets were listed
about 450 times on the 539 records obtained. Many of them had
a base of rice, rice flour or glutinous rice with sugar, and
included coconut, banana or other fruit. Some were made with
legumes, and a few contained egg. Fried bananas, fried sweet
potato slices, bannnas or beans cooked in syrup, and bananas
cooked in sweetened coconut milk were also listed. A few
items such as ices, flavored syrup poured over shaved ice, and
candies, had little nutrient value other than caloric content.

272 A glass of milk, and milk with coffee, were each listed
once. These might have been obtained at the store adjoining
[854] the school grounds. These instances are worth noting primar-
ily because, although dried and tinned milks were obtainable,
milk was seldom given to village children after weaning.

262 Many children were given a bit of cash each day, and
437 Janlekha (1955) commented that some children who did not have
855 any might barter an egg for snacks. One could tell fairly
[261] well from the children's records what the venders offered for
sale on a given day. Some influence of season was apparent;
thus ices and syrup over shaved ice were eaten more often dur-
ing the hot dry season, and cooked foods such as fried Chinese
noodles appeared primarily in the cool season.

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[126] 1. With the cooperation of teachers of the third and
fourth grades in the Bang Chan elementary school, records of
food eaten during 24-hour periods were obtained from children
in these grades at intervals of about one month during the
school year. This was a regular activity in the health class.
A total of 539 records (from 1 to 8 for each child) were ob-
tained from 75 boys and 72 girls. To facilitate recording,
each child was given a sheet of paper, with spaces for his
name, the date, and kinds of food other than rice, eaten at
the morning, noon and evening meals, and as snacks. These
records were collected primarily for information on meal pat-
terns of village families for comparison with the limited
sample in the dietary survey, and on seasonal use of various
foods.

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)daeaeng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chauaun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

435 Some information as to the cost in baht of the larger
796 ceremonies held in 1954, and their scale, was obtained from
[126] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[714] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

Homage-to-the-teacher ritual:

[875] A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000. Guests gave 2300.
[583] B: Rite of forgiveness after elopement: a meal, with 5 bottles of liquor.
[184] C: Moslem: 2 buffalo slaughtered. 400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
[583] sugar cane, fruits, sweetmeats and other things. At more modest weddings and the rite of forgiveness for a couple who had eloped, food might differ from the usual fare only by including the three essentials of a wedding: pork, chicken and alcohol.

273 Increased consumption of alcoholic beverages during the
796 ceremonial season was indicated by the sales of one local
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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[574] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

443 storekeeper: about 800-900 liter bottles per month during
273 the 3 months dry season as compared to about 350 bottles per
796 month during the 9 months of the rice season.

184 Moslems never served liquor at their weddings, crema-
[271] tions, and other auspicious events. Moslem residents occa-
sionally attended Buddhist (l)ngaan in spite of dietary pro-
[262] scriptions that Buddhists did not observe.[1] A medium (spiritualist) commented however that because pig's head was essential for her homage-to-the-teacher rites, some Moslem sick persons preferred to go to the Buddhist temple for treatment. There the priest-practitioner could afford to set up a separate kitchen for his Moslem patients, and so spare them the distress of confronting pork. To one big ordination Moslem guests brought their own food. Buddhists came somewhat more often to Moslem ceremonies.

262 We do not have enough information to appraise the nutri-
574 tional significance of food eaten at ceremonies. Some indi-
476 viduals got a great deal of it, others very little. One must
264 remember that the (l)ngaan was not a public but a private event at home, to which guests came on invitation. Although cremations and the teacher-rites of priest-practitioners were held at the temple, and so had a semi-public character, no one who was not invited presented himself for food. Of the participants, the working group undoubtedly received the most food; they were there the longest time, had regular meals, tastings and snacks throughout the (l)ngaan meal itself. This group comprised the host, co-sponsors and their immediate kin; other relatives and friends who were asked or who volunteered to help. The feeling was, if one were "very fond" of the host, one volunteered to cook. If less close, one was invited as a guest, but made the usual cash donation. Sociable persons combining skill and energy were invited often and volun-
[885] teered often, hence spent many days at ceremonies. Young unmarried men and women were asked and liked to be asked to work, for such occasions offered a great chance for fun and flirting.

114 Different degrees of participation may be estimated
476 from Janlekha's (1955) figures for reported contributions
796 ranging from 30 to 1000 baht in a year. Since a contribution of 5 to 10 baht per (l)ngaan was customary, the villager with the lowest reported contribution probably attended from 3 to 6 ceremonial occasions. Attendance at 100 or more (l)ngaan is unlikely, hence the villager who gave as much as 1000 baht probably made larger contributions per (l)ngaan.

574 What sort of persons or groups in the village were in-
796 vited as guests? Every host's list included his older

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[702] 1. Moslems were said to resist army service because they were afraid they would have to eat pork.

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 8. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

146 For items used less frequently, the figures are correspond-
262 ingly less than the usual amount eaten. Thus, sweet potato, which is represented as 18 grams per day per person in Group A, actually appeared on 3 records only. One family of 8 persons ate 1200 grams of sweet potato at one meal and a substantial amount later the same day. Most items appear on the lists for both groups, but sweet potato, sweet basil and bananas were included on the list for Group A only, and glutinous rice which is used as a sweet in this area, appears on the list for Group B only. Note that a few common foods account for most of the nutrients in the diets of both groups. These common foods account for only about 80% of the calcium and vitamin A value and slightly less of the ascorbic acid in the diets of Group A. The list for Group B accounts for about 70% of the calcium and 60% of the ascorbic acid in the diets of this group. The variety of green leaves used once or twice only on survey days by Group B, and the number of different seasonal fruits used by both groups in small amounts as snacks, probably account for this.

264 Contribution of Snacks to the Nutrient Content of Diets. -
[855] On the average, 4 out of 5 children had one snack per day,
262 whereas only one adult in 6 did so. The following items appeared most commonly: various kinds of fruit, 40 times (orange 7, banana 6, pineapple, watermelon and mango each 5 times, guava, jujube and Manila tamarind each 2 times, olives, rambutan, rambai, star gooseberry, (2)ta-(1)koo and Thai nutmeg each once,) coconut and bread each 13 times, glutinous rice 8, mung bean 7, truffles 6, products made of rice flour 6 times, and a variety of other items including rice noodles, sweet potato, taro, bean sprouts, lotus stalks, lotus seeds, popcorn, products made of cassava flour, sugar cane, pork and milk from 1 to 4 times each. Salt, and/or palm sugar were
[146] eaten with a number of the snacks. Although they contributed only about 2% of the total calories, and from 1 to 3% of most nutrients, snacks contributed 16% of the total ascorbic acid for Group A and 11% for Group B.

Seasonal Variation in Food Preparation, Meal Patterns, Food Costs and Calorie and Nutrient Value of Foods Eaten

128 In Table 14, a summary including the number of meals
252 prepared, time spent in meal preparation, number of "with-
264 rice" dishes, and cash expenditures for food is given by
435 rounds, for families in each group.

252 Number of Meals Prepared. - Food was cooked twice on
512 each survey day in 3 of 6 households in Group A and 3 of 5 households in Group B. Heavy farm work or vending which kept the mother away from the house sometimes accounted for once-
[443] a-day food preparation. One housewife who took food to market in Bangkok, cooked food twice a day only during the period shortly before the birth of a child, when she was not vending.

[Text continues on page 79 --- Analyst]

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. So also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 18.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)	Twice or more (Proportion who own or use the motor)
Illiterate	44% (40)	58% (51)
Literate	83 (36)	88 (83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

236 was slightly higher than that of chickens, averaging 155 eggs per laying duck.

178 231 Hogs: In 1949, two families were raising hogs which according to our observation did not seem to be well fed. When we returned to the village in 1952, not a single hog remained in Bangchan.

Fish

262 443 434 After rice, fish (and other marine animals) are by far the most important ingredient in the diet of Bangchan. More fish are bought from the outside than the very small amount that is exported from the village mainly by one or two very poor families who have availed themselves of this means of augmenting their income.

221 226 The villagers' annual cycle for fish-taking varies somewhat with the particular method used, and with the annual rice and ceremonial cycles: yet the maturation cycle of the principal types of fish is also a factor, and one which tends to give an overall orderliness to the annual cycle for fish in general. There is no time in the year when at least some fish are not available, nor is there any time in the year, even the busiest, when the family does not want fresh fish for its menu. For this reason, there is fishing the year round, at least in the form of the housewives simply setting nets in the canal and then tending them according to some schedule or whenever the noise of caught fish sloshing about in the water is heard. When a lull from the pressure of

novice; there were noticeable increases in those for farm laborers and traders, and a slight increase in that for investors, which were offset by a marked decrease in figures for farm operators and slight drops in those for the professional and home enterprisers. In order to understand these changes in the occupational structure of the village, more information on some of these occupation than that given in our operational definitions at the beginning of this chapter is necessary.

Farm operation is a traditional way of life in the village. The primary motive is to secure enough rice for consumption. A secondary motive is to have cash from sale of surplus rice to buy goods that are not produced locally.

Farm laboring as a profession is limited to the poor. Farm laborers, occupying the lowest status in the village, are the most unstable and socially disintegrated group. They are not fully employed even during the work seasons of the year because there are too many of them in the locality. Thus, they exist in the village not because of demand for their work but because they have no opportunity for other occupations.

There were twenty-one families that were classified as traders in 1953. Of these, nine were permanent storekeepers, and twelve were peddlers selling food stuffs from door to door. Stores were situated at strategic places in the village -- two at the crossing of Minburi Road and Bangchan Canal which is the natural entrance into the village,

621 four in the immediate neighborhood of the temple or on the
463 temple ground itself, and three on the banks of up-canal
443 Bangchan. These stores varied in the size of business but the goods sold were almost identical. To be found in each store were inexpensive articles of daily use, mostly dry foods, cookies, tobacco, betel, areca, lime, toilet articles, matches, kerosene, and farm materials like ropes. Most of these stores also sold hot coffee, soft drinks, and liquor. It should be noted in this connection that the market town is only two miles away. This nearness to a large market adversely affects the nature and volume of business of local traders in two ways -- villagers bypass local stores and go to the market town for varieties and large purchase, and the village is daily invaded by a number of peddlers from the town selling perishable foods.

443 While local stores operated the whole year round, the
463 activities of twelve other trader families classified as peddlers were highly seasonal subject to local water condition, seasonal demand for purchased food, seasonal supply of cash, and alternative income on the part of the peddlers themselves. These peddlers sold small quantities of vegetables, fruit, and the cheap salt water platoo fish (Rastrelliger chrysozonus), receiving in exchange from buyers cash,
[426] eggs, or paddy. Extension of credit was necessary for villagers did not have cash especially during the period from July to November. The following passages in the author's daily note dated January 12, 1953 gives an idea as to how

443 peddling was conducted by a local resident of Bangchan.

443 43 "With a capital of 600 baht Nang A began to engage in peddling on December 4, 1952. The first day she spent 150 baht on goods, mostly vegetables which she bought from Minburi. She made two rounds that day. At the end of the morning round she got 25 baht cash and 150 baht on credit. The rest of the vegetables were sold out in the afternoon round in which she received 8.50 baht cash and 29 baht on credit. This was the only time she bought goods from Minburi. From then on she took the 5 a.m. bus to Bangkok and returned to Bangchan with the goods about noon.

"Later she also dealt in pork, and her daily outlay rose to 220 baht. Out of this, she received 150 baht cash and 150 baht on credit. To date her credit accounts total 750 baht. Yesterday she was able to collect 150 baht cash and six tang of paddy (worth 54 baht) from her debtors. She said she expected to do the peddling for fifteen more days, after which the water level would be too low. She would then quit and start the same business next rice year, but she intended to start as early as the transplanting season (August-September).

"She took 200-300 chicken eggs to Bangkok every day. She sold these at a wholesale price of 55 satang each. Sometimes she sold them direct to Bangkok coffee shops and got a higher price of 65 satang a piece. 'If you are a peddler,' 443 she said, 'you must also deal in eggs.' She took time off today because 'shrimps are plentiful' in the canal. Besides,

443 she wanted to spend more time collecting debts."

221 433 434 443 261 262 It should be noted that A's brief duration of peddling started in the harvesting season. During this time the village cash supply was high, resulting in demand for such a delicacy as pork which normally constituted a negligible fraction of the diet of Bangchan people. This is a good business period for the peddlers. Another good business period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this latter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

443 It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

427 434 454 621 463 426 Five families were classified as investors in 1953. All these families lived on rents from land, interest on loans, and income from speculative sources such as buying paddy when the price was low and selling it at high prices. Actually, most of these five families were not among large land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

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434 1949-53, in actuality public service as an occupation is
463 increasing in Bangchan.
621
647 There were four home enterprisers in 1949, mostly
434 engaged in making cookies. As in case of the professional,
443 this activity still existed in Bangchan, but by 1953 it had
463 degenerated into a secondary income, leaving the lone case
621 of basket making in the home enterprise category.
285 Only one family head was classified in 1953 as a home-enterpriser. The family was engaged in making takraw -- a cane utensil used in picking mangoes from the tree. On January 27, 1953 we met A, the head of this family, who was taking 103 takraws of various sizes to sell in Bangkok. [435] A gave the amounts and prices of these takraws as follows: 56 large size, @ 3.00 baht; 31 medium size, @ 2.50 baht; 16 small size, @ 2.00 baht. A said he and his wife worked on these 103 takraws alone, and finished them in twelve days, using 50 baht worth of materials including cane, wood, and binders. Ordinarily, they started making takraws in December and continued through May. They were able to make about 3,000 baht within this period. They also made other things like baskets, but takraws were their main source of income. In rice growing season, they also did some piece working. They did not operate a farm. Piece working and basketry during rice growing season brought them a combined income of about 2,000 baht. The amount of each kind of
621 basketry they made was not as constant as takraws. It de-
434 pended more on which paid best. Their total annual income
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landlord-operators were more sensitive to the change in rent rates than were the other groups of farm operators.

Limited opportunity for an alternative occupation was mentioned in the preceding paragraph as one of the factors contributing to the inelastic nature of demand for working land. It was also mentioned in the section on the occupational structure of Bangchan that farm laboring families as existing in the village were indigenous and were an outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent [443] in any land. Limited opportunity for an alternative occupation in the village was also suggested in the same section when it was mentioned that the only possible alternative -- petty trading which was actually taken up by some former farm operators -- was limited by the fact that villagers bypassed local traders and went to the nearby market town of Minburi for major purchases and variety goods.

Limited opportunity for an alternative occupation outside the village, however, needs elaboration. It cannot be denied that wages in Bangkok, only twenty miles away and easily accessible through good road and bus services, were higher on the average than corresponding returns for labor in the village. It is important to note, however, that what will attract a villager to seek a job in Bangkok is not a higher average wage level in the city but a higher marginal wage there. Regarding the marginal wage, it is highly doubtful that a better condition exists in Bangkok.

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money, if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at other seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

182 423 435 369 rate of increase in land price is considered, however, it is reasonable to believe that population increase is certainly not the only factor.

[121] It is not the purpose of this study to deal with the price of urban land. Neither the problem of land utilization nor the whole economy of Bangchan can be clearly understood, however, without some account of the rapid building up of urban land prices in recent years. It is thus necessary to digress at this point into some factors accountable for this rapid rise.

369 454 423 435 178 182 It has been observed that the volume of domestic saving in Thailand is small because of the low level of income, and that such saving as does take place tends to be put into real estate and gold and jewelry. Concentration of income resulting from the postwar phenomenon of shifting of political and economic power into the hands of few people, however, has somewhat increased the proportion of saving; but this is again used largely to purchase real estate. The natural result is the boosting up of urban land prices especially in the suburban sections where there has been a relatively high degree of improvement in road construction since the war.

423 45 178 369 182 This investment in land purchase has more than ever before assumed a speculative nature. This is largely due to the experience of inflation initiated by World War II whereby huge and easy profits could be made from buying and selling of land. Corruption in the sale and purchase

423 of government real estates has no doubt increased these
45 speculative activities. The process has also been greatly
178 accelerated by an enormous increase since the war of banking
369 facilities, which traditionally extend loans on mortgage of
182 real estate. It should be noted in this connection that the demand for loans in Bangkok has been so great as to allow most commercial banks to adopt a highly discriminating policy of extending loans only to their favored customers who are often willing to give as much as five per cent of the loan sought to bank officials as a customary "tea-money".

182 A third factor is that some organized financial
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178 price in Zone 1 from 300 baht per rai in 1948 to 12,000 baht
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6: Goldsen and Rails Z-4.5 (1955) 1957
AO7 Central Thai AO7

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

3. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and acceptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike acceptors of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

427 the combined land of five leading farm operators of 693
434 rai, averaging 139 rai per operator and ranging from 83
454 to 235 rai. It must be remembered that our operational
621 definition of occupations was based on the main source of
463 income and that many of the villagers had more than one
426 source of income. Investors as an occupational class in Bangchan should not be pictured as large landlords and large money lenders, possessing financial influences over their tenants and debtors. Rather, they were humble fellow villagers whose incomes were mainly derived from rents of small parcels of land or interest on small loans. To cite an extreme case, one aged woman was classified as an investor. She had only 17 rai which she rented out to her own son. She was living alone in an old shack and was too old to do any kind of work. She received as rent about a hundred tang of paddy a year which is equivalent to an annual income of only 800 baht. Thus she was considered one among the poor in the village.

198 There were three families whose occupations were
465 classified as professional in 1949. The number was reduced
621 to one in 1953. The head of this family was a Chinese car-
322 penter who derived his income primarily from boat building. Again, it must be pointed out that reduction of the number of families primarily engaged in professional services does not mean that professional services had been declining.
[305] On the contrary, they had been increasing. There were three barbers in 1953 as against only one in 1949. More traditional

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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454 saving in Thailand is small because of the low level of in-
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178 put into real estate and gold and jewelry. Concentration
182 of income resulting from the postwar phenomenon of shifting of political and economic power into the hands of few people, however, has somewhat increased the proportion of saving; but this is again used largely to purchase real estate. The natural result is the boosting up of urban land prices especially in the suburban sections where there has been a relatively high degree of improvement in road construction since the war.

This investment in land purchase has more than ever
423 before assumed a speculative nature. This is largely due
45 to the experience of inflation initiated by World War II
178 whereby huge and easy profits could be made from buying
369 and selling of land. Corruption in the sale and purchase
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434 was considered as spent in land purchase. If, however,
432 he made another partial payment of 2,000 baht during the
511 period covered by the study, a total of 3,000 baht was considered. Since purchases of gold and household equipment are normally made with cash, a total of cash spent on these three items (land, household equipment and gold) would seem to fairly well indicate the extent of internal saving of
434 each family. The assumption here is that one would not
426 borrow money to buy gold or a gun. With this correction
511 the figure remaining will represent a change in net assets, if we can assume no other changes in the debt situation. For those who bought these assets, it is very unlikely that any increase in outside debt occurred. The reason for this belief lies in interest rate differences: any person with some cash (which may be borrowed at low rate of interest in case he was about to buy land) would rather settle his high interest bearing debts first before buying household equipment or gold or making down payment for land. For those who did not buy these assets, some increase in debt for consumption purposes may have occurred. Both groups may have decreased debts during this period. The most likely assumption is that those buying land experienced a net decrease in debts other than those incurred in buying land, while those not buying such assets experienced a net increase in debts. The balance was probably one of some
[454] increase in debt in the village. Therefore, although these figures for net accumulation of assets provide a fair

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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426 representation of internal savings in the community, they
454 probably overstate this increase somewhat.
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When calculated in the manner outlined above, the
511 net accumulation of assets of our 96 sample-families was
434 found to total 84,942 both during the period from March, 1948 to February, 1953, averaging 885 baht per family per year. The frequency distribution of this accumulation of assets is shown in Table 59.

It is seen that of 96 sample-families, 90 had positive accumulation while only 6 had negative accumulation. Fifty-six or more than half of the total number of families studied had an accumulation of assets in the class interval between 0 and 999 baht. The highest amount of accumulation was found to be 9,000 baht, while the lowest was -10,470 baht.

We should examine the figures of Table 59 more closely before drawing a sweeping conclusion from the mere fact that 90 out of 96 sample-families had positive accumulation. In the first place, the raw data show that of the 56 families reporting accumulation in the class interval of 0 - 999 baht, there were 42 families whose accumulation was 0. Thus the number of families with positive accumulation was really not 90, but actually 48 or only half of the total sample-
[435] families. Besides, consideration must be paid to the fact that gold is not only a kind of security but also an article of prestige as well, and a gold necklace of 15 - 30 gram weight valued at 500 - 1,000 baht is usually worn by a rural Thai who can afford one. When a person reappears in the

[TEXT CONTINUED ON PAGE 340]

seller of the land did not show up until the next morning. Recruit had to be made for guns and men to guard the money for that whole long night.

3. Scarcity of money

Scarcity of money exists in Bangchan because there is, relative to the demand for purchased goods and services, only a small margin between the price received and the cash outlay of producing paddy. Another reason is that most farms are too small, thus yielding small net cash incomes to the majority of farm operators in the village. Small incomes of farm operators who constitute the core of village economy means also small incomes of the rest of the village population whose financial condition directly or indirectly depends on incomes of farm operators.

Scarcity of money is directly evidenced by shortage of money during theperiod from July to December. It is also indicated by high rates of interest on credit purchases and loans sought in the village.

The problem of scarcity of money has been rendered more acute by the fact that affluent farmers do not like to keep cash at home or put it in liquid form such as in saving bank in the nearby market town, but prefer to invest it in a more or less non-liquid form such as loans or land purchases. Some of those who had accumulated a large amount also tend to spend it on sponsoring of rituals costing as high as several

thousand baht to more than ten thousand baht which is a real drain on the village cash supply.

These huge expenses are, however, partially compensated by such items as loans sought from outside or sale of lands and other assets. It cannot be expected, however, that these items would provide enough supply of cash to bring down the rate of interest in the village.

4. Role of paddy

Paddy is extensively used in the village as a medium of exchange. It is used in both small transactions of a few baht and large transactions of several thousand baht. Thus paddy stock may almost be considered as equivalent of a bank balance.

The most important consumption uses of paddy are as seeds and for human consumption. In order to make it really comparable to a bank balance, allowance must be made for the amount necessary for seeds and human consumption although the amount for chicken feed may be dispensed with because the farmer may choose to drop his poultry enterprise. On this basis, we have arbitrarily coined a term "index of capital formation potential with present levels of living" to represent the amount of paddy in tang which is left at the operator's disposal at the end of March after allowance for seeds and family consumption has been made. No allowance is made for special consumption expenses such

243 128 433 436 454

as sponsoring of ordination and other rituals. Algebraically, the formula for the index of capital formation potential may be expressed as follows:

$$I = P - (R \times 1\ 1/2) - (C \times 30)$$

where,

I is index of capital formation potential
P is paddy stock at the end of the first phase of sale (about March 31)
R is area in rai devoted to rice
C is the family size expressed in consuming units, whereby adults age 15 years and over are considered to be one consuming unit each and children age 14 years and under are considered to be one-half unit each.

The formula is constructed under the following assumptions:

1. Creditors and landlords demand settlement of debts and rentals immediately after harvest.
2. Farmers prefer to keep paddy rather than cash.
3. Before the end of March, affluent farmers sell only a certain part of their crops which would bring just enough cash to last until the next sale in July or after.
4. Amount of seeds necessary to plant one rai of rice is 1 1/2 tang.
5. Paddy consumption is 38.3 tang annually per consuming unit (Table). The surplus held on March 31 must last for 9 1/2 months before the next harvest can be used. Consumption during these 9 1/2 months is calculated at 30 tang per concuming unit.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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Table 65 shows the frequency distribution of index of capital formation potential of 96 sample-operators as of March 31, 1953.

It is seen that the median index of capital formation potential is 65 tang. The abnormally high indices of two operators, one over 1,000 tang and the other over 2,000 tang, have pushed the mean index up to 145 tang. It is seen also that there are 34 operators whose indices of capital formation potential are negative. Since there 34 operators constitute more than one-third of the sample, the situation may be said to be rather disheartening. This means that a good proportion of farm operators do not produce enough paddy even for their own consumption after having to pay for debts, rentals, and other immediate requirements.

In the opinion of the author, index of capital formation potential in the sense that is here used is a very useful device for a quick survey of economic condition of most rice growing areas of Thailand where the single-crop system is practiced and where there is relatively little secondary income.

434 in the canals, some cash is also needed to last the farmers
453 through the festive and merit-making dry season.

Since most of Bangchan operators are farmers whose incomes are barely or not at all enough to cover their household expenses, very few could hold their paddy stock for sale in the second period when higher prices may be expected.

[454] It has been observed that Bangchan farmers do not want to keep cash in their homes for fear of robbery. This is probably another reason for the withholding of paddy from sale in the first period in addition to the prospect of better prices. These few affluent farmers who have some paddy for sale in the second period have to sell it all before the arrival of new crop which often floods the market and forces the prices down.

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[426] Farmers usually arrange that payment for their paddy be made in the market town where they immediately pass most of the cash on to their creditors or sellers of the goods they plan to buy on that date. On the way home, they would stop over at the village stores to settle their other accounts. Thus, by the time they are back at home there is not much cash on hand to worry about. The few affluent farmers would do the same thing in their early sales -- that is, they would sell only a small portion of their crop so that there will be only a small amount of cash left on hand by the time they are back at home. In their later sales, however, these farmers must have a large amount of cash. It has

423 of government real estates has no doubt increased these
45 speculative activities. The process has also been greatly
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369 accelerated by an enormous increase since the war of banking
182 facilities, which traditionally extend loans on mortgage of real estate. It should be noted in this connection that the demand for loans in Bangkok has been so great as to allow most commercial banks to adopt a highly discriminating policy of extending loans only to their favored customers who are often willing to give as much as five per cent of the loan sought to bank officials as a customary "tea-money".

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423 cur informants, the insurance company owned hundreds of
435 rai of land in the vicinity. By spending only 20,000 baht
456 in boosting up land prices, the company thus set the stage
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367 for making a large profit through sale of their own land
at inflated prices.

178 While the increase in land prices in Zone 1 was
429 attributable to the sudden assumption of residential land
435 prices, this explanation does not apply to the increases in land prices in the other zones which have remained agricultural throughout. Although less spectacular than the case of Zone 1, the rise in land prices in these six zones was also quite abrupt, averaging 560 per cent for the five-year period from 1946 to 1953 (Table 28).

429 Capitalized valuation of these farm lands (Zones
434 2-7) may shed some light on the situation, although there
427 is limitation especially to the cost concept. There are two ways by which a capitalized value of farm lands may be obtained: (1) by capitalizing income from the farm operation left after payment of all factor costs except land, and (2) by capitalizing income deriving from explicit rent of the land.

243 Receipt from one rai of rice land in 1948 may be cal-
435 culated from the crop of 32.1 tang at 252 baht, using that
434 year's average farm price of 7.86 baht per tang of paddy.
423 When the cost, including an imputed return to all labor but
427 excluding rent, of 166 baht per rai is deducted, a residual return to land of 86 baht per rai is obtained for the year.[15]

15. For want of sufficient data, it is assumed that the cost items other than rent remain the same.

	Qu 11	Qu 13	Qu 121	
1. Positive, no evidence: very good, good, nice	103	114	77	125 241
2. Positive, with evidence: good results, specific statements	47	120	95	244
3. Neutral or mixed	11	20	6	228
4. Negative, no evidence: no good, bad, of no use	9	5	15	
5. Negative, with evidence: difficult to apply in deep water, must keep using it, too expensive, same results as without fertiliser	33	13	80	
6. Positive, qualified: Fertiliser too expensive	13	—	1	
7. Positive, qualified otherwise: only for high land; very hard to purchase; requires to keep on using it	32	18	18	
8. Respondent states he has no opinion	54	31	36	
X. Negative, qualified: It's not quite good, it depends on the soil	4	4	3	
0. No answer	4	3	1	
99 Respondent's attitude not ascertainable	23	5	11	

	Qu 122	
0. D.A.	85	125 241
1. Too expensive	78	
2. Difficult to purchase	15	
3. Not fit for low land	39	
4. Soil not suitable	3	
5. No ascertainable reason given	28	
6. Too little land	7	
7. Other reasons	56	
8. Have never used it before. Do not now either	12	
X. N.A.	105	
9.	21	

	Qu 123	
X. N.A. Unascertainable	60	125 243 435 458.
0. D.A.	151	
1. Nothing, cannot do anything	70	
2. Grow mushrooms	12	
3. Raise poultry	15	
4. Raise fish (including Tilapia	7	
5. Use fertiliser	—	
6. Find job as laborers	6	
7. Other: try to find new seed, sell vegetables, borrow money from neighbors, keep rice until price goes up, economise, send sons to work	36	

434 Odd receipts: lottery prizes, gambling, etc.

b. Outgoing

Imports: Several items of food, clothing, stimulants, medicine, toilet, fuel; building materials; buffaloes, farm implement, farm materials; gold and jewelries and other articles of adornment; stationary (very limited); ordination and other ritual items.

Outsiders' regular earnings in the village: rentals of land owned by outsiders, interest on loans and equivalent extended by outsiders, wage paid to outsiders (limited to peripheral areas).

Taxes, contributions and fees: land taxes, fees and contributions paid to outsiders.

Purchases of lands owned by outsiders.

Settlement of loans extended to outsiders.

Investment outside the village (one Bangchan resident owns shares of an electricity concern in Minburi totalling 5,000 baht, the same person had invested a total of 10,000 baht on a fishing enterprise in a coastal town).

Remittances: for educationof children sent to Bangkok.

Travelling expenses and pilgrimage.

434
• 458 2. Seasonal fluctuation of money supply

Money supply fluctuates very highly in the village because of pronounced periods of sale of paddy and of the method of payment for it. There are two periods of sale: during late December and March, and during July and November. There is practically no sale between March and July because canals are impassable during this more or less dry period. Actually, it is dry from March to May; after that although rain has started, the water level in the canals is not high

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

434 enough for efficient movement of paddy.

458 The general practice was that right after harvest immediate sale of paddy was necessary for settlement of credit purchase accounts and rentals. Another sale was perhaps necessary a few days later for living expenses which had been postponed during the cash-scarce [798] period before harvesting. Then another sale might be made in order to have cash to pay for building materials needed for repair work which was usually done during this time. Just before March a final sale for this first period was made in order that the family may have cash enough to last through July. The money was to cover contributions to various rituals to which the family had already been invited, and perhaps to cover ritual sponsor by the family itself. Besides, there was still need for cash for each family member to carry around during this period of festivals.

243 Villagers said that few farm operators had any
434 paddy left for sale in the second period (July - November).
458 This was contrary to our findings as shown later in Table 65. Perhaps, they were thinking of conspicuous sales of large amounts by farmers having say over 500 tang of paddy for sale in the second period.

* [123] During the last few days of March, 1953, when paddy sale had apparently ceased, we made a round call covering the homes of all 96 sample-families and checked the amount of paddy on hand as of the end of March.

[TEXT CONTINUED ON PAGE 360]

432 seller of the land did not show up until the next morning. Recruit had to be made for guns and men to guard the money for that whole long night.

3. Scarcity of money

243 434 Scarcity of money exists in Bangchan because there is, relative to the demand for purchased goods and services, only a small margin between the price received and the cash outlay of producing paddy. Another reason is that most farms are too small, thus yielding small net cash incomes to the majority of farm operators in the village. Small incomes of farm operators who constitute the core of village economy means also small incomes of the rest of the village population whose financial condition directly or indirectly depends on incomes of farm operators.

426 458 Scarcity of money is directly evidenced by shortage of money during theperiod from July to December. It is also indicated by high rates of interest on credit purchases and loans sought in the village.

434 454 The problem of scarcity of money has been rendered more acute by the fact that affluent farmers do not like to keep cash at home or put it in liquid form such as in saving bank in the nearby market town, but prefer to invest it in a more or less non-liquid form such as loans or land purchases. Some of those who had accumulated a large amount also tend to spend it on sponsoring of rituals costing as high as several

[796]

A243 Finally, it has been pointed out that the kind of
161 training and the type of financial preparation given to young
178 married couples have served only to confirm Bangchan people
464 to their preference for rice cultivation. This together with limited job opportunities open to them elsewhere have tended to keep the villagers on the farms, and thus have tended to regenerate the condition of population pressure in Bangchan.

Lack of Effective Control and Regulationof Water Supply

A243 Another contributing factor is the lack of effective
458 control and regulation of water supply, which has caused annual fluctuation of rice crop. On the whole, this crop fluctuation is not as high as is the case in most of rice
[731] growing areas elsewhere. Famine certainly has not been known in Bangchan. Nevertheless, it is a certain sector of rice growers -- the marginal farmers with limited ability to adjust or with relatively little command over capital -- who are seriously affected by annual fluctuation of rice crop.

A243 When affluent farmers have a poor crop, their credit
426 purchase accounts may go up beyond the normal level, but they are usually in a position to clear this type of high interest bearing debts at the end of the business year by their net cash incomes or at least by securing loans with lower rates of interest to pay the accounts. On the other hand, marginal farmers are not in a position to seek low interest bearing loans. In case of crop failure, therefore,

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 256 433 comprising the by-products of milling -- broken rice, bran, and husk. There is still a further saving when paddy is milled where it is produced, for bran would not have to be moved away from the farm as part of paddy to distant mills and then moved back again to the farm where it is bought back to be utilized as feed.

If not hampered by unnecessary government restriction, small rice mill industry will provide opportunity for local investment to which internal savings among affluent farmers may be channelized. The relatively low capital requirement and the simplicity of operation of small movable rice mills have made it possible for many Thai farmers in the northern part of the country to become successful rice millers, and there is no reason to believe that farmers in the Central Plain cannot do likewise.

Scarcity of Cash and Credit

434 • 457 An important factor contributing to the acuteness of the basic economic problem of Bangchan is the scarcity of both cash and credit in the village. Bangchan farmers receive cash from the sale of paddy in two periods -- from January to March, and from July to October. Most sales are expedited in the first period, when rentals and credit accounts are expected to be settled. Farmers also need cash for the purchase of goods they have forgone during the previous work season when they had little or no cash. Since there will be no sale of paddy during April - June when paddy cannot be moved through the shallow water level

434 in the canals, some cash is also needed to last the farmers
453 through the festive and merit-making dry season.

Since most of Bangchan operators are farmers whose incomes are barely or not at all enough to cover their household expenses, very few could hold their paddy stock for sale in the second period when higher prices may be expected.

[454] It has been observed that Bangchan farmers do not want to keep cash in their homes for fear of robbery. This is probably another reason for the withholding of paddy from sale in the first period in addition to the prospect of better prices. These few affluent farmers who have some paddy for sale in the second period have to sell it all before the arrival of new crop which often floods the market and forces the prices down.

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[426] Farmers usually arrange that payment for their paddy be made in the market town where they immediately pass most of the cash on to their creditors or sellers of the goods they plan to buy on that date. On the way home, they would stop over at the village stores to settle their other accounts. Thus, by the time they are back at home there is not much cash on hand to worry about. The few affluent farmers would do the same thing in their early sales -- that is, they would sell only a small portion of their crop so that there will be only a small amount of cash left on hand by the time they are back at home. In their later sales, however, these farmers must have a large amount of cash. It has

APPENDIX B

Cornell Methodology Project
Thailand, May 1958

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BANG CHAN STRUCTURED QUESTIONNAIRE (Frequency Distributions)

A. Ser. No. B. Hamlet and N C. Date of Interview E. Name of Respondent [162]

F. Sex
9. male 243
X. female 90

G. Religious Affiliation
0. Buddhist 298
Y. Moslem 35

H. Main Occupation [46]
8. Farm operator 269
9. Farm laborer 24
X. Trade and commerce 18
Y. Service 10
0. Other, Specify_____ 12

I. R is HH or not HH
1. HH 277
2. Not HH 56

J. If not HH, relationship to HH
3. Husband —
4. Wife 41
5. Son 10
6. Daughter 2
7. Father —
8. Mother —
9. Mother-in-law —
X. Other relative 3

1.a. Were you born in Bang Chan Commune, Khanna Yao Commune, Minburi Commune, or outside?

b. If outside, in what province were you born? [166]

1. BC Commune 116
2. KY Commune 141
3. Minburi Commune 11
4. Commune unascertainable 2
5. Outside BC, KY, Minburi 30
7. Unascertainable 33

2.a. How old are you?
b. In what zodiac year were you born? [162]

1. 20 to 29 41
2. 30 to 39 81
3. 40 to 49 85
4. 50 to 59 68
5. 60 to 69 41
6. 70 and over 17

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

4243 59 46 [954] Family workers are members of farm operating families other than the farm operators themselves who regularly participate in the farm work of the families. These do not include children of school age who occasionally help in the farm work especially during the busiest period.

4243 46 592 Hired laborers are farm laborers who are hired for all or part of the work season for more or less fixed wages in kind or in cash. These hired laborers have in addition to their yearly wage a privilege to board and lodge freely at their employers' home, and thus become part of their employers' household. The contract, usually verbal, is on a one year basis.

4243 46 Piece-workers are farm laborers who receive wages on a piece-work basis for such short-term tasks as uprooting the seedlings, transplanting, and harvesting. Payment for piece-work is made at the end of the day at going rates. It has been observed that most of the extra work in Bangchan is done by piece-workers, and that very few farms engage hired laborers. Piece-workers may be called independent workers, for they have no obligation other than finishing the day's task agreed upon. They may work whenever they please and may stop working altogether if they have enough money. The disadvantage of piece-workers is that they do not have, as hired laborers do, the guarantee of a job. This is quite crucial especially if under-employment of farm labor exists.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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465 be of any help in the understanding of the hired laborer situation in Bangchan.

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• 46 Let us now turn to the last group of farm laborers -- the piece-workers. These laborers receive their remunerations in the form of cash paid at the completion of each job contracted. Four types of farm work were observed to have involved the utilization of piece-workers -- uprooting of rice seedlings, transplanting, harvesting, and digging earth and mounding. Uprooting, the heaviest of all rice growing steps because seedlings must be pulled up in budle and smashed against the shank of the worker, was limited to adult male workers. Transplanting, on the other hand, was the lightest of all these steps involving the itlization of piece-workers and may be done by all kinds of workers including the young. Harvesting and digging and mounding are too heavy for the young but not for the adult female workers to participate, so they are usually performed by adult workers of both sexes.

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[435] It was found in the cost of production study in 1948 that 104 farm operators in Bangchan spent a total of 4,434 baht on uprooting done by piece-workers, 7,951 baht on transplanting, and 13,310 baht on harvesting, or an average per farm of 43 baht for uprooting, 76 baht for transplanting, and 128 baht for harvesting. Although digging and mounding is generally considered a part of farm work since it is done primarily in order to keep the buffalo shed above the water level as well as to improve the home garden; it is not

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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243 433 461 423 labor cost. Most farmers must go by foot or boat to work at places ranging from a hundred meters to two kilometers from home. This waste is the more serious during the period of preparation of the fields at the beginning of the season when the water level in the canals is not high enough to permit the effective use of a boat.

243 178 423 Table 40 shows the frequency distribution of areas worked by Bangchan operators in 1948 and 1952. It is seen that in both years work areas concentrate in the size groups between 10 to 40 rai, averaging 34.2 rai for 1948 and 31.7 rai for 1952. It is seen also that the work areas of 1948 have a wider range than that of 1952. There were 30 farms in 1948 whose areas were 40 rai and over, while the number of such farms was 28 in 1952.

Table 41 shows that of 96 continuing farms, 20 have increased their size during the five years period, 40 have decreased their size, while 35 farms have the same size throughout.

243 433 46 2. Labor: This element represents 51 per cent of the total cost of producing paddy (Table 38). Of this, only a small fraction is actually paid for -- 3.3 per cent to hired laborers and 3.4 per cent to pieceworkers. The bulk of labor is supplied by family workers (including the operator himself) whose labor value is assessed at 44.6 per cent of the total cost of producing paddy.

It is seen in Table 42 that the number of adjusted rai per worker is only 9.4 for farms which used only family

[TEXT CONTINUED ON PAGE 286]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 433 46 labor, while the corresponding number is 13.4 for farms which used regularly hired laborers along with family workers. We make the assumption that farms with hired laborers had full utilization of labor (otherwise there would be no need to hire an extra laborer) and that farms without any hired labor might or might not have full utilization of labor. The significantly larger area per worker for farms demonstrating full utilization of labor than that of farms which did not demonstrate such condition indicates that there was latent underemployment in terms of rai per worker on some Bangchan farms. Table 43 suggests that there might be as many as 87 of such farms out of 104 sample-farms in Bangchan in 1949.

While full utilization of labor is fairly well indicated by employment of regular hired laborers, it is not necessaryily the case that the family labor of farms which employ some pieceworkers had been fully utilized except during the peak period when the pieceworkers were employed. It has been observed that many of the apparently undersized farms had to engage some pieceworkers to do some uprooting, transplanting, and harvesting because the labor requirements for these steps are so highly seasonal that such labor adjustment devices as planting of several varieties of rice and cooperative work system could not amply spread the work of the family. The extra work sought from the pieceworkers is usually small, however.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 43

FREQUENCY DISTRIBUTION OF ADJUSTED AREA WORKED PER MAN OF 104 FARMS
Bangchan, Thailand, 1948

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Class Intervals of Adjusted Rai Per Man	Number of Farms	Cumulative Number of Farms
rai		
Under 2.5	1	1
2.5 to under 5.0	11	12
5.0 to under 7.5	29	41
7.5 to under 10.0	18	59
10.0 to under 12.5	21	80
12.5 to under 15.0	5	85
15.0 to under 17.5	9	94
17.5 to under 20.0	3	97
20.0 to under 22.5	1	98
22.5 to under 25.0	2	100
25.0 to under 27.5	2	102
27.5 to under 30.0	1	103
30.0 to under 32.5	1	104
Total	104	

Note: It is seen from this table that there are 80 farms whose adjusted area worked per man are less than 12.5 rai.

By interpolation, it may be estimated that there are 7 farms whose adjusted area worked per man falls between 12.5 and 13.3 rai.

We can say, then, that there are 87 farms whose adjusted area worked per man are less than 13.4 rai -- the average for farms with hired laborers, or farms which have demonstratively shown sign of full utilization of labor.

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TABLE 52

BREAKDOWNS OF COST OF PRODUCING RICE ON 104 SAMPLE-FARMS
Bangchan, Thailand, 1948
(Total area -- 3,528 rai; total crop -- 112,415 tang)

Items	Total	Average Per Farm	Average Per Rai	Average Per Tang	Per Cent
	baht	baht	baht	baht	
Rent					
Actual	99,500	957	28	0.88	13
Imputed	70,600	679	20	0.63	9
Total	170,100	1,636	48	1.51	22
Labor					
Actual					
Pieceworkers	25,700	247	7	0.23	3
Hired laborers	24,800	238	7	0.22	3
Sub-total	50,500	485	14	0.45	6
Imputed					
Family workers	237,800	2,287	67	2.11	31
Operator	101,000	971	29	0.90	13
Sub-total	338,800	3,258	96	3.01	44
Total	389,300	3,743	110	3.46	51
Seeds, materials	42,600	409	12	0.38	6
Depreciations	73,200	704	21	0.65	10
Interest on investments	84,600	813	24	0.75	11
Grand Total	759,800	7,305	215	6.76	100

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janlekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 16 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

243 [433] [476] [464] 243 461 • [442] [505] [887] [857] [759]

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

221 461

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand [Kingshill 1960:73]).

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Besides the work in rice-fields, women dug and cleaned

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462 Besides the work in rice-fields, women dug and cleaned [503] canals and ditches, mounded land, and fished in many ways, the [226] most laborious of which was plunging a heavy basket into the mud to catch burrowing fish. In the household chores, in which men shared to some extent, they carried water, cut and fetched wood, tended livestock, cultivated kitchen gardens, [501] pounded rice in mortars, and cleaned houses. Boats were rowed by paddling or sculled by standing and pushing a single large [354] oar. Cooking was time consuming. The low stoves were on the ground or floor. Since there were no tables or chairs, one [352] squatted two to four hours a day to cut or pound ingredients, [516] stir the curry, or wash the dishes.

868 The training of boys and girls for farm and household 561 work was thorough and started early. By 18 years of age, 461 boys and girls with few exceptions were experienced in every step of farming. Janlekha's chart (1955:82) indicates the progression (parenthetical additions are the present author's):

Age	Method	Kinds of farm work
5 - 7	not forced, but allowed or induced to work if they want to	light hauling, removal of weeds which have been turned over by harrowing
8 - 12	mild pressure	light hauling, removal of weeds which have been turned over by harrowing; some household work and help in the kitchen - girls only - (sometimes boys)
13 - 14	moderate pressure	hauling, weeding, buffalo-tending, transplanting, chicken-feeding, fishing, household work (boys and girls)
15 - 16	high pressure	all kinds of farm work, harrowing, harvesting, and uprooting - boys only - are started at this age.

872 Children worked in the fields before and after school
461 which, compulsory for all children aged eight to fourteen, was held from 9 a.m. to 3 p.m. five and one-half days a week. Vacations coincided with peak work seasons so children could help in the fields or at home.

846 [789] Seven days after the end of the fire period, Dŭan sent a message to the mɔ̌ to look in his book as to what direction from the house she should bury the phlai, the bamboo knife, and the pot with the now dried placenta and cord. She already knew some of the procedure: burying should take place on a Monday or a Friday; south was right during the first three months of the lunar calendar, November, December, January; and the full moon of the twelfth month (October) was especially good, for the moon waned thereafter. Chăi had been born in October, so north was right for him, but for a girl it would have been east. Song or Lak or anyone could bury the pot, but most mothers did it themselves. If it were buried in the wrong direction, the baby would die, and if not under a tree, he would leave them and their home, and roam. The instructions came. With the things in her hand, she walked toward a big jackfruit tree. Beside it was a sakɛ̌. Either was good, so she chose the sakɛ̌ which, being nearer the house, might strengthen by that much the roots that would keep her boy at home. After burying the pot and all, she returned directly to the house, remembering to pick, as she came, a fruit, a vegetable, a leaf, and then a piece of wood, all useful things. In the house she added them to the usual household stores. By doing so, and by using them up shortly, she ensured that her new son would be a good worker, who on returning home would always bring something to add to the requirements and wealth of the household. Once buried, the placenta, "like ashes," was ignored and the spot forgotten.

846 262 [461] [753] [757] 862 Within a month after childbirth, Dŭan was back at farm work, even to the back-straining pounding of rice in the big mortar. For three months she avoided fruits, particularly guava and jackfruit. Then, since the baby was thin, she gave up vegetables, especially gourds, corn, and the green plants that grew in the canal. One day, because she carelessly ate some salted field crabs, the baby got thrush on its tongue. They cured him by smearing the milky juice of a peel of klûai nam banana on the cloth sheet covering his cushion, then wiping this on his tongue (cf. Anuman Rajadhon 1961:153). So the year passed, and then another. Not long after his third birthday, Dŭan realized she was pregnant again, so took steps to wean him. She painted her nipples with "black medicine" (yɛ̂ dam), a bitter and hot tasting ointment made from the boreped rhizome (Mcf; 474). Then she sent the child over to her mother's older sister's house for four nights. To make quite sure, she followed an old ritual way, too. She boiled an egg hard and peeled it. Holding the egg behind her back, she turned her face away from her son, and handed it to him behind her so that she could not see his face. "Henceforth, you shall not nurse any more," she said. Without looking at him, she walked

Despite the availability of fish and of vegetables in the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

The two months of September and October during which the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit and take trips. A few might go on a pilgrimage. Therefore, in this season, all family members were less often together at the evening meal. Fishing was a continuous occupation, with some preserving and home craft. Jobs such as selling food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

High water caused time-consuming inconvenience only in earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

By November, the earliest varieties of rice matured. Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience of purchased food was greatest, cash was exhausted. With rice money in sight, venders might be generous with credit, but they could navigate only the larger canals, so were not available to many.

There was an important psychological difference between

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1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at other seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headman each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

A discussion of food habits in Bang Chan would be incomplete without some description of ceremonies ((1)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and at festivities. Thus, there was reason to make a (1)ngaan as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

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1. Significantly the same Thai word is used for work and for ceremony.

2. Topknots, formerly worn by all Thai children, used to be cut ritually at the time of puberty. In Bang Chan, the growing of a topknot had become primarily an attempt to improve a child's health. Few school age children wore topknots. They were usually cut earlier than puberty.

3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

4:Phillips E-4,5 (1956-1957) 1966
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various kinds of ants living in Thailand and the United States. (Such are the topics that interest villagers.) The villagers wanted to know the English names for small red ants, normal black ones, and the large, rusty colored variety that are indigenous to the tropics. I named the first two with no difficulty. For the third, I said simply, "a giant ant." The assistant, turning to one of the informants, first gave the literal Thai equivalent of "giant," and then, as if this were the funniest thing he had heard that week, began to repeat, "giant, gi-ant, gi-ant." In a few seconds, they were all bursting with laughter.

Different, yet part of the same psychological constellation, is the whole complex of behaviors associated with the term, *sanug*. *Sanug* is usually translated into English simply as "fun." However, this translation conveys little of the motivational significance of the term. Essentially, *sanug* is a quality inherent in all situations which are not only fun but also emotionally worthwhile. In fact, these two states are often thought of as reciprocals of one another. An activity that is novel, diverting, or that can be done comfortably, is *sanug dii* (good fun); one that is tedious, overdemanding, that lacks the opportunity for frivolity, is not *sanug* and should be avoided. Harvesting rice in coöperative work groups, attending a ceremonial, participating in an election (see Phillips 1958: 45–46), or even taking something as outlandish as a Sentence Completion Test are all *sanug*. (The unifying elements of these diverse activities are either their novelty or the fact that they involve the presence of relatively large numbers of people but require no genuine interchange with them.) On the other hand, going into the army or working for a demanding superior are not *sanug*.

The importance of *sanug* is that it provides the villagers with a standard of value, a measure of how much they wish to commit themselves to a particular activity. The role of this standard should not be underestimated. Villagers who have taken a job in the city, often involving a time-bound daily routine or continuous, sustained attention to a task (work in a small factory, for example) frequently return to the village explaining that they quit "because it wasn't *sanug*. How can you work on a job if there is never any time for fun?" Foreign employers, with their greater concern for the job than with the person who does it and with their annoying tendency to be *cuu cii* (compulsive, fussy, exacting) are a particular target for this indictment, although this is usually based on hearsay rather than personal experience. On the other hand, villagers will often take on free of charge a major job (for example, helping a neighbor build a house) precisely because it is *sanug*. Although there are other considerations operating here—creating or repaying a personal obligation, doing a *bunkhun* ("a goodness") for a neighbor—the "sanug-ful" aspects of the task are always

4:Phillips E-4,5 (1956-1957) 1966
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181 salient: the free food, drink, and chitchat at the end of a hard day's work;
• 461 the fun of working together with several other individuals. Notice that in
476 this kind of situation there is no overseer demanding the person's effort. His labor is freely given and may be freely withdrawn.

181 In describing *sanug* as a measure of how much villagers wish to commit
*156 themselves to a particular activity, I mean to communicate a point and not
571 merely to turn a phrase. The word "commit," which appears often in this book, is used to convey the idea that coöperative, mutually expectable interaction as we know it in the West does not "simply take place" in Bang Chan. Rather, there is always the intervening factor of whether individuals want it to take place. Siamese are, first and foremost, free and independent souls. Much of the time they fulfill each other's expectations, but this is only because they want to, not because others expect it of them or because the situation demands it. It is the individual that is primary, not the social relationship. The strength of this principle is demonstrated by the fact that one is almost never surprised when one's expectations about another are not fulfilled. The assumption is: "If he did not do it, he must have had his own good reason."

181 The potentialities for interpersonal frustration that are inherent in such
154 a system are minimized largely by the hesitation on the part of individuals
*156 to build up strong expectations about people or events. In general, the Thai
571 are a people who do not live at, and rarely reach, a high emotional pitch. Witness, for example, the specifications of "sanug-ful activities," those which afford the greatest pleasure: they are novel, diverting, comfortable, and frivolous, but there is no Faustian intensity about these joys. They are all rather muted emotional experiences. The point here is simply that in this kind of psychological environment, people rarely permit themselves to become *so* committed to an activity or to another person that the frustration of that commitment will be overly disturbing to them. They proceed from a premise which says in effect: "Well, it is really not that important that he did not do what I expected of him. I will simply have to make do."

181 There are a few aspects of the villagers' concern with *sanug* that
154 warrant underscoring. First, from an analytic point of view, *sanug* seems to
*156 reflect an attempt on the part of the villagers to lead a psychologically integrated life, wherein the time and energy one gives to an activity is rewarded immediately and directly with pleasure. This low-keyed pleasure should be an inextricable part of the total situation in which one finds oneself (or more accurately, into which one places oneself), not something to be deferred until a later, "more appropriate" time when it becomes an isolated segment of experience. Essentially, *sanug* should be—it not always is—a concurrent aspect of almost everything that one does. At the same time, however, these conditions are also the source of an inevitable paradox. Since "sanug-ful" activities are, by definition, novel and diverting, and

4:Phillips E-4,5 (1956-1957) 1966
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recognition of the incongruity being portrayed; to have to explicate the way the familiar has been violated is to miss the whole point. Yet the very problem with which the anthropological investigator is characteristically faced is his unfamiliarity with the culturally implicit. His major intellectual task in fact is to make explicit that which is implicitly held by his informants. The only way to deal with this paradox is either to consider humor a special case of anthropological investigation, leave the content alone, and focus principally on forms and functions, or do a humorless exegesis and be prepared for disappointments. As indicated earlier, this writer greatly prefers the former alternative.

Why the frequency and value of the humor should be so different is difficult to say. That the villagers devote considerably more time to this mode of play and place considerably higher value on it than do most Occidentals is clear, especially from the pejorative comments of Westerners who are so disturbed by it. One possible reason may be the simple lack (compared to Occidentals) of time-consuming, functional tasks in the village; that is, given the villagers' definitions of things that have to be done during the cycle of daily activity, there is just more time available to them to be "frittered away" in amusing conversation. However, this negative explanation is at best only a partial solution since many people who have "little to do" manage to make busy work for themselves (in a diagnostic, not deprecating, sense); also, granted the fact that Bang Chaners have time to talk of many things, it does not explain why such a large portion of this time should be given over to humor. Another possible reason was indicated earlier: comedy provides an outlet for certain feelings that otherwise are denied direct expression or are a source of anxiety in the culture. The higher frequency of humor is a function of the degree of prohibition or anxiety, which in the case of some feelings—aggression, for example—is very high indeed. Since, as has probably been detected, much of the villagers' humor does revolve around aggressive situations, there is clearly some cogency to this approach. There is a third possible reason for the villagers' greater concern with humor. Humor, with its emphasis on the exaggerated, the incongruous, and unpredictable is, from a psychological point of view, essentially a form of new experience. In fact, it, and the real life situations to which it refers, are "invention" in the purest meaning of the terms: the breaking through of tried and established patterns of expectation. But people in different cultures look for their new experience, or express their inventiveness, in different ways. There is no inherent necessity (a consideration often overlooked by scholars concerned with culture change) for inventiveness to be expressed primarily through technological, economic, or sociological forms. It might well be, as Keesing has suggested (1960), that in many cultures the favoured modes for expressing the

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125 39.4. IF A WAS SOME 20 AND UP: Of your sons over twenty, how many have been ordained as Buddhist priests, or not?

[793]

	7. DA	212
	A. None	81
[593]	9. One	58
	X. Two	25
[792]	Y. Three or more	16
[162]		

e. Do you have any sons under twenty?

	9. Yes	128
	X. No	108
	— No Answer	37

[793] f. IF YES: In future, do you want your sons under twenty to be ordained as priests, or not?

[782]

	Y. Yes	126
	O. No	—
	— No Answer	2

g. IF YES: But aside from your admirable desire to have them ordained, in your true heart how sure is your expectation? Are you very sure or not very sure, or fairly sure that they will be ordained?

1. Very sure	110
2. Not sure	26
3. Fairly sure	12
4. Unascertainable	9
NA	1

h. All over Thailand there are some Thai men who are over 50 but have never been ordained as priests. For what various reasons might this happen?

(See code at end)

[461] 30. Suppose there was some work you could do individually, or that could be done in a small group of two or three, or that could be done in a large group. Which way would you prefer to do the work--as an individual, or in a group of two or three, or in a large group?

8. Individually	60
9. Small group	55
X. Large group	202
Y. Undecided, depends	4
O. Unascertainable	12

[572] 31. Around here in KO-KI there are some people who have many close friends and there are other people who have few close friends. And how about yourself? Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?

X. More than most	62
8. Fewer than most	34
7. About the same	154
8. Unascertainable	83

*243 476 as unscrupulous guest workers might tend to lengthen the distance in order that they might work less because the share of work was on an area basis. In cooperative harvesting, it was customary that the host provided a meal after the work was done. As with the case of cooperative transplanting, each guest worker was to harvest an area of one-fourth of a rai. No checking was necessary in this case. In the rather unsignificant cooperative weeding, the host worked side by side with guest workers in the same plot, and work was measured by the time spent on weeding -- in "day" or "half-day," one "day" being an equivalent of six-hours' work and correspondingly one "half-day" an equivalent of three-hours' work. Guest workers were induced to weed more intensively by an offer of prizes in the form of cigarettes for a certain number of bamboo binders they collected in the course of weeding (by pulling). The underlying idea was that since these bamboo binders which were left in the parcel during transplanting sank deep in the soil, thus the amount of bamboo binders collected by each guest worker more or less indicated his weeding effort.

Our records show that supervision of cooperative work started on July 22 and ended on January 24.

*243 476 • 461 21. Entertaining guest workers. It was already mentioned in the previous step that customarily the host provided food to guest workers in cooperative uprooting and cooperative harvesting. To feed some twenty to thirty people was quite a job, thus practically all family workers were occupied in food preparation and serving on these occasions. Our records show that entertaining guest workers started on July 22 and ended on January 24, and that while supervision of cooperative work

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476 utilized only 26 man-hours of labor, entertaining the same
461 groups involved as many as 158½ man-hours.

Labor Requirement in Rice Production

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128 During the 1953-54 rice year, an exploratory study of labor requirement in rice production was conducted, using only one farm. This farm was operated by Headman Chom Srisuay of KY5. It was one among the 104 sample farms covered by the preliminary survey in 1948-49. The choice of this farm was made on the basis of the high degree of cooperation given us by Chom and all his family.

[594] During the period covered by this special study of labor requirement, Chom had a family of nine, consisting of Husband Chom (47), Wife Sai (44), three sons -- Phuan (19), Phan (16) and Phloen (8), and four daughters -- Phung (15), Phad (13), Bunmarg (7) and Mian (4).

In the year of the study of labor requirement, Chom operated a farm of 49 rai consisting of four parcels: Parcel A, 7 rai; Parcel B, 20 rai; Parcel C, 7 rai; Parcel D, 15 rai. The locations of these parcels are shown in the sketch map on page

Part of Parcel A was used at the beginning of the sea-
243 son as seedbed. After the seedlings had been uprooted and
461 transplanted, this parcel was again plowed and harrowed and planted to three varieties of rice -- Mue Hag, Ched Ruang and Khao Sa-ing. Parcel B was also planted to three varieties -- Mue Hag, Ched Ruang and glutinous rice. Parcel C was planted to only one variety -- Mue Hag. Parcel D was planted to two

*243 varieties -- Khao Sa-ing and floating rice. The areas in each
• 461 parcel planted to different varieties are given below.

Parcel	Total area rai	Area planted to each variety Var. name	Area in rai
A	7	Mue Hag	3
		Khao Sa-ing	3
		Ched Ruang	1
B	20	Mue Hag	10
		Ched Ruang	7½
		Glutinous rice	2½
C	7	Mue Hag	7
D	15	Khao Sa-ing	9
		Floating rice	6

It may be seen that actually there were five varieties altogether. The areas devoted to these varieties were as follow: Mue Hag, 20 rai; Khao Sa-ing, 12 rai; Ched Ruang, 8½ rai; glutinous rice, 2½ rai; floating rice, 6 rai. Since 6 rai was planted to floating rice and it was mentioned in the first section of this chapter that this floating rice lent itself only to the broadcasting method, it may be noted here that of the total area in rice of 49 rai, 43 rai was devoted to transplanted rice and 6 rai was devoted to broadcast rice.

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461 Of the nine members of the family, Chom, Sai, Phuan and Phan were first-rate workers while Phung -- the fifteen year old daughter -- was diligent but still needed more training in the farm work. Chom kept four buffaloes. Thus the needed four regular workers who were supposed to be Chom, Sai, Phuan and Phan. When the work season was about to begin, however, Phan was engaged by the Cornell research team as a

[TEXT CONTINUED ON PAGE 242a]

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row man. He could not very well be substituted by his younger sister who was also needed to perform the housework. A worker was thus hired for the period of two months -- from the middle of June to the middle of August -- primarily to help in plowing. Phan also partially helped in plowing and harrowing in part of the morning session before he started his work for the Cornell team at nine o'clock.

During the cooperative work season, Chom represented the family in cooperative uprooting and cooperative harvesting, and Phuan in cooperative transplanting, weeding and harvesting. Phan also represented the family in cooperative work scheduled for Saturdays and Sundays when he was free from Cornell duty.

Work records of all workers of this farm were kept by the author throughout the work season from June 4, 1953 to February 14, 1954. At the beginning, the author stayed overnight with the family. Family workers were requested to give accounts of their activities of the day. To facilitate more accurate accounts regarding the time of the work, a clock was given to the family. When family workers became acquainted with the type of information that was needed, Phan, our row man, was assigned to make a daily report on the kinds and time of work done by each worker. Phan's daily report was taken down by the author in the labor schedule specially prepared for the purpose.[3] Later, when Phan's reporting skill was well developed, he was asked to report on the daily labor records only four times a week, usually Monday, Tuesday, Thursday and Friday.

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3. See Appendix E

243 Since the farm work usually followed the same pattern for a
461 certain period, it was observed that Phan remembered quite well
128 the time and the kind of work done by each family worker during
the past two or even three days. The time of work was recorded
[231] to the nearest half-hour. In Tables 35 and 35, labor spent by
[464] family workers, piece-workers hired by the family, and buf-
[592] faloes, on different steps in rice production was given in
man-hours and buffalo-hours. The dates when these various
[476] jobs started and ended were also given. It should be noted,
however, that labor recorded as spent on cooperative work was
actually not spent on the family farm but rather on farms of
other cooperative members. This was nevertheless exactly com-
pensated by cooperative work on this farm on several occasions
which were not entered in the calculation to avoid error
because of duplication.

243 The data from Tables 35 and 36 may be summarized as
461 follows:
221 1. Man labor provided by farm staff.
[592] Work started June 4, ended February 14, a total of 248
[464] work days.
[231] Total man-hours spent by farm staff -- 5,478½.

2. Man labor provided by piece-workers.

Work started July 19, ended August 30, a total of 10 work days.
Total man-hours spent by piece-workers -- 229.

3. Animal labor provided by buffaloes.

Work started June 4, ended February 13, a total of 112 work days.
Total buffalo-hours -- 2,119.

[TEXT CONTINUED ON PAGE 246]

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TABLE 35

SUMMARY OF YEAR ROUND WORK BY CHOM FARM STAFFS
Bangchan, Thailand, 1953

Steps*	Duration Start	End	Days in work	Man-hrs.
A. Work by Farm Staff				
1. Plowing	June 4	Aug 23	49	918½
2. Harrowing	June 13	Aug 24	28	291
3. Remove weeds after harrow	June 13	Aug 15	25	219½
4. Irrigate and drain	June 4	July 8	21	186½
5. Rolling	June 13	Aug 22	7	42
6. Sow, broadcast	June 18	July 15	13	48½
7. Prepare and repair	July 5	Dec 9	10	106½
8. Prepare bamboo binders	July 17	Aug 27	10	45½
9a. Coop uprooting	July 15	Sept 11	25	127½
9b. Family uprooting	July 17	Sept 8	20	115½
10a. Coop transplanting	July 18	Sept 19	36	267½
10b. Family transplanting	Aug 20	Sept 10	13	125
11. Hauling	July 17	Sept 14	55	733
12. Field inspection	Aug 25	Nov 30	42	87
13a. Care of the plants	July 24	Sept 28	14	114½
13b. Coop weeding	Sept 20	Sept 29	8	86
14. Prepare thresh floor	Nov 29	Jan 27	7	13½
15a. Coop harvesting	Dec 4	Jan 25	44	747½
15b. Family harvesting	Dec 12	Feb 6	18	148½
16. Threshing	Dec 15	Feb 14	43	597
17. Winnowing	Dec 25	Feb 14	9	86½
18. Stacking of straw	Dec 29	Feb 4	2	16
19. Procure grass for buf.	June 14	Nov 27	83	157
20. Supervise coop work	July 22	Jan 24	8	26
21. Entertaining guest workers	July 22	Jan 24	7	158½
Total	June 4	Feb 14	248	5,476½
B. Work by Piece-workers				
1. Coop uprooting	Aug 18	Aug 23	6	24
2. Uprooting	Aug 23	Aug 30	2	45
3. Transplanting	July 19	Aug 2	5	160
Total	July 19	Aug 30	10	229
Grand total	June 4	Feb 14	248	5,707½

* See details in the section on steps in rice production.

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TABLE 36

SUMMARY OF YEAR ROUND WORK BY BUFFALOES ON CHOM FARM
Bangchan, Thailand, 1953

	Duration Start	End	Days in work	Buf-hrs.
1. Plowing	June 4	Aug 23	49	918½
2. Harrowing	June 13	Aug 24	28	582
3. Rolling	June 13	Aug 22	7	84
4. Hauling	Aug 23	Aug 23	1	8
5. Prepare thresh floor	Nov 30	Dec 4	5	32
6. Threshing	Dec 15	Feb 13	35	494½
Total	June 4	Feb 13	112	2,119

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4. Labor requirement per rai.

Our records show that the total area planted to rice was 49 rai.
Therefore, man labor per rai was $\frac{5,707½}{49}$ = 116 man-hours.[4]

And animal labor per rai was $\frac{2,119}{49}$ = 43 buffalo-hours.[5]

5. Labor requirement per 100 tang of paddy.

Our records show that a total crop of 2,100 tang of paddy was produced.
Therefore, man labor per 100 tang of paddy was
$\frac{5,707½}{2,100}$ X 100 = 272 man-hours
And animal labor per 100 tang of paddy was
$\frac{2,119}{2,100}$ X 100 = 101 buffalo hours.

The Critical Period in Rice Production

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The entire length of rice producing activities, which in the case under study lasted from June 4, 1953 to February 14, 1954, may be subdivided into three distinct phases: (1) cultivation and planting season which lasts from the first day of field work to the date when the seedlings have all been transplanted and properly cared for; (2) flooding season which lasts approximately from the date when the water level has risen up over the dikes to the time when the early varieties of rice are ready to be harvested; and (3) harvesting season which lasts from the harvesting time of the early varieties until all varieties have been harvested, threshed, and winnowed.

Bangchan farmers recognize these three distinct phases which are called in Thai na nar (lit., field season), na nam (lit., water season), and na khao (lit., paddy season). They

4. This would be 290 man-hours per acre.

5. This would be 107½ buffalo-hours per acre.

243 Hence, transplanting should be completed some time before the
221 whole field is inundated. It is seen, then, that this critical period of na nar is not only one of physical strain on the part of the farmer but also a period of anxieties.

When the rice plants are well established in the fields, they more or less can take care of themselves, for they grow sufficiently rapidly to keep up with the rising water level unless the rise is abnormally rapid. Thus, na nam or the flooding season is a period when farmers have nothing to do except procure grass for the buffaloes. It was earlier indicated that field inspection that was done during this period was actually a pleasure trip to observe the general growth of the rice plants; for even if anything wrong was noticed, nothing could be done about it.

Farmers are busy again when harvesting season starts. Each variety of rice ripens on its exact date and it must be harvested within a day or two. If harvesting is delayed even for a short period of three or four days, the paddy will be over-ripe, resulting in a higher proportion of breakage and hence a lower price. If there is any anxiety at all, it is now over the possibility of rain which may damage the paddy which is left to dry in the field. This is unlikely, however, for the rainy season has just passed. Generally speaking, this
• [461] is a period of joy rather than anxiety. The major field work -- harvesting -- although one of the most burdensome field operations consuming one-sixth of the total man labor spent on rice production, is largely a cooperative undertaking carried on

243 under a lively atmosphere. Moreover, the amount of work done
221 depends solely on the amount of human labor utilized. Hence,
461 if the operator wants to finish his harvesting in time when he has not enough available labor, he simply hires more piece-workers. The situation is different in the critical period of cultivation and planting, when the amount of work done depends not only on the amount of labor utilized but also on the accomplishment of the preceding steps which are governed by water condition, weather condition, available equipment, animal labor as well as man labor.

243 In the 1953-54 crop year, it was observed that na nar
221 started on June 4 and ended on September 30, na nam lasted from October 1 to December 3, and na khao from December 4 to February 14.

243 While the figures on total labor requirement in rice
461 production represent valuable information, an earlier discussion in this section has led us to the belief that the mere knowledge that it takes 272 man-hours and 101 buffalo-hours to produce 100 tang of paddy is not enough to demonstrate the labor requirement situation if it is to serve as a guide in problem locating and problem solving. These figures must be further broken down into those required during the critical period and those required in the non-critical period.

243 Our records show that of the 5,707½ man-hours spent
221 in producing 2,100 tang of paddy on Chom Farm, 3,226½ man-
231 hours were utilized in na nar (June 4 to September 30, 119 days),
461 133½ man-hours in na nam (October 1 to December 3, 64 days),

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243 and 2,347½ man-hours in na khao (December 4 to February 14, 72
221 days). Similarly, of 2,119 buffalo-hours spent on the same
231
461 production, 1,592½ were utilized in na nar, 24 in na nam, and
502½ in na khao. From these data, we may calculate the averages for daily labor utilization in each period as follows:

1. Na nar (119 days)

Total man-hours, 3,226½; daily man-hours, 27.1
Total buf-hours, 1,592½; daily buf-hours, 13.4

Man-hours per rai, 66.
Buf-hours per rai, 32½.

2. Na nam (64 days)

Total man-hours, 133½; daily man-hours, 2.1
Total buf-hours, 24 ; daily buf-hours, 0.4

Man-hours per rai, 2½.
Buf-hours per rai, ½.

3. Na khao (72 days)

Total man-hours, 2,347½; daily man-hours, 32.6
Total buf-hours, 502½; daily buf-hours, 7.0

Man-hours per rai, 47.
Buf-hours per rai, 10.

It is seen that three-fourths of the total buffalo labor was utilized in na nar. This was to be expected, for most of the steps involving buffalo labor were in this period. It is important to observe that buffaloes assumed an active role in practically all steps of land preparation -- plowing, harrowing, and rolling. Human labor, on the other hand, played only a passive part in these steps.

243 Table 36 shows that buffaloes were utilized in six
231 steps in rice production -- plowing, harrowing, rolling, haul-
461 ing, preparation of threshing floor, and threshing. These steps

243 may be classified according to the way the animals are used
231 as follow:
461

1. Steps in which buffaloes are always used and in constant proportion to men.

Steps	Proportion of buffaloes to men
Plowing	1 to 1
Harrowing	2 to 1
Rolling	2 to 1

2. Steps in which buffaloes are always used but not necessarily in constant proportion to men.

Preparation of threshing floor: Four buffaloes are led by one worker to tramp over the dirt floor which was soaked with water on the previous day. While the buffaloes are tramping over the floor, another worker levels the floor with hoe. The number of buffaloes and workers may be more or may be less, and there is no definite proportion between the animals and men.

Threshing: Four buffaloes are led by one worker to tramp over harvested rice stalks (with paddy still intact) which have been spread over the threshing floor. While the buffaloes are tramping over the rice stalks, two or three other workers separate straw from the threshed paddy with pitchforks.

3. Steps in which buffaloes are not usually used but are sometimes used to minimize human labor when opportunity permits.

Hauling: Two buffaloes are led by two workers to draw the boat carrying seedlings along the muddy water way. Of a total hauling work of 733 man-hours in 55 work days lasting from July 17 to February 14, buffaloes were used only once on August 23, involving only 8 buffalo-hours.

243 Since buffaloes are used in the critical period of
221 na nar in the three steps where they must be used and used in
231 constant proportion to men, it is not difficult to see that
461 the field work accomplished in this critical period depends more on buffaloes than on human workers. It was mentioned that

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243 Chom Farm utilized four buffaloes and four regular workers
221 including the operator himself. Supposing that one buffalo
231 is sick, we might expect that the work accomplished in this
461 period would be reduced to three-fourths. On the other hand, if one regular worker is sick, that would not materially affect the amount of work done, for the sick worker would certainly be replaced by a substitute. Even if no extra family worker is available, it would be only a matter of hours that Chom would be able to recruit one more worker among his relatives and neighbors. He could not recruit a temporary service of a buffalo. If more buffalo labor is badly needed, the only alternative is to purchase the animal. Looking from a different angle, if Chom wants to finish plowing and harrowing ahead of the original schedule for fear of an early inundation, he could not accomplish that by simply utilizing more human labor alone. It is thus seen that buffaloes, more than human workers, are the limiting factor in the accomplishment of the field work during the critical period of cultivation and planting season.

Labor Adjustment Devices

243 Rice plants have one unique quality: each variety will
221 mature on a certain exact date no matter how early or how late it is planted.[6] If there were only one variety of rice in existence, this would be a serious handicap to rice growers, for there would certainly be much more demand for labor in

6. The exceptions are the very early varieties which mature at the age of about 90-100 days. Ripening dates of these varieties are set only by the length of time they have been planted, regardless of the time of the year.

243 harvesting time than could be coped with by the supply for it.
221 Chom Farm, for example, would alone need 916 man-hours in one or two days, during which time approximately the same amount of labor would be needed by each of the other farms. Fortunately, there are in existence hundreds of rice varieties whose maturing dates vary from October to February. These different varieites are grouped into the early, medium, and late varieties according to their ripening dates of October to November, early December to early January, and middle January to middle February, respectively. Usually, the choice of varieties of rice to be grown in a certain locality is so conditioned by local water levels at different periods that a narrower range of selection is forced. Thus, the earliest variety in Bangchan is harvested in early December and the latest in middle February. The terms "early," "medium," and "late" are also arbitrarily used by local people to denote the relative ripening dates of locally grown varieties. Thus, in Bangchan the varieties ripening in early and middle December are known as the early varieites, those ripening between late December and middle January the medium varieties, and those ripening in late January and after the late varieties. It is possible, then, that the same variety may be called an early variety in one place and a medium or even a late variety in another.

243 By growing several varieties of different ripening
221 dates, a farmer is able to spread out labor required in har-
461 vesting. In the same manner, labor required in uprooting and transplanting is spread out by sowing these seeds at different

243 times. Using too many varieties of rice on a farm, however,
221 will complicate the working schedule; and sowing times of these
461 varieties cannot also be spread out too far apart because seedlings should all grow up to the size appropriate for transplanting some time before the deadline set by the water level. It has been observed that most farmers grow from three to six varieties on their farms.

243 Another efficient device for spreading out labor is
221 that of farmers in a locality organizing themselves into
461 informal cooperative work groups to perform on a mutual help
467 basis such field work which can be best cooperatively done, such as uprooting, transplanting and harvesting. There were three cooperative work groups in Bangchan: (1) Mu Rongan Yai, or the Bridge Group, consisting of farm operating families living in the vicinity of the bridge across Bangchan Canal; (2) Mu ha Wat, or the Near Wat Group, consisting of families living around Wat Bangchan; and (3) Mu Non, or the North Group, consisting of families living in Upcanal Bangchan. The organization and the system for labor compensation of these various informal work cooperatives will be discussed in the next section.

Cooperative Work

243 There were five kinds of cooperative work in Bangchan --
476 cooperative uprooting, cooperative transplanting, cooperative harvesting, cooperative weeding, and cooperative pounding of cargo rice. While the first three kinds were important undertakings through which a major part of these rice production

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#243 476 464 possible ways to eliminate the participation of professional piece-workers. From the standpoint of professional piece-workers, however, to get oneself admitted into a cooperative group is a boon to their respective families for job opportunity [465] would be assured to them. This is the reason why Sa was able to earn 2,000 baht in 1953 while most of his fellow piece-workers' earnings were as low as 300 or 600 baht.

#243 476 The same principle of labor reciprocity held in the other kinds of cooperative work, which also involved cash payment in the end to professional piece-workers who served as clearing agents to settle the balances of work credits. Generally speaking, such balances were more in case of cooperative transplanting than cooperative uprooting, and the same were even higher in the case of cooperative harvesting. This was to be expected because transplanting involved about double the amount of labor spent on uprooting, and harvesting alone required about a tenth more than the combined labor requirement of these two operations.

#243 461 476 Chart 1 shows both man-labor spent by Chom farm staffs and man-labor spent on Chom Farm, the former being represented by the solid line and the latter by the dotted line. On the basis of equal reciprocity of labor, these two should be technically equal in total magnitude. They differed, however, in their daily distribution. It is seen that the two lines coincide during the periods from June 4 to July 14, from September 30 to December 3, and from January 26 to February 4, when there was no cooperative activity. During the periods from July 15

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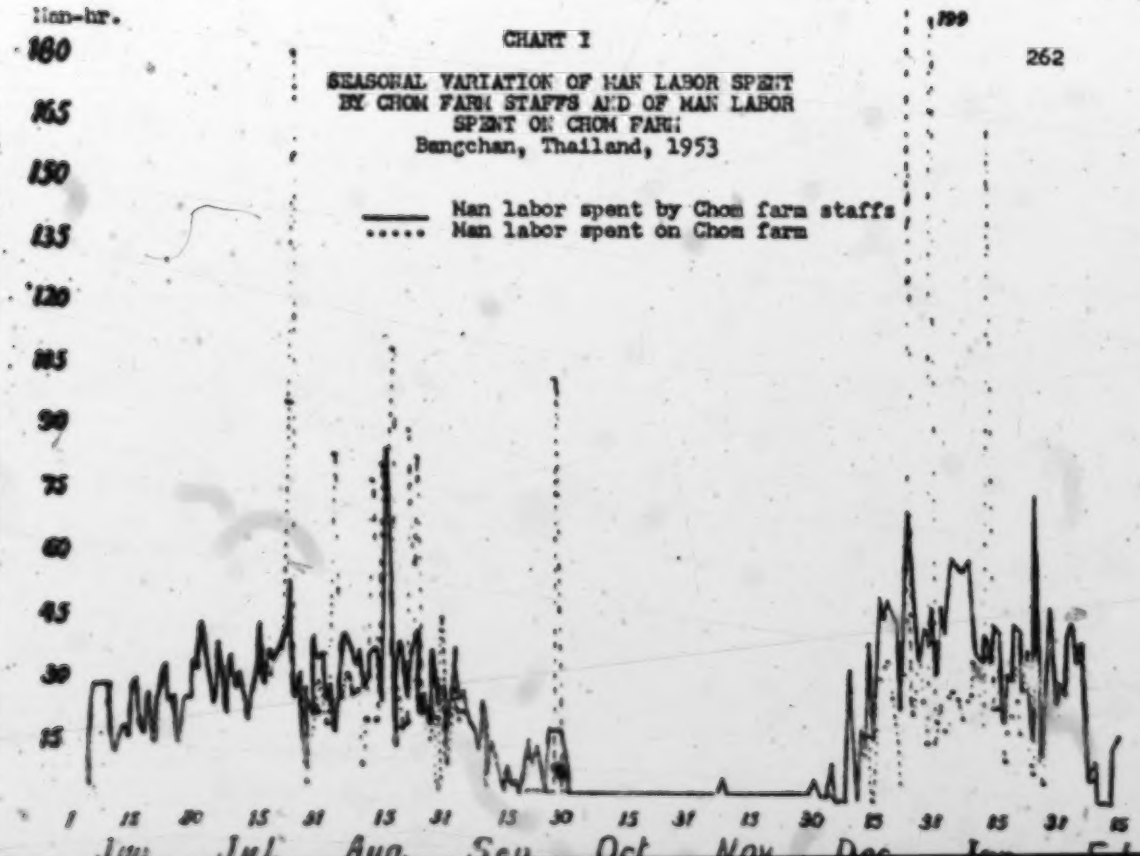
CHART I

SEASONAL VARIATION OF MAN LABOR SPENT BY CHOM FARM STAFFS AND OF MAN LABOR SPENT ON CHOM FARM
Bangchan, Thailand, 1953



• 263
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231
• 461

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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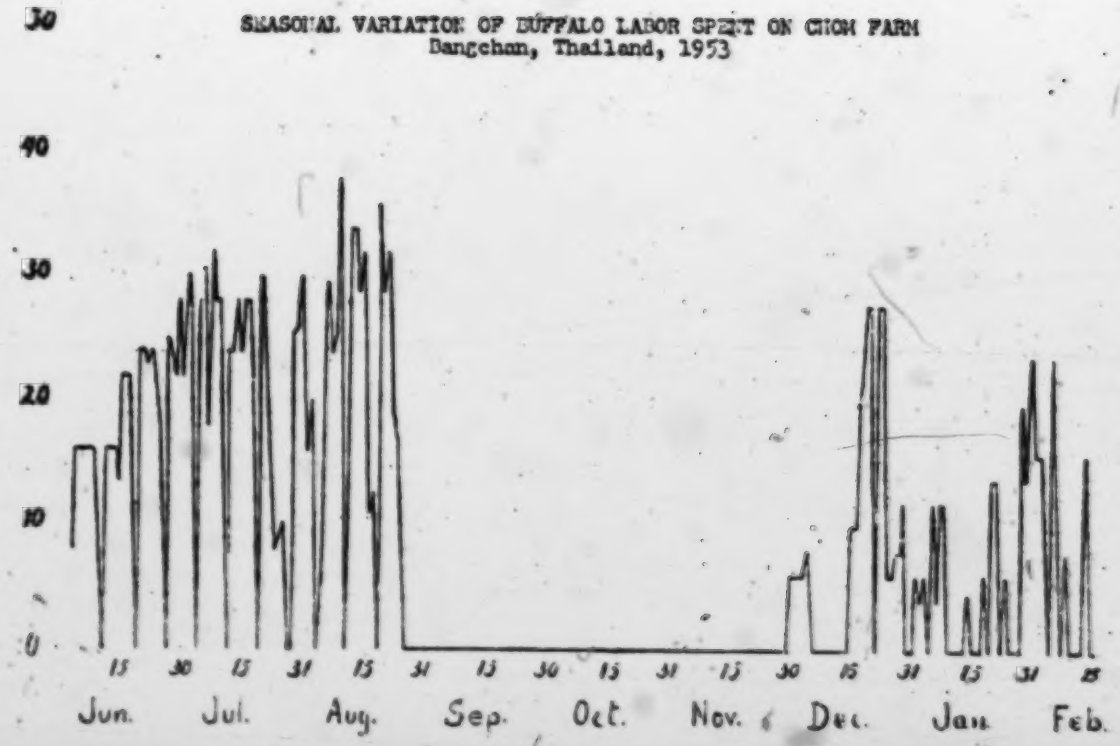
CHART II

SEASONAL VARIATION OF BUFFALO LABOR SPENT ON CHOM FARM
Bangchan, Thailand, 1953



7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 37

DAILY LABOR SPENT BY CHOW FARM STAFFS
Bangchan, Thailand, 1953

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hr	man-hr	man-hr	man-hr
Jun 4	8	24	--	24
5	16	28	--	28
6	16	28	--	28
7	16	28	--	28
8	16	28	--	28
9	16	28	--	28
10	8	12	--	12
11	--	16	--	16
12	16	18	--	18
13	16	15½	--	15½
14	16	27½	--	27½
15	13½	29	--	29
16	22	19½	--	19½
17	22	16½	--	16½
18	20	26½	--	26½
19	--	14½	--	14½
20	24	25	--	25
21	24	24	--	24
22	23	33	--	33
23	24	24	--	24
24	21½	25½	--	25½
25	18	14	--	14
26	--	18½	--	18½
27	25	25	--	25
28	24	25	--	25
29	22	34½	--	34½
30	28	32	--	32
July 1	22	43	--	43
2	30	38	--	38
3	27½	30	--	30
4	--	23	--	23
5	28	38	--	38
6	30½	32½	--	32½
7	18	21	--	21
8	32	35	--	35
9	28	28	--	28
10	28	3-½	--	30½

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

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221
231
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592

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
July	11	--	23½	--	23½
	12	24	20	--	20
	13	24	26½	--	26½
	14	28	31	--	31
	15	24	38	5½	43½
	16	28	27½	--	27½
	17	28	36	--	36
	18	22	30	5	35
	19	--	36	--	36
	20	30	37½	--	37½
	21	28	37	4½	41½
	22	19	46½	5	51½
	23	8	20½	4½	25
	24	9	31	--	31
	25	10	16	--	16
	26	--	4	4	8
	27	--	17	4½	21½
	28	25½	27½	12	39½
	29	26	26½	9½	38
	30	28	21	13½	34½
	31	30	35	--	35
Aug	1	16	18	6	24
	2	20	21½	7	28½
	3	--	7½	8½	16
	4	5	17	9½	26½
	5	22½	24½	16	40½
	6	29½	29½	10½	40
	7	24	30½	6½	37
	8	25½	25½	7½	33
	9	38	26	10½	36½
	10	--	8	19½	27½
	11	28	16	13	29
	12	34	19	16½	35½
	13	34	25½	12	37½
	14	29	19	7½	26½
	15	32	81½	4	85½
	16	11	67½	4	71½
	17	12½	35	5½	39½
	18	--	4½	8	12½
	19	36	38	--	38
	20	29	17½	8½	26

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

243
221
231
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476
592

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hr	man-hr	man-hr	man-hr
Aug 21	32	18	6½	24½
22	19	28	7	35
23	17	41½	--	41½
24	8	16	4½	20½
25	--	19	7	26
26	--	14½	3½	18
27	--	21	15	36
28	--	4	16	30
29	--	2	22½	24½
30	--	14	14	28
31	--	8	4	12
Sept 1	--	8	9	17
2	--	27½	10	37½
3	--	12½	11½	24
4	--	19	7	26
5	--	21½	3½	25
6	--	19	--	19
7	--	17	--	17
8	--	12	--	12
9	--	24	--	24
10	--	6	--	6
11	--	11	3	14
12	--	9	--	9
13	--	6	--	6
14	--	2	--	2
15	--	8	--	8
16	--	3½	--	3½
17	--	4½	--	4½
18	--	2	--	2
19	--	2	3½	5½
20	--	2	12	14
21	--	2	7	9
22	--	2	11	13
23	--	2	7	9
24	--	2	--	2
25	--	2	14	16
26	--	2	14	16
27	--	2	14	16
28	--	16	--	16
29	--	2	7	9
30	--	2	--	2

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

243
221
231
461
476
592

Date		Animal labor	Human labor		Total
			On farm	On coop. work	
		buf-hr	man-hr	man-hr	man-hr
Oct	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	2	--	2
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2
	11	--	2	--	2
	12	--	2	--	2
	13	--	2	--	2
	14	--	2	--	2
	15	--	2	--	2
	16	--	2	--	2
	17	--	2	--	2
	18	--	2	--	2
	19	--	2	--	2
	20	--	2	--	2
	21	--	2	--	2
	22	--	2	--	2
	23	--	2	--	2
	24	--	2	--	2
	25	--	2	--	2
	26	--	2	--	2
	27	--	2	--	2
	28	--	2	--	2
	29	--	2	--	2
	30	--	2	--	2
	31	--	2	--	2
Nov	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	2	--	2
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Nov	11	--	2	--	2
	12	--	2	--	2
	13	--	2	--	2
	14	--	2	--	2
	15	--	2	--	2
	16	--	2	--	2
	17	--	2	--	2
	18	--	2	--	2
	19	--	2	--	2
	20	--	2	--	2
	21	--	2	--	2
	22	--	2	--	2
	23	--	2	--	2
	24	--	2	--	2
	25	--	2	--	2
	26	--	2	--	2
	27	--	2	--	2
	28	--	2	--	2
	29	--	2	--	2
	30	6	5	--	5
Dec	1	6	2½	--	2½
	2	6	1½	--	1½
	3	6	1½	--	1½
	4	8	2	7	9
	5	--	--	--	--
	6	--	--	--	--
	7	--	--	--	--
	8	--	25½	--	25½
	9	--	33	--	33
	10	--	--	--	--
	11	--	12½	4½	17
	12	--	8	5	13
	13	--	16	22	38
	14	--	--	15	15
	15	10	17	16	33
	16	10	30	19	49
	17	20	33	10	43
	18	22	34	15	49
	19	28	24½	21	45½
	20	28	19½	24	43½

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOW FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hrs	man-hr	man-hr	man-hr
Dec	21	--	4½	18	22½
	22	28	30½	21	51½
	23	28	43½	27½	71
	24	6	40	8	48
	25	6	21	18½	39½
	26	8	34½	--	34½
	27	8	24	18	42
	28	12	17½	24	41½
	29	--	14½	24	38½
	30	--	47	--	47
	31	--	14½	16	30½
Jan	1	6	23	24½	47½
	2	4	17	24	41
	3	6	26½	24	50½
	4	--	27½	32	59½
	5	12	25½	32	57½
	6	4	20	36	56
	7	12	25½	32	57½
	8	12	26½	32	58½
	9	--	34	15	49
	10	--	19½	16	35½
	11	--	25	9	34
	12	--	23½	18	41½
	13	--	23½	10	33½
	14	4½	32	11	43
	15	--	26	16	42
	16	--	10	9	19
	17	--	16½	15	31½
	18	6	21	9½	30½
	19	--	33	10	43
	20	14	25½	16	41½
	21	14	17½	10	27½
	22	--	32½	5	37½
	23	6	5½	9½	15
	24	--	74½	--	74½
	25	--	2½	8½	11
	26	--	22	--	22
	27	--	29½	--	29½
	28	20	47½	--	47½
	29	14	31	--	31
	30	20	24	--	24
	31	24	29	--	29

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

243
221
231
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467
592

Date		Animal labor	Human Labor		
			On farm	On coop. work	Total
		Buf-hrs	man-hr	man-hr	man-hr
Feb	1	16	25½	--	25½
	2	16	39½	--	39½
	3	14	43½	--	43½
	4	--	34	--	34
	5	24	38½	--	38½
	6	8	22	--	22
	7	--	5	--	5
	8	8	10½	--	10½
	9	--	--	--	--
	10	--	--	--	--
	11	--	--	--	--
	12	--	--	--	--
	13	16	12½	--	12½
	14	--	16	--	16

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 433 [427] 1. Land: This element represents 22 per cent of the total cost of producing paddy (Table 38). Of this, 15 per cent is actual payment for explicit rent while 9 per cent is assessed value of implicit rent.

Among the cost items in Table 38, cash expenses include actual rent (13%), wages for pieceworkers (3%), wages for hired laborers (3%) and seeds and materials (6%), while imputed expenses include implicit rent (9%), value of family labor (31%), value of the operator's labor (13%), depreciation (10%) and interest on investment (11%). It is seen that cash expenses comprise only 25 per cent, while imputed expenses comprise as high as 75 per cent of the total cost.

In view of the high proportion of imputed expenses, the method adopted in the imputation will be explained here.

[427] [435] 1. Rent: Going rate for 1948-49 of 6.2 tang (49 baht) per rai was used.

[592] [461] 2. Value of family labor: Labor requirement based on acreage was first calculated, using the standard factor of 13.4 adjusted rai to one fully employed worker (this was the 1949 average for farms with regularly hired laborers on which [435] workers were assumed to be fully employed). When the labor requirement in terms of number of fully employed laborers needed was known, imputed family labor cost was calculated at the going wage rate for the year of 1,600 baht (1,000 baht cash and 600 baht of food privilege).

3. Value of the operator's labor: In addition to

[TEXT CONTINUED ON PAGE 280]

*243 433 [435] the value of family labor, the cost of managerial service of the operator of 1,000 baht was arbitrarily charged for farms with the size of 10 rai or over. For farms under 10 rai, only 500 baht was arbitrarily charged as the cost of managerial service.

4. Depreciation: From the original cost of each item of equipment (including buffaloes) was deducted its residual value at the termination of its service, and the result was divided by the expected length of service in years of the equipment.

5. Interest on investment: The rate of 15 per cent per year was arbitrarily chosen. This was the maximum legal rate, and was also a minimum rate of return which any person in Bangchan might reasonably expect from his money if he chose to lend it out at any moment.

*[128] Since much of these imputed expenses were arbitrarily chosen, the cost of producing paddy might naturally vary widely according to the assigned value of each item. Our cost of production figure, then, will be more meaningful, if the amounts of these arbitrarily imputed values are constantly kept in mind.

*243 433 • 461 423 Farms in Bangchan are composed of from one to four parcels of land. The characteristics of this fragmentation are shown in Table 39. The size of a parcel ranges from one rai to 65 rai, averaging 18.8 rai. Fragmentation obviously brings about a waste of considerable time and energy spent in going from one parcel to another, and thus an increase in

[TEXT CONTINUED ON PAGE 282]

243 433 461 423 labor cost. Most farmers must go by foot or boat to work at places ranging from a hundred meters to two kilometers from home. This waste is the more serious during the period of preparation of the fields at the beginning of the season when the water level in the canals is not high enough to permit the effective use of a boat.

243 178 423 Table 40 shows the frequency distribution of areas worked by Bangchan operators in 1948 and 1952. It is seen that in both years work areas concentrate in the size groups between 10 to 40 rai, averaging 34.2 rai for 1948 and 31.7 rai for 1952. It is seen also that the work areas of 1948 have a wider range than that of 1952. There were 30 farms in 1948 whose areas were 40 rai and over, while the number of such farms was 28 in 1952.

Table 41 shows that of 96 continuing farms, 20 have increased their size during the five years period, 40 have decreased their size, while 35 farms have the same size throughout.

243 433 46 2. Labor: This element represents 51 per cent of the total cost of producing paddy (Table 38). Of this, only a small fraction is actually paid for -- 3.3 per cent to hired laborers and 3.4 per cent to pieceworkers. The bulk of labor is supplied by family workers (including the operator himself) whose labor value is assessed at 44.6 per cent of the total cost of producing paddy.

It is seen in Table 42 that the number of adjusted rai per worker is only 9.4 for farms which used only family

[TEXT CONTINUED ON PAGE 286]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7 Bangchan

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TABLE 42

DISTRIBUTION OF FULL TIME LABOR FORCE OF 104 FARMS
Bangchan, Thailand, 1948

Condition of Regular Labor Force	Number of Farms	Number of Workers	Adjusted* Areas	Adjusted Rai Per Man
Farms without hired laborer			rai	rai
One family worker	8	8	131.75	16.5
Two family workers	28	56	497.50	8.9
Three family workers	25	75	646.25	8.6
Four family workers	20	80	747.50	9.3
Five family workers	10	50	487.25	9.7
Six family workers	--	--	--	--
Seven family workers	1	7	75.50	10.8
Eight family workers	1	8	83.00	10.4
Nine family workers	--	--	--	--
Ten family workers	1	10	107.50	10.8
Sub-total	94	295	2,776.25	--
Average	1	3.1	29.50	9.4
Farms with hiredlaborers				
a. With one hired laborer				
One family worker	1	2	58.50	29.2
Two family workers	5	15	177.50	11.8
Five family workers	2	12	108.00	9.0
b. With two hired laborers				
One family worker	1	3	70.00	23.3
c. With three hired laborers				
Two family workers	1	5	80.00	16.0
Sub-total	10	37	494.00	--
Average	1	3.7	49.50	13.4
Grant total	104	332	3,270.25	--
Average	1	3.2	31.50	9.8

* An "adjusted" rai equals one transplanted rai or two broadcast rai. Cultivation of one rai by the broadcasting method requires roughly only one-half the labor involved in the transplanting method.

Buffaloes are considered as a kind of farm equipment, so the cost of buffalo labor appears under the item of cost of equipment. Buffalo labor is, however, so closely associated with man labor that it seems to be more appropriate to discuss it here.

It has been pointed out that the accomplishment of farm work during the critical period depends largely on buffalo labor. Farmers fully realize the importance of this draft animal, which is always given good treatment. Even in the busiest season of field preparation, when farmers work from dawn to dusk seven days a week, the buffalo has a full holiday each week (on Wan Phra, the Buddhist holiday) and has a four-hour noon recess, usually from 10 a.m. to 2 p.m., on work days.

3. Farm equipment and supplies: This element represents 26 per cent of the total cost of producing paddy. Our records show that in 1948 the total value of farm equipment and materials of the 104 sample-farms amounted to 559,626 baht, averaging 5,381 baht per farm, and ranging from 443 to 16,733 baht. The frequency distribution of the value per farm of farm equipment and materials is shown in Table 44.

Table 45 shows the frequency distribution of the value per rai of farm equipment and materials which ranges from 34 to 518 baht, averaging 159 baht. It is seen, in spite of this rather wide range, that three-fifths of the value per rai concentrate in the interval between 100 and 200 baht per rai.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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8. Efficiency in the use of farm equipment

9. Markets and marketing

While these nine points may appropriately be considered as standard factors affecting farm profit, it is obvious that the extent of their respective effect varies with location, type of farming, and the stage of technological development of the area in question. In Bangchan, we may immediately rule out as an important variable the selection and combination of enterprises because there is only one enterprise -- rice. Farm layout, farmstead and building arrangement is also a rather insignificant factor as a variable affecting the profit of rice farms, although we have earlier noted that parcelization may have increased the cost of labor and irrigation. Efficiency in the use of farm equipment may also be considered as an insignificant variable factor in Bangchan; for the equipment units are usually small although numerous, hence farm equipment tend to be fully utilized.

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Labor efficiency needs more explanation than mere passing comment. Table 52 shows that labor constitutes 51 per cent of the total cost of producing rice. It should be noted, however, that of 3,743 baht that goes to labor for each farm only 485 baht is actually spent, the balance of 3,258 baht being imputed values of family's labor and the operator's labor. It is seen, then, that a reduction in labor cost would involve largely only imputed values. It certainly will correspondingly reduce the total cost

[TEXT CONTINUED ON PAGE 313]

7: Janlekha X-4.5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 434 461 and enhance income from the farm, but it would not significantly affect the farm family income or income for the family living (see definitions under Headings 7 and 8 of the section on the operator's remuneration and measures of success) unless more land is added.

243 433 434 In rice farming, rates of production of crops and animals is reduced to rice yield per rai. At the present stage of technological development in Bangchan, this is not as much a result of management as of nature -- the water condition and the quality of land (in both senses of soil fertility and levels of the fields). Since we already have quality of land as a factor, rates of production may thus be eliminated.

After eliminating factors that are either insignificant or duplicates of other factors under Bangchan conditions, the standard factors affecting farm profit are thus reduced to prices, quality of land, size of business, and markets and marketing. These influences are familiar to students in agricultural economics, and therefore do not need further elaboration here.

[171] In addition to these standard factors, there are certain special factors affecting farm profit which the author suspects to be appropriate not only to Bangchan but also to all other rice producing areas of Southeast Asia. These are the differentials in paddy prices, in rates of interest, rentals, and wage.

J: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janlekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 16 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand [Kingshill 1960:73]).

Besides the work in rice-fields, women dug and cleaned

462 Besides the work in rice-fields, women dug and cleaned [503] canals and ditches, mounded land, and fished in many ways, the [226] most laborious of which was plunging a heavy basket into the mud to catch burrowing fish. In the household chores, in which men shared to some extent, they carried water, cut and fetched wood, tended livestock, cultivated kitchen gardens, [501] pounded rice in mortars, and cleaned houses. Boats were rowed by paddling or sculled by standing and pushing a single large [354] oar. Cooking was time consuming. The low stoves were on the [352] ground or floor. Since there were no tables or chairs, one squatted two to four hours a day to cut or pound ingredients, [516] stir the curry, or wash the dishes.

868 The training of boys and girls for farm and household 561 work was thorough and started early. By 18 years of age, 461 boys and girls with few exceptions were experienced in every step of farming. Janlekha's chart (1955:82) indicates the progression (parenthetical additions are the present author's):

Age	Method	Kinds of farm work
5 - 7	not forced, but allowed or induced to work if they want to	light hauling, removal of weeds which have been turned over by harrowing
8 - 12	mild pressure	light hauling, removal of weeds which have been turned over by harrowing; some household work and help in the kitchen - girls only - (sometimes boys)
13 - 14	moderate pressure	hauling, weeding, buffalo-tending, transplanting, chicken-feeding, fishing, household work (boys and girls)
15 - 16	high pressure	all kinds of farm work, harrowing, harvesting, and uprooting - boys only - are started at this age.

872 Children worked in the fields before and after school 461 which, compulsory for all children aged eight to fourteen, was held from 9 a.m. to 3 p.m. five and one-half days a week. Vacations coincided with peak work seasons so children could help in the fields or at home.

This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

462 147 843 846

Marriage

883

As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Minburi to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

582

Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.[4] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:62) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

[702] [793] 584 583 581

4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

[832] [715]

close touch with each other's activities and needs. 621

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time. 621 844 592 844 476 593 [462]

Wealth Differences:

Way of Life 556 875 441

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable. [464] 556 511 178 369

magical formulae and incantations (khāthā cf. Textor 1960:80-98; 67-79). It was one of the branches of occultism (saiyasāt [McF. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khāo (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khāo. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō raksā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyāe). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.[19]

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

562 delivery, "her blood was purified to a white color to become
[827] the milk of the breast."[48] Nursing a child was the essence
[853] of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 In a wider context, not only all their household members
462 but people anywhere were the objects of women's nurture:
252 women were in charge of the cooking even if occasionally
264 helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor houshold, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry any more." She construed this as proof that she had ample
[082] merit, but it also meant that she was a great donor who gave
[431] continuously and took little. Women usually offered the
[796] early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When
593 age pushed women past their mature capacities, they returned
888 to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 A desire to give tender care and nourishment was deemed
857 inborn in all women. Although sex was not strongly
[291] differentiated in babyhood,[49] by age 3 a hard-to-handle
[593] skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phūm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[856] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

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[602
[184] affection overrode kinship.[64] Thus affinal relatives and non-kin neighbors were also requested to assist. Buddhists attended Muslims and vice-versa, (though Muslim women preferred female assistance).

[609] In emergencies the professional midwives' area was the whole community. They travelled long distances to attend women who were not close kin. No parturient, however, even in an emergency, was ever attended by a complete stranger. In all likelihood, every adult in the community knew the midwives at least by sight.

759 As to the size of the practices, reported activities ranged from the Muslim midwife's estimate of 10 per year, down to 2 or 3 per year.[65] The 2 men and the most competent female midwife reported about 4 per year, a figure probably weighted on the side of the difficult cases per year. It is noteworthy that the men, in spite of being as [462] we shall see both mɔ̄ and midwife, did not have larger practices than the women. It was considered basically a woman's skill.

759
465 None of the midwives derived much income from their practices, nor did they expect it to be significant. Their main income came from rice-growing from which, however, the women and one of the males had largely retired because of age. The other male midwife was exceptionally busy as a labor contractor, builder of houses, land-owner, and headman as well. The midwives found the 5 to 30 baht offered

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64. Two teachers who were in the kinship category of granddaughter (lān) to the 3 best midwives, and lived only a few hundred yards from them, were delivered by a woman who was mother-in-law to one and husband's older sister to the other and who was "not a midwife but knows how." Since labor was quick and normal, no higher help was necessary. On the other hand, all 3 of these midwives turned up to help at the confinement of another cherished "granddaughter." Only one of them actually delivered the infant but other functions were diplomatically divided up by the young mother.

65. Hauck studied 46 babies, aged up to 3 and so not all born in one year. Thirty-one were delivered by 4 of the professional female midwives (12,9,7,3 respectively); a male midwife and an "experienced" person had done 2 each; 11 [602 women, one each (Hauck, 1959:61). A few of the latter 11 [571] were ordinary kin, not midwives.

251 which did not attract them could be left anywhere out of reach of dogs. Raw rice was stored in a large jar or oil can while salt, fermented fish, shrimp paste[1] and fishsoy[1] were kept in smaller jars or bottles. Such containers were customarily covered. Dried food materials such as onions, garlic, chili peppers and other seasonings were often kept in a basket hung from the roof. Paddy, i.e. unhusked rice, was kept in a large bin of matting or wood, the excess sometimes simply piled on an uncovered mat on the floor.

128 Descriptions of two kitchens, one in a relatively prosperous household and one in a poorer home in Bang Chan, are included in excerpts from field notes, Appendix A, p. 93.

312 In a few homes, a clay water jar was kept in the kitchen or nearby, but more frequently foods were washed, and cooking water obtained at the canal or fish pond.

The water level varied between heavy flood and threatened drought. There were no deep wells in the whole area. Rainwater was collected from the roofs and stored in jars, but during the dry season, the canal or fishpond, although low, must supply the needs of the household. In some, drinking water drawn from the fishpond was preferred, and an effort might be made to keep buffalo from wallowing in it, and to avoid contaminating it with fecal or food wastes or by bathing. Others considered the moving water of the canal preferable to pond water.

General Social Factors Affecting Nutritional Level

462 In Bang Chan, most farm and household tasks were shared by men and women. Both sexes plowed, planted, harvested and dealt with rice buyers; managed buffaloes, boats, and children; cooked, fished and cut wood for fuel; hired out as labor hands, "living in" if desired.

554 184 Though there were clear differences in socio-economic status, the daily life of the people was much alike: whether owners of land or renters, whether farming large or small acreages, the rich and the poor worked in the fields at the same tasks, produced or gathered much of their sustenance, and ran out of cash periodically. Socio-economic status was roughly defined in terms of food: a poor man "had one meal only to forego another;" a rich man "had or could get what he wanted to eat." (Sharp et al. 1953, p. 264.)

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1. Description of these products will be found on pp. 17-18.

594 What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the
434 families, living in tiny separate cottages.[1] Usually with in-
464 adequate or no land, they earned an irregular income by hiring
423 themselves out for farm or other work. At the other extreme,
596 in a hamlet-like cluster of dwellings, lived a closely affili-
592 ated group of kin. A senior couple more or less headed the
476 married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

855 Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or
[252] go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying home from school to do so. Where the adult cooperative
596 476 group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons
[871] could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

241 Plowing could be done by a man and wife, but for both
462 transplanting and harvesting which had to be done within a few
476 days, large groups were necessary. Two patterns of auxiliary
464 group labor prevailed: reciprocal cooperative work, and hiring of labor.

113
114 1. Janlekha, 1955, categorized families as 5% "one-
162 person," 59% nuclear, 8% limited extended (including one or
594 more parents of a spouse), 27% extended (including dependent
596 married couples or other collateral relatives), and the temple
423 residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

22] The year starts with May, the beginning of the rice-
132 year. At this time the rains began to soften the parched ground, and the heat slackened. School re-opened. Farmers
241 turned to plowing, harrowing, raising the seedlings. Both
512 sexes worked about equally in field labor, boys from 14 and
871 girls from about 15 years of age performing tasks according
462 to skill and strength. Everyone was in the field at dawn.
883 The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy
264 day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third
[262 meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

221 With the rains, the canals had filled, so that by June
132 buyers with big rice boats could return. The few farmers who
501 could afford to hold onto a portion of their last year's crop
443 sold it for a better price at this time. Vegetables and
241 fruits which had died in the long drought were replaced, and trees were planted.

24 In July the heavy transplanting season began. Because
221 of cooperative work habits or hiring out, people worked solidly day after day for two months on their own or on an-
132 other's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly con-
[312] trollable. Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School
871 vacation was scheduled at this time so both teachers and
857 children could help. Older children might work in the fields,
887 while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food
[438 for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

273 in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

433 434 443 Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

[442]

121 In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

221 267 122 [123] From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953, and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

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1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 29 -- Analyst]

271 contaminated drinking water, but the traditional use of boiled water for newborn infants and their mothers, and its occasional use for sick persons, might provide the starting point for a desirable change.

Meal Preparation and Service

Processes and Equipment

252 The principal processes involved in food preparation for which equipment was required are: cutting solid food into bite-size pieces, pounding spices and flavoring materials, grating coconut, straining, boiling, sauteing in a small amount of fat, steaming, and roasting on a stick or metal support over the fire. Although foods were steamed or roasted only occasionally, the processes were familiar to all.

358 The Thai kitchen had no oven. When the term "baked" was used, it might mean cooking with dry heat on a rack over the fire (as banana baked in the skin) or without fat in the frying pan (as small dried fish toasted in this way).

128 415 Equipment used during meal preparation by the 11 families observed on 44 survey days is listed in Appendix A, p. 96, that used in serving and eating food, on p. 96.

252 415 554 184 The type of food preparation and service was much the same in the relatively well-to-do and the poorer households in Bang Chan. The chief difference in equipment for food preparation and service in families of different economic status was in the number of items of one kind which were owned. Thus a poor family might own one knife and one clay water jar, whereas an affluent family would probably own several knives and a number of water jars. Equipment used on special occasions, as in preparation of food for large numbers of people, was owned by well-to-do families only. Some had enough equipment for large cooperative work parties.

Persons Responsible for Food Preparation

252 462 Food was usually prepared by the homemaker and/or older daughter, if one were at home, but all members of the family who were old enough to help, had some knowledge of food preparation and did prepare food as the occasion demanded. While preparing, cooking and serving food were more frequently carried out by women than by men, adults and school-age children of both sexes had some competence in this area. "While certain activities are normally assigned to men and others to women, the Thai maintain no rigid compartmentalization and are unembarrassed when a woman does a man's job or a man does

252 a woman's" (Sharp et al., 1953, p. 88). For instance, the
462 husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was
252 sick or resting after childbirth. The ability of boys as well
867 as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had
252 (Hauck, 1953). Responsibility for food preparation increased
[383] with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a
[597] daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 Certain men of eminence, e.g. headmen and elders, would
554 not be asked to cook at all, but as they aged, they might re-
881 turn to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for
252 2 months because his wife had back trouble. Some dishes were
562 cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 A premium was put on good cooking, and certain women
261 who were noted for their cooking were in great demand for large
[868] scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 Food was commonly prepared twice a day, in the morning
264 and late afternoon. The meal pattern was the same for breakfast

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114 1. Suvarnakich (1950) described the Thai diet in a
262 general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

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mushrooms. The following section searches for sociological factors linked to these decisions. For example, are the well-to-do farmers* more apt than the less well-to-do to adopt agricultural innovations? To what extent is literacy a factor in acceptance of innovations? To what extent do differences in literacy, communications habits, cultural contacts and urban orientation account for tendencies to adopt or reject these changes?

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[125] * The following analysis has been made, in most cases, for male farmers only. The distribution of initial acceptance among the three groups of male farmers, females, and male non-farmers is given in the following table.

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TABLE 6. USE OF AGRICULTURAL INNOVATIONS AMONG THREE GROUPS OF BANG CHAN VILLAGERS

	Male Farmers (211)	Male Non-farmers (82)	Females (32)
Tried motor	71%	61%	48%
Didn't try	29	39	52
Tried mushroom growing	46%	35%	41%
Didn't try	54	65	59
Tried tilapia raising	35%	25%	31%
Didn't try	65	75	69
Tried fertiliser	15%	5%	**
Didn't try	85	95	

** Asked of farmers only.

It is apparent, as one would expect, that it is mainly the farmers who try these innovations. Relatively few women (with the exception of tilapia raising) and even fewer non-farmers say they have tried them. Since the absolute number of acceptors among women and non-farmers is too small to bear the separate treatment which would be essential to analyse the factors influencing the use or non-use of innovations, they have been excluded from the following presentation, which refers, thus, to male farmers only.

Economic Level

It could be, of course, that people on a higher economic level are in a better position to try agricultural innovations, since they might more easily afford not only an initial cost but also possible loss in trying out something new.

The survey data provide several indicators of economic level. Among other questions on this subject, all respondents were asked: "Here in your household how many buffaloes do you own?" About one-quarter reported owning no buffaloes at all; a little more than that proportion reported owning four or more; the median number of buffaloes reported was between two and three.

In Bang Chan buffalo are an indication of wealth, as is the amount of land planted to rice. Thus all farmers in the sample were also asked, "Last time you planted rice, how many rai* of rice did you plant?" About a third reported that they planted 19 rai or less; about one-fourth reported that they planted 40 rai or more; the median number of rai reported was 26.3.

If the reported number of buffalo owned is an adequate measure of economic level, then one would expect a high correlation between reported buffalo ownership and reported number of rai planted. If the expectation is borne out by the survey data the two indices may be used interchangeably. (Table 7 reports this relationship for the male farmers in the sample.)

TABLE 7. FARMERS# WHO OWN MORE BUFFALOES ARE MORE LIKELY TO CULTIVATE LARGER LAND HOLDINGS

	"...how many buffaloes do you own?"	
	None, one or two (99)	Three or more (112)
"...how many rai of rice did you plant?		
Less than 9	31%**	11
10-19	32	7
20-29	18	27
30-39	15	23
40-or more	3	41

Male farmers only
** Percentages may add to 99 or 101 owing to rounding of figures.

* A Thai land measure; 1 rai = 0.4 acres.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

CHAPTER IV

FARMING POPULATION

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It was indicated in the section on occupational structure in Bangchan, Chapter III, that there were two groups of villagers whose main incomes were directly derived from farming -- the farm operating and farm laboring families. These two groups constituted 254 out of a total of 298 families in the village in 1953 (Table 10). It should be noted, however, that Table 10 was constructed on the basis of the principal source of income of the family heads, and that the family was taken as a unit.

When individual farm workers are considered, four groups may be differentiated: (1) Farm operators; (2) Family workers; (3) Hired laborers; and (4) Piece-workers.

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Farm operators are those who are assumed to actively manage the farm. Actually, it has been observed that some wives did direct the farm work while their husbands assumed only a passive role. It is rather difficult, however, to point out among some one hundred couples which spouse actually manages the family farm. To save time, and perhaps embarssment, it was assumed that, where both husband and wife were involved, the husband -- the official family head --was the farm operator regardless of his actual role.

243 except for the question of some of these adults being tied
178 up with other jobs. Nevertheless, when limited job oppor-
592 tunity was considered, it was unlikely that this last
128 factor would appreciably affect the estimate. It was assumed, therefore, that 313 out of the total of 391 adults in our 106 sample-families, or an average of 3.0 persons per family, were working members in 1952.

[162] Table 32 shows that the size of farm operating families in 1952 ranged from one to thirteen, averaging 5.7, the median being 6. Eighty-six of these 106 families, or 81 per cent, had a size between three and eight.

Training for Farm Work

243 Every adult in the village of both sexes is expected
462 to be able to do farm work. This includes the ability to perform the following jobs.

Minimum standard: Every step of rice production except uprooting of rice seedlings which is performed only by adult males (for various steps of rice production, see the chapter on farm technology); digging and mounding; paddling and rowing; hauling except a heavy load like gas engines; tending the buffaloes and livestock; gardening; pounding of cargo rice for consumption during the work season; fishing by line-and-hook, dipping net, and trap; food preparation.

In addition to the minimum standard listed above for both male and female adults, male adults are expected to be able to perform the following jobs: Uprooting of rice

TEXT CONTINUED ON PAGE 1871

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 seedlings; hauling heavy loads; fishing by throwing net
462 and by spearing; setting up and starting the windmill; starting the engine; simple carpentry work; most parts of house construction except the most technical parts like leveling and planning where the "professional" carpenters are often called in for advice; simple repairing of tools and equipment; guarding of the buffaloes and irrigation equipment left in the field when somebody must stay overnight at the temporary watch-house.

243 In order to be competent for these various farm jobs,
861 the young were gradually trained, starting at a rather early
868 age of 5-7 years. At the beginning they were not forced, but allowed to participate in some simple farm work like light hauling and removal of weeds which have been turned over by harrowing. Mild pressure is applied when they grow older to the age of 8-12, and they are expected to participate in more complex and heavier jobs. More and more discipline is observed with the progress of the age of the young. The outline of training schedule which we have tried to reconstruct in collaboration with some elderly Bangchan informants is given below.

Age	Method	Kinds of Farm Work
5- 7	Not forced, but allowed or induced to work if they want to.	Light hauling, removal of weeds which have been turned over by harrowing.
8-12	Mild pressure.	Light hauling, removal of weeds which have been turned over by harrowing, some household work, and help in the kitchen (girls only).

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentretion around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mɔ̄, whether priests or lay. The only Muslim who did a little curing was the Te Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mɔ̄ gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mɔ̄. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the thaw khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

132 Bangkok. The tropical monsoon climate divides the year into
three seasons, a hot, wet season from late May to November, a
cooler, dry season from December to early February, and a hot,
361 dry season from late February to mid-May. The community,
scattered over an area of approximately five square miles, was
161 composed of seven neighboring hamlets. In 1954, the population
162 was approximately 1700, divided among 336 households. About
60 per cent of the households were made up of independent fam-
ilies, parents with unmarried children, with an average family
[145] size of 5.7 persons. The main occupation of 80 per cent of all
families was rice farming.

243 The climate together with the overflowing Chao Phraya
[13] river, provided natural conditions for raising a single crop
[220] of wet rice. From May or June to February, the principal activ-
ities were those connected with rice production. This crop
greatly exceeded the needs for local consumption as human food,
[435] feed, and seed. The surplus of rice which was sold, was esti-
mated for 1953 as 1.4 times the amount used for all purposes
within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re-
621 ligious exercises, was also the center of social life in the
[195] community. When data for this study were being gathered, the
one primary school in the village was located on the grounds
of the wat. The community was defined simply by the clientele
which patronized Wat Bang Chan and this elementary school.
[563] Within the area of the community lived a small minority of Thai
Moslems who patronized a mosque and school just outside Bang
Chan. The few Chinese in the village were considered as part
[28] of the Thai-Buddhist community. Information to be presented
on food habits refers primarily to habits of the Buddhist major-
ity, although some reference will be made to ways in which
Moslem practices differed therefrom.

133 Although for six or more months of the year the fields
243 were covered with water, sometimes to a depth of a meter or
491 more, a year-round road, connecting Bangkok and Minburi, the
484 nearest market town, ran through one edge of the village. Bus
487 service was available along this road, to either Bangkok or
[494] Minburi but within the community one went by boat on the net-
work of canals during the wet season, and during the dry season,
[503] on foot along the dikes or across fields. From late January
through May, when subsidiary canals were apt to be dry, getting
about was somewhat difficult. Boat travel was considered easy,
but as many families had only one boat, a trip to the store or
even to a neighbor's home had to be planned with reference to
the activities of other family members.

443 Large scale purchases, as for a ceremony, were always
made at a big market, but in general, instead of people going
to the market-town, the "market" came to the people. Boat-
venders brought not only fresh produce and staples but also
sweets, ices, soft drinks, and cooked foods such as Chinese

per day were calculated for Groups A and B by Round and for all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

Although our sample was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

From the viewpoint of parents, the "peak of life" was the time when children were no longer dependent, but productive, unmarried workers whose earnings stayed within the family. Household 16 was such a family, forward looking, progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analyst]

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Table 8. Summary of Economic Conditions of the Two Groups of Households Participating in Dietary Studies

Household Group and Code No.	Members	Land: Rai Worked	Land: Rai Owned	Buffalo[1]	Food Cost[2]: Total	Food Cost[2]: Per Cap.	No. of Priests Fed	Sources of Income
Group A								
222	5	0	0	0	2.96	0.59	0	Labor contractor; hired out as labor; boat repair; fishing; vegetables sold; canal digging.
12	3	12	0	1	2.70	0.90	0	Rice production; occasional work in Bangkok.
215	5	14	0	1	1.59	0.32	0	Rice production; wife, a medium.
67	5	16	6	1-0	2.52	0.50	0	Rice production; eggs sold; road jobs.
2	6[3]	20	0	2	3.97	0.66	3	Rice production; "professional cook".
103	8	47	12	5	2.04	0.26	2[4]	Rice production; eggs, fish, mushrooms sold; buffaloes raised.
Mean		18.2	3.0	1.6	2.37	0.49	0.7	
Group B								
23	8[3]	6	0	1	1.56	0.19	0	Rice production; selling fish and vegetables; masseur.
21	4	25	25	3	1.92	0.48	3	Rice production; headman
16	8	47	47	5	2.70	0.34	2	Rice production; vegetables, fruit sold; road jobs.
25	8	50	50	3	7.97	1.00	2	Rice production; eggs, mushrooms sold.
20	9	66	51	11	2.17	0.27	2	Rice production; ceremonialist; doctor; carpentry; trading; eggs collected and sold.
Mean		38.8	34.7	2.6[1]	3.32	0.45	1.8	

1. The buffalo belonging to Household 67 died during the year. In Household 20, the brother who moved in owned several buffalo, thus the total for Group B was more than the number shown.

2. Average cash expenditure per day, in baht. (One baht equalled about 5 cents.) Household 222 received rice as part of wages.

3. Babies born during Round IV were not included. In Household 23, a 12-year old son served as temple boy and was away from home much of the time.

4. Rainy season only, when priests could come by boat; counted as 1 in computing average.

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 8. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

BANG CHAN

FOREWORD

114 The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

[113] The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on [128] health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

361 Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, [489] Minburi. A century-old canal and to the north of it a post- [491] war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

621 In 1954, when data for the present study were still being 162 gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the house- [592] holds were made up of independent nuclear families consisting of parents and unmarried children. The average size for all 243 families was 5.7 persons. Rice farming was the main occupa- 241 tion of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With [463] the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals [311] in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple [132] food of the people. During the wet season and into the cooler 224 dry season, from May or June to February, the growing of the [517] single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

621 The Thai countryside is divided into hamlets, each with [622] a headman in charge of the thirty to sixty households of the [128] hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

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228 mushrooms. The following section searches for sociological factors
241 linked to these decisions. For example, are the well-to-do farmers*
244 more apt than the less well-to-do to adopt agricultural innovations? To what extent is literacy a factor in acceptance of innovations? To what extent do differences in literacy, communications habits, cultural contacts and urban orientation account for tendencies to adopt or reject these changes?

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It is apparent, as one would expect, that it is mainly the farmers who try these innovations. Relatively few women (with the exception of tilapia raising) and even fewer non-farmers say they have tried them. Since the absolute number of acceptors among women and non-farmers is too small to bear the separate treatment which would be essential to analyse the factors influencing the use or non-use of innovations, they have been excluded from the following presentation, which refers, thus, to male farmers only.

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[872]

3.a. Is there anyone from your house who is now attending mattayom school?

1.	Yes	24
2.	No	309

b. Do you have any children who have not yet entered or not yet finished prathom school?

3.	Yes	201
4.	No	128
--	Unascertainable	4

c. IF YES: Do you plan to send any of these children to mattayom school or not, or is it uncertain?

5.	Plans to send	66
6.	Does not plan to send	83
7.	Unascertainable	52

[863]

4. What kind of occupation would please you the most--farming or some other occupation? If some other occupation, what other occupation would please you the most?

1.	Farmer prefers farming	266
2.	Farmer prefers other occupation	25
3.	R. from other occupation prefers his occupation	25
4.	R. from other occupation prefers farming	8
5.	R. from other occupation prefers another occupation	5
6.	Unascertainable	4

5. How is Bwana BC-KY in your opinion? Is it a very good place to live, a fairly good place to live, or not such a good place to live?

8.	Very good	71
9.	Fairly good	254
X.	Not so good	4
O.	Unascertainable	4

[276]

6.a. Do you smoke cigarettes or not?

7.	Yes	208
8.	No	118
--	No Answer	7

b. If yes: Would you say that you smoke more cigarettes than most people in BC-KY, less than most people in BC-KY, or about the same as most people in BC-KY?

9.	More	14
X.	Less	68
Y.	About the same	124
O.	Unascertainable	2

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125 [166] [592] 64.c. IF YES: At what age did he leave BC?

1.	Below 15 years	8
2.	15 to 19 years	28
3.	20 to 29 years	50
4.	30 years or more	5
5.	Unascertainable	6

d. IF YES: For how long has he (she, they) been gone from BC?

6.	Less than one year	12
7.	1 to 4	42
8.	5 to 9	19
9.	10 years or more	19
X.	Unascertainable	

[464] [463] e. IF YES: What various duties or jobs does he (she, they) do in Bangkok?

1.	Housewife	17
2.	Unskilled laborer	19
3.	Skilled laborer	33
	Armed forces	17
	Service	9
	Employee	5
4.	Other (retired, selling things)	2
5.	Unascertainable	4

[166] [593] [602] f. IF YES: During the last year, have you seen this person(s) several times, once, or not at all?

9.	Several times	65
X.	Once	16
Y.	Not at all	8
0.	Unascertainable	3

g. IF YES: Does he (she, they) make regular remittances to this house?

X.	Yes	31
Y.	No	56
0.	Unascertainable	5

[207] 65. Do you listen to the radio regularly, daily, occasionally, seldom, or never?

6.	Regularly-daily	45
7.	Occasionally	66
8.	Seldom	148
9.	Never	60
—	Unascertainable	14

[525] 66.a. Do you play the lottery regularly, occasionally, seldom, or never?

1.	Regularly	20
2.	Occasionally	54
3.	Seldom	220
4.	Never	38
5.	Unascertainable	—
—	No Answer	1

b. IF REGULARLY, OCCASIONALLY, OR SELDOM: Suppose you were to win the second prize of 40,000 baht. What various things would you do with this money?

(See code)

The Family

532 Although the family is the smallest of social institutions, it occupies first rank in importance. For the purpose of this study family is defined as a group of persons who form a household under one head including parents, children, servants and other dependents. It is a social unit [264] for both consumption and production. In Bangchan, members [464] of the same family, with the possible exception of piece- [463] workers who have the privilege of eating with their employers only during periods of certain kinds of work, usually share the same meal although not necessarily at the same time. Physically able members are expected to contribute to family work although some may also do extra jobs for their own pocket money. In all cases family work has priority over the extra job, and in most cases members turn over all or part of the [354] earning thus realized to the family head. Although most [184] families have separate dwellings, there are instances of two families sharing the same dwelling but having separate cook- [464] ing arrangement. Such cases are rare, however. According [463] to our operational definition, then, a member of a biolcgical family who has hired himself out as regularly hired laborer ceases to be a member of his own biological family and becomes a member of his employer's family. Piece workers, on the other hand, although they may occasionally eat with their employers, still retain membership of their biological family if they still live with them. Finally, people who live in the same dwelling may not belong to the same family if they

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Appearance of New Families in Bangchan

178 592 621 166 In the pairing of the 1949 and 1953 censuses against each other the appearance of new families was detected as was the disappearance of some of the old families which has just been discussed. Table 5 shows that there were 53 new families, but five of these were merely cases of reappearance of existing families from other hamlets of the same village. Actually, therefore, there were only 48 families that were really new in Bangchan.

Of these 48 new families, 27 moved into the village from the outside and 21 evolved from existing families in Bangchan. Of the 27 immigrating families, 18 came from the bordering villages and 9 from distant villages in all directions ranging from Lardprao and Samsen, some ten miles to the southwest, to Prachin, over a hundred miles to the east. [463] while the eighteen families from the bordering were accustomed, as expected, to rice growing, not all of the nine families from distant villages had been farmers. A family head of one of these nine families came from a family of fruit growers, while another family head, who apparently had a more spectacular record, had been engaged in international rice trading. This latter man, who knew some English, had worked in a large rice mill in Nonburi which was exporting rice under strict government control after the war. Discovery by the government agent of irregularities of the firm led to the man's flight abroad to Hongkong or Swatow some eight years ago. It is assumed with his

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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CHAPTER III

COMMUNITY ECONOMY

*122 434

Occupational Structure in Bangchan

At the completion of the 1949 census, by which time we had spent nine months in the village, we categorized Bangchan's 288 families primarily on the basis of the principal source of income of the family head. Though the categories derived suffered from some overlapping and ambiguity, we found them useful for survey and other purposes. The descriptions of each occupational category, as found in Tables 9, 10 and 11, appear on pages 111 through 113 of the primary report.[1] As they will be constantly referred to, they will be summarized here:

*243 434 463

1. Farm operator. Main income from growing rice on his own or rented land.

2. Farm laborer. Main income from working on local farm operators' farms, as regularly hired laborer for an entire rice season or at casual farm jobs for which wages are contracted on the basis of piece-work or days worked, for example, transplanting or harvesting rice, digging ditches, or deepening fish pools. Some families in this category supplement their real income with rice which they cultivate

1. Sharp, Hauck, Janlekha, and Textor, op. cit., pp. 111-13.

[TEXT CONTINUED ON PAGE 98]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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TABLE 9

OCCUPATIONAL DISTRIBUTION BY FAMILY
Bangchan, Thailand, 1949*

Occupation	BC4	BC5	BC6	KY5	KY6	KY7	KY8	Total
F. operators	25	25	38	37	25	37	42	229
F. laborers	7	1	2	10	1	-	6	27
Traders	1	-	2	1	-	2	1	7
Investors	3	-	1	-	-	-	-	4
Professional	2	-	-	1	-	-	-	3
Public servants	2	-	-	3	-	-	-	5
Home enterprisers	2	-	-	-	1	1	-	4
Priest or novice	-	-	-	1	-	-	-	1
Miscellaneous	1	1	1	1	1	3	-	8
Total	43	27	44	54	28	43	49	288

* Some figures in this table differ slightly from those reported on pages 114-5 of the preliminary study (Sharp, Hauck, Janlekha and Textor, Siamese Rice Village) because errors such as duplications and omissions in the original census have been detected and corrected.

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TABLE 10

OCCUPATIONAL DISTRIBUTION BY FAMILY
Bangchan, Thailand, 1953

Occupation	BC4	BC5	BC6	KY5	KY6	KY7	KY8	Total
F. operators	26	19	33	42	28	31	37	216
F. laborers	6	3	8	7	2	5	7	38
Traders	4	4	2	6	1	2	2	21
Investors	2	1	-	1	-	1	-	5
Professional	1	-	-	-	-	-	-	1
Public servants	-	-	2	4	-	1	-	7
Home enterprisers	-	-	1	-	-	-	-	1
Priest or novice	-	-	-	1	-	-	-	1
Miscellaneous	1	1	1	2	-	2	1	8
Total	40	28	47	63	31	42	47	298

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 11

CHANGES IN OCCUPATIONAL STRUCTURE
Bangchan, Thailand, 1949-53

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Occupation	Distribution				
	Actual		Per Cent		
	1949	1953	1949	1953	Changes
Farm operators	229	216	80	72	-8
Farm laborers	27	38	9	13	+4
Traders	7	21	2	7	+5
Investors	4	5	1	2	+1
Professional	3	1	1	+	-1
Public servants	5	7	2	2	
Home enterprisers	4	1	1	+	-1
Priest or novice	1	1	+	+	
Miscellaneous	8	8	3	3	
Total	288	298	100	100	

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

*243
434 on a small plot that they own or rent, but all families
463 in this category derive their main income from wages.

3. Trader. Main income from the more or less regular sale, not production, of rather considerable amounts of goods. Perhaps somewhat arbitrarily, we have not included in this category those very few families who derive their main income from production of cookies or the like, even though such families might themselves perform the selling of their products to local consumers; such families are included in the 'home enterpriser' category below.

[426] [427] 4. Investor. Main income from land rent, interest on loans, and/or speculative gain.

5. Professional. Main income from such specialties as midwifery or dramatic entertainment.

434 6. Public servant. Main income from, or majority of
647 working time spent in, government employment. This is the
463 only category in which we had to add the additional criterion of "majority of working time"; government pay is rather low, and one person who works full time in the employ of the government actually receives more income from other sources.
[875] This category includes regular government officials, teachers
[622] and school janitors. The hamlet headmen are not included, however, as their main incomes are otherwise derived and their remuneration from the government is extremely low. They maintain no daily routine as public servants. The headmen are all farm operators, except one who is an investor.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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434 463 7. Home enterpriser. Main income from food or handicraft articles produced at home.

434 192 463 8. Priest or novice. Though priests and novices do not receive salaries or wages, their maintenance, which comes from the temple and directly from the people in the form of contributions, is their main income. This category includes only permanent priests and novice personnel. Excluded here are all residents who enter the priesthood more or less perfunctorily for just a few months. Since sexual abstinence is demanded of all monastic personnel, no wives or offspring are found in this category.

434 9. Miscellaneous. The main income source for the eight families in this category is obscure. The heads of these families are not known to have any steady occupations.

178 463 621 Table 9 shows the occupational distribution of Bangchan families as of 1949. It may be observed that some of the figures in this table differ slightly from those reported in the preliminary study previously cited. This is because errors such as duplications and omissions in the original census have been detected and corrected.

Table 10 shows the same distribution as of 1953, and Table 11 the change in the occupational structure of the village that took place during the four intervening years. In 1949, 80 per cent of Bangchan families were farm operators. Four years later, the figure was reduced to 73 per cent. While there was no percentage change in the figures for public servants, miscellaneous, and priest or

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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179 novice; there were noticeable increases in those for farm
463 laborers and traders, and a slight increase in that for
621 investors, which were offset by a marked decrease in figures for farm operators and slight drops in those for the professional and home enterprisers. In order to understand these changes in the occupational structure of the village, more information on some of these occupation than that given in our operational definitions at the beginning of this chapter is necessary.

243 Farm operation is a traditional way of life in the
434 village. The primary motive is to secure enough rice for
463 consumption. A secondary motive is to have cash from sale of surplus rice to buy goods that are not produced locally.

243 Farm laboring as a profession is limited to the poor.
464 Farm laborers, occupying the lowest status in the village,
554 are the most unstable and socially disintegrated group.
621 They are not fully employed even during the work seasons
463 of the year because there are too many of them in the locality. Thus, they exist in the village not because of demand for their work but because they have no opportunity for other occupations.

621 There were twenty-one families that were classified
463 as traders in 1953. Of these, nine were permanent store-
443 keepers, and twelve were peddlers selling food stuffs from door to door. Stores were situated at strategic places in the village -- two at the crossing of Minburi Road and Bangchan Canal which is the natural entrance into the village.

621 four in the immediate neighborhood of the temple or on the
463 temple ground itself, and three on the banks of up-canal
443 Bangchan. These stores varied in the size of business but the goods sold were almost identical. To be found in each store were inexpensive articles of daily use, mostly dry foods, cookies, tobacco, betel, areca, lime, toilet articles, matches, kerosene, and farm materials like ropes. Most of these stores also sold hot coffee, soft drinks, and liquor. It should be noted in this connection that the market town is only two miles away. This nearness to a large market adversely affects the nature and volume of business of local traders in two ways -- villagers bypass local stores and go to the market town for varieties and large purchase, and the village is daily invaded by a number of peddlers from the town selling perishable foods.

443 While local stores operated the whole year round, the
463 activities of twelve other trader families classified as peddlers were highly seasonal subject to local water condition, seasonal demand for purchased food, seasonal supply of cash, and alternative income on the part of the peddlers themselves. These peddlers sold small quantities of vegetables, fruit, and the cheap salt water plaloo fish (Rastrelliger chrysozonus), receiving in exchange from buyers cash, [426] eggs, or paddy. Extension of credit was necessary for villagers did not have cash especially during the period from July to November. The following passages in the author's daily note dated January 12, 1953 gives an idea as to how

443 she wanted to spend more time collecting debts."

221 433 434 443 261 262 It should be noted that A's brief duration of peddling started in the harvesting season. During this time the village cash supply was high, resulting in demand for such a delicacy as pork which normally constituted a negligible fraction of the diet of Bangchan people. This is a good business period for the peddlers. Another good business period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this latter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

443 It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

427 434 454 621 463 426 Five families were classified as investors in 1953. All these families lived on rents from land, interest on loans, and income from speculative sources such as buying paddy when the price was low and selling it at high prices. Actually, most of these five families were not among large land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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the combined land of five leading farm operators of 693 rai, averaging 139 rai per operator and ranging from 83 to 235 rai. It must be remembered that our operational definition of occupations was based on the main source of income and that many of the villagers had more than one source of income. Investors as an occupational class in Bangchan should not be pictured as large landlords and large money lenders, possessing financial influences over their tenants and debtors. Rather, they were humble fellow villagers whose incomes were mainly derived from rents of small parcels of land or interest on small loans. To cite an extreme case, one aged woman was classified as an investor. She had only 17 rai which she rented out to her own son. She was living alone in an old shack and was too old to do any kind of work. She received as rent about a hundred tang of paddy a year which is equivalent to an annual income of only 800 baht. Thus she was considered one among the poor in the village.

There were three families whose occupations were classified as professional in 1949. The number was reduced to one in 1953. The head of this family was a Chinese carpenter who derived his income primarily from boat building. Again, it must be pointed out that reduction of the number of families primarily engaged in professional services does not mean that professional services had been declining. On the contrary, they had been increasing. There were three barbers in 1953 as against only one in 1949. More traditional

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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178 doctors were practicing in 1953 than in 1949, while there
463 was no change in the number of midwives. In most cases,
621 however, these professional services had ceased to be the main sources of income of the families engaging in them.

621
434 In 1953, occupation defined as public service in-
463 cluded the jobs of an educational supervisor, one teacher,
647 two school janitors, two workers in the government-owned
[875] Bangkok Wharf, and one policeman. Actually, there were five Bangchan residents who were teaching in 1953. Only one of these, however, was a family head. Two of the other four teachers were husband and wife living with the wife's mother who was classified as an investor -- the most prosperous of the investors mentioned earlier in this section. Another teacher, a wife, was also living with her mother who was also an investor. The last teacher, also a wife, was living independently with her husband who was operating a rice farm, and the occupation of the family was thus classified as farm operating. With the possible exception of the policeman, all these public servants were well paid in the village standard, ranging from some four hundred baht a month for a janitor to eight hundred baht for the educational supervisor. After the 1953 census was taken, more regular jobs were opened to Bangchan residents by the Highways Department, and also more people took up regular jobs of a public service nature in Bangkok while retaining residence in Bangchan by commuting daily between the village and their offices. Thus,
[178] although the percentage figures remain constant during

178
434 1949-53, in actuality public service as an occupation is
463 increasing in Bangchan.
621
647 There were four home enterprisers in 1949, mostly
434 engaged in making cookies. As in case of the professional,
443 this activity still existed in Bangchan, but by 1953 it had
463 degenerated into a secondary income, leaving the lone case
621 of basket making in the home enterprise category.
285 Only one family head was classified in 1953 as a home-enterpriser. The family was engaged in making takraw -- a cane utensil used in picking mangoes from the tree. On January 27, 1953 we met A, the head of this family, who was taking 103 takraws of various sizes to sell in Bangkok. [435] A gave the amounts and prices of these takrawa as follows: 56 large size, @ 3.00 baht; 31 medium size, @ 2.50 baht; 16 small size, @ 2.00 baht. A said he and his wife worked on these 103 takraws alone, and finished them in twelve days, using 50 baht worth of materials including cane, wood, and binders. Ordinarily, they started making takraws in December and continued through May. They were able to make about 3,000 baht within this period. They also made other things like baskets, but takraws were their main source of income. In rice growing season, they also did some piece working. They did not operate a farm. Piece working and basketry during rice growing season brought them a combined income of about 2,000 baht. The amount of each kind of
621 basketry they made was not as constant as takraws. It de-
434 pended more on which paid best. Their total annual income
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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

amounted to somewhere around 5,000 baht, which was about four times as much as the labor earnings of an average rice farm operator as we shall see later.

The present occupational situation and accounts of the changes in the past few years alone may not be enough to give us a complete picture of occupational development since the beginning of the history of Bangchan. Fourtunately, however, since settlement in the village in a considerable scale took place only some eighty years ago, evidence from genealogical studies has provided us with ample materials on which a reconstruction of the past development may be made.

When Bangchan was being settled in the 1870's, as a probable consequence of the increasing national and international demand for rice and the revolutionary change in Thai society, every family was naturally a farm operator family. As long as there was land available for clearing, opportunity would be open for every new family, either branching off from the old ones or moving in from the outside, to operate a rice farm.

Eventually, population grew up to a size large enough to support a temple in 1895. Population growth and the emergence of a village center at the temple prompted occupational specialization. At the beginning, investing, trading, professional servicing, and home enterprising probably took the forms of secondary occupations, while farm operating remained the primary occupation throughout. In time, these secondary occupations became more and more specialized and

178 finally, for a few families, took precedence over rice
463 growing. The relative importance of these new occupations remained low, however, since only a few families were needed to meet the village requirements for such services.

434 The establishment of the primary school some thirty
647 years ago opened up new jobs as teachers and janitors for
875 some educated villagers who were given preference over out-
[372] siders. It should be noted, nevertheless, that at the beginning the primary school teachers were not considered as regular officials and their pay was as low as six baht a month during the prewar years. Even during the war, they did not get as proportionately large a cost-of-living raise as did other regular officials. It was only after the war that they were made regular officials and that their pay rose almost a hundred times to 450 to 550 baht a month with provision for a steady raise to more than one thousand baht
[48] a month. This new occupation in public service also increased with the extension of the central government employment into the rural areas and with improved transportation facilities which permitted an individual to commute daily between his office in Bangkok and his home in Bangchan. Thus, a Bangchan resident is now serving as an educational supervisor in the nearby Minburi District and a few others are on the regular payroll of the government-owned Bangkok wharf.

243 With the background knowledge of the situation of
464 Bangchan farm laborers previously described in mind, we may
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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 hypothesize that the presence of farm laborer families in
464 a rice growing village indicates a condition of land scar-
621 city. This is to be distinguished from the presence of farm
463 laborer families in intensive farming areas such as the truck gardening villages along the Damnernsaduag Canal and plantation villages in Cholburi where the marginal product of labor, even with the same crude implement, is much higher than that in the non-intensive rice growing areas. Usually, there are farm laborers in any commercial rice growing region, but they consist of members of farm operator families with excess family workers who work for their own lampai. With low marginal product of labor, the demand for extra labor outside the family is not great and is highly seasonal in rice growing villages, resulting in extremely low total income for farm laborers. Piece-working is thus only good as a subsidiary income for an under-employed farm operator family, and certainly not as the main source of income for any family. Farm laborer families such as those existing in Bangchan are indigenous and are the outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent in any land. These people prefer to remain in the home village, willing to accept meager income from piece-work which is perhaps the only type of job they could get in the village, in the meantime trying to eke out as much as possible from what nature has to offer in the form of fish or uncultivated aquatic plants. The
[161]
[178] abrupt rise of farm laborer families in Bangchan from nine

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 per cent in 1949 to thirteen per cent in 1953 suggests that the problem of population pressure on land has become more acute, although it may also indicate changes in the cost structure of rice production which will be discussed in Chapter VI.

Concluding the discussion of this section, we may say that rice growing is the core of the occupational structure of Bangchan around which other occupations rotate. It is not uncommon that one family has several occupations, and in addition to income from these most families get "free" food in the forms of fish and uncultivated aquatic plants. This is the principal reason why families with apparently no cash income still thrive.

It is conceivable that in years of poor rice crop the family put more effort in the secondary occupations; when such an attempt does not work out well -- for example, no work for manual labor and no capital for trivial trade -- an effort is made to obtain subsistence directly from nature.

In any event, every family in the village is engaged in fishing in varying degree. It is because of this fact coupled with the fact that the village fish supply is decreasing that the problem of fish conservation is very important.

Finally, the dynamic nature of rice farming, with varying efforts on getting extra jobs and securing free food outside the farm depending upon the increase and decrease of the rice crop, suggests that the economy of any rice

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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*128 423 427 While this "functional" classification of land tenure does not eliminate all of the shortcomings of the conventional method which have been accentuated by land scarcity, it evidently helps to bring about a clearer economic picture of the farm. If the primary purpose of land tenure classification is merely to establish a plain typology of the land holding situation for its own sake only, the conventional method might suffice even in farm labor underemployment areas. On the other hand, if we want to probe further into the business aspect of the farm, as we propose to do in Part II of this study, then a more revealing system of classification is perhaps necessary.

*243 423 427 463 621 It has been mentioned earlier in this section that of 6,722 rai planted to rice by Bangchan residents a total of 4,315 rai was locally owned (Table 18) and that a total area rented in from outside renters was some 2,407 rai. Since the net area rented out by local renters was 1,186 rai (Table 21), the proportion of outside renters to local renters was roughly two to one. Table 21 shows that there were 21 local renters whose main occupations were distributed among landlord-operators, trader, investors, and public servants, and that an average area rented out by each local renter was 56.5 rai.

Table 22 shows a frequency distribution of land owned by operators, and Table 23 shows a frequency distribution of land owned by non-operators.

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TABLE 21

NET AREAS RENTED OUT BY VARIOUS OCCUPATIONAL GROUPS
Bangchan, Thailand, 1953

Occupation	Number	Total Area	Ave. Area	Range
		rai	rai	rai
Landlord-operator	10	683	68.3	5-170
Trader	5	189	37.8	17- 86
Investor	4	149	37.3	17- 76
Public servant	2	165	82.5	5-160
Total	21	1,186*	56.5	5-170

* This figure is slightly less than total area rented out of 1,203 rai in Table 18 because net figures are used here.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 23

FREQUENCY DISTRIBUTION OF LAND OWNED BY NON-OPERATORS
BY OCCUPATIONAL GROUPS
Bangchan, Thailand, 1953

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Class	Frequency	Total Area	Ave. Area	Range
		rai	rai	rai
Farm laborer	2	8	4.0	2- 6
Trader	8	184	23.0	3- 86
Investor	5	164	32.8	10- 76
Public servant	2	167	83.5	7-160
Total	17	523	30.8	2-160

369 It should be noted also that once a villager has moved
167 into Bangkok he will be deprived of the privilege to
162 acquire free food from nature -- an important economic advantage of living in the village which counts heavily when emigration to the city is being seriously contemplated.

427 It is seen, then, that the demand for land on the
423 part of land-thirsty operators -- the tenants, part-owners, and owner-operators -- was high and inelastic, while the demand for land on the part of land-saturated landlord-operators was low and elastic. Since the combined demand of all landlord-operators constituted only a small fraction of the total demand (Table 20), it may be safely concluded that the aggregate demand for land in Bangchan at the period we are dealing with was high and inelastic.

311 Let us now consider the supply side of land. For
423 the purpose of this discussion we may differentiate four
427 sources of supply of a total of 6,722 rai considered to
463 represent our natural Bangchan area. They are:

1. Land-thirsty operators -- all for implicit rent.
   a, Owner-operators 2,131 rai
   b, Part-owners 227 rai
   c, Tenants 225 rai
   Sub-total 2,583 rai

2. Land-saturated operators (landlord-operators).
   a, For implicit rent 517 rai
   b, For explicit rent 683 rai
   Sub-total 1,220 rai

3. Local non-operators -- all for explicit rent.
   a, Traders 189 rai
   b, Investors 149 rai
   c, Public servants 165 rai
   Sub-total 503 rai

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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4. Non-indigenous landlords 2,416 rai (all for explicit rent).

To understand the working of the supply forces, it is necessary to break the non-indigenous landlords down into those living in the neighborhood of Bangchan, which we shall henceforth call the neighboring landlords, and those living far away, which we shall call the absentee landlords. It is regrettable that accurate figures for these breakdowns were not available, but it may be estimated on the basis of some known cases that they were roughly of the same proportion, that is, some 1,208 rai in this category were owned by neighboring landlords and the same amount by absentee landlords. On the basis of the same known cases, it may be generalized that the area of land owned by an average absentee landlord was larger than that owned by an average neighboring landlord.

It is obvious that the individual supply of land varies according to the type of the people who have command over it. Generally speaking, land-thirsty operators who supply part of their own working areas should provide an inelastic supply of land, for they will continue to offer to themselves all the land they own regardless of how the rent rate may change. All lands owned by land-thirsty operators yield only implicit rents, for if they are rented out for explicit rents, the landowners of the parcles in question would have changed their status to landlord-operators.

7: Janiekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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CHAPTER IV

FARMING POPULATION

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It was indicated in the section on occupational structure in Bangchan, Chapter III, that there were two groups of villagers whose main incomes were directly derived from farming -- the farm operating and farm laboring families. These two groups constituted 254 out of a total of 298 families in the village in 1953 (Table 10). It should be noted, however, that Table 10 was constructed on the basis of the principal source of income of the family heads, and that the family was taken as a unit.

When individual farm workers are considered, four groups may be differentiated: (1) Farm operators; (2) Family workers; (3) Hired laborers; and (4) Piece-workers.

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Farm operators are those who are assumed to actively manage the farm. Actually, it has been observed that some wives did direct the farm work while their husbands assumed only a passive role. It is rather difficult, however, to point out among some one hundred couples which spouse actually manages the family farm. To save time, and perhaps embarssment, it was assumed that, where both husband and wife were involved, the husband -- the official family head --was the farm operator regardless of his actual role.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Table 30 shows that the size of the sample has continuously decreased from 104 in 1948 to 103 in 1949, 98 in 1950, 96 in 1951, 96 in 1952, and finally 87 in 1953.[1] It should be noted, however, that we re-visited the village in 1952 and that most of our materials on business and living aspects of the farms were gathered from the sample-farms existing in that year; hence we occasionally referred to the sample of 96 continuing farms.

One way of minimizing the problem of declining size of the sample is to include in the sample new farm operating families which have branched out from the original sample-families. It was found that there were ten such families when we re-visited the village to continue the study in 1952. If this method were adopted, it would mean that the size of our sample would then be 106 farms, a figure which does not differ very much from the original size of 104 farms in 1948.

Another way of solving the problem is to abolish the continuing operator approach entirely in favor of the re-sampling approach -- that is, a fixed sample size is chosen and new sampling is done every time a new survey is to be conducted. This approach, however, has the drawback that

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[243] [178] [433] [463] [182]

1. According to Table 14, crop indices were as low as 86.8 for 1949, and 87.5 for 1952; while those for 1948, 1950 and 1951 were 111.4, 111.1 and 102.7 respectively. It is worth noting that a relatively large number of farm operators changed their occupation (or moved out of the village) in 1950 and 1953. When Table 14 is studied together with Table 30, it is seen that there is a close correlation between change in occupation (or change of farming place) and crop failure in the preceding year.

[TEXT CONTINUED ON PAGE 180]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 30

CHANGES IN OCCUPATION OF 104 SELECTED OPERATORS*
Bangchan, Thailand, 1948-53

Occupation	1948	1949	1950	1951	1952	1953
Farm operator	104	103	98	96	96	87
Farm laborer	-	-	-	-	1	3
Trader	-	-	-	-	-	2
Investor	-	1	1	1	1	3
Professional	-	-	-	-	-	-
Public servant	-	-	-	-	-	-
Home enterpriser	-	-	-	-	-	-
Priest or novice	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	1
Disappeared	-	-	5	7	6	8
Total	104	104	104	104	104	104

* Explanation for those changing occupations:

1949 A became an investor.

1950 B moved out to unknown locality.
C moved out to Lam Kralog.
D moved out to Sai Kong Din.
E moved out to Bang Plee.
F moved out to Bang Plee.

1951 G died, and family moved out to unknown locality.
H moved to Bangkok.

1952 H moved back from Bangkok into the village, became farm laborer.

1953 I moved to Lard Krabang.
J stopped farming, became an investor.
K stopped farming, became an investor.
L stopped farming, became a trader.
M stopped farming, became a farm laborer.
N stopped farming, became a farm laborer.
O's occupation became obscure (under miscellaneous).
P stopped farming, became a trader.
Q's family lost its identity, was annexed by a farm operating family not in the sample.

243 included in the items of cost of producing paddy, and therefore we do not have the figure for this item of farm expenses.

It was earlier mentioned in the section on occupational structure in Bangchan that most villagers regardless of their main occupations did perform some piece-work for either main or subsidiary incomes. It is almost impossible, then, to give an exact figure of the number of piece-workers in any one year. For the purpose of this study, however, we may arbitrarily differentiate between the "professional" and the "non-professional" piece-workers. Here, the classification suffers much overlapping -- even more than does the classification of the occupation of the villagers, for we cannot even use the concept of the main source of income as a criterion in this connection. It was mentioned that farm laborers existed in Bangchan not because of demand for their work but because they have no opportunity for other occupations (page 100). Thus, if the main source of income was used as the criterion for differentiating the "professional" piece-workers, this group would include, for example, the old woman described in Case 7 page 69, who after having been left alone had managed to get a small income from transplanting which was the only type of farm work she could perform. The main source of income was also not a good criterion considering the fact that most piece-work was done by family members after their obligation to the family farm had been fulfilled. In a desperate attempt to differentiate the professional from the non-professional piece-workers

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

463 we finally settled on an arbitrary definition: a profes-
464 sional piece-worker was one who was ready most of the time to be called upon to perform piecework. This automatically eliminated the school children who were able to work only during the school recesses, the poor aged people who had to make a living in one form or another but who were able to perform only the lightest kind of piecework -- transplanting, and members of the well-to-do families who did some piecework for a small amount of pocket money only.

Adopting this arbitrary operational devinition, it may be assumed that professional pieceworkers include all members of the laboring families, small farm operating families, and other families of various occupations not financially well off, who are old enough yetnot too old to work and who are not currently engaged in some other kinds of work.

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465 Table 34 shows work records of the 34 farm laborers earlier mentioned. It is seen that of these 34 laborers, only six had remained hired laborers throughout the periods of their farm work. These were Laborers 8, 9, 11, 22, 27, and 28. The other laborers were observed to have assumed various other statutes in the course of the five-year period from 1949 to 1953, namely, farm operator, pieceworker, family worker, and transient family worker. When these laborers were interviewed, they also gave estimates of their earnings from pieceworking as far as they could remember. In 1949, for example, piecework earning figures were available from

[TEXT CONTINUED ON PAGE 203]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 34

WORK RECORDS OF 34 SELECTED FARM LABORERS IN BANGCHAN AND ITS IMMEDIATE NEIGHBORHOOD Thailand, 1949-53

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Laborer Number	Age in 1953	Working Status 1949	1950	1951	1952	1953
1	23	HL	HL	PW	HL	FO
2	39	PW	PW	PW	HL	HL
3	42	...	...	PW	PW	HL
4	27	HL	HL	PW	PW	PW
5	28	HL	HL	PW	PW	PW
6	23	PW	PW	HL	HL	...
7	25	PW	...	HL	HL	HL
8	22	HL	HL	HL	HL	HL
9	23	HL	HL	HL	HL	HL
10	52	HL	HL	X	HL	HL
11	19	...	HL	HL	HL	HL
12	32	FO	FO	FO	FO	HL
13	33	PW	PW	PW	HL	HL
14	30	TFW	HL	HL	PW	PW
15	35	PW	HL	HL	HL	PW
16	20	...	TFW	TFW	HL	...
17	45	PW	PW	HL	PW	PW
18	50	PW	PW	HL	HL	HL
19	31	X	PW	HL	...	HL
20	20	TFW	TFW	TFW	FW	FW
21	19	TFW	TFW	HL	HL	HL
22	17	...	...	HL	HL	...
23	21	TFW	TFW	TFW	TFW	HL
24	23	TFW	HL	HL	...	HL
25	17	...	...	TFW	...	HL
26	40	...	...	TFW	TFW	HL
27	26	...	...	...	HL	HL
28	18	...	HL	HL	HL	HL
29	63	PW	PW	X	PW	HL
30	30	PW	X	X	PW	HL
31	36	HL	HL	HL	FW	FW
32	16	...	...	...	PW	HL
33	23	PW	HL	HL	HL	HL
34	20	...	HL	TFW	HL	HL

Key to abbreviations:
FO -- farm operator
HL -- hired laborer
PW -- pieceworker
FW -- family worker
TFW -- transient family worker
X -- farm laborer elsewhere
(...)-- not engaged in farm work

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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465 two laborers -- 1,000 baht for Laborer 7 and 900 baht for Laborer 30, averaging 950 baht for the year. In 1950, earnings of 500, 850, and 1,000 baht were reported respectively by Laborers 18, 19, and 29, averaging 783 baht for the year. In 1951, only one case of 600 baht earning was reported by Laborer 5. In 1952, earnings of 600, 1,000, 1,000, 1,000, and 350 baht were reported respectively by Laborers 5, 14, 29, 30, and 32, averaging 790 baht for the year. In 1953, earnings of 2,000, 600, 1,000, and 300 baht were reported respectively by Laborers 4, 5, 14, and 15, averaging 975 baht for the year.[4]

592
464 In the preceding paragraph, the term "transient family worker" was introduced. This refers to a person distantly or not at all related to the family in question who has been accepted as a family member with a dual status of half relative and half laborer. Since there is actually no genuine family tie, such member has been observed to come in and go out of the family rather freely as the occasion may arise, and hence the term "transient". While staying with the family, the transient member is expected to participate in the family work that is appropriate to him in exchange for good, shelter, clothing, and occasional monetary gifts.

[465]

In 1948, we came across a case where an old man of 80 was living with one of the seven headmen of Bangchan as

4. Table 53 gives an idea of the meaning in real terms of these incomes.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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182 Nevertheless, the advantages of transient member
464 arrangements to both parties should not be overlooked. It
592 has at least provided the poor with a kind of economic security, since they might arrange to join some families in the village in time of crises. This is perhaps the principal reason why the village, not the living quarter, is considered by most Bangchan people to be their home. By sending some offspring to live with a more affluent family, the poor villagers had been able to reduce the size of their families and thus had managed to prevent their level of living from falling far below the minimum level of subsistence. As for the accepting families, it has already been shown that they had enjoyed the benefit of cheap labor provided by transient family workers.

*243 Changes in Farming Population in Bangchan
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[592] Table 11 shows that the number of farm operators in Bangchan had decreased from 229 in 1949 to 216 in 1953, while the number of the family heads whose main incomes were derived from farm labor had increased from 27 to 38 within the same period.

When the farm operating families were studied individually, it was found that 181 families had been operating their rice farms in Bangchan throughout the period. There were 48 farm operators whose names disappeared from the list of operators in 1953. These were compensated by 35 new operators. Thus, there was a net loss of 13 farm operating families during the period from 1949 to 1953.

249 16 178 463 Of the 48 families disappearing from the 1953 list of farm operators in the village, 21 moved out, 2 were annexed, and 25 were dropped from the list because they had changed their occupations to some other kinds. Among these last mentioned, four had become investors, three traders, thirteen laborers, one public servant, and four had obscure occupations.

Of the 35 new farm operating families, 17 were immigrants moving into the village during the period between 1949 and 1953, 14 had evolved from pre-existing families, and four were families already existing in the village in 1949 but were then having some occupations other than farm operating. Among the four families last mentioned, three were formerly farm laboring families, and one was formerly an investor family.

249 178 463 The fact that there were as many as twenty-five families leaving farm operating occupation as against only four families entering it within the same period seemed to indicate that farm operation as an occupation had become less attractive in Bangchan during recent years.

It may be argued that former farm operators who had given up farming did so because of the force of special circumstances beyond their control, and that the change to other occupations was not due to the relative unattractiveness of farm operation. A tenant operator, for example, might have to leave the farm because his landlord no longer wanted him to work on the parcel. In fact one such case was

[427]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 reported where the tenant had to leave the farm in the
178 beginning of 1953 and had since become a hired laborer.
463 This was Laborer 12 shown in Table 34. In most cases of
[427] farm operators who had become farm laborers, however, they were marginal operators working on areas too small to provide decent incomes. It was found that the total working area in 1948 of thirteen farm operators who had become farm laborers was 94 rai, averaging only 7 rai per farm. It is possible to speculate, then, that low farm income was a major factor in the occupational shift among these thirteen families. To the extent that this speculation is acceptable, it may be inferred that the shift to the farm laboring profession among these thirteen cases was voluntary rather than a result of special circumstances beyond their control.

The relative unattractiveness of farm operation stands out clearly when the cases where former farm operators taking up new occupations other than farm laboring were considered. As mentioned earlier, there were twelve of these of which four had become investors, three traders, one a public servant, and four had obscure occupations. Among those having obscure occupations, two were families of old people apparently without any income, one family head was allegedly engaged in no occupation except gambling if this could be considered an occupation at all, and one family head -- the sole member of a one-man household -- was also a person of no known occupation. For obvious reason, these four cases should be left out of consideration, leaving only those who had

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

*243 178 • 463 [311] become investors, traders, and public servant. In 1948, these eight families were operating farms of a combined area of 286 rai, ranging from 20 rai to 80 rai, averaging 36 rai per farm. Seven of these eight families owned rice fields totalling 201 rai, ranging from 5 rai to 80 rai, averaging 29 rai per family owning land. Evidently, it may be said that these seven families deliberately had given up farming in favor of new occupations from which they expected higher remunerations. As for the one family owning no land, the same generalization still holds. This family was operating a 22-rai farm in 1948, a farm of optimum size which could be expected to yield a higher income than any of those operated by the thirteen former [464] [465] operators who had turned farm laborers. The head of this family, nevertheless, got a permanent job in the Bangkok Harbor, a government owned concern, with a salary of more than 7,000 baht annually which is much higher than his former net income from operating a rented farm.

A case has thus been built for the relative unattractiveness of farm operating occupation among a certain sector of farm operators who had shifted to other occupations. This was responsible for the decline of farm operating occupation from 80 per cent of the occupational structure of the village in 1949 to 72 per cent in 1953 (Table 11). If it had not been for the 14 new families branching out from existing families who had taken up farming during the period between 1949 and 1953, the decline would have been more abrupt.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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There are reasons to believe that newly established indigenous families had tended to take up farming. First, rice growing is probably the only profession that these newly wed couples had been properly trained for.[5] Second, during their nascent period their financial preparation had been oriented toward starting a rice farm. This is best illustrated by a remark of a Bangchan operator whose daughter and her husband were about to start an independent family:

> A (informant's son-in-law) is now (1954) 24 years old. I have known him since 1948 when he was a transient family member of B. A married my daughter C in 1952 and has since been living with me. He is a very diligent man who works even in the dry season -- digging earth and that sort of thing (for his own lampai).
>
> I gave the couple 200 tang of paddy for their lampai for last year's work. I am going to give them the product from 10 rai for this year's work.
>
> Already the couple have accumulated from their lampai the following: two baht weight of gold, lumber enough to construct a farm house, and 100 tang of paddy. I told them not to keep their money in cash. When they receive a certain amount of money, I instruct them to buy durable goods like lumber or buffaloes. But if they want to lend out money, it's all right with me. Any way, they are not to keep cash. By the way, they have loaned out the 100 tang of paddy, so they will have more paddy when that amount is returned with interest.
>
> The couple will leave me next year. They have most of the things they need for starting a family now. In fact they wanted to start out this year, but I asked them to stay on another year.
>
> When they leave me next year, I will give them the customary parental gifts -- one buffalo, one plow, one harrow, one clothing container, and paddy for seed and for consumption.

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5. See the section on training for farm work.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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[423]
[431]
Third, among the land owning class the newly established family usually received from their parents an outright gift of land or the benefit of free use of a certain area of land for two or more years. They would not receive this gift if they did not pursue rice farming.

It is seen, then, that while rice growing might have become less attractive as an occupation, there are still some cultural factors that have been working to confirm the Bangchan villagers in their preference for rice cultivation.

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janlekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 16 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand [Kingshill 1960:7]).

Besides the work in rice-fields, women dug and cleaned

close touch with each other's activities and needs. 621

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time. 621 844 592 844 476 593 [462]

Wealth Differences:

Way of Life 556 875 441

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable. [464] 556 511 178 369

What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the families, living in tiny separate cottages.[1] Usually with inadequate or no land, they earned an irregular income by hiring themselves out for farm or other work. At the other extreme, in a hamlet-like cluster of dwellings, lived a closely affiliated group of kin. A senior couple more or less headed the married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying home from school to do so. Where the adult cooperative group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

Plowing could be done by a man and wife, but for both transplanting and harvesting which had to be done within a few days, large groups were necessary. Two patterns of auxiliary group labor prevailed: reciprocal cooperative work, and hiring of labor.

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1. Janlekha, 1955, categorized families as 5% "one-person," 59% nuclear, 8% limited extended (including one or more parents of a spouse), 27% extended (including dependent married couples or other collateral relatives), and the temple residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

423 184 from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

369 177 A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital [494] does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey [484] conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise 369 177 167 of regular wages, lighter work, and the bright lights of the city, leave Bang Chan with the hope that they will never have to return, although of course [464] many do. The Goldsen-Ralis survey reveals that 26 percent of their re- [701] spondents had lived in Bangkok for a year or more, although for most this was in fulfillment of military service.

369 177 181 Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

369 177 The frequent transit between Bang Chan and Bangkok,[8] however,

[207] [204] [871]

[8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
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the village to find dependent relatives—siblings, cousins, nephews, nieces— who, unable to make a go of it elsewhere, are accepted into a relative's family, sometimes to the extent of eventually taking over the headship of the family. Sometimes, on the initiative and invitation of an elderly or lonely relative, an entire nuclear family will be asked to take over or share a household. Children of poor or "inconvenienced" families (where a new child is born before the first is weaned, where there are too many children for the mother to handle comfortably, where a youngster is simply being "troublesome") are adopted or "borrowed" by other villagers for varying periods of time. This is done preferably by relatives, sometimes by neighbors, and often, in the case of boys, by the monastery, where the children become hand-servants to the monks and are supposed to absorb, by a kind of osmotic process, righteous ways of behaving. (Of my three male life history informants, two were given over to relatives at the ages of two, the third at the age of eight; one spent his childhood with four different families, another with five families; one describes his adolescence as "wandering from place to place." The psychological implications of such displacement should not be underestimated.) On occasion, two independent nuclear families—almost always connected by some kinship tie—will join together for convenience to share cooking facilities, in which case they effectively become a single extended family. And in some cases, although rare, one will encounter adult children living in independent households but handing over their income to a parent, living in still another home, who disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a husband to be away for four or five months at a time earning money in Bangkok, or during the dry season on a vegetable farm, returning home to visit his wife and children whenever opportunity permits, with or without funds. The wife may still maintain their household, but often returns to live with her own parents.[7] In a similar vein, although obviously more extreme, it is not unusual to find families in Bang Chan which have simply "disintegrated," as the villagers say. Much depends here on the circumstances of family members. Bang Chaners usually reserve the term "disintegrated" for families that no longer have the economic wherewithal or justification for staying together as functioning units. In these instances, family members simply go their separate ways, if possible back to their families of orientation or to other relatives, husbands perhaps into the monkhood, and the children to whomever will take them. Most frequently, "disintegration" is characteristic of very poor families, and in the minds of

[7] This pattern may be related to the old *corvée* labor pattern when able-bodied village men were away from their families for extended periods of time.

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. So also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 16.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)	Twice or more (Proportion who own or use the motor)
Illiterate	44% (40)	58% (51)
Literate	83 (36)	88 (83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

b. IF YES: What various things do you do with the polishings? 125

1.	DA as mill not used	3
2.	Used for feed	99
3.	Used for food	—
4.	They are sold	3
5.	Other, specify_____	3
6.	Unascertainable	2

[243]

c. ASK ALL: During this past year, did your family eat home-milled rice entirely, in major part, in minor part, or not at all? [262]

7.	Entirely	5
8.	For major part	51
9.	For minor part	78
X.	Not at all	199

20.a. As you know, some people have had plenty of chance to learn to read, while others have hardly had any chance. How about you yourself? Are you able to read the Thai language, or haven't you ever had the opportunity to do any reading? [212]

1.	Yes, can read	224
2.	No	109

b. IF R CAN READ: Would you say it is hard for you to read, or easy, or about medium?

3.	Hard	15
4.	Easy	85
5.	Medium	124
6.	Unascertainable	—

c. ASK ALL: Now how about writing? How is it with you yourself? Are you able to write Thai, or haven't you ever had the opportunity to do any writing?

7.	Yes, can write	227
8.	No	106

d. IF R CAN WRITE: How much writing do you do? Are you able to sign your name, or can you also write a letter?

9.	Sign name only	63
X.	Can write letter	163
0.	Unascertainable	1

21.a. Suppose there were a factory in Minburi paying 20 ticals per day. Would you apply for a job to work in this factory? [464]

7.	Yes	162
8.	No	159
9.	Unascertainable	12

b. Do you think that someone else from your house would apply for a job there?

X.	Yes	105
Y.	No	211
0.	Unascertainable	17

58

125 [484]

57.b. IF R DID NOT GO DURING LAST MONTH: How many months ago was the last time you went to Minburi?

7.	Within last 3 months	34
8.	More than 3 months ago	25
9.	Never been to Minburi	1
X.	Unascertainable	3
—	No Answer	4

58. This past year, how many times did you go to Bangkok, or didn't you go at all?

0.	None	71
1.	Once	56
2.	2 to 4 times	90
3.	5 to 9 times	28
4.	10 times or more	87
5.	Unascertainable	1

59. In your life, how many times have you been to Don Muang Airport, or haven't you been there at all?

6.	None	148
7.	Once	58
8.	2 to 4 times	72
9.	5 times or more	52
X.	Unascertainable	3

60. In your life, how many times have you been to the annual agricultural fair or the Agricultural Experimental Station at Bang Khan, or haven't you been there at all?

0.	None	227
1.	Once	47
2.	2 to 4 times	45
3.	5 times or more	14
4.	Unascertainable	

61. In your life, have you ever been beyond the boundaries of Thailand, or not?

X.	Yes	13
Y.	No	318
0.	Unascertainable	2

62.a. Have you ever lived in Bangkok, or not?

1.	Yes	117
2.	No	216
—	Unascertainable	

[464]

b. IF YES: What various duties or jobs did you have when you lived in Bangkok?

4.	Soldier	37
5.	Police	10
6.	Student	22
7.	Artisan	1
8.	Laborer	23
9.	Other, specify _____	33
0.	Unascertainable	2

125 64.a. IF YES: At what age did he leave BO?

[166] [592]

1.	Below 15 years	8
2.	15 to 19 years	28
3.	20 to 29 years	50
4.	30 years or more	5
5.	Unascertainable	6

d. IF YES: For how long has he (she, they) been gone from BO?

6.	Less than one year	12
7.	1 to 4	42
8.	5 to 9	19
9.	10 years or more	19
X.	Unascertainable	

• [464] [463] e. IF YES: What various duties or jobs does he (she, they) do in Bangkok?

1.	Housewife	17
2.	Unskilled laborer	19
3.	Skilled laborer	33
	Armed forces	17
	Service	9
	Employee	5
4.	Other (retired, selling things)	2
5.	Unascertainable	4

[166] [593] [602] f. IF YES: During the last year, have you seen this person(s) several times, once, or not at all?

9.	Several times	65
X.	Once	16
Y.	Not at all	8
O.	Unascertainable	3

g. IF YES: Does he (she, they) make regular remittances to this house?

X.	Yes	31
Y.	No	56
O.	Unascertainable	5

[207] 65. Do you listen to the radio regularly, daily, occasionally, seldom, or never?

6.	Regularly-daily	45
7.	Occasionally	66
8.	Seldom	148
9.	Never	60
—	Unascertainable	14

[525] 66.a. Do you play the lottery regularly, occasionally, seldom, or never?

1.	Regularly	20
2.	Occasionally	54
3.	Seldom	220
4.	Never	38
5.	Unascertainable	—
—	No Answer	1

b. IF REGULARLY, OCCASIONALLY, OR SELDOM: Suppose you were to win the second prise of 40,000 baht. What various things would you do with this money?

(See code)

The Family

592 Although the family is the smallest of social institutions, it occupies first rank in importance. For the purpose of this study family is defined as a group of persons who form a household under one head including parents, children, servants and other dependents. It is a social unit for both consumption and production. In Bangchan, members of the same family, with the possible exception of piece-workers who have the privilege of eating with their employers only during periods of certain kinds of work, usually share the same meal although not necessarily at the same time. Physically able members are expected to contribute to family work although some may also do extra jobs for their own pocket money. In all cases family work has priority over the extra job, and in most cases members turn over all or part of the earning thus realized to the family head. Although most families have separate dwellings, there are instances of two families sharing the same dwelling but having separate cooking arrangement. Such cases are rare, however. According to our operational definition, then, a member of a biological family who has hired himself out as regularly hired laborer ceases to be a member of his own biological family and becomes a member of his employer's family. Piece workers, on the other hand, although they may occasionally eat with their employers, still retain membership of their biological family if they still live with them. Finally, people who live in the same dwelling may not belong to the same family if they

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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178 to which surviving elements of the disappearing families
592 were subsequently attached. It was noticed that in the
621 last four cases -- Cases 8, 9, 10, and 11 -- merging with new families was arranged on the basis of mutual convenience, and the disappearing families moved en masse into the new ones (with the exception of Case 10 -- a lone woman when arrangement for merging was being made). It may even be said that the initiative came from the receiving families, although the new members may have been more anxious for the union. In the remaining six cases -- Cases 1, 2, 3, 4, 5, and 7 -- there was no element of mutual convenience, and the surviving elements of the disappearing families did not move into new families as a body but as an individual. It seemed in these latter cases that the force of circumstances -- death or extreme poverty -- had prompted either party, usually the disintegrating elements, to seek the union as a quick way out. Because of the purposive nature of the arrangement in the former cases, the process may be called 'annexation'; while for want of a proper term, the process seen among the latter cases will be called 'disintegration'.

[162] None of the eleven cases undergoing disintegration
[423] or annexation owned landed property. Table 6 shows that
[464] six of these were farm laboring families. The five others were distributed among the following occupational groups: farm operator, public servant, and no occupation.

[166] Among the 27 families that moved out of Bangchan, eleven families were known to be living in the bordering

[TEXT CONTINUED ON PAGE 75]

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TABLE 6

DISINTEGRATION AND ANNEXATION OF FAMILIES
Bangchan, Thailand, 1949-53

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Case	Occupation	Landed Property	Immediate Cause	Number of Surviving Elements	Number of Attached Families
Disintegration:					
1.	F. laborer	no	poverty	11	4
2.	Public servant	no	death	1	1
3.	F. laborer	no	death	2	2
4.	F. operator	no	death	1	1
5.	F. laborer	no	death	5	3
6.	no occupation	no	death	0	0
7.	F. laborer	no	death	2	2
Annexation:					
8.	Public servant	no	convenience	4	1
9.	F. laborer	no	convenience	3	1
10.	F. operator	no	convenience	1	1
11.	F. laborer	no	marriage	3	1

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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178 villages, and six in villages within a distance of from four
592 to fifteen miles from Bangchan. These seventeen families,
621 whose locations were known, were engaged at the time of the
166 study in the same occupations they had been when they were in Bangchan -- either farm operating or farm laboring. Our investigation, however, covered only the whole family as a unit -- that is, we cannot say that every single individual constituting these seventeen families when they moved out of
• [469] Bangchan was doing farm work in his new location. Only one case was known in which the family head got a permanent job as a janitor in Wat Makasan Primary School in Bangkok. This man was nevertheless commuting regularly between his farm home in Bangplee and his office in the suburb of Bangkok. His taking up a new job was thus a question of an individual member, not of the family as a whole.

It is not likely that the ten families whose locations were not known to us would take up new occupations in Bangkok. If they did work in Bangkok, they should pay some visits to Bangchan at least during festival time or family re-union occasioned by ordination or cremation, and their presence in the village would certainly be known to us. Besides, we were in constant contact with the core of a group of young men who went to work in Bangkok and who knew one another's whereabouts fairly well, and no information about these ten families was available from this source either. Our impression was that they were doing farm work in some villages not too close to Bangchan.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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178 different types of separation which will be described individually as follows:
532
621

Case 1: This involved the two sons who inherited landed property from his father described in Case 2 for the disintegration of the family, and in fact this was the first Bangchan family we met in 1948. At that time the elder brother, then age 37, was a widower and was courting a woman in another village along the Minburi Road. His work in road construction and maintenance (the Minburi Road) gave him a good excuse for continued absence from home, leaving his two daughters and three sons under the care of his younger brother who was the family head. Just before the 1949 census [527] [464] was made, he married the woman and once again became settled down. Meanwhile the younger brother got a job in road construction. With regular monthly cash income, he took to drinking and established himself as one among the few notorious dipsomaniacs in the village. This was intolerable to the elder brother who finally moved his nuclear family out to their new home just across the road.

Case 2: In 1949, an unmarried woman was living in an 'extended' family headed by a son of her elder sister. The combined landed property of the family was 67 rai of rice land, 40 rai of which was a share of the woman and her aged mother who was also living in the family. Some time before the 1953 census was made the woman and her mother moved out to form a separate household. The reason for the separation was not quite clear. It was assumed, however,

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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178 that these two women were happier living by themselves than
592 with their junior relatives.
621

[586] Case 3: A married couple were living in 1949 with the wife's parents. They were later separated, the husband leaving his former wife with her parents. In the 1953 census the man appeared in KY7 list as head of a one-person household.

Case 4: In 1949, a woman appeared in the census as wife of a family head in KY6. In that same year she left him and lived as wife with another man in KY8. A few years after, she left this second man again. She then appeared in the 1953 census as family head of a family of six including her three children and her aged parents.

Case 5: In 1949, a man of 47 was head of a laboring family of nine in KY, including his wife, three adult off-
[464] spring and four young children. Later in that year he left
[586] the family and hired himself out as a regular laborer to a farm operator with whom he worked for two years. He then left the village for a year after which he returned to work as regular hired laborer for another operator for almost a year and a half. In the 1953 census he appeared as head of a one-person household in KY6. Our records show that he was a diligent worker, excellent fisherman, averse to sweet cookies, but very fond of liquor. When asked why he did not go back to his family in KY8, he replied "The larger the family you have, the more trouble you get. I have more fun living alone."

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59 the establishment of a new family, virtually a new farm. It must be noted in this connection, however, that not all new families started outwith financial resources. There are circumstances like incongenial relationship between the dependent couple and their parents or other members of the family, tight financial situation of the old family, or extreme optimism on the part of the young couple themselves that brought about premature fission.

243 The role of the family becomes more outstanding when
433 the following features of rice farming are considered:
59
[423] 1. In Bangchan, as elsewhere in the rice producing areas of Thailand, a farm means rice land available for the family to till because farm income depends more on rice acreage than anything else.

2. An operator is generally not in a position to reallocate his resources in order to obtain higher income. Usually he does not, for example, put in more labor to get a better crop, for crop under existing technology would not increase with more labor than normally used. He does not put in fertilizer, for it is not certain, in his thinking, that profit is assured in so doing. He does try to improve his rice strains for greater yield, however.

[444] 3. The only way to increase income from rice with no change in technology (other than improving strains), then, is to increase acreage utilizing the same amount of family labor. This is the case, as we shall see in a later chapter on farm organization and management, because of the existing under-employment of family labor.

novice; there were noticeable increases in those for farm laborers and traders, and a slight increase in that for investors, which were offset by a marked decrease in figures for farm operators and slight drops in those for the professional and home enterprisers. In order to understand these changes in the occupational structure of the village, more information on some of these occupation than that given in our operational definitions at the beginning of this chapter is necessary.

Farm operation is a traditional way of life in the village. The primary motive is to secure enough rice for consumption. A secondary motive is to have cash from sale of surplus rice to buy goods that are not produced locally.

Farm laboring as a profession is limited to the poor. Farm laborers, occupying the lowest status in the village, are the most unstable and socially disintegrated group. They are not fully employed even during the work seasons of the year because there are too many of them in the locality. Thus, they exist in the village not because of demand for their work but because they have no opportunity for other occupations.

There were twenty-one families that were classified as traders in 1953. Of these, nine were permanent storekeepers, and twelve were peddlers selling food stuffs from door to door. Stores were situated at strategic places in the village -- two at the crossing of Minburi Road and Bangchan Canal which is the natural entrance into the village,

178 finally, for a few families, took precedence over rice
463 growing. The relative importance of these new occupations remained low, however, since only a few families were needed to meet the village requirements for such services.

434 The establishment of the primary school some thirty
647 years ago opened up new jobs as teachers and janitors for
875 some educated villagers who were given preference over out-
[372] siders. It should be noted, nevertheless, that at the beginning the primary school teachers were not considered as regular officials and their pay was as low as six baht a month during the prewar years. Even during the war, they did not get as proportionately large a cost-of-living raise as did other regular officials. It was only after the war that they were made regular officials and that their pay rose almost a hundred times to 450 to 550 baht a month with provision for a steady raise to more than one thousand baht
[48] a month. This new occupation in public service also increased with the extension of the central government employment into the rural areas and with improved transportation facilities which permitted an individual to commute daily between his office in Bangkok and his home in Bangchan. Thus, a Bangchan resident is now serving as an educational supervisor in the nearby Minburi District and a few others are on the regular payroll of the government-owned Bangkok Wharf.

*243 With the background knowledge of the situation of
• 464 Bangchan farm laborers previously described in mind, we may
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243 464 621 463 hypothesize that the presence of farm laborer families in a rice growing village indicates a condition of land scarcity. This is to be distinguished from the presence of farm laborer families in intensive farming areas such as the truck gardening villages along the Damnernsaduag Canal and plantation villages in Cholburi where the marginal product of labor, even with the same crude implement, is much higher than that in the non-intensive rice growing areas. Usually, there are farm laborers in any commercial rice growing region, but they consist of members of farm operator families with excess family workers who work for their own lampai. With low marginal product of labor, the demand for extra labor outside the family is not great and is highly seasonal in rice growing villages, resulting in extremely low total income for farm laborers. Piece-working is thus only good as a subsidiary income for an under-employed farm operator family, and certainly not as the main source of income for any family. Farm laborer families such as those existing in Bangchan are indigenous and are the outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent in any land. These people prefer to remain in the home village, willing to accept meager income from piece-work which is perhaps the only type of job they could get in the village, in the meantime trying to eke out as much as possible from what nature has to offer in the form of fish or uncultivated aquatic plants. The [161] [178] abrupt rise of farm laborer families in Bangchan from nine

243 per cent in 1949 to thirteen per cent in 1953 suggests that
464 the problem of population pressure on land has become more
621 acute, although it may also indicate changes in the cost
161 structure of rice production which will be discussed in
178 Chapter VI.

494 Concluding the discussion of this section, we may
463 say that rice growing is the core of the occupational struc-
222 ture of Bangchan around which other occupations rotate. It
226 is not uncommon that one family has several occupations,
[243] and in addition to income from these most families get "free"
food in the forms of fish and uncultivated aquatic plants.
This is the principal reason why families with apparently
no cash income still thrive.

433 It is conceivable that in years of poor rice crop
434 the family put more effort in the secondary occupations;
22 when such an attempt does not work out well -- for example,
[136] no work for manual labor and no capital for trivial trade --
an effort is made to obtain subsistence directly from nature.

In any event, every family in the village is engaged
[136] in fishing in varying degree. It is because of this fact
coupled with the fact that the village fish supply is de-
creasing that the problem of fish conservation is very
important.

243 Finally, the dynamic nature of rice farming, with
varying efforts on getting extra jobs and securing free food
outside the farm depending upon the increase and decrease
of the rice crop, suggests that the economy of any rice

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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[464]

It is seen, then, that the conventional system of land tenure classification is of very limited usefulness in areas where under-employment of farm labor is the general pattern. In an attempt to increase its usefulness mentioned above, a new classification system for land tenure is suggested in which the "owner-operator" category of the conventional system is sub-divided and arbitrary limits set to partially solve the problem of the third type of confusion.

The emphasis of the suggested method of classification lies in the functional aspect of each category. Thus, operators who own all the farm land they operate and still have some more land to rent out, an indication that they really have more than enough land for their farm operating occupation, are grouped under the landlord-operator category. This group resembles the conventional "owner-operator" in that in both the farmers do not rent in any more land, but differs from the latter in that they are really land saturated farmers while the latter may or may not be land saturated. Generally speaking, therefore, the new landlord-operator group are economically more secure than the conventional owner-operator group.

Operators who own all the farm land they operate but do not have any more land in the village or close neighborhood to rent out are grouped under the owner-operator category. To avoid confusion of the second two adjustments are made: (1) if a farmer owns two-thirds or more of his working area, he is included in this category; and (2) he

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*243
178 from certain points of view, or for certain purposes, or
427 subject to certain interpretations, they are to the indi-
494 vidual producer no different from any other money expense.
495 They do not arise as a surplus from his own operations;
they are a cost rigidly imposed upon him by the competition
of his rivals for the use of the rent-yielding property.
They figure in the same way as do wages of labor and the
interest of capital in his computations as to the most ad-
vantageous proportion between the factors and as to the most
*[128] advantageous scale of operations.[10] Naturally, we are now
dealing with contractual rent, which is the actual sum paid
by the tenant to the landlord for the use of the land, not
the hypothetical economic rent of the classical economists.

*243 The preliminary study revealed that there was in
• 464 1948 under-employment on some Bangchan farms in terms of
rai worked per worker. This was shown by comparing the
number of rai worked per worker on 94 farms employing no
hired laborer with the number of rai worked per worker on
*[128] 10 farms employing one or more hired laborers. On the farms
where only family labor was used, the figure was 9.4 ad-
justed rai per worker; while on those farms which used
regularly hired laborers along with family labor, the figure
was 13.4 adjusted rai per worker. (Each rai of transplanted
rice was counted as one adjusted rai, while each rai planted
by the less-labor-requiring broadcast method was counted as
one-half of an adjusted rai.) An assumption was made that

10. Edward Chamberlin, The Theory of Monopolistic Competition (sixth edition; Cambridge: Harvard University Press, 1950), p. 22.

243 464 farm operators who hired regular laborers did so because full utilization of the effort of all the family workers was not adequate. This assumption would seem to be reasonable in view of the rather high cost of hiring such laborers. It was concluded, then, that some farms in the community were below optimum size for the number of workers in the family.[11]

243 464 161 178 This condition of farm under-employment is our basic assumption in discussing rent rates in Bangchan. With an increase in population in an area where farm operating is the core around which other less important occupations rotate, it may be reasoned that the aggregate demand for rice land in 1952 was at least as high as that in 1948 if not greater. As for the extent of under-employment of farm labor, it is interesting to note that the number of families directly engaged in rice farming, the farm operating and farm laboring families, was 256 in 1949 and 254 in 1953. With a constant supply of land (in the popular sense of the term), this more or less constant number of families directly engaged in rice farming indicated that the extent of farm under-employment in 1952 was just about the same as that in 1948. Although the average size of the family was found to be slightly smaller in 1953,[12] that slight decrease was certainly not large enough to materially affect the situation.

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11. Sharp et al., op. cit., p. 158.

[162] 12. The average size of the family was 5.7 in 1949, and 5.5 in 1953.

*243 434 464 As long as farm under-employment prevails and as long as limited opportunity for an alternative occupation is open to farm operators and farm laborers, we have reason to believe that the demand for rice land is rather inelastic. Another important factor contributing to this belief is the operator's concept of cost of producing paddy which seemed to include only explicit rent (actual amount paid to the [435] landlord) and cash operating expenses. Thus, while our calculation shows that the cost was 6.76 baht per tang or 215 baht per rai in 1948, the figure would be only 1.71 baht per tang or about 55 baht per rai according to the operator's concept of the cost.

*243 427 464 178 435 Under the conditions of farm under-employment, a tenant, part-owner, or even owner-operator is willing to pay high rent for an additional parcel because a larger worked area would cost him only the additional explicit rent and a small increase in seeds and materials. Unless the extra rented parcel is so large that extra labor must be sought outside the family, he does not have to pay any explicit wage at all for rice production in this additional parcel. Landlord-operators, on the other hand, are under a different situation, for they may rightly be considered land saturated and fully employed. Hence, the individual demand for working land on the part of a landlord-operator is relatively more elastic than those of the other farm operators. As rent rose from 6.2 tang per rai in 1948 to 8.1 tang per rai in 1952, it was observed in Table 26 below that

*243 427 435 178

[TEXT CONTINUED ON PAGE 148]

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427 landlord-operators were more sensitive to the change in
435 rent rates than were the other groups of farm operators.

Limited opportunity for an alternative occupation
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621 was mentioned in the preceding paragraph as one of the factors contributing to the inelastic nature of demand for working land. It was also mentioned in the section on the occupational structure of Bangchan that farm laboring families as existing in the village were indigenous and were an outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent
[443] in any land. Limited opportunity for an alternative occupation in the village was also suggested in the same section when it was mentioned that the only possible alternative -- petty trading which was actually taken up by some former farm operators -- was limited by the fact that villagers bypassed local traders and went to the nearby market town of Sinburi for major purchases and variety goods.

464
465 Limited opportunity for an alternative occupation
569 <u>outside</u> the village, however, needs elaboration. It cannot be denied that wages in Bangkok, only twenty miles away and easily accessible through good road and bus services, were higher on the average than corresponding returns for labor in the village. It is important to note, however, that what will attract a villager to seek a job in Bangkok is not a higher <u>average</u> wage level in the city but a higher <u>marginal</u> wage there. Regarding the marginal wage, it is highly doubtful that a better condition exists in Bangkok.

369 have an opportunity for secondary education although some
87 of them have adequate financial support. This has a tre-
[464] mendous effect on job opportunity for farm people, for most firms and Government departments set Matyom VIII as minimum standard for even the lowest clerical job.

243 While farm children have a poor academic education,
369 they are compensated by a high degree of farm training which
464 includes not only the technique of rice growing but also the
868 use of basic equipment for manual labor and simple construction work. It has been observed that farmers are better qualified to do manual work than urban people. This aptitude, however, does not to any considerable extent minimize the farmer's disadvantage in making a living other than by farming. In the first place, compensation for manual work is generally lower than the pay for clerical jobs. Second, there are in the city more job opportunities for clerical work and other white-collar types than there are for manual work. Third, the white-collar jobs tend to be more or less permanent while the manual jobs tend to be somewhat seasonal, and the manual worker seldom has a "position" in the firm as does the white-collar worker.

To the extent that these three conditions remain true, it may be assumed that the type of academic education and practical training being given to Bangchan children will serve only to confine them to farming life rather than to give them opportunity for alternative occupations.

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465 178 ranging from 250 baht to 800 baht annually, and eight were paid in kind. There were two types of wages in kind, the fixed and the variable types. In the fixed type, which involved two laborers, each laborer was paid a fixed amount of 100 tang of paddy. In the variable type, which involved six laborers, one laborer received the product (paddy) from 3 rai specified at the beginning of the season, four received the product from 5 rai, and one from 6 rai.[3]

*128 464 178 In 1953, a farm hired laborer survey was made to include people in Bangchan who were known to have been hired laborers and who could be located at that time. The survey was intended to serve as a benchmark for a subsequent study of farm laborers in 1956-57. The work done in 1953 was therefore only preliminary and was concentrated in locating the hired laborers and recording such basic informations as age, sex, and their jobs and remunerations during the previous five years from 1949 to 1953. Materials on life history were also gathered, but they were still incomplete. Nevertheless, information thus received about their jobs and remunerations have shed much light on wage rates of hired laborers in the village, and these are shown in Table 33.

A few points must be made clear, however, before any generalization can be made from the figures in Table 33. First, the survey included 34 persons who were known to have been hired laborers in Bangchan during the period from 1949 to 1953. Second, the survey covered only the people who were living and could be located in Bangchan in 1953; thus

3. Sharp et al., op. cit., p. 157.

[TEXT CONTINUED ON PAGE 196]

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 33

ANNUAL WAGES OF HIRED LABORERS IN BANGCHAN AND ITS IMMEDIATE NEIGHBORHOOD
Thailand, 1949-53

Year	Type of Wages*	Number of Laborers Reporting	Total Wage	Range	Average
1949	Cash wage	2	1600 baht	600-1000 bt	800 bt
	Kind, fixed	3	300 tang	100-100 tg	100 tg
	Kind, variable	2	9 rai	4-5 rai	4.5 rai
1950	Cash wage	4	3350 baht	400-1350 bt	838 bt
	Kind, fixed	7	600 tang	60-100 tg	86 tg
	Kind, variable	3	12 rai	3-5 rai	4.0 rai
1951	Cash wage	6	4400 baht	300-1200 bt	733 bt
	Kind, fixed	8	660 tang	50-110 tg	83 tg
	Kind, variable	3	12 rai	3-5 rai	4.0 rai
1952	Cash wage	10	8400 baht	600-1300 bt	840 bt
	Kind, fixed	7	630 tang	50-120 tg	90 tg
	Kind, variable	3	13 rai	3-5 rai	4.3 rai
1953	Cash wage	14	12000 baht	250-1150 bt	857 bt
	Kind, fixed	2	250 tang	100-150 tg	125 tg
	Kind, variable	2	6 rai	3-3 rai	3 rai

*Cash wage -- wage was paid in cash.
Kind, fixed -- wage was paid in fixed amount of paddy agreed upon at the beginning of the season.
Kind, variable -- wage was paid in paddy harvested from a specified area agreed upon at the beginning of the season.
In all these cases, laborers received in addition free board and lodging and two working suits, one at the beginning of the period of breaking the soil and another at the beginning of the harvesting season.

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178 some hired laborers who had left the village before the survey was started were not included, and so were some former hired laborers, especially those working as such in the earlier years, who might be living in the village but were not identified as former hired laborers. Third, of the 34 cases covered by the survey nine were persons of 20 years old or younger as of 1953. Naturally, these persons would not be considered as hired laborers in 1949 or even in 1950, for they would be too young then for the job. Besides, it was not necessary that all hired laborers should begin their job as soon as they had attained the proper age of say 18 years, for there were many factors militating against taking up the job at an early age, one of which was obligation to the family. As a matter of fact, two among our 34 laborers were obliged to quit their jobs because their parents wanted them to go back to the family and help in the farm work. One of these two laborers remained with the family for a yearin 1951, went back to work with his former employer in 1952, then emerged as a farm operator in 1953. The other quitted the job in 1952 and had since remained a family worker on the family's rented farm. Fourth, these 34 laborers varied in sex, age, farming experience,
464 and working ability. Fifth, the employers of these hired
466 laborers also varied in the degree of generosity exemplified by the amount of wage they agreed to give their employees and their relative willingness to observe the oral contract. This last point was important in Bangchan where the supply

464 for labor exceeded the demand for it. Some employers were
466 known to have been in the habit of cheating their employees. To cite an example, in March 1953 A, a young man of 16 who was known to be one of the best transplanters in the village, was hired by Operator B at 50 baht a month. After working for B for three months, A quit the job because his employer had paid him only his wage for the first month and there was indication that he would not receive any more for his labor from his employer. The author was informed about this whole business by A's father, Laborer C, who complained bitterly against B. That happened just before the beginning of the 1953 rice growing season. It was rather surprising that the author discovered that a month later Laborer C was hired by his son's former employer -- Operator B. Three months later, the author saw Laborer C working not on B's field but on some body else's farm on August 19. Upon inquiry, it was found that history had again repeated itself -- Operator B had just fired Laborer C and refused to pay him for his three months' work. "He ate more, but worked less, and always found asleep," complained Operator B, "Besides, he was in the habit of criticizing me behind my back."

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464 These five points were brought up in connection with
178 Table 33 in order to caution against two generalizations that might be made from a glance at the table. First, the number of laborers which appears to increase progressively from 1949 does not in any way indicate that more and more hired laborers have been employed in Bangchan. The figures

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*128 of the number of hired laborers represent only the case
= 464 study of hired laborers who were located in 1953 and were
178 interviewed on their past records. Statistically, therefore, it would be misleading to infer the actual employment of hired laborers in each year from those figures. Second, since the same population of hired laborers was used throughout, the effect of increasing age on individual wages must be considered. This does not mean, however, that there was a tendency for the average wage in our sample to rise with the years in relation to the standard wage; because not all of the 34 hired laborers started to work in the same year, rather some started before 1949, some started in 1949, and a good many started in each of the following year. There was also the effect of the generosity of the employer which is to be considered in relation to the wage level.

It would appear, nevertheless, that employment of hired laborers in any specified year can be measured by actual counting or simple random study done in each specified year. Although this is possible now that we have fairly well established our universe, there is still the problem of the hired laborers quitting their jobs before the end of the rice season
*128 which had occurred not infrequently. The problem of varying
464 wage rates due to working ability of the laborer on the one
465 hand and to the scrupulousness of the employer on the other may, however, be partially solved by using the maximum wage of each year as the basis for generalization. It is with such cautions that the figures as presented in Table 33 might

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465 be of any help in the understanding of the hired laborer situation in Bangchan.

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46 Let us now turn to the last group of farm laborers -- the piece-workers. These laborers receive their renumerations in the form of cash paid at the completion of each job contracted. Four types of farm work were observed to have involved the utilization of piece-workers -- uprooting of rice seedlings, transplanting, harvesting, and digging earth and mounding. Uprooting, the heaviest of all rice growing steps because seedlings must be pulled up in budle and smashed against the shank of the worker, was limited to adult male workers. Transplanting, on the other hand, was the lightest of all these steps involving the itlization of piece-workers and may be done by all kinds of workers including the young. Harvesting and digging and mounding are too heavy for the young but not for the adult female workers to participate, so they are usually performed by adult workers of both sexes.

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[435] It was found in the cost of production study in 1948 that 104 farm operators in Bangchan spent a total of 4,434 baht on uprooting done by piece-workers, 7,951 baht on transplanting, and 13,310 baht on harvesting, or an average per farm of 43 baht for uprooting, 76 baht for transplanting, and 128 baht for harvesting. Although digging and mounding is generally considered a part of farm work since it is done primarily in order to keep the buffalo shed above the water level as well as to improve the home garden; it is not

243 included in the items of cost of producing paddy, and there-
621 fore we do not have the figure for this item of farm expenses.
433

It was earlier mentioned in the section on occupa-
434 tional structure in Bangchan that most villagers regardless
464 of their main occupations did perform some piece-work for
621 either main or subsidiary incomes. It is almost impossible,
463 then, to give an exact figure of the number of piece-workers in any one year. For the purpose of this study, however, we may arbitrarily differentiate between the "professional" and the "non-professional" piece-workers. Here, the classification suffers much overlapping -- even more than does the classification of the occupation of the villagers, for we cannot even use the concept of the main source of income as a criterion in this connection. It was mentioned that farm laborers existed in Sangchan not because of demand for their work but because they have no opportunity for other occupations (page 100). Thus, if the main source of income was used as the criterion for differentiating the "professional" piece-workers, this group would include, for example, the old woman described in Case 7 page 69, who after having been left alone had managed to get a small income from transplanting which was the only type of farm work she could perform. The main source of income was also not a good criterion considering the fact that most piece-work was done by family members after their obligation to the family
467 farm had been fulfilled. In a desperate attempt to differ-
463 entiate the professional from the non-professional piece-workers

463 we finally settled on an arbitrary definition: a profes-
464 sional piece-worker was one who was ready most of the time to be called upon to perform piecework. This automatically eliminated the school children who were able to work only during the school recesses, the poor aged people who had to make a living in one form or another but who were able to perform only the lightest kind of piecework -- transplanting, and members of the well-to-do families who did some piecework for a small amount of pocket money only.

Adopting this arbitrary operational devinition, it may be assumed that professional pieceworkers include all members of the laboring families, small farm operating families, and other families of various occupations not financially well off, who are old enough yetnot too old to work and who are not currently engaged in some other kinds of work.

178 Table 34 shows work records of the 34 farm laborers
463 earlier mentioned. It is seen that of these 34 laborers,
465 only six had remained hired laborers throughout the periods of their farm work. These were Laborers 8, 9, 11, 22, 27, and 28. The other laborers were observed to have assumed various other statutes in the course of the five-year period from 1949 to 1953, namely, farm operator, pieceworker, family worker, and transient family worker. When these laborers were interviewed, they also gave estimates of their earnings from pieceworking as far as they could remember. In 1949, for example, piecework earning figures were available from

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TABLE 34

WORK RECORDS OF 34 SELECTED FARM LABORERS IN BANGCHAN AND ITS IMMEDIATE NEIGHBORHOOD Thailand, 1949-53

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Laborer Number	Age in 1953	Working Status 1949	1950	1951	1952	1953
1	23	HL	HL	PW	HL	FO
2	39	PW	PW	PW	HL	HL
3	42	...	...	PW	PW	HL
4	27	HL	HL	PW	PW	PW
5	28	HL	HL	PW	PW	PW
6	23	PW	PW	HL	HL	...
7	25	PW	...	HL	HL	HL
8	22	HL	HL	HL	HL	HL
9	23	HL	HL	HL	HL	HL
10	52	HL	HL	X	HL	HL
11	19	...	HL	HL	HL	HL
12	32	FO	FO	FO	FO	HL
13	33	PW	PW	PW	HL	HL
14	30	TFW	HL	HL	PW	PW
15	35	PW	HL	HL	HL	PW
16	20	...	TFW	TFW	HL	...
17	45	PW	PW	HL	PW	PW
18	50	PW	PW	HL	HL	HL
19	31	X	PW	HL	...	HL
20	20	TFW	TFW	TFW	FW	PW
21	19	TFW	TFW	HL	HL	HL
22	17	...	...	HL	HL	...
23	21	TFW	TFW	TFW	TFW	HL
24	23	TFW	HL	HL	...	HL
25	17	...	...	TFW	...	HL
26	40	...	...	TFW	TFW	HL
27	26	...	...	...	HL	HL
28	18	...	HL	HL	HL	HL
29	63	PW	PW	X	PW	HL
30	30	PW	X	X	PW	HL
31	36	HL	HL	HL	FW	FW
32	16	...	...	...	FW	HL
33	23	PW	HL	HL	HL	HL
34	20	...	HL	TFW	HL	HL

Key to abbreviations:
FO -- farm operator
HL -- hired laborer
PW -- pieceworker
FW -- family worker
TFW -- transient family worker
X -- farm laborer elsewhere
(...)-- not engaged in farm work

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465 two laborers -- 1,000 baht for Laborer 7 and 900 baht for Laborer 30, averaging 950 baht for the year. In 1950, earnings of 500, 850, and 1,000 baht were reported respec-- tively by Laborers 18, 19, and 29, averaging 783 baht for the year. In 1951, only one case of 600 baht earning was reported by Laborer 5. In 1952, earnings of 600, 1,000, 1,000, 1,000, and 350 baht were reported respectively by Laborers 5, 14, 29, 30, and 32, averaging 790 baht for the year. In 1953, earnings of 2,000, 600, 1,000, and 300 baht were reported respectively by Laborers 4, 5, 14, and 15, averaging 975 baht for the year.[4]

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464 In the preceding paragraph, the term "transient family worker" was introduced. This refers to a person distantly or not at all related to the family in question who has been accepted as a family member with a dual status of half relative and half laborer. Since there is actually no genuine family tie, such member has been observed to come in and go out of the family rather freely as the occasion [465] may arise, and hence the term "transient". While staying with the family, the transient member is expected to participate in the family work that is appropriate to him in exchange for good, shelter, clothing, and occasional monetary gifts.

In 1948, we came across a case where an old man of 80 was living with one of the seven headmen of Bangchan as

4. Table 53 gives an idea of the meaning in real terms of these incomes.

592 a transient member of the family. This was rather unusual,
464 however. The pattern was that a transient member was
[561] accepted when he is rather young. If he was quite mature,
he might also be accepted; but the expressed motive of the
592 accepting family would then be somewhat different. When
465 approached by a mature prospective transient member, the
464 family head would most probably say that he could not afford to keep a hired laborer but he would be glad to let the man or woman stay with him as a member of the family, and that they might as well "share in the food, and share in the work".

It has been observed that transient family workers received much less from the family than the standard wage
[435] of hired laborers. While the latter received an annual wage of 1,000 baht or the crop from 5 rai, the former might be given only 50 or 100 baht a year. To farm operators of moderate or large rice farms, transient family workers were certainly an economic advantage. It was quite natural that these operators would try to keep them in the family as long as possible. Among the several methods observed were the following: (1) adoption; (2) promise to sponsor ordination of the young male transient member; and (3) giving a certain amount of <u>lanpai</u>.

592 It was mentioned in the section on the family in
464 Chapter II that adoption as practiced in Bangchan did not
[597] involve legal registration of the adopted child, and that
[792] maltreatment of adopted children was not infrequent. To sponsor an ordination was in fact not quite as expensive

592 as it might seem to be, for there was a wide range of
464 ordination expenses and the family head naturally tended
792 to arrange one that was not so expensive unless it was for his own son. He might even arrange a joint ordination of
592 which the cost was much reduced. Moreover, most of the cost
464 of the ordination would be covered by the customary contributions made by neighbors. The lampai arrangement, which was nothing but a sophisticated term for wage, was a real concession on the part of the family head, indicating that he really wanted to keep the transient member in the family even at a certain cash expense.

464 The presence of transient family workers and their
592 relatively low remunerations indicated a condition of popu-
466 lation pressure onland. Already, these people had adversely
[160] affected the laboring sector of the village economy because they represented an additional supply of cheap labor. Although they had contributed to a low cost of producing paddy and thus benefited the operators, with the rise of the price of foods which farmers had to buy and with the decline of free food (in the forms of fish and aquatic plants) transient family members may in time become a liability rather than an asset to the family. To be sure, when such a time has arrived, the family would be reluctant to admit a transient member. The trouble, however, is that the cost of maintaining an extra family member is implicit and not readily distinguished by the family. It would thus take some time before the real situation would be recognized.

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182 464 592 Nevertheless, the advantages of transient member arrangements to both parties should not be overlooked. It has at least provided the poor with a kind of economic security, since they might arrange to join some families in the village in time of crises. This is perhaps the principal reason why the village, not the living quarter, is considered by most Bangchan people to be their home. By sending some offspring to live with a more affluent family, the poor villagers had been able to reduce the size of their families and thus had managed to prevent their level of living from falling far below the minimum level of subsistence. As for the accepting families, it has already been shown that they had enjoyed the benefit of cheap labor provided by transient family workers.

*243 178 463 621 [592] Changes in Farming Population in Bangchan

Table 11 shows that the number of farm operators in Bangchan had decreased from 229 in 1949 to 216 in 1953, while the number of the family heads whose main incomes were derived from farm labor had increased from 27 to 38 within the same period.

When the farm operating families were studied individually, it was found that 181 families had been operating their rice farms in Bangchan throughout the period. There were 48 farm operators whose names disappeared from the list of operators in 1953. These were compensated by 35 new operators. Thus, there was a net loss of 13 farm operating families during the period from 1949 to 1953.

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243 178 463 [311] become investors, traders, and public servant. In 1948, these eight families were operating farms of a combined area of 286 rai, ranging from 20 rai to 80 rai, averaging 36 rai per farm. Seven of these eight families owned rice fields totalling 201 rai, ranging from 5 rai to 80 rai, averaging 29 rai per family owning land. Evidently, it may be said that these seven families deliberately had given up farming in favor of new occupations from which they expected higher remunerations. As for the one family owning no land, the same generalization still holds. This family was operating a 22-rai farm in 1948, a farm of optimum size which could be expected to yield a higher income than any of those operated by the thirteen former operators who had turned farm laborers. The head of this [464] [465] family, nevertheless, got a permanent job in the Bangkok Harbor, a government owned concern, with a salary of more than 7,000 baht annually which is much higher than his former net income from operating a rented farm.

A case has thus been built for the relative unattractiveness of farm operating occupation among a certain sector of farm operators who had shifted to other occupations. This was responsible for the decline of farm operating occupation from 80 per cent of the occupational structure of the village in 1949 to 72 per cent in 1953 (Table 11). If it had not been for the 14 new families branching out from existing families who had taken up farming during the period between 1949 and 1953, the decline would have been more abrupt.

row man. He could not very well be substituted by his younger sister who was also needed to perform the housework. A worker was thus hired for the period of two months -- from the middle of June to the middle of August -- primarily to help in plowing. Phan also partially helped in plowing and harrowing in part of the morning session before he started his work for the Cornell team at nine o'clock.

During the cooperative work season, Chom represented the family in cooperative uprooting and cooperative harvesting, and Phuan in cooperative transplanting, weeding and harvesting. Phan also represented the family in cooperative work scheduled for Saturdays and Sundays when he was free from Cornell duty.

Work records of all workers of this farm were kept by the author throughout the work season from June 4, 1953 to February 14, 1954. At the beginning, the author stayed overnight with the family. Family workers were requested to give accounts of their activities of the day. To facilitate more accurate accounts regarding the time of the work, a clock was given to the family. When family workers became acquainted with the type of information that was needed, Phan, our row man, was assigned to make a daily report on the kinds and time of work done by each worker. Phan's daily report was taken down by the author in the labor schedule specially prepared for the purpose.[3] Later, when Phan's reporting skill was well developed, he was asked to report on the daily labor records only four times a week, usually Monday, Tuesday, Thursday and Friday.

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3. See Appendix B.

243 461 128 Since the farm work usually followed the same pattern for a certain period, it was observed that Phan remembered quite well the time and the kind of work done by each family worker during the past two or even three days. The time of work was recorded [231] to the hearest half-hour. In Tables 35 and 35, labor spent by [464] family workers, piece-workers hired by the family, and buf- [592] faloes, on different steps in rice production was given in man-hours and buffalo-hours. The dates when these various [476] jobs started and ended were also given. It should be noted, however, that labor recorded as spent on cooperative work was actually not spent on the family farm but rather on farms of other cooperative members. This was nevertheless exactly compensated by cooperative work on this farm on several occasions which were not entered in the calculation to avoid error because of duplication.

243 461 221 The data from Tables 35 and 36 may be summarized as follow:

1. Man labor provided by farm staff.

[592] [464] [231] Work started June 4, ended February 14, a total of 248 work days.
Total man-hours spent by farm staff -- 5,478½.

2. Man labor provided by piece-workers.

Work started July 19, ended August 30, a total of 10 work days.
Total man-hours spent by piece-workers -- 229.

3. Animal labor provided by buffaloes.

Work started June 4, ended February 13, a total of 112 work days.
Total buffalo-hours -- 2,119.

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TABLE 35

SUMMARY OF YEAR ROUND WORK BY CHOM FARM STAFFS
Bangchan, Thailand, 1953

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Steps*	Duration: Start	End	Days in work	Man-hrs.
A. Work by Farm Staff				
1. Plowing	June 4	Aug 23	49	918½
2. Harrowing	June 13	Aug 24	28	291
3. Remove weeds after harrow	June 13	Aug 15	25	219½
4. Irrigate and drain	June 4	July 8	21	186½
5. Rolling	June 13	Aug 22	7	42
6. Sow, broadcast	June 18	July 15	13	42½
7. Prepare and repair	July 5	Dec 9	10	106½
8. Prepare bamboo binders	July 17	Aug 27	10	45½
9a. Coop uprooting	July 15	Sept 11	25	127½
9b. Family uprooting	July 17	Sept 8	20	115½
10a. Coop transplanting	July 18	Sept 19	36	267½
10b. Family transplanting	Aug 20	Sept 10	13	125
11. Hauling	July 17	Sept 14	55	733
12. Field inspection	Aug 25	Nov 30	42	87
13a. Care of the plants	July 24	Sept 28	14	114½
13b. Coop weeding	Sept 20	Sept 29	8	86
14. Prepare thresh floor	Nov 29	Jan 27	7	13½
15a. Coop harvesting	Dec 4	Jan 25	44	747½
15b. Family harvesting	Dec 12	Feb 6	18	148½
16. Threshing	Dec 15	Feb 14	43	597
17. Winnowing	Dec 25	Feb 14	9	86½
18. Stacking of straw	Dec 29	Feb 4	2	16
19. Procure grass for buf.	June 14	Nov 27	83	157
20. Supervise coop work	July 22	Jan 24	8	26
21. Entertaining guest workers	July 22	Jan 24	7	158½
Total	June 4	Feb 14	248	5,478½
B. Work by Piece-workers				
[464] 1. Coop uprooting	Aug 18	Aug 25	6	24
2. Uprooting	Aug 23	Aug 30	2	45
3. Transplanting	July 19	Aug 2	5	160
Total	July 19	Aug 30	10	229
Grand total	June 4	Feb 14	248	5,707½

* See details in the section on steps in rice production.

*243 476 a "ngarn" (lit., work), which is one hundred bundles of seedlings uprooted in case of uprooting, one-fourth of a rai transplanted in case of transplanting, and also one-fourth of a rai harvested in case of harvesting.

The author followed closely every cooperative uprooting which Chom participated. It was found that this operator had bilateral obligations with 20 other members who during the 1953 season had uprooted for him a total of 41 units or 4,100 bundles of seedlings -- 1,400 bundles on July 22, 1,100 bundles on August 3, and 1,600 bundles on August 15. Chom had to make good the reciprocal work of this same amount for all his guest workers according to their individual shares of contribution to him. At the end the records show, however, that Chom himself had contributed only 28 units or had uprooted only 2,800 bundles for fellow members. Although his son Phuan had contributed six more units, the family was still short of seven units. As it actually happened, Chom was away from the village on a house building work in Dhonburi from August 18 to 25. During this period of eight days he was supposed to participate in seven cooperative uprootings. His only substitute, Phuan, could not do the work for him for Phuan was also tied up in cooperative transplanting. Chom therefore arranged for a professional piece-worker to do the seven cooperative uprootings he was committed to at the going rate of 13 baht per 100 bundles uprooted. [464] [465]

Records show that at the end Chom's contribution to each of his twenty fellow members was individually equal to the

243 help he received from each of them (the work by Phuan and the
476 piece-worker was considered as Chom's contribution), the exception being the cases with A and B. Chom had contributed three units to A, receiving only two units from the man; but he had received four units from B, giving him only three units of work. This was settled by transferring Chom's credit with A to B which is the general practice.

243 There were two professional piece-workers among Chom's
476 twenty fellow members. In fact, there were four such piece-
464 workers in our records of this group of cooperative uprooting, but Chom was bilaterally obligated to only two of them. Perhaps it is necessary to mention at this juncture that each member of a cooperative group had within that group their own circle of members among whom he had bilateral obligatory work. Chom, for example, had a circle of twenty-one within that group of twenty-four. We got this number of twenty-four by listing all the names of the persons (representing families) to whom each of the twenty-one members of Chom's circle had bilateral obligatory work. Most of these names overlapped, and the composite number was found to be twenty-four. It is seen then that the number of members of both a circle and a group depended entirely on which member was used as the basis. It would be misleading, therefore, to state the Mu Sapan Yao Cooperative Uprooting had twenty-four members, for no real size of a cooperative work group exists because of the overlapping nature of various circles within it.

All the four professional piece-workers in this

243 cooperative uprooting were exceptionally good workers, and
476 this was the reason why they were approached when help was
464 needed. These men accumulated work credits and utilized them when they were contracted by operators who had not enough family labor to uproot their seedlings. Chom, for example, after utilizing his own family labor as well as all the work credits he earned in cooperative uprooting, still was in short of labor to uproot his latest varieites on August 22 in which ten units of work were needed for the estimated 1,000 bundles
[465] to be uprooted. He, therefore, contracted Sa, a fellow member, to do the job for 130 baht. On that date, Sa called upon ten members including himself to uproot Chom's seedlings in his name. So the same old faces appeared on Chom's farm. Outwardly, this looked like an ordinary cooperative uprooting on the mutual help basis. In reality, however, it was a business deal out of which Sa received cash payment from Chom who in turn received labor. Our records show that Sa had another earlier contract to uproot 1,700 bundles for another operator, and the same method of recruiting labor among fellow cooperative members was used. Since our records show only cooperative uprootings conducted among this group of twenty-four members, it was possible that Sa might have a few more contracts which did not appear in the records.

Ordinarily, farmers do not like to be obligated to professional piece-workers, for they might later be asked to work in return for somebody they do not like. In fact, there was some talk in 1953 among farm operating members on the

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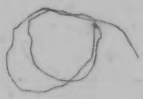

*243 476 464 possible ways to eliminate the participation of professional piece-workers. From the standpoint of professional piece-workers, however, to get oneself admitted into a cooperative group is a boon to their respective families for job opportunity would be assured to them. This is the reason why Sa was able to earn 2,000 baht in 1953 while most of his fellow piece-workers' earnings were as low as 300 or 600 baht.

[465]

*243 476 The same principle of labor reciprocity held in the other kinds of cooperative work, which also involved cash payment in the end to professional piece-workers who served as clearing agents to settle the balances of work credits. Generally speaking, such balances were more in case of cooperative transplanting than cooperative uprooting, and the same were even higher in the case of cooperative harvesting. This was to be expected because transplanting involved about double the amount of labor spent on uprooting, and harvesting alone required about a tenth more than the combined labor requirement of these two operations.

*243 461 476 Chart 1 shows both man-labor spent by Chom farm staffs and man-labor spent on Chom Farm, the former being represented by the solid line and the latter by the dotted line. On the basis of equal reciprocity of labor, these two should be technically equal in total magnitude. They differed, however, in their daily distribution. It is seen that the two lines coincide during the periods from June 4 to July 14, from September 30 to December 3, and from January 26 to February 4, when there was no cooperative activity. During the periods from July 15

*243 433 water conditions is also a major factor militating against investment on fertilizer. As it happens, therefore, fertilization does not prevail in the decision making of Bangchan operators.

If the operator has any positive role at all in the production plan, it is in the selection of rice varieties. This topic has already been dealt with in the section on labor adjustment devices of the preceding chapter.

*243 433 423 Finally, one of the most important organizational decisions involves the choice of the size of the farm. It has been observed that poverty in agriculture is as much a problem of farm size as of any other single factor. Most frequently, farm size is spoken of in terms of acres -- the land input. Although this measure is generally not sufficient, it serves the purpose quite well in single-crop farming areas such as Bangchan and all other rice areas in this country. In this study, therefore, farm size will be expressed in rai (two-fifths of an acre) devoted to rice.

Generally speaking, if the Bangchan operator is free * [464 592] to choose the farm size that suits him best, his decision will be based almost entirely on the size of labor force under his command, which in turn depends largely on the size of his family labor. As it happens, most operators are not *243 free to do so. It was mentioned in the section on land tenure 427 of Chapter III that it was only the landlord-operator group, 464 actually 11 out of a total of 216 farm operators in Bangchan, 423 that had demonstratively shown sign of land saturation and

thus could freely choose the proper size of their farms.

To be sure, some of the other 205 operators in the land scarce group could rent in enough additional parcels to make an efficient-sized farm. The preliminary study in 1948-49, however, reveals that of 104 farms under study 87 were under-sized. The point we want to make in this section is that there are considerations other than economic interest which preclude the attainment of a most favorable farm size by some of these land scarce operators. In the study of labor utilization on Chom Farm, it was seen that preparation of the fields was finished long before the deadline, indicating that the land input could be increased or labor input could be decreased. If Chom wanted to rent in an additional parcel of five rai, the problem presented would not be simple. In the first place, all rice land in the village had been filled up, so Chom's additional parcel had to be one that had been operated by a neighbor of his. Unless this neighbor had expressed an intention to quit this parcel, conscience alone would prevent Chom from outbidding the other person for the parcel. Second, although lease of land was on a one-year basis, in practice the landlord usually rented his lands continuously to the same tenants. If the landlord wanted to operate a certain parcel himself, the former tenant might think that it was reasonable enough to abandon the parcel. But it was inconceivable that he should leave the parcel so that another tenant could operate it. Third, the additional parcel should not be too far away

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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from the homelot because much time and energy would be wasted in daily walking to the field.

It would seem, then, that most rice farm operators had little opportunity to obtain a farm size they thought best and had to accept what was due them. Thus, their role in choosing the size of business, which is the most important role, is also limited.

2. Limited role in management: Inasmuch as management refers to the function of putting the scheme into operation, Bangchan operators certainly have a large part to play. A good rice crop depends largely on the relationship between the height of the young plant and the rising water level. Since the rise of water level is highly seasonal, depending on local rains as well as rains elsewhere that affect the general water level, scheduling the farm work and seeing to it that the schedule is followed becomes a most important function of the farm operator.

Management, however, refers also to the function of making those adjustments in the business which are necessary in order to obtain the maximum economic returns from the farm business as a whole. Inasmuch as this latter function is concerned, the operator's role has been limited as in the case of the organizational function. As previously stated, under the present stage of technological development in rice production in this country, not only the points of diminishing return of both labor and capital (farm equipment, at the present state of technical development in the village)

T: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7 Bangchan

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TABLE 42

DISTRIBUTION OF FULL TIME LABOR FORCE OF 104 FARMS
Bangchan, Thailand, 1948

Condition of Regular Labor Force	Number of Farms	Number of Workers	Adjusted* Areas	Adjusted Rai Per Man
			rai	rai
Farms without hired laborer				
One family worker	8	8	131.75	16.5
Two family workers	28	56	497.50	8.9
Three family workers	25	75	646.25	8.6
Four family workers	20	80	747.50	9.3
Five family workers	10	50	487.25	9.7
Six family workers	--	--	--	--
Seven family workers	1	7	75.50	10.8
Eight family workers	1	8	83.00	10.4
Nine family workers	--	--	--	--
Ten family workers	1	10	107.50	10.8
Sub-total	94	295	2,776.25	--
Average	1	3.1	29.50	9.4
Farms with hiredlaborers				
a. With one hired laborer				
One family worker	1	2	58.50	29.2
Two family workers	5	15	177.50	11.8
Five family workers	2	12	108.00	9.0
b. With two hired laborers				
One family worker	1	3	70.00	23.3
c. With three hired laborers				
Two family workers	1	5	80.00	16.0
Sub-total	10	37	494.00	--
Average	1	3.7	49.50	13.4
Grant total	104	332	3,270.25	--
Average	1	3.2	31.50	9.8

* An "adjusted" rai equals one transplanted rai or two broadcast rai. Cultivation of one rai by the broadcasting method requires roughly only one-half the labor involved in the transplanting method.

243 474 464 Some farmers had artificially reduced their operational cost by utilizing free labor of transient members of the family, who would not stay long if they were not adequately taken care of. These farmers would have to resort to pieceworkers or hired laborers when transient members decided to leave them.

243 434 655 The farm price of paddy was adversely affected by the government control of rice export. It was estimated that huge profits of no less than 100 per cent had been made each year by the government through its monopoly over and later control of rice export and foreign exchange control. This will be dealt with separately later in this chapter.

243 474 423 Although the average size of farm of 30.7 rai for Bangchan can be favorably compared to the average of 23.1 rai for the Central Plain, this does not mean that size of farm is not a problem contributing to low returns from rice. [444] It was pointed out earlier that there was a condition of disguised unemployment among Bangchan operators. Small size elsewhere simply indicates the widespread nature of the problem of disguised unemployment among farm operators in the Central Plain.

243 434 Limited earning opportunity for incomes from sources other than rice is due to the fact that at the present stage of technological development no other crop can be profitably grown in rotation with rice because of agronomic limitations.

243 434 221 The inundation period from the middle of September to early December, during which time no work is needed on

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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The lean time from the middle of February to the end of May is devoted by some villagers, mostly young men, to wage earning outside the village. The size of this temporary labor migration depends on the job opportunities, and these job opportunities depend largely on personal contact. Seasonal off farm jobs are: (a) crude carpentry work usually on nonpermanent construction where cheap temporary labor is preferred; and (b) plantation work in the sugar cane region of Cholburi some eighty miles east of Bangkok.

Inherent Excess of Expenses over Incomes

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The prevalence of debts in the form of credit purchases among Bangchan farmers indicates an excess of expenses over incomes. It has been shown that most cash loans were sought to clear high interest bearing credit purchase accounts, although some were for productive purposes. Even in this latter case, it has been observed that farmers usually borrowed no more than an amount that was immediately needed together with cash on hand to pay for the capital investment. This means that after such capital purchases there was less cash for the household and operating expenses, and so there would be a higher credit account to be settled in the following harvest.

Low incomes coupled with relatively high expenses leave little or no room for internal savings.

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The situation is aggravated by an increasing rate of consumption relative to the ability to produce. While

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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434 among these contributing factors is population pressure.

Disguised unemployment in the case of farm operators
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161 and their family workers and actual unemployment in case of
434 farm laborers indicates a condition of over-population in
464 Bangchan in the sense that a certain part of its population can be removed without materially reducing total production in the area.

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226 In view of a continually decreasing supply of fish,
433 it may be said that the situation has reached the point where
262 it not only affects the per capita income of Bangchan residents but actually exerts pressure on means of subsistence. There are several indications of decreasing supply of fish and other marine animals in the village. First, it is the consensus of opinion gathered by our daily informal talk with villagers non of whom was found to hold a contrary view. Second, a passage in our 1948 log, "X is very lazy. Everybody here in Bangchan catches shrimps and makes his own shrimp paste. He alone does not catch shrimps even though he is among the poorest," indicates that purchase of shrimp paste was in 1948 an exception rather than a rule. In 1952, however, it was found that a total of 22.7 kilograms of shrimp paste consumed in a year by an average family, 6 kilograms, or more than a quarter, was purchased. In this latter year, 83 baht worth of fish and 54 baht of fish sauce were purchased by an average family in addition to shrimp paste as against negligible amounts for the same items in 1948 (we did not conduct a systematic consumption

226 made that any program of fish raising in a closed pond, no
654 matter how effective it may be, should not preclude the need for conservation of fish naturally existing in the open canals.

243 It has been pointed out that Bangchan operators
226 produce 52 per cent of the things they need for ordinary
433 consumption. Thus, rice growing may be seen as a farming-
474 to-reduce-cost enterprise where maximization of profit ceases to be the primary motive of production. It has been pointed out also that rice growing is a losing concern to many operators (in terms of labor income and operator's labor earnings), but the loss has been compensated by the privilege to fish
[146] which is open to all village residents. Since the amount of fish caught constitutes the main and probably the only source of protein intake and at the same time a considerable share in the diet of villagers, continually decreasing supply of fish therefore underscores the immediate need for an effective program for fish conservation as a means to prevent the standard of living of the villagers from falling below the minimum level of subsistence.

161 Over-population in an area of limited job opportuni-
464 ties naturally creates an over supply of labor, which in
465 turn results in low wages. This is further complicated by a wide variation of individual earning from labor of from two thousand baht annually to almost nothing, the latter being the case of transient members of farm operating families.

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243 Finally, it has been pointed out that the kind of
161 training and the type of financial preparation given to young
178 married couples have served only to confirm Bangchan people
464 to their preference for rice cultivation. This together with limited job opportunities open to them elsewhere have tended to keep the villagers on the farms, and thus have tended to regenerate the condition of population pressure in Bangchan.

Lack of Effective Control and Regulationof Water Supply

243 Another contributing factor is the lack of effective
458 control and regulation of water supply, which has caused annual fluctuation of rice crop. On the whole, this crop fluctuation is not as high as is the case in most of rice
[731] growing areas elsewhere. Famine certainly has not been known in Bangchan. Nevertheless, it is a certain sector of rice growers -- the marginal farmers with limited ability to adjust or with relatively little command over capital -- who are seriously affected by annual fluctuation of rice crop.

243 When affluent farmers have a poor crop, their credit
426 purchase accounts may go up beyond the normal level, but they are usually in a position to clear this type of high interest bearing debts at the end of the business year by their net cash incomes or at least by securing loans with lower rates of interest to pay the accounts. On the other hand, marginal farmers are not in a position to seek low interest bearing loans. In case of crop failure, therefore,

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 60 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygynous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap.V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlakha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

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affection overrode kinship.[64] Thus affinal relatives and non-kin neighbors were also requested to assist. Buddhists attended Muslims and vice-versa, (though Muslim women preferred female assistance).

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In emergencies the professional midwives' area was the whole community. They travelled long distances to attend women who were not close kin. No parturient, however, even in an emergency, was ever attended by a complete stranger. In all likelihood, every adult in the community knew the midwives at least by sight.

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As to the size of the practices, reported activities ranged from the Muslim midwife's estimate of 10 per year, down to 2 or 3 per year.[65] The 2 men and the most competent female midwife reported about 4 per year, a figure probably weighted on the side of the difficult cases per year. It is noteworthy that the men, in spite of being as we shall see both mɔ̌ and midwife, did not have larger [462] practices than the women. It was considered basically a woman's skill.

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None of the midwives derived much income from their practices, nor did they expect it to be significant. Their main income came from rice-growing from which, however, the women and one of the males had largely retired because of age. The other male midwife was exceptionally busy as a labor contractor, builder of houses, land-owner, and headman as well. The midwives found the 5 to 30 baht offered

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64. Two teachers who were in the kinship category of granddaughter (lân) to the 3 best midwives, and lived only a few hundred yards from them, were delivered by a woman who was mother-in-law to one and husband's older sister to the other and who was "not a midwife but knows how." Since labor was quick and normal, no higher help was necessary. On the other hand, all 3 of these midwives turned up to help at the confinement of another cherished "granddaughter." Only one of them actually delivered the infant but other functions were diplomatically divided up by the young mother.

65. Hauck studied 46 babies, aged up to 3 and so not all born in one year. Thirty-one were delivered by 4 of the professional female midwives (12,8,7,3 respectively); a male midwife and an "experienced" person had done 2 each; 11 [R02] women, one each (Hauck, 1959:61). A few of the latter 11 [597] were ordinary kin, not midwives.

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in the khwan khăo "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mŏ or to the Mĭnburī Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

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Though living like other elder citizens of the community, in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mŏ was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (thaw ĕchĭp [Mc.F. 990]) when others who had equal or more experience were not so considered?

759 Although as to fees, they said, "It is as you please," these
• [465] women received as a rule the higher honoraria of 10, 20, and
30 baht. They did not have a separate teacher-rite but paid
their respects during regular temple events, such as offer-
ing a pig's head and the other items during someone's ordi-
[212] nation, though the Muslim midwife had her modified teacher-
[214] rite in a separate home ceremony, not at the mosque (cf.
Appendix:Muslim Customs). It was even said of the best fe-
male midwife that "she had a book." She was literate in
Thai. Even if her book were a popular astrological guide,
it carried the reverence accorded all books. Whatever it
[789] was, its possession increased her aura of reliability.
Though the women did not receive their magic at the temple
but rather from a kinsman in the maternal line, their incan-
tations, which appeared to be in the Pali-Thai tradition,
were no less effective.

759 The professional midwives, both men and women, saw
themselves as individual custodians of sacred knowledge and
competent in a technique. They were not only interested and
ready, but obliged to give expert care to anyone, anywhere
it was needed.

The non-professional midwives always thought of them-
selves as voluntary helpers of kinsmen, acting "out of pity,"
and carrying on the female responsibility for new life as
[562] older women helping their younger relatives. The idea of
giving nurture and assistance was so deeply ingrained in the
female office that the professional midwives saw themselves
fundamentally as volunteers.

Learning Midwifery

The decision to deliver a daughter or a wife was not
momentous. One did not have to be "suk" to deliver a baby.
The same practical and compassionate motives that led a
mother or husband to do this led some of these people to
seek out professional techniques so that they might "help
more." One woman, bearing her own child at 25 with intense
suffering, became angry (Thep Thai) because "the midwife did
nothing to help, but just sat and chewed betel while others
did all the work." In desperation she called in her own
mother to deliver her. She also "felt she had many rela-
tives who would need her help." Another was asked by her
mother's brother, a midwife, to accompany him as he was get-
ting too old. He then gave her his magic. A man took up
the specialty after his first child, a son, died at birth
from ineptness, he thought, of the midwife. Another man,
though, took it up as a "minor extra" to his career as a [illegible].
All learned the [illegible] by accompanying and helping an

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from venders almost every day. They said "Some do not pay money to buy food, but pick or get it from the canal or gardens --this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

433 511 Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

243 244 256 262 Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

244 254 Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chilies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

222 262 Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)sa-(5)noo flowers were used by 3 families on one day each;

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landlord-operators were more sensitive to the change in rent rates than were the other groups of farm operators.

Limited opportunity for an alternative occupation was mentioned in the preceding paragraph as one of the factors contributing to the inelastic nature of demand for working land. It was also mentioned in the section on the occupational structure of Bangchan that farm laboring families as existing in the village were indigenous and were an outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent in any land. Limited opportunity for an alternative occupation in the village was also suggested in the same section when it was mentioned that the only possible alternative -- petty trading which was actually taken up by some former farm operators -- was limited by the fact that villagers bypassed local traders and went to the nearby market town of Sinburi for major purchases and variety goods.

Limited opportunity for an alternative occupation outside the village, however, needs elaboration. It cannot be denied that wages in Bangkok, only twenty miles away and easily accessible through good road and bus services, were higher on the average than corresponding returns for labor in the village. It is important to note, however, that what will attract a villager to seek a job in Bangkok is not a higher average wage level in the city but a higher marginal wage there. Regarding the marginal wage, it is highly doubtful that a better condition exists in Bangkok.

243 household. Although labor earnings is a truer measure of
434 a farmer's return, it is less widely used than labor income because no such estimation is involved in this latter measure and because prequisites are much less important in the United States. On Thai rice farms, however, it is not as difficult to estimate the value of farm products used in the household because generally only one kind of farm product -- rice -- is involved and the consumption of rice, although in large amount, can be precisely determined. To a much lesser extent poultry products may be used, but it is also fairly easy to estimate.

583 In theory, the remuneration for family workers'
465 effort is imputed at the going wage rate on their actual contribution in the farm work, when labor earning is calculated. In practice, however, Bangchan family workers receive in addition to board and lodging a certain amount of cash from their family head who is also the farm operator and who pays this amount from farm net cash return. The amount an individual family worker receives varies according to individual need and often to the whim of the family head. To be sure, there is no such thing as a fixed allowance because yearly fluctuation of farm income does not permit
593 such arrangement. One Bangchan farmer put it this way,
434 "Hired labor is usually more expensive than family labor
465 except in good years, for you can't help giving generous gifts to the family in a good year. This year (1949, the year following a bumper 1948-49 crop) I gave my two daughters

434 300 baht for clothing, 500 baht which they spent mostly
• 465 on a pilgrimage to the Temple of Buddha's Footprint, and
593 670 baht for two gold necklaces. That's a total of 1470 baht for the two of them. My wife alone took 1,100 baht received from the sale of the early variety, and I don't want to take the trouble to ask where the money went."

It has been observed that farm income varies greatly from farm to farm as well as from year to year. Farm household expense, on the other hand, has been observed to be less variable. Although the remunerations for farm operators and family workers are directly related to farm income, it would seem unwise to discuss farm income without bringing in first the discussion on farm technology and farm organization and management. We propose, therefore, to limit at the time being our discussion of the remunerations of farm operators and family workers to indicating their respective sources only. We shall have occasion to deal with their patterns and magnitudes in Chapter VII, which will be exclusively devoted to income and consumption of farm operators.

465 The hired laborer receives his remuneration for the
178 farm work in the form of annual wage which is paid by his employer, the farm operator, according to the provision of the oral contract made before each working season. It was found in 1948 that this annual wage was paid in either cash or kind, and in addition the laborer received free board and lodging and one or two working suits. Of 13 hired laborers covered by the 1948 survey, five were paid a cash wage

TABLE 33

ANNUAL WAGES OF HIRED LABORERS IN BANGCHAN AND ITS IMMEDIATE NEIGHBORHOOD
Thailand, 1949-53

Year	Type of Wages*	Number of Laborers Reporting	Total Wage	Range	Average
1949	Cash wage	2	1600 baht	600-1000 bt	800 bt
	Kind, fixed	3	300 tang	100-100 tg	100 tg
	Kind, variable	2	9 rai	4-5 rai	4.5 rai
1950	Cash wage	4	3350 baht	400-1350 bt	838 bt
	Kind, fixed	7	600 tang	60-100 tg	86 tg
	Kind, variable	3	12 rai	3-5 rai	4.0 rai
1951	Cash wage	6	4400 baht	300-1200 bt	733 bt
	Kind, fixed	8	660 tang	50-110 tg	83 tg
	Kind, variable	3	12 rai	3-5 rai	4.0 rai
1952	Cash wage	10	8400 baht	600-1300 bt	840 bt
	Kind, fixed	7	630 tang	50-120 tg	90 tg
	Kind, variable	3	13 rai	3-5 rai	4.3 rai
1953	Cash wage	14	12000 baht	250-1150 bt	857 bt
	Kind, fixed	2	250 tang	100-150 tg	125 tg
	Kind, variable	2	6 rai	3-3 rai	3 rai

*Cash wage -- wage was paid in cash.
Kind, fixed -- wage was paid in fixed amount of paddy agreed upon at the beginning of the season.
Kind, variable -- wage was paid in paddy harvested from a specified area agreed upon at the beginning of the season.
In all these cases, laborers received in addition free board and lodging and two working suits, one at the beginning of the period of breaking the soil and another at the beginning of the harvesting season.

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of the number of hired laborers represent only the case study of hired laborers who were located in 1953 and were interviewed on their past records. Statistically, therefore, it would be misleading to infer the actual employment of hired laborers in each year from those figures. Second, since the same population of hired laborers was used throughout, the effect of increasing age on individual wages must be considered. This does not mean, however, that there was a tendency for the average wage in our sample to rise with the years in relation to the standard wage; because not all of the 34 hired laborers started to work in the same year, rather some started before 1949, some started in 1949, and a good many started in each of the following year. There was also the effect of the generosity of the employer which is to be considered in relation to the wage level.

It would appear, nevertheless, that employment of hired laborers in any specified year can be measured by actual counting or simple random study done in each specified year. Although this is possible now that we have fairly well established our universe, there is still the problem of the hired laborers quitting their jobs before the end of the rice season which had occurred not infrequently. The problem of varying wage rates due to working ability of the laborer on the one hand and to the scrupulousness of the employer on the other may, however, be partially solved by using the maximum wage of each year as the basis for generalization. It is with such cautions that the figures as presented in Table 33 might

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• 465 be of any help in the understanding of the hired laborer situation in Bangchan.

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46 Let us now turn to the last group of farm laborers -- the piece-workers. These laborers receive their renunerations in the form of cash paid at the completion of each job contracted. Four types of farm work were observed to have involved the utilization of piece-workers -- uprooting of rice seedlings, transplanting, harvesting, and digging earth and mounding. Uprooting, the heaviest of all rice growing steps because seedlings must be pulled up in budle and smashed against the shank of the worker, was limited to adult male workers. Transplanting, on the other hand, was the lightest of all these steps involving the itlization of piece-workers and may be done by all kinds of workers including the young. Harvesting and digging and mounding are too heavy for the young but not for the adult female workers to participate, so they are usually performed by adult workers of both sexes.

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[435] It was found in the cost of production study in 1948 that 104 farm operators in Bangchan spent a total of 4,434 baht on uprooting done by piece-workers, 7,931 baht on transplanting, and 13,310 baht on harvesting, or an average per farm of 43 baht for uprooting, 76 baht for transplanting, and 128 baht for harvesting. Although digging and mounding is generally considered a part of farm work since it is done primarily in order to keep the buffalo shed above the water level as well as to improve the home garden; it is not

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463 we finally settled on an arbitrary definition: a profes-
464 sional piece-worker was one who was ready most of the time to be called upon to perform piecework. This automatically eliminated the school children who were able to work only during the school recesses, the poor aged people who had to make a living in one form or another but who were able to perform only the lightest kind of piecework -- transplanting, and members of the well-to-do families who did some piecework for a small amount of pocket money only.

Adopting this arbitrary operational devinition, it may be assumed that professional pieceworkers include all members of the laboring families, small farm operating families, and other families of various occupations not financially well off, who are old enough yetnot too old to work and who are not currently engaged in some other kinds of work.

178 463 465 Table 34 shows work records of the 34 farm laborers earlier mentioned. It is seen that of these 34 laborers, only six had remained hired laborers throughout the periods of their farm work. These were Laborers 8, 9, 11, 22, 27, and 28. The other laborers were observed to have assumed various other statutes in the course of the five-year period from 1949 to 1953, namely, farm operator, pieceworker, family worker, and transient family worker. When these laborers were interviewed, they also gave estimates of their earnings from pieceworking as far as they could remember. In 1949, for example, piecework earning figures were available from

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465 two laborers -- 1,000 baht for Laborer 7 and 500 baht for Laborer 30, avereging 950 baht for the year. In 1950, earnings of 500, 850, and 1,000 baht were reported respectively by Laborers 18, 19, and 29, avereging 703 baht for the year. In 1951, only one case of 600 baht earning was reported by Laborer 5. In 1952, earnings of 600, 1,000, 1,000, 1,000, and 320 baht were reported respectively by Laborers 5, 14, 29, 30, and 32, avereging 790 baht for the year. In 1953, earnings of 2,000, 600, 1,000, and 300 baht were reported respectively by Laborers 4, 5, 14, and 19, avereging 975 baht for the year.[4]

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464 In the preceding paragraph, the term "transient family worker" was introduced. This refers to a person distantly or not at all related to the family in question who has been accepted as a family member with a dual status of half relative and half laborer. Since there is actually no genuine family tie, such member has been observed to come in and go out of the family rather freely as the occasion [465] may arise, and hence the term "transient". While staying with the family, the transient member is expected to participate in the family work that is appropriate to him in exchange for good, shelter, clothing, and occasional monetary gifts.

In 1948, we came across a case where an old man of 80 was living with one of the seven headmen of Bangchan as

4. Table 53 gives an idea of the meaning in real terms of these incomes.

592 a transient member of the family. This was rather unusual,
464 however. The pattern was that a transient member was
[561] accepted when he is rather young. If he was quite mature,
he might also be accepted; but the expressed motive of the
592 accepting family would then be somewhat different. When
• 465 approached by a mature prospective transient member, the
464 family head would most probably say that he could not afford
to keep a hired laborer but he would be glad to let the man
or woman stay with him as a member of the family, and that
they might as well "share in the food, and share in the work".

It has been observed that transient family workers received much less from the family than the standard wage
[435] of hired laborers. While the latter received an annual wage of 1,000 baht or the crop from 5 rai, the former might be given only 50 or 100 baht a year. To farm operators of moderate or large rice farms, transient family workers were certainly an economic advantage. It was quite natural that these operators would try to keep them in the family as long as possible. Among the several methods observed were the following: (1) adoption; (2) promise to sponsor ordination of the young male transient member; and (3) giving a certain amount of lampai.

592 It was mentioned in the section on the family in
464 Chapter II that adoption as practiced in Bangchan did not
[597] involve legal registration of the adopted child, and that
[792] maltreatment of adopted children was not infrequent. To sponsor an ordination was in fact not quite as expensive

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*243 178 463 [311] become investors, traders, and public servant. In 1948, these eight families were operating farms of a combined area of 286 rai, ranging from 20 rai to 80 rai, averaging 36 rai per farm. Seven of these eight families owned rice fields totalling 201 rai, ranging from 5 rai to 80 rai, averaging 29 rai per family owning land. Evidently, it may be said that these seven families deliberately had given up farming in favor of new occupations from which they expected higher remunerations. As for the one family owning no land, the same generalization still holds. This family was operating a 22-rai farm in 1948, a farm of optimum size which could be expected to yield a higher income than any of those operated by the thirteen former operators who had turned farm laborers. The head of this family, nevertheless, got a permanent job in the Bangkok Harbor, a government owned concern, with a salary of more than 7,000 baht annually which is much higher than his former net income from operating a rented farm. [464] [465]

A case has thus been built for the relative unattractiveness of farm operating occupation among a certain sector of farm operators who had shifted to other occupations. This was responsible for the decline of farm operating occupation from 80 per cent of the occupational structure of the village in 1949 to 72 per cent in 1953 (Table 11). If it had not been for the 14 new families branching out from existing families who had taken up farming during the period between 1949 and 1953, the decline would have been more abrupt.

*243 476 a "ngarn" (lit., work), which is one hundred bundles of seedlings uprooted in case of uprooting, one-fourth of a rai transplanted in case of transplanting, and also one-fourth of a rai harvested in case of harvesting.

The author followed closely every cooperative uprooting which Chom participated. It was found that this operator had bilateral obligations with 20 other members who during the 1953 season had uprooted for him a total of 41 units or 4,100 bundles of seedlings -- 1,400 bundles on July 22, 1,100 bundles on August 3, and 1,600 bundles on August 15. Chom had to make good the reciprocal work of this same amount for all his guest workers according to their individual shares of contribution to him. At the end the records show, however, that Chom himself had contributed only 28 units or had uprooted only 2,800 bundles for fellow members. Although his son Phuan had contributed six more units, the family was still short of seven units. As it actually happened, Chom was away from the village on a house building work in Dhonburi from August 18 to 25. Dkring this period of eight days he was supposed to participate in seven cooperative uprootings. His only substitute, Phuan, could not do the work for him for Phuan was also tied up in cooperative transplanting. Chom therefore arranged for [464] [465] a professional piece-worker to do the seven cooperative uprootings he was committed to at the going rate of 13 baht per 100 bundles uprooted.

Records show that at the end Chom's contribution to each of his twenty fellow members was individually equal to the

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243 476 464 cooperative uprooting were exceptionally good workers, and this was the reason why they were approached when help was needed. These men accumulated work credits and utilized them when they were contracted by operators who had not enough family labor to uproot their seedlings. Chom, for example, after utilizing his own family labor as well as all the work credits he earned in cooperative uprooting, still was in short of labor to uproot his latest varieites on August 22 in which ten units of work were needed for the estimated 1,000 bundles [465] to be uprooted. He, therefore, contracted Sa, a fellow member, to do the job for 130 baht. On that date, Sa called upon ten members including himself to uproot Chom's seedlings in his name. So the same old faces appeared on Chom's farm. Outwardly, this looked like an ordinary cooperative uprooting on the mutual help basis. In reality, however, it was a business deal out of which Sa received cash payment from Chom who in turn received labor. Our records show that Sa had another earlier contract to uproot 1,700 bundles for another operator, and the same method of recruiting labor among fellow cooperative members was used. Since our records show only cooperative uprootings conducted among this group of twenty-four members, it was possible that Sa might have a few more contracts which did not appear in the records.

Ordinarily, farmers do not like to be obligated to professional piece-workers, for they might later be asked to work in return for somebody they do not like. In fact, there was some talk in 1953 among farm operating members on the

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243 476 464 possible ways to eliminate the participation of professional piece-workers. From the standpoint of professional piece-workers, however, to get oneself admitted into a cooperative group is a boon to their respective families for job opportunity [465] would be assured to them. This is the reason why Sa was able to earn 2,000 baht in 1953 while most of his fellow piece-workers' earnings were as low as 300 or 600 baht.

243 476 The same principle of labor reciprocity held in the other kinds of cooperative work, which also involved cash payment in the end to professional piece-workers who served as clearing agents to settle the balances of work credits. Generally speaking, such balances were more in case of cooperative transplanting than cooperative uprooting, and the same were even higher in the case of cooperative harvesting. This was to be expected because transplanting involved about double the amount of labor spent on uprooting, and harvesting alone required about a tenth more than the combined labor requirement of these two operations.

243 461 476 Chart 1 shows both man-labor spent by Chom farm staffs and man-labor spent on Chom Farm, the former being represented by the solid line and the latter by the dotted line. On the basis of equal reciprocity of labor, these two should be technically equal in total magnitude. They differed, however, in their daily distribution. It is seen that the two lines coincide during the periods from June 4 to July 14, from September 30 to December 3, and from January 26 to February 4, when there was no cooperative activity. During the periods from July 15

243 426 432 Differentiation in paddy prices is limited to cases where farmers have received in advance the payment for paddy to be delivered at harvesting time. This is a common practice which is called in Thai "tog khao" (lit., fall rice). Usually, the advance price received by the farmer is about half or not more than three-fifths of what he would normally receive. Considering that cash is usually received about a month or two before the delivery of the paddy, it would seem that tog khao is a kind of loan with as high a rate of interest as from 25 to 50 per cent per month.

243 426 465 A similar practice is adopted with respect to advanced payment for piecework, where pieceworkers are committed to uproot, transplant, or harvest at about half of the prevailing rates. This is called tog raeng (lit., fall labor).

243 128 427 Tables 24 and 25, in the section on land tenure of Chapter III, show a wide range of rental rates of rice lands which have not demonstrated any marked difference in crop producing ability.

Rates of interest in Bangchan vary greatly from 0 to 10 per cent per month. This topic will be discussed more fully in later sections of this chapter.

243 434 556 The important point that should be observed in connection with these differentials in paddy prices, rates of interest, rentals, and wage is that it is the less affluent farmers who usually bear the burden of higher costs due to these practices. Thus, these differentiations serve only to widen the gap between poor and well-to-do farmers.

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made that any program of fish raising in a closed pond, no matter how effective it may be, should not preclude the need for conservation of fish naturally existing in the open canals.

It has been pointed out that Bangchan operators produce 52 per cent of the things they need for ordinary consumption. Thus, rice growing may be seen as a farming-to-reduce-cost enterprise where maximization of profit ceases to be the primary motive of production. It has been pointed out also that rice growing is a losing concern to many operators (in terms of labor income and operator's labor earnings), but the loss has been compensated by the privilege to fish which is open to all village residents. Since the amount of fish caught constitutes the main and probably the only source of protein intake and at the same time a considerable share in the diet of villagers, continually decreasing supply of fish therefore underscores the immediate need for an effective program for fish conservation as a means to prevent the standard of living of the villagers from falling below the minimum level of subsistence.

Over-population in an area of limited job opportunities naturally creates an over supply of labor, which in turn results in low wages. This is further complicated by a wide variation of individual earning from labor of from two thousand baht annually to almost nothing, the latter being the case of transient members of farm operating families.

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at either seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

Table 5. Diet Classifications for 75 School Children in Bang Chan, and Percentage of Children with Each Diet Classification who Missed Lunch

(Adapted from Thorangkul, 1957)

Diet classification[1]	Percentage of children	Percentage of children who missed lunch	
Class I	8	Boys	46
		Girls	45
Class II	61	Boys	73
		Girls	68
Class III	31	Boys	81
		Girls	98

1. See text for basis of classification.

vegetables eaten, since items from these two food groups were not commonly eaten as snacks. Note, in the illustrative records presented in translation (Appendix A, p. 98), that the child whose diet was considered to be in Class III did not eat a regular lunch on any of the six days for which records were available, whereas the child whose diet was classified as I ate a regular lunch six times out of seven.

Family Food Shared With Others

Throughout the year families prepared especially good meals for persons who came to work cooperatively with them. Every rice-grower entertained his cooperative harvest crew, some the transplanters. Hired laborers were not usually served such feasts, but the conviviality of the harvest season called for a round of liquor even for them. One harvest dinner for 48 cost 50 baht, plus eels (60 baht) and rice. Cooperative home pounding of rice was still practiced in some households and thought to be fun. In one day enough rice to produce 40 tang (640 kg.) was pounded by groups of 15 to 20 workers; in an evening 20 tang were done. If 40 tang were milled, workers were served a full meal; if 20 tang, a dessert only. Other occasions were fish-pond draining, house raising and repair. Each participant in the fish-pond draining at Household 21 was fed (3)khaaw (3)tom (soupy rice) for lunch and "an enormous supper," in addition to receiving the traditional pot of fish. If good food were not served at these functions people

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the village to find dependent relatives—siblings, cousins, nephews, nieces— 596
who, unable to make a go of it elsewhere, are accepted into a relative's family, sometimes to the extent of eventually taking over the headship of the family. Sometimes, on the initiative and invitation of an elderly or lonely relative, an entire nuclear family will be asked to take over or share a household. Children of poor or "inconvenienced" families (where a new 596
child is born before the first is weaned, where there are too many children 597
for the mother to handle comfortably, where a youngster is simply being "troublesome") are adopted or "borrowed" by other villagers for varying periods of time. This is done preferably by relatives, sometimes by neighbors, and often, in the case of boys, by the monastery, where the children become hand-servants to the monks and are supposed to absorb, by a kind of osmotic process, righteous ways of behaving. (Of my three male life history informants, two were given over to relatives at the ages of two, the third at the age of eight; one spent his childhood with four different families, another with five families; one describes his adolescence as "wandering from place to place." The psychological implications of such displacement should not be underestimated.) On occasion, two independent 596
nuclear families—almost always connected by some kinship tie—will join [594]
together for convenience to share cooking facilities, in which case they effectively become a single extended family. And in some cases, although rare, one will encounter adult children living in independent households but handing over their income to a parent, living in still another home, who disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a 596
husband to be away for four or five months at a time earning money in 591
Bangkok, or during the dry season on a vegetable farm, returning home to [464]
visit his wife and children whenever opportunity permits, with or without funds. The wife may still maintain their household, but often returns to 596
live with her own parents.[7] In a similar vein, although obviously more 586
extreme, it is not unusual to find families in Bang Chan which have simply 182
"disintegrated," as the villagers say. Much depends here on the circumstances of family members. Bang Chaners usually reserve the term "disintegrated" for families that no longer have the economic wherewithal or justification for staying together as functioning units. In these instances, family members simply go their separate ways, if possible back to their families of orientation or to other relatives, husbands perhaps into the monkhood, and the children to whomever will take them. Most frequently, [578]
"disintegration" is characteristic of very poor families, and in the minds of

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[7] This pattern may be related to the old *corvée* labor pattern when able-bodied [466] •
village men were away from their families for extended periods of time. [651]
[174]

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tries to identify the bases of their contact. Having once identified these, he then tends to assume that not only the bases but the relationships themselves are relatively constant and reliable.[18] The relationship between Bang Chan employer and employee is an excellent example of the problem. An investigator concerned with specifying the bases of their relationship could readily point to two factors; contractual (in the strict meaning of the term) and sentimental. The former involves the exchange of a sum of money for labor fulfilled. The latter involves an array of behaviors expressive of the employer's concern for his retainer: feeding him well, not making him work too hard, treating him like a younger sibling or "adopted" child, recognizing his birthday, or buying him small gifts if possible. Interestingly, the subordinate's obligations to his superior are considerably less explicit and social psychologically less demanding: he must simply respect and obey him. However, as accurate as these specifications are, they say nothing about the reliability of the relationship. It may be broken off over matters that have nothing to do with how well each is fulfilling his interactive responsibilities. The employee may become bored; he may have a sudden desire to take a trip or go to Bangkok; if he is from a distant village, he may suddenly become homesick and just as suddenly leave. As indicated earlier, he will frequently do this without saying a word to the employer; his absence is sufficient to indicate the termination of the relationship.

Very often the breakdown of the relationship is short-lived. I recall my exasperation during the early stages of field work when right in the middle of an important interview, my field assistant would tell me—with absolutely no forewarning—that he had to be in Bangkok in an hour and a half, and would have to leave now. When I suggested that the interview first be completed, the reply, the first time this happened, was "No, I promised a friend I would meet him at the movies, and I have to go now." When asked why he made a movie date during working hours, he answered: "Well, this was the only time my friend could go." The straightforwardness of his response indicated that it was both futile and dangerous (he might never return from the movies) to ask why the friend could not go alone, what the real reason was for his sudden departure, or why he did not tell me beforehand so I could have made different plans. Pursuing such queries would have served only to annoy my assistant, rather than hold him; and from his own point of view, they were really not my business. This kind of behavior was neither idiosyncratic to this individual nor limited to movies. Later on, when other assistants asked for intermissions, the explanations

[18] Certain relationships are of course explicitly recognized as inconstant and unreliable. The relationship between appliance owner and repairman in our society, for example, has come to have these special attributes—not without strain and exasperation, but as part of the reality of the relationship.

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571 123 • 466 given were equally oblique. Although I never really overcame my feeling of helplessness in dealing with such situations, I did manage over a period of time to communicate to those in my employ the appropriateness (at least regarding our own particular relationship) of giving me fair warning, *e.g.*, "Europeans are different in this way."

571 Again, there is nothing extraordinary or unique about personal desires and inclinations intruding on the stability of an interpersonal relationship. However, what is unique to Bang Chan and Thai culture in general is the frequency of such intrusions, the extent to which they take precedence over the responsibilities of the established relationship, and perhaps most important, their general expectability. No Bang Chaner is ever taken aback when another does not fulfill his assumptions about how that other will behave. Note that these intrusions may have little effect on the face-to-face contacts existing between people. My assistant's declaration that he was going to the movies was presented in a most affable way and in the other examples cited, where people were left in the lurch, there need not have been any contact whatsoever between the parties involved.

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114 *156 171 Reference was made to these modes of relationship in the section on Bang Chan social organization and kinship. However, they received their first formal, and perhaps most elegant, formulation in a now famous article entitled "Thailand—A Loosely Structured Social System," by the late John F. Embree (1950). Embree's application of the notion of "loose structure" was mainly descriptive rather than analytic; it was used to summarize a wide variety of empirical materials. Thus (182): "The first characteristic of Thai culture to strike an observer from the West, or from Japan or Vietnam is the individualistic behavior of the people. The longer one resides in Thailand the more one is struck by the almost determined lack of regularity, discipline, and regimentation in Thai life. In contrast to Japan, Thailand lacks neatness and discipline; in contrast to Americans, the Thai lack respect for administrative regularity and have no industrial time sense." After providing an extensive series of examples—on the lack of binding filial piety, on the tendency to permit a thief to steal from a neighbor's house without raising an alarm or attempting to stop him, on the capacity to delay and double-talk those with whom one has business dealings, Embree concludes (184): "The point here once more is that . . . while obligations are recognized, they are not allowed to burden one unduly. Such as are sanctioned are observed freely by the individual—he acts of his own will, not as a result of social pressure."

*114 156 While Embree's formulation is by definition phrased in social structural terms, it inevitably directs our attention to an underlying motivational issue: the nature of the villagers' dispositions to conformity. Conformity to the expectations of others—whether such expectations are shared, comple-

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A Bang Chan employee who walks out on his superior because he does not like the food he is served or a villager who agrees to lend a person money and then is not at home when the person calls for the loan can easily account for his actions by saying that circumstances had changed.

It must be noted, and this is crucial, that there is generally no animosity felt toward the employer with the unpalatable food, toward the fleeing[21] employee, or toward the unreliable creditor. Villagers are thoroughly conditioned to the possibility of such events and accept them simply as part of the inauspicious nature of life. That they are in fact considered inauspicious rather than results of the willful or malevolent intentions of others is not accidental. Bang Chaners faced with a breakdown in the fulfillment of commitments can of course point to the individual who directly caused it. But there is no satisfaction to be gained from this. The person who broke his obligation must have had his own good reason, and beyond this, there were probably other factors, unknown to both parties, that caused the breakdown. For most Bang Chaners, all human intentions are forever set within a framework of cosmic, and particularly moral, unpredictabilities.[22] If things do not work out the way one expects, it is most likely due to the inauspiciousness of the time, place, and persons involved. The proper time is particularly important. It is precisely for these reasons that the more important events in a person's life—marriage, trying to win a lottery or a maiden's heart, taking an important trip—are so often preceded by ceremonial attempts to decide the cosmologically auspicious conditions for effecting the event. These involve consultations with monks, shamans, and other religious practitioners, and highly ritualized forms are followed to select the appropriate conditions. (See Textor 1960 and 1962 for systematic discussions of the various kinds of problems and practices associated with this complex.) The kind of occurrences discussed above are not of this order of significance, but they do partake of the same cognitive assumptions that lead to such highly institutionalized practices. Thus, whereas most Occidentals would point exclusively to the actions of the other person as being both the necessary and sufficient cause of the interactional breakdown, Bang Chaners, who have considerably less confidence in human capacities, would really not be sure. To them, human volition represents only one of several indeterminate and uncontrollable factors giving rise to events. Who knows what accident, change of heart, sudden windfall—particularly one occasioned by something done by one of the parties several lives earlier—might intervene to alter what had originally been planned and agreed upon?

[21] This is just the term that villagers, with their wonderful sense of hyperbole, apply to such cases. The original Thai word is *nii*.

[22] I am indebted to L. M. Hanks, Jr., for suggesting this line of thought.

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*243
• 466 Difficulty arises when farm workers are classified individually because of duplication. It was mentioned in Chapter II that family members might work for their lampai after they had fulfilled their obligation on the family farm work. It is seen, then, that a family member may be considered as both family worker and piece-worker. Even the farm operator himself may earn extra income from piece-working and thus becomes also a piece-worker. In fact, most farm operators who had only a small area to work did have time to earn extra income this way. It is only the hired laborer that could not earn extra income from piece-working because he is bound by contract to devote all his time to his employer's farm and household work. It is considered unbecoming for a hired laborer to take time out, even at night, to fish for his own biological family.

Sampling Technique

*128
621 So far we have been dealing mostly with the universe of our study -- the total population of our "natural" Bangchan Village as defined in Chapter II; although occasionally, it might have been noticed, reference has been made to a sample of 104 farm operators and of 96 continuing farm operators.

[121]
[161] Our primary attempt in this community study is to cover the entire village. It is obvious, however, that all relevant information cannot be gathered on some 300 families comprising this village of about 1,700 people. We may, for

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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178 some hired laborers who had left the village before the survey was started were not included, and so were some former hired laborers, especially those working as such in the earlier years, who might be living in the village but were not identified as former hired laborers. Third, of the 34 cases covered by the survey nine were persons of 20 years old or younger as of 1953. Naturally, these persons would not be considered as hired laborers in 1949 or even in 1950, for they would be too young then for the job. Besides, it was not necessary that all hired laborers should begin their job as soon as they had attained the proper age of say 18 years, for there were many factors militating against taking up the job at an early age, one of which was obligation to the family. As a matter of fact, two among our 34 laborers were obliged to quit their jobs because their parents wanted them to go back to the family and help in the farm work. One of these two laborers remained with the family for a year in 1951, went back to work with his former employer in 1952, then emerged as a farm operator in 1953. The other quitted the job in 1952 and had since remained a family worker on the family's rented farm. Fourth, these 34 laborers varied in sex, age, farming experience,
464 and working ability. Fifth, the employers of these hired
466 laborers also varied in the degree of generosity exemplified by the amount of wage they agreed to give their employees and their relative willingness to observe the oral contract. This last point was important in Bangchan where the supply

464 for labor exceeded the demand for it. Some employers were
• 466 known to have been in the habit of cheating their employees. To cite an example, in March 1953 A, a young man of 16 who was known to be one of the best transplanters in the village, was hired by Operator B at 50 baht a month. After working for B for three months, A quit the job because his employer had paid him only his wage for the first month and there was indication that he would not receive any more for his labor from his employer. The author was informed about this whole business by A's father, Laborer C, who complained bitterly against B. That happened just before the beginning of the 1953 rice growing season. It was rather surprising that the author discovered that a month later Laborer C was hired by his son's former employer -- Operator B. Three months later, the author saw Laborer C working not on B's field but on some body else's farm on August 19. Upon inquiry, it was found that history had again repeated itself -- Operator B had just fired Laborer C and refused to pay him for his three months' work. "He ate more, but worked less, and always found asleep," complained Operator B, "Besides, he was in the habit of criticizing me behind my back."

*128 These five points were brought up in connection with
464 Table 33 in order to caution against two generalizations
178 that might be made from a glance at the table. First, the number of laborers which appears to increase progressively from 1949 does not in any way indicate that more and more hired laborers have been employed in Bangchan. The figures

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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592 as it might seem to be, for there was a wide range of
464 ordination expenses and the family head naturally tended
792 to arrange one that was not so expensive unless it was for his own son. He might even arrange a joint ordination of
592 which the cost was much reduced. Moreover, most of the cost
464 of the ordination would be covered by the customary contributions made by neighbors. The lampai arrangement, which was nothing but a sophisticated term for wage, was a real concession on the part of the family head, indicating that he really wanted to keep the transient member in the family even at a certain cash expense.

464 The presence of transient family workers and their
592 relatively low remunerations indicated a condition of popu-
466 lation pressure onland. Already, these people had adversely
[160] affected the laboring sector of the village economy because they represented an additional supply of cheap labor. Although they had contributed to a low cost of producing paddy and thus benefited the operators, with the rise of the price of foods which farmers had to buy and with the decline of free food (in the forms of fish and aquatic plants) transient family members may in time become a liability rather than an asset to the family. To be sure, when such a time has arrived, the family would be reluctant to admit a transient member. The trouble, however, is that the cost of maintaining an extra family member is implicit and not readily distinguished by the family. It would thus take some time before the real situation would be recognized.

*243 times. Using too many varieties of rice on a farm, however,
221 will complicate the working schedule; and sowing times of these
461 varieties cannot also be spread out too far apart because seedlings should all grow up to the size appropriate for transplanting some time before the deadline set by the water level. It has been observed that most farmers grow from three to six varieties on their farms.

* 243 Another efficient device for spreading out labor is
221 that of farmers in a locality organizing themselves into
461 informal cooperative work groups to perform on a mutual help
• 467 basis such field work which can be best cooperatively done, such as uprooting, transplanting and harvesting. There were three cooperative work groups in Bangchan: (1) Mu Sapan Yao, or the Bridge Group, consisting of farm operating families living in the vicinity of the bridge across Bangchan Canal; (2) Mu ha Wat, or the Near Wat Group, consisting of families living around Wat Bangchan; and (3) Mu Bon, or the North Group, consisting of families living in Upcanal Bangchan. The organization and the system for labor compensation of these various informal work cooperatives will be discussed in the next section.

Cooperative Work

*243 There were five kinds of cooperative work in Bangchan --
476 cooperative uprooting, cooperative transplanting, cooperative harvesting, cooperative weeding, and cooperative pounding of cargo rice. While the first three kinds were important undertakings through which a major part of those rice production

7: Janlekha X-4.5 (1948-1953) 1956 AO7 Central Thai AO7
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TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

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Date		Animal labor	Human Labor		
			On farm	On coop. work	Total
		Buf-hrs	man-hr	man-hr	man-hr
Feb	1	16	25½	--	25½
	2	16	39½	--	39½
	3	14	43½	--	43½
	4	--	34	--	34
	5	24	38½	--	38½
	6	8	22	--	22
	7	--	5	--	5
	8	8	10½	--	10½
	9	--	--	--	--
	10	--	--	--	--
	11	--	--	--	--
	12	--	--	--	--
	13	16	12½	--	12½
	14	--	16	--	16

426 two tang of rice are required to pay at harvest time for one tang of rice borrowed during the cash-scarce work season; and (b) Toq raeng wherein an advanced payment of say 10 - 15 baht is made for a promise to harvest one rai of paddy which normally brings in a cash wage of 25 - 30 baht payable on the day the work is done.

Scarcity of credit and the consequent high interest rates naturally discourage productive investment, for those who need operating capital certainly cannot afford to pay for these high rates of interest and those who have cash at all would do much better by straight lending.

426 • 471 184 Scarcity of cash and credit in the village is a blow especially to the marginal farmers who comprise the majority of Bangchan operators. These are farmers with a low index of capital formation potential who are often found among the land-thirsty category of operators. It has been pointed out that farmers with a high index of capital formation potential could more easily adjust their credit situation and thus are able to avoid high interest bearing debts. The marginal farmers, on the other hand, cannot do likewise. Scarcity of cash and credit and its consequences -- high interest rates and discounts and premiums of various forms -- have certainly put these marginal farmers at a most disadvantageous spot of receiving less for the same unit of labor and product and of having to pay more for the same unit of goods. Under this circumstance, the gap between the affluent and the less affluent farmers is ever increasing.

*243 256 • 472 Although private rice millers in Bangkok operate with a rather high degree of collusion, in the countryside the many small millers compete actively on the basis of price charged for their services or price paid for paddy or both. The comparatively high capital investment of the enterprise has rendered inter-mill competition in the countryside very intense, and it is obvious that the farmer gains economically from such competition. If somehow the government could, by a carefully conceived gradual program, induce a large number of smaller mills to move from Bangkok to the countryside, the farmer will benefit all the more. Already, the trend has been for gradual business decline for Bangkok mills and business upswing for the countryside mills.[8]

*243 256 656 44 It is rather unfortunate, however, that the government has explicitly taken the view that small rice mills (capacity of five tons and under) in the countryside are detrimental to the interest of the farmer. It is officially held that small rice mills would bring about a large number of middlemen who would then combine to suppress the farm price. Actually, more middlemen tend to produce correspondingly keener competition in the marketing process which is beneficial, not detrimental, to rice growers.

*243 256 433 Small rice mills, which may be more conveniently erected in the villages and perhaps with local capital, will reduce the cost of transporting rice by a third, for about two-thirds of the weight of paddy is head rice, the other

8. The Economic Yearbook, edited by Luan Pannoi, Bangkok, 1951.

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janlekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 16 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand [Kingshill 1960:7]).

Besides the work in rice-fields, women dug and cleaned

close touch with each other's activities and needs.

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time.

Wealth Differences:

Way of Life

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable.

594 What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the
434 families, living in tiny separate cottages.[1] Usually with in-
444 adequate or no land, they earned an irregular income by hiring
423 themselves out for farm or other work. At the other extreme,
596 in a hamlet-like cluster of dwellings, lived a closely affili-
532 ated group of kin. A senior couple more or less headed the
476 married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

855 Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or
[252] go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes stay-
596 ing home from school to do so. Where the adult cooperative
476 group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons
[971] could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

241 Plowing could be done by a man and wife, but for both
462 transplanting and harvesting which had to be done within a few
476 days, large groups were necessary. Two patterns of auxiliary
464 group labor prevailed: reciprocal cooperative work, and hiring of labor.

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114 1. Janlekha, 1955, categorized families as 5% "one-
162 person," 59% nuclear, 8% limited extended (including one or
594 more parents of a spouse), 27% extended (including dependent
596 married couples or other collateral relatives), and the temple
423 residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

Table 5. Diet Classifications for 75 School Children in Bang Chan, and Percentage of Children with Each Diet Classification who Missed Lunch

(Adapted from Thorangkul, 1957)

Diet classification[1]	Percentage of children	Percentage of children who missed lunch	
Class I	8	Boys	46
		Girls	45
Class II	61	Boys	73
		Girls	68
Class III	31	Boys	81
		Girls	98

1. See text for basis of classification.

vegetables eaten, since items from these two food groups were not commonly eaten as snacks. Note, in the illustrative records presented in translation (Appendix A, p. 98), that the child whose diet was considered to be in Class III did not eat a regular lunch on any of the six days for which records were available, whereas the child whose diet was classified as I ate a regular lunch six times out of seven.

Family Food Shared With Others

Throughout the year families prepared especially good meals for persons who came to work cooperatively with them. Every rice-grower entertained his cooperative harvest crew, some the transplanters. Hired laborers were not usually served such feasts, but the conviviality of the harvest season called for a round of liquor even for them. One harvest dinner for 48 cost 50 baht, plus eels (60 baht) and rice. Cooperative home pounding of rice was still practiced in some households and thought to be fun. In one day enough rice to produce 40 tang (640 kg.) was pounded by groups of 15 to 20 workers; in an evening 20 tang were done. If 40 tang were milled, workers were served a full meal; if 20 tang, a dessert only. Other occasions were fish-pond draining, house raising and repair. Each participant in the fish-pond draining at Household 21 was fed (3)khaaw (3)tom (soupy rice) for lunch and "an enormous supper," in addition to receiving the traditional pot of fish. If good food were not served at these functions people

264 would not come willingly to work. When a family with a repu-
476 tation for stinginess diluted the (3)khaaw (3)tom too much,
574 the group refused to eat any, thereby reminding the host of his obligation for hospitality.

574 Guests to whom meals were served fell into four categories: 1) kin, 2) visiting dignitaries, 3) priests and 4) drinking companions. Kinfolk who came as guests were married children, or those who were away at school or work, or kinsmen from Bangkok or elsewhere. The older the relative or the greater the distance travelled, the greater the honor accorded him. Foods were exchanged. Two visiting ladies travelling in a large boat, made an annual round of all their relatives, bringing certain "city" foods and receiving substantial gifts of rice, fish and fruit. They stayed for several days as guests of one family, then moved on. Every person from Bang
143 Chan who visited a relative in Bangkok carried big packages of food, usually rice or eggs, as gifts. With the inflated prices in Bangkok, it was advantageous to have a "country cousin" who might bring food. Visiting kinsmen always recognized the need for eventual reciprocity.

Visiting dignitaries were usually entertained by hamlet headmen. Meals served to visiting officials, policemen and others might be elaborate, involving cooperative help in preparation, but reciprocity, if any, rarely took the form of a return meal.

192 Regular visits of the priests, as well as the invitation of priests to the house for special events, have been mentioned. Priests might also come from afar, usually staying at the temple but receiving generous offerings of food from people of the community.

562 The custom of convivial get-togethers of either or both sexes was well established. Men traditionally enjoyed "stag" dinners of four up to twenty or more whenever the ingredients for a turtle, frog, cobra or other snake curry were available. Chicken curry might also be thus served, and once a catfish mash was prepared by a male visitor from the north. These curries were cooked by men, and the host served liquor freely.
184 The all-male character of the occasion reflected the old re-
188 strictions on women's partaking of flesh foods (see p. 42),
213 but older women did not hesitate to join in the drinking.
524 Women also got together in drinking parties, sometimes to play cards.

In addition to sharing food with people in these four categories, the general rules of hospitality required that anyone who came to the house at meal time, should be offered food, or at least a drink of liquor, tea, or plain water.

796 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the [476] time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives [782] and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A 764 big cremation might require planning in detail for years ahead: 796 invitations to priests and relatives in distant parts of the 574 country; hiring an orchestra and obtaining ceremonial gear. 533 For the largest events, when the guest lists ranged upward to [926] 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person, [258] usually one of the "professional" cooks of the village. The [476] day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

[262] The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an 262 annual homage-to-the-teacher rite. It is the nearest approxi- 796 mation to a quantitative record of food for a ceremony that 895 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either 796 at 7 a.m. or 11 a.m., or both, always at least in part by the 792 host, who sat and chatted with them. No one else ate until

In Bang Chan when donations for a new school
264 building warranted buying the foundation materials, so that
476 volunteer labor was solicited for their installation, some of
946 the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

782 The spirit-offering, or the portions eaten by a partic-
854 ipant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests.
262 The pork was cut up and eaten with a hot sauce, or put into a
252 "with-rice" dish. It was especially appropriate with liquor.

262 The use of food ritually was not limited to the ceremon-
755 ial season nor to big events. The same purposes underlay the
852 use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

43 The benefits of a (l)ngaan accrued to every participant
554 down to the last worker and contributor according to the degree
796 of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

796 One assistance in the financing was that every invited
476 guest made a contribution, customarily 5 to 10 baht, which
435 helped defray the costs. In 1952, household heads reported these contributions as totalling from 30 to 1.000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (l)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

storekeeper: about 800-900 liter bottles per month during the 3 months dry season as compared to about 350 bottles per month during the 9 months of the rice season.

Moslems never served liquor at their weddings, cremations, and other auspicious events. Moslem residents occasionally attended Buddhist (l)ngaan in spite of dietary proscriptions that Buddhists did not observe.[1] A medium (spiritualist) commented however that because pig's head was essential for her homage-to-the-teacher rites, some Moslem sick persons preferred to go to the Buddhist temple for treatment. There the priest-practitioner could afford to set up a separate kitchen for his Moslem patients, and so spare them the distress of confronting pork. To one big ordination Moslem guests brought their own food. Buddhists came somewhat more often to Moslem ceremonies.

We do not have enough information to appraise the nutritional significance of food eaten at ceremonies. Some individuals got a great deal of it, others very little. One must remember that the (l)ngaan was not a public but a private event at home, to which guests came on invitation. Although cremations and the teacher-rites of priest-practitioners were held at the temple, and so had a semi-public character, no one who was not invited presented himself for food. Of the participants, the working group undoubtedly received the most food; they were there the longest time, had regular meals, tastings and snacks throughout the (l)ngaan meal itself. This group comprised the host, co-sponsors and their immediate kin; other relatives and friends who were asked or who volunteered to help. The feeling was, if one were "very fond" of the host, one volunteered to cook. If less close, one was invited as a guest, but made the usual cash donation. Sociable persons combining skill and energy were invited often and volunteered often, hence spent many days at ceremonies. Young unmarried men and women were asked and liked to be asked to work, for such occasions offered a great chance for fun and flirting.

Different degrees of participation may be estimated from Janlekha's (1955) figures for reported contributions ranging from 30 to 1000 baht in a year. Since a contribution of 5 to 10 baht per (l)ngaan was customary, the villager with the lowest reported contribution probably attended from 3 to 6 ceremonial occasions. Attendance at 100 or more (l)ngaan is unlikely, hence the villager who gave as much as 1000 baht probably made larger contributions per (l)ngaan.

What sort of persons or groups in the village were invited as guests? Every host's list included his older

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1. Moslems were said to resist army service because they were afraid they would have to eat pork.

4:Phillips E-4,5 (1956-1957) 1966
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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[6] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

[6] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost *a* Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

4:Phillips E-4,5 (1956-1957) 1966
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"extended families." The aim of all Bang Chan families even then was to attain a position in which they would be free from such obligations or would have other families dependent upon them.

In the intervening years the influx of new families into Bang Chan, the increased self-sufficiency of the individual nuclear families and, most important, the increased acceptance of commercial values, have served to break down kindred groups so that today few kinsmen work their fields together and even fewer share their food or equipment with one another, beyond what has been noted above. Perhaps the only remaining *universally* practiced function of the old kindred groups is the celebration of ceremonials involving members of the family, particularly cremations and ordinations, the cost and merit of which are shared among the participants, depending upon their wealth. Very often people do not want to borrow from or lend money or equipment to kinsmen precisely because the intrusion of the kinship tie makes the collection of such debts doubly awkward ("relatives take twice as long in repaying money; I do not want to lend anything to them"). However, the old forms have not been completely obliterated and when necessity requires or personal convenience moves an individual to look to others, the traditions of extended kinship, as indicated earlier, may be invoked.

For purposes of conceptual convenience, two types of kindred may be specified: the kind referred to above which involves kinsmen living in the village and to which Kaufman (1960) gives the name "spatially extended family"; and the type descriptive of relatives living outside Bang Chan, dispersed throughout other villages and provinces or in Bangkok, and called by Kaufman "the remotely extended family" and by L. M. Hanks (1959c) "the multi-local extended family." These terms are of course generic labels descriptive of actual or potential relationships between individuals, not of specifically delimited groups. Sometimes Bang Chaners attempt to extend the definition of the latter type of relationship to individuals who have never heard of them, but who may be in a position to help their son obtain a job in the city or get him admitted into a vocational school. Hanks has shown how the multi-local extended family has to a limited extent in recent years rejuvenated extended kinship ties by becoming the major institutional mechanism through which villagers leave Bang Chan to seek their fortunes elsewhere. (This last phrase is not merely a figure of speech; many young Bang Chan men have what could be called almost a Dick Whittington view about leaving Bang Chan for Bangkok.) A cousin who undertakes to serve as a villager's liaison to a city job or who offers him a place to stay usually does so willingly, for it creates obligations which may be called upon later if need be.

The above description of variations and extensions has been presented

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As the reader might by now suspect, it is not easy to determine the basis of the unity of the family. However, of all the factors that keep people living together in amity and affection, two come to the fore: a sense of love, obligation, and respect that is derived from the simple fact of kinship, but which must be continuously confirmed by mutual benefits; and economic considerations.

The economic foundation of the family is significant not only because the family is in fact the sole economic and occupational unit in the community (with the exception of the monkhood and school) but because the villagers themselves think of the family in terms of its economic functions. People say that they marry for wealth or because of the productive capacities of their spouses;[13] spouses stay together because the economic costs of a split are too great; most important of all, people are keenly *aware* of their economic interdependence. Fathers say that they need children to work in the fields and care for the buffalos, that a family needs a mother so that its members will be fed, that siblings are useful because it is easy to borrow from them (although, as noted earlier, some are unhappy about the intrusion of the kinship tie into what they regard to be a commercial transaction). Many villagers extend this economic, transactional type of thinking to other aspects of the kinship relationship. Thus they say that "the purpose of marriage is to have a companion who will take care of you when you get sick," or very frequently that "my parents went to the trouble of bringing me up so they would have a person to make merit for them when they die." The emphasis here is on independent agents serving each other because it is mutually beneficial.

The love and affection that people feel for each other is of course grounded in the close associations that one finds in most nuclear families. However, the attitudes of respect that one sees are perhaps more distinctively Thai. Almost all the literature on Thailand refers, at one point or another, to the patterns of respect (*khwaamnabthyy*) existing between people, both within and without the family. These patterns are based, in the first instance, on the status inequalities that exist in almost all social

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[13] In responding to the unstructured Sentence Completion Test item, "*He (she) wants to get a wife (husband) who. . . ,*" for example, thirty-one of sixty informants indicated that they wanted a mate who "was a good worker," "earned a living," "was rich," or otherwise had high socio-economic status. Only two persons said that they wanted a spouse for reasons that could be reasonably defined as sentimental: one woman wanted a husband who "would be a good friend with whom she could discuss things," and a man said he wanted a wife whom "he loved." Other informants gave completions distributed among a variety of categories: "polite, well-mannered, handsome, kind, strong, and good" spouses; and six women wanted husbands who would be faithful.

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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[10] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[10] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

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various kinds of ants living in Thailand and the United States. (Such are the topics that interest villagers.) The villagers wanted to know the English names for small red ants, normal black ones, and the large, rusty colored variety that are indigenous to the tropics. I named the first two with no difficulty. For the third, I said simply, "a giant ant." The assistant, turning to one of the informants, first gave the literal Thai equivalent of "giant," and then, as if this were the funniest thing he had heard that week, began to repeat, "giant, gi-ant, gi-ant." In a few seconds, they were all bursting with laughter.

Different, yet part of the same psychological constellation, is the whole complex of behaviors associated with the term, *sanug*. *Sanug* is usually translated into English simply as "fun." However, this translation conveys little of the motivational significance of the term. Essentially, *sanug* is a quality inherent in all situations which are not only fun but also emotionally worthwhile. In fact, these two states are often thought of as reciprocals of one another. An activity that is novel, diverting, or that can be done comfortably, is *sanug dii* (good fun); one that is tedious, overdemanding, that lacks the opportunity for frivolity, is not *sanug* and should be avoided. Harvesting rice in coöperative work groups, attending a ceremonial, participating in an election (see Phillips 1958: 45–46), or even taking something as outlandish as a Sentence Completion Test are all *sanug*. (The unifying elements of these diverse activities are either their novelty or the fact that they involve the presence of relatively large numbers of people but require no genuine interchange with them.) On the other hand, going into the army or working for a demanding superior are not *sanug*.

The importance of *sanug* is that it provides the villagers with a standard of value, a measure of how much they wish to commit themselves to a particular activity. The role of this standard should not be underestimated. Villagers who have taken a job in the city, often involving a time-bound daily routine or continuous, sustained attention to a task (work in a small factory, for example) frequently return to the village explaining that they quit "because it wasn't *sanug*. How can you work on a job if there is never any time for fun?" Foreign employers, with their greater concern for the job than with the person who does it and with their annoying tendency to be *cuu cii* (compulsive, fussy, exacting) are a particular target for this indictment, although this is usually based on hearsay rather than personal experience. On the other hand, villagers will often take on free of charge a major job (for example, helping a neighbor build a house) precisely because it is *sanug*. Although there are other considerations operating here—creating or repaying a personal obligation, doing a *bunkhun* ("a goodness") for a neighbor—the "sanug-ful" aspects of the task are always

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salient: the free food, drink, and chitchat at the end of a hard day's work; the fun of working together with several other individuals. Notice that in this kind of situation there is no overseer demanding the person's effort. His labor is freely given and may be freely withdrawn.

In describing *sanug* as a measure of how much villagers wish to commit themselves to a particular activity, I mean to communicate a point and not merely to turn a phrase. The word "commit," which appears often in this book, is used to convey the idea that coöperative, mutually expectable interaction as we know it in the West does not "simply take place" in Bang Chan. Rather, there is always the intervening factor of whether individuals want it to take place. Siamese are, first and foremost, free and independent souls. Much of the time they fulfill each other's expectations, but this is only because they want to, not because others expect it of them or because the situation demands it. It is the individual that is primary, not the social relationship. The strength of this principle is demonstrated by the fact that one is almost never surprised when one's expectations about another are not fulfilled. The assumption is: "If he did not do it, he must have had his own good reason."

The potentialities for interpersonal frustration that are inherent in such a system are minimized largely by the hesitation on the part of individuals to build up strong expectations about people or events. In general, the Thai are a people who do not live at, and rarely reach, a high emotional pitch. Witness, for example, the specifications of "sanug-ful activities," those which afford the greatest pleasure: they are novel, diverting, comfortable, and frivolous, but there is no Faustian intensity about these joys. They are all rather muted emotional experiences. The point here is simply that in this kind of psychological environment, people rarely permit themselves to become so committed to an activity or to another person that the frustration of that commitment will be overly disturbing to them. They proceed from a premise which says in effect: "Well, it is really not that important that he did not do what I expected of him. I will simply have to make do."

There are a few aspects of the villagers' concern with *sanug* that warrant underscoring. First, from an analytic point of view, *sanug* seems to reflect an attempt on the part of the villagers to lead a psychologically integrated life, wherein the time and energy one gives to an activity is rewarded immediately and directly with pleasure. This low-keyed pleasure should be an inextricable part of the total situation in which one finds oneself (or more accurately, into which one places oneself), not something to be deferred until a later, "more appropriate" time when it becomes an isolated segment of experience. Essentially, *sanug* should be—it not always is—a concurrent aspect of almost everything that one does. At the same time, however, these conditions are also the source of an inevitable paradox. Since "sanug-ful" activities are, by definition, novel and diverting, and

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Age	Method	Kinds of Farm Work
13-14	Moderate pressure.	Hauling, weeding, buffalo tending, transplanting, chicken feeding, fishing, household work.
15-16	High pressure.	All kinds of farm work. Harrowing, harvesting, and uprooting (boys only) are started at this age.

By the time the young are 16 years old, they are already reliable farm hands, although they are still not considered competent enough to participate in the cooperative work to which only the best family workers are expected to be sent. By the time they reach 18 years of age, all males and females should be well trained in all kinds of farm work.

According to the Primary Education Law, parents are responsible for sending their children to school at the age of eight. These children are to remain in school until they are over fourteen years old, or until they have passed Pratom IV.[2] Since school hours start at nine and last until three in the afternoon, children of school age are still able to participate in the farm work before or after school hours. Moreover, most rural primary schools including the Bangchan Primary School have adjusted their vacation recesses to the periods when rice farm labor is needed most -- from August 16 to September 15 which coincides with transplanting period, and from December 16 to January 15 which coincides with harvesting period. It is during these vacations that the upperclass children are expected to contribute their

2. Primary education is divided into four academic years -- Pratom I, II, III, and IV.

243 binding the seedlings into bundles. Since only fresh bamboo binders could be used, the farmer had to make them himself from the locally grown bamboos. Our records show that this step started on July 17 (the day prior to the first cooperative uprooting conducted for the farm under study) and ended on August 27.

9. Uprooting. This is the heaviest step of all farm work. The seedlings must be pulled out as many as one could each time and are smashed to the puller's shank in order to rid them of mud which accompanied the roots. These seedlings were then made into standard sized bundles with the use of bamboo binders. Each variety of seedlings must be uprooted at about the same time, for they should be all transplanted not later than the following day. Uprooted seedlings were not carried to the homeyard, but left temporarily on the dikes of the seedbed.

243
476 Farmers in Bangchan organized themselves into cooperative work groups to mutually help one another in such kinds of field work as uprooting, transplanting, harvesting, and to a somewhat limited extent weeding. In case of the farm under study, more uprooting work was done through cooperative work groups than by family members working on family parcels. Our records show that uprooting by the family started on July 17 and ended on September 8, while the cooperative uprooting which the family participated started on July 15 and lasted until September 11.

243 would detach themselves from the ground and be seen afloat on the surface water. To remedy this, the farmer usually inspected his newly transplanted parcel and simply pressed the floating seedlings back into the ground. Sometimes, transplanting was poorly done or the seedlings were roughly handled during uprooting, resulting in "dead stands." These dead stands could not be distinguished from the live ones in the first few days after transplanting, for both would appear greenish yellow in color. In four days after transplanting, however, the root system of the live rice plant resumed its normal function and most stands assumed their true green color. The dead stands could then be easily detected for they remained greenish yellow. These dead stands were removed and new seedlings were transplanted in their places.

Weeding was another care given to the rice plants. Again, it was difficult to apportion the time spent on each of these separate activities -- pressing the floating seedlings back into their original position on the ground, replacement of the dead stand stands with the live seedlings, and weeding -- for at certain periods (within a few days after transplanting) they were all done in the same trip and almost concurrently.

[476] Weeding was also done cooperatively, although recently cooperative weeding has become less popular and involved only [592] few families. It may be said, therefore, that care of the [178] plants as of 1953-54 was largely a family undertaking. Our records show that care of the plants in our sense of the term [476] started on July 24 and ended on September 29. Of this, the [592]

*243 work done by the family members themselves lasted from July
• [476] 24 to September 28 and the work done through cooperative work
[592] group (weeding only) lasted from September 20 to September 29. It was observed that as from the end of September there was no need for weeding, for weeds could not keep up with the rising water level.

14. Preparation of threshing floor. When harvesting was approaching, the farmer would get busy preparing the threshing floor. He had to do this well ahead of time, that is, before harvesting actually started, or else there would be complications during that busy period. As a matter of fact, this was a rather short step of rice production. Although our records show that it lasted from November 29 to January 27, that seemingly long period was due to the fact that cracking appeared and repair of the threshing floor was necessary on the latter date. In fact, the whole work took only seven work days, involving only 13½ man-hours and 32 buffalo-hours. The method of preparing the threshing floor was simple. The ground space designated to be the floor was first soaked with water for the whole night. In the following morning, four buffaloes were led to tramp over and over this small earth floor for an hour and a half, in the meantime another worker levelled the floor with grub hoe. The process was repeated on each of the four following days until the floor became compact and level.
*243 Finally the surface was pasted with wet buffalo manure to mini-
476 mize surface cracking.

15. Harvesting. This was largely done through a

#241 cooperative work group, the proportion of the work done by the
• 476 family workers themselves and that done through cooperative harvesting being about one to five. Cooperative harvesting started on December 4 and ended on January 25, while family harvesting started on December 12 and ended on February 6.

#243 16. Threshing. This step can be further broken down into piling of harvested bundles of rice around the threshing floor, laying some of these on the threshing floor, actual threshing by having the buffaloes tramp over and over the rice stalks with rice seeds on them (by this time the stalks had already broken loose from the bundle), frequent turning of stalks that were in the lowest layer upward (with the use of pitchforks), separating the threshed paddy from the stalks (with the use of pitchforks and rakes), and finally piling of the threshed paddy. Threshing started on December 15 and ended on February 14. It was one of the few steps in rice production in which the work was often carried on into the night.

17. Winnowing. Started on December 25 and ended on February 14. The completion of winnowing marks the end of rice production as far as rice farmers are concerned.

18. Stacking of straw. After threshing, straw was piled up in stacks around poles in the homeyard or the edge of the field near the homeyard. This was done on December 29 and February 4. It was a simple step using only a total of 16 man-hours of labor.

231 19. Procuring grass for buffaloes. Care for buffaloes is a whole year job involving leisurely work, such as taking the buffaloes to graze on the fields which any child can do,

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231 as well as painstaking work like ridding them of insects during a certain period of the year by smoking throughout the night. Besides, in some years when the water level is exceptionally high, for example in 1952, the buffaloes may have to be tended in other villages of higher elevation. Moreover, there always is need for constant guard against robbery of these precious draft animals. It is extremely difficult to keep a record of labor spent on these activities. The author is reluctant to attempt even at mere estimation.

In view of the difficulties mentioned above, only the procurement of grass for the buffaloes which could be measured was taken into consideration in the computation for labor requirements in rice production. This was done with the realization that there was more labor actually spent on the tending of buffaloes which could not be estimated and which should be considered as extra work over the calculated requirement. Our records show that cutting grass for buffaloes started on June 14 and ended on November 27 when the buffaloes began to feed on straw. (This straw was obtained from a neighbor's field at the mouth of Bangchan Canal which was planted to an early variety of rice; hence, even though harvesting had not yet begun on the farm under study, it was possible to feed the buffaloes with straw and save time that would have to be spent on procuring fresh grass for buffaloes during this busy period when all available labor should be spent on harvesting.)

243 476 20. Supervising the work done by cooperative workers. The amount of supervision varied with the kind of cooperative

*243 work. In cooperative uprooting, which usually started as
• 476 early as 5:30 a.m. and lasted until each guest worker finished his 100th bundle of uprooted seedlings, the host did not participate in the work but had to entertain his guest workers by talking with them while they worked and providing a meal after the work. He had to see to it that every worker had enough bamboo binders to bind each bundle of uprooted seedlings, and it was his own responsibility to check that each guest had actually uprooted his share of 100 bundles. Usually, cooperative work was done on the honor system -- the bundles were not counted. In one of the cooperative weedings for the farm under study, however, one guest who had been known to be a not very fast worker finished his share too soon to the surprise of his fellow workers. Perhaps partly with a sense of curiosity and partly with a sense of justice, these other guest workers stopped their work temporarily and helped the host counting the bundles uprooted by that man. To the embarassment of all concerned, it was found that the man had actually finished only 80 bundles. In cooperative transplanting, the host was not obliged to feed guest workers. In this case, each guest worker was to finish one-fourth of a transplanted rai. The host's duty was to assign each worker to his respective plot which had to be properly measured. Earlier in the day, the host and his family had to haul the uprooted seedlings to each of these plots. While cooperative transplanting was being done, the host usually walked from one plot to another to see to it that proper distance of planting was being observed by each worker

*243 • 476 as unscrupulous guest workers might tend to lengthen the distance in order that they might work less because the share of work was on an area basis. In cooperative harvesting, it was customary that the host provided a meal after the work was done. As with the case of cooperative transplanting, each guest worker was to harvest an area of one-fourth of a rai. No checking was necessary in this case. In the rather unsignificant cooperative weeding, the host worked side by side with guest workers in the same plot, and work was measured by the time spent on weeding -- in "day" or "half-day," one "day" being an equivalent of six-hours' work and correspondingly one "half-day" an equivalent of three-hours' work. Guest workers were induced to weed more intensively by an offer of prizes in the form of cigarettes for a certain number of bamboo binders they collected in the course of weeding (by pulling). The underlying idea was that since these bamboo binders which were left in the parcel during transplanting sank deep in the soil, thus the amount of bamboo binders collected by each guest worker more or less indicated his weeding effort.

Our records show that supervision of cooperative work started on July 22 and ended on January 24.

*243 476 461 21. Entertaining guest workers. It was already mentioned in the previous step that customarily the host provided food to guest workers in cooperative uprooting and cooperative harvesting. To feed some twenty to thirty people was quite a job, thus practically all family workers were occupied in food preparation and serving on these occasions. Our records show that entertaining guest workers started on July 22 and ended on January 24, and that while supervision of cooperative work

*243
• 476 utilized only 26 man-hours of labor, entertaining the same
461 groups involved as many as 158½ man-hours.

Labor Requirement in Rice Production

*243 During the 1953-54 rice year, an exploratory study of
461 labor requirement in rice production was conducted, using
*128 only one farm. This farm was operated by Headman Chom Srisuay of KY5. It was one among the 104 sample farms covered by the preliminary survey in 1948-49. The choice of this farm was made on the basis of the high degree of cooperation given us by Chom and all his family.

[594] During the period covered by this special study of labor requirement, Chom had a family of nine, consisting of Husband Chom (47), Wife Sai (44), three sons -- Phuan (19), Phan (16) and Phloen (8), and four daughters -- Phung (15), Phad (13), Bunmarg (7) and Mian (4).

In the year of the study of labor requirement, Chom operated a farm of 49 rai consisting of four parcels: Parcel A, 7 rai; Parcel B, 20 rai; Parcel C, 7 rai; Parcel D, 15 rai. The locations of these parcels are shown in the sketch map on page

Part of Parcel A was used at the beginning of the sea-
*243 son as seedbed. After the seedlings had been uprooted and
461 transplanted, this parcel was again plowed and harrowed and planted to three varieties of rice -- Mue Hag, Ched Ruang and Khao Sa-ing. Parcel B was also planted to three varieties -- Mue Hag, Ched Ruang and glutinous rice. Parcel C was planted to only one variety -- Mue Hag. Parcel D was planted to two

*243 594 461 [464] row man. He could not very well be substituted by his younger sister who was also needed to perform the housework. A worker was thus hired for the period of two months -- from the middle of June to the middle of August -- primarily to help in plowing. Phan also partially helped in plowing and harrowing in part of the morning session before he started his work for the Cornell team at nine o'clock.

• [476] During the cooperative work season, Chom represented the family in cooperative uprooting and cooperative harvesting, and Phuan in cooperative transplanting, weeding and harvesting. Phan also represented the family in cooperative work scheduled for Saturdays and Sundays when he was free from Cornell duty.

*243 461 *128 Work records of all workers of this farm were kept by the author throughout the work season from June 4, 1953 to February 14, 1954. At the beginning, the author stayed overnight with the family. Family workers were requested to give accounts of their activities of the day. To facilitate more accurate accounts regarding the time of the work, a clock was [115] given to the family. When family workers became acquainted with the type of information that was needed, Phan, our row man, was assigned to make a daily report on the kinds and time of work done by each worker. Phan's daily report was taken down by the author in the labor schedule specially prepared for the purpose.[3] Later, when Phan's reporting skill was well developed, he was asked to report on the daily labor records only four times a week, usually Monday, Tuesday, Thursday and Friday.

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3. See Appendix B.

*243 Since the farm work usually followed the same pattern for a
461 certain period, it was observed that Phan remembered quite well
+128 the time and the kind of work done by each family worker during
the past two or even three days. The time of work was recorded
[231] to the hearest half-hour. In Tables 35 and 35, labor spent by
[464] family workers, piece-workers hired by the family, and buf-
[592] faloes, on different steps in rice production was given in
man-hours and buffalo-hours. The dates when these various
• [476] jobs started and ended were also given. It should be noted,
however, that labor recorded as spent on cooperative work was
actually not spent on the family farm but rather on farms of
other cooperative members. This was nevertheless exactly com-
pensated by cooperative work on this farm on several occasions
which were not entered in the calculation to avoid error
because of duplication.

*243 The data from Tables 35 and 36 may be summarized as
461 follow:

221 1. Man labor provided by farm staff.

[592] Work started June 4, ended February 14, a total of 248
[464] work days.
[231] Total man-hours spent by farm staff -- 5,478½.

2. Man labor provided by piece-workers.

Work started July 19, ended August 30, a total of 10
work days.
Total man-hours spent by piece-workers -- 229.

3. Animal labor provided by buffaloes.

Work started June 4, ended February 13, a total of 112
work days.
Total buffalo-hours -- 2,119.

[TEXT CONTINUED ON PAGE 246]

243 times. Using too many varieties of rice on a farm, however,
221 will complicate the working schedule; and sowing times of these
461 varieties cannot also be spread out too far apart because seedlings should all grow up to the size appropriate for transplanting some time before the deadline set by the water level. It has been observed that most farmers grow from three to six varieties on their farms.

243 Another efficient device for spreading out labor is
221 that of farmers in a locality organizing themselves into
461 informal cooperative work groups to perform on a mutual help
467 basis such field work which can be best cooperatively done, such as uprooting, transplanting and harvesting. There were three cooperative work groups in Bangchan: (1) Mu Sapan Yao, or the Bridge Group, consisting of farm operating families living in the vicinity of the bridge across Bangchan Canal; (2) Mu Ba Wat, or the Near Wat Group, consisting of families living around Wat Bangchan; and (3) Mu Bon, or the North Group, consisting of families living in Upcanal Bangchan. The organization and the system for labor compensation of these various informal work cooperatives will be discussed in the next section.

Cooperative Work

243 There were five kinds of cooperative work in Bangchan --
476 cooperative uprooting, cooperative transplanting, cooperative harvesting, cooperative weeding, and cooperative pounding of cargo rice. While the first three kinds were important undertakings through which a major part of those rice production

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*243 steps were carried on, the last two were relatively insignif-
• 476 icant and were participated in by few families. All of these five kinds of cooperative work, except cooperative pounding of cargo rice, have been mentioned in the earlier sections of this chapter.

We did not include pounding of cargo rice as a step in rice production, although it was closely related to it. Before or at the beginning of the farm year, when the pressure of the field work was not yet strong, farmers would pound their home-milled rice which was to be consumed during the entire work season. The recent trend has been for farmers to take their paddy to the rice miller who retained a portion of the milled rice and bran as his fee. Nevertheless, there were still some farm families who milled rice needed for their own consumption, contending that it was more economical and that in so doing they could save the much needed bran for their livestock. Home-milled rice, which appears in the form of cargo rice, must be pounded in order that its outer coat may be removed. Farmers found that it was less tedious, and perhaps it was even fun, to do pounding as a group work rather than as a laborious task for an individual family; so they formed a group of say ten families, each sending a representative to participate in group pounding at each member family's home in rotation. Cooperative pounding was more often carried on in the evening. When the work was finished, refreshment was served by the host.

In this section we shall concentrate on the three

*243 major cooperative work -- cooperative uprooting, cooperative
• 476 transplanting, and cooperative harvesting.

At the outset, it should be understood that cooperative work groups were very informally organized. Although the idea was to mobilize labor to work on each member's farm in rotation, the work obligation was not collective but was purely bilateral -- each farmer receiving help was bound to return the same amount of work to each guest worker individually. There was no such thing as group responsibility.

Supposing Chom wanted help in the uprooting of his early variety, after figuring out how many guest workers he needed for the occasion, he would send word to the group that he wanted, say fifteen workers, on the specified date. Each member approached had to make it known to Chom that he could or could not participate in that cooperative work for Chom. Technically, members were approached individually. There should not be any difficulty, therefore, in limiting guest workers to the required number. Since immediate reply was an ettiquette that was strictly observed, Chom would know not only the number of guest workers but also who would come on the specified date. Another strictly observed rule was that one should participate in a cooperative work only when he was asked to do so. This latter was necessary because there might otherwise be too many guest workers, which meant more future reciprocal work on the part of the host.

Since a farmer grew several varieites of rice, he usually needs help several times in each of the uprooting, transplanting, and harvesting processes. A help unit is called

*243 • 476 a "ngarn" (lit., work), which is one hundred bundles of seedlings uprooted in case of uprooting, one-fourth of a rai transplanted in case of transplanting, and also one-fourth of a rai harvested in case of harvesting.

The author followed closely every cooperative uprooting which Chom participated. It was found that this operator had bilateral obligations with 20 other members who during the 1953 season had uprooted for him a total of 41 units or 4,100 bundles of seedlings -- 1,400 bundles on July 22, 1,100 bundles on August 3, and 1,600 bundles on August 15. Chom [illegible]d to make good the reciprocal work of this same amount for all his guest workers according to their individual shares of contribution to him. At the end the records show, however, that Chom himself had contributed only 28 units or had uprooted only 2,800 bundles for fellow members. Although his son Phuan had contributed six more units, the family was still short of seven units. As it actually happened, Chom was away from the village on a house building work in Dhonburi from August 18 to 25. During this period of eight days he was supposed to participate in seven cooperative uprootings. His only substitute, Phuan, could not do the work for him for Phuan was also tied up in cooperative transplanting. Chom therefore arranged for [464] [465] a professional piece-worker to do the seven cooperative uprootings he was committed to at the going rate of 13 baht per 100 bundles uprooted.

Records show that at the end Chom's contribution to each of his twenty fellow members was individually equal to the

help he received from each of them (the work by Phuan and the piece-worker was considered as Chom's contribution), the exception being the cases with A and B. Chom had contributed three units to A, receiving only two units from the man; but he had received four units from B, giving him only three units of work. This was settled by transferring Chom's credit with A to B which is the general practice.

There were two professional piece-workers among Chom's twenty fellow members. In fact, there were four such piece-workers in our records of this group of cooperative uprooting, but Chom was bilaterally obligated to only two of them. Perhaps it is necessary to mention at this juncture that each member of a cooperative group had within that group their own circle of members among whom he had bilateral obligatory work. Chom, for example, had a circle of twenty-one within that group of twenty-four. We got this number of twenty-four by listing all the names of the persons (representing families) to whom each of the twenty-one members of Chom's circle had bilateral obligatory work. Most of these names overlapped, and the composite number was found to be twenty-four. It is seen then that the number of members of both a circle and a group depended entirely on which member was used as the basis. It would be misleading, therefore, to state the Mu Sapan Yao Cooperative Uprooting had twenty-four members, for no real size of a cooperative work group exists because of the overlapping nature of various circles within it.

All the four professional piece-workers in this

#243 • 476 464 cooperative uprooting were exceptionally good workers, and this was the reason why they were approached when help was needed. These men accumulated work credits and utilized them when they were contracted by operators who had not enough family labor to uproot their seedlings. Chom, for example, after utilizing his own family labor as well as all the work credits he earned in cooperative uprooting, still was in short of labor to uproot his latest varieites on August 22 in which ten units of work were needed for the estimated 1,000 bundles [465] to be uprooted. He, therefore, contracted Sa, a fellow member, to do the job for 130 baht. On that date, Sa called upon ten members including himself to uproot Chom's seedlings in his name. So the same old faces appeared on Chom's farm. Outwardly, this looked like an ordinary cooperative uprooting on the mutual help basis. In reality, however, it was a business deal out of which Sa received cash payment from Chom who in turn received labor. Our records show that Sa had another earlier contract to uproot 1,700 bundles for another operator, and the same method of recruiting labor among fellow cooperative members was used. Since our records show only cooperative uprootings conducted among this group of twenty-four members, it was possible that Sa might have a few more contracts which did not appear in the records.

Ordinarily, farmers do not like to be obligated to professional piece-workers, for they might later be asked to work in return for somebody they do not like. In fact, there was some talk in 1953 among farm operating members on the

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 possible ways to eliminate the participation of professional
• 476 piece-workers. From the standpoint of professional piece-
464 workers, however, to get oneself admitted into a cooperative
group is a boon to their respective families for job opportun-
[465] ity would be assured to them. This is the reason why Sa was
able to earn 2,000 baht in 1953 while most of his fellow piece-
workers' earnings were as low as 300 or 600 baht.

*243 The same principle of labor reciprocity held in the
476 other kinds of cooperative work, which also involved cash pay-
ment in the end to professional piece-workers who served as
clearing agents to settle the balances of work credits. Gen-
erally speaking, such balances were more in case of cooperative
transplanting than cooperative uprooting, and the same were
even higher in the case of cooperative harvesting. This was
to be expected because transplanting involved about double the
amount of labor spent on uprooting, and harvesting alone
required about a tenth more than the combined labor require-
ment of these two operations.

*243 Chart 1 shows both man-labor spent by Chom farm staffs
461 and man-labor spent on Chom Farm, the former being represented
476 by the solid line and the latter by the dotted line. On the
basis of equal reciprocity of labor, these two should be tech-
nically equal in total magnitude. They differed, however, in
their daily distribution. It is seen that the two lines coin-
cide during the periods from June 4 to July 14, from September
30 to December 3, and from January 26 to February 4, when there
was no cooperative activity. During the periods from July 15

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 to September 29 and from December 4 to January 25, these two
461 lines diverge from each other. Although both fluctuate greatly,
476 it is readily seen that fluctuation of the dotted line representing labor spent on Chom's Farm is much more than that of the solid line representing labor spent by Chom farm staffs. This shows that by adopting cooperative work device Chom was able to spread out the work of his farm staffs although the daily labor requirement on his farm still remained highly fluctuating.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 37

DAILY LABOR SPENT BY CHOM FARM STAFFS
Bangchan, Thailand, 1953

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hr	man-hr	man-hr	man-hr
Jun 4	8	24	--	24
5	16	28	--	28
6	16	28	--	28
7	16	28	--	28
8	16	28	--	28
9	16	28	--	28
10	8	12	--	12
11	--	16	--	16
12	16	18	--	18
13	16	15½	--	15½
14	16	27½	--	27½
15	13½	29	--	29
16	22	19½	--	19½
17	22	16½	--	16½
18	20	26½	--	26½
19	--	14½	--	14½
20	24	25	--	25
21	24	24	--	24
22	23	33	--	33
23	24	24	--	24
24	21½	25½	--	25½
25	18	14	--	14
26	--	18½	--	18½
27	25	25	--	25
28	24	25	--	25
29	22	34½	--	34½
30	28	32	--	32
July 1	22	43	--	43
2	30	38	--	38
3	27½	30	--	30
4	--	23	--	23
5	28	38	--	38
6	30½	32½	--	32½
7	18	21	--	21
8	32	35	--	35
9	28	28	--	28
10	28	3-½	--	30½

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

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Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
July	11	--	23½	--	23½
	12	24	20	--	20
	13	24	26½	--	26½
	14	28	31	--	31
	15	24	38	5½	43½
	16	28	27½	--	27½
	17	28	36	--	36
	18	22	30	5	35
	19	--	36	--	36
	20	30	37½	--	37½
	21	28	37	4½	41½
	22	19	46½	5	51½
	23	8	20½	4½	25
	24	9	31	--	31
	25	10	16	--	16
	26	--	4	4	8
	27	--	17	4½	21½
	28	23½	27½	12	39½
	29	26	29½	9½	38
	30	28	21	13½	34½
	31	30	35	--	35
Aug	1	16	18	6	24
	2	20	21½	7	28½
	3	--	7½	8½	16
	4	5	17	9½	26½
	5	22½	24½	16	40½
	6	29½	29½	10½	40
	7	24	30½	6½	37
	8	25½	25½	7½	33
	9	38	26	10½	36½
	10	--	8	19½	27½
	11	28	16	13	29
	12	34	19	16½	35½
	13	34	25½	12	37½
	14	29	19	7½	26½
	15	32	81½	4	85½
	16	11	67½	4	71½
	17	12½	35	5½	39½
	18	--	4½	8	12½
	19	36	38	--	38
	20	29	17½	8½	26

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Aug	21	32	18	6½	24½
	22	19	28	7	35
	23	17	41½	--	41½
	24	8	16	4½	20½
	25	--	19	7	26
	26	--	14½	3½	18
	27	--	21	15	36
	28	--	4	16	30
	29	--	2	22½	24½
	30	--	14	14	28
	31	--	8	4	12
Sept	1	--	8	9	17
	2	--	27½	10	37½
	3	--	12½	11½	24
	4	--	19	7	26
	5	--	21½	3½	25
	6	--	19	--	19
	7	--	17	--	17
	8	--	12	--	12
	9	--	24	--	24
	10	--	6	--	6
	11	--	11	3	14
	12	--	9	--	9
	13	--	6	--	6
	14	--	2	--	2
	15	--	8	--	8
	16	--	3½	--	3½
	17	--	4½	--	4½
	18	--	2	--	2
	19	--	2	3½	5½
	20	--	2	12	14
	21	--	2	7	9
	22	--	2	11	13
	23	--	2	7	9
	24	--	2	--	2
	25	--	2	14	16
	26	--	2	14	16
	27	--	2	14	16
	28	--	16	--	16
	29	--	2	7	9
	30	--	2	--	2

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		Total
			On farm	On coop. work	
		buf-hr	man-hr	man-hr	man-hr
Oct	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	2	--	2
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2
	11	--	2	--	2
	12	--	2	--	2
	13	--	2	--	2
	14	--	2	--	2
	15	--	2	--	2
	16	--	2	--	2
	17	--	2	--	2
	18	--	2	--	2
	19	--	2	--	2
	20	--	2	--	2
	21	--	2	--	2
	22	--	2	--	2
	23	--	2	--	2
	24	--	2	--	2
	25	--	2	--	2
	26	--	2	--	2
	27	--	2	--	2
	28	--	2	--	2
	29	--	2	--	2
	30	--	2	--	2
	31	--	2	--	2
Nov	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	5	--	5
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Nov	11	--	2	--	2
	12	--	2	--	2
	13	--	2	--	2
	14	--	2	--	2
	15	--	2	--	2
	16	--	2	--	2
	17	--	2	--	2
	18	--	2	--	2
	19	--	2	--	2
	20	--	2	--	2
	21	--	2	--	2
	22	--	2	--	2
	23	--	2	--	2
	24	--	2	--	2
	25	--	2	--	2
	26	--	2	--	2
	27	--	2	--	2
	28	--	2	--	2
	29	--	2	--	2
	30	6	5	--	5
Dec	1	6	2½	--	2½
	2	6	1½	--	1½
	3	6	1½	--	1½
	4	8	2	7	9
	5	--	--	--	--
	6	--	--	--	--
	7	--	--	--	--
	8	--	25½	--	25½
	9	--	33	--	33
	10	--	--	--	--
	11	--	12½	4½	17
	12	--	8	5	13
	13	--	16	22	38
	14	--	--	15	15
	15	10	17	16	33
	16	10	30	19	49
	17	20	33	10	43
	18	22	34	15	49
	19	28	24½	21	45½
	20	28	19½	24	43½

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hrs	man-hr	man-hr	man-hr
Dec	21	--	4½	18	22½
	22	28	30½	21	51½
	23	28	43½	27½	71
	24	6	40	8	48
	25	6	21	18½	39½
	26	8	34½	--	34½
	27	8	24	18	42
	28	12	17½	24	41½
	29	--	14½	24	38½
	30	--	47	--	47
	31	--	14½	16	30½
Jan	1	6	23	24½	47½
	2	4	17	24	41
	3	6	26½	24	50½
	4	--	27½	32	59½
	5	12	25½	32	57½
	6	4	20	36	56
	7	12	25½	32	57½
	8	12	26½	32	58½
	9	--	34	15	49
	10	--	19½	16	35½
	11	--	25	9	34
	12	--	23½	18	41½
	13	--	23½	10	33½
	14	4½	32	11	43
	15	--	26	16	42
	16	--	10	9	19
	17	--	16½	15	31½
	18	6	21	9½	30½
	19	--	33	10	43
	20	14	25½	16	41½
	21	14	17½	10	27½
	22	--	32½	5	37½
	23	6	5½	9½	15
	24	--	74½	--	74½
	25	--	2½	8½	11
	26	--	22	--	22
	27	--	29½	--	29½
	28	20	47½	--	47½
	29	14	31	--	31
	30	20	24	--	24
	31	24	29	--	29

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511 needs at least two work suits in each rice season, one during the field preparation and another during the harvesting season.

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511 Kerosine is used every day for lighting purposes. We do not include in this category kerosine which is used in the farm work; but that used with the pressure lamp in fishing by spearing during the night is included in the ordinary household expenses, for we do not consider fishing as a farm enterprise but as a routine activity participated in by all Bangchan residents, farmers and non-farmers alike.

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[792]
[764]
[585] Contributions to neighbors is a necessary item of expense in the village. These are cash gifts made by invited guests to the sponsor of such rituals as ordination, cremation, marriage, topnotch-cutting, and teacher worship. These rituals usually take place during the dry season following harvesting when cash is abundant in the village and are always followed by feasts, not uncommonly in a series of two or three days. Since all these rituals necessitate the participation of the priests, they have to be arranged in consultation with the temple to avoid conflicting schedules. Although few rituals have been noted to be in conflict with one another, usually they are spread throughout the dry season and m ost people are able to attend rituals to which they are invited. In cases where they cannot attend in person, they are obliged by conventional requirement to send in their cash contributions. The standard cash contribution is 5 - 10 baht. Usually, a

431 guest contributes exactly the same amount that was given
496 him by the man when he last attended his party. Written
796 account is always kept by the host specifying contributors
511 and respective amounts given. When invited to a ritual, the guest consults his book and takes along an appropriate amount of cash. It is on this basis of reciprocal help that a prospective sponsor of a ritual has been able to determine the size of cash contribution he would receive from neighbors. Since a guest normally contributes no more than ten baht and no less than five baht, his annual expense on this item depends largely on the number of parties he attends each year. Our records for 1952 show that this ranges from 30 to 1,000 baht, averaging 343 baht.

27
511 We include in the personal item of expenses the amounts spent on traveling, entertainment, coffee, liquor, etc. To be sure, some of these should be grouped under the stimulant item. We, however, intentionally put coffee and liquor here because the sequence seems to better fit the requirements of the persons responding to questions so that better answers might be obtained. Tobacco, betel, and areca, for example, appear to have somewhat constant rates of consumption. They are usually bought in large quantities which will last for a considerable length of time. As a result, informants are in a position to give more accurate rates of consumption of these items than those of liquor and coffee of which consumption is somewhat irregular and is difficult to estimate.

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184
511 c. The family's purchasing power. Certain goods considered as luxuries -- medicine, eggs, pork and beef, and white sugar -- were not consumed by poor families.

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182
511 d. Individual taste and preference. The Moslems would not consume any pork although they had enough money to buy it. Some poor farmers spent more money on curry essence than their more affluent neighbors because they preferred highly flavored dishes, and some tobacco smokers did not spend a cent on tobacco binder because they preferred the home-grown banana leaf binder to the thatch leaf binder which had to be purchased.

182
511
[184] e. Producing ability of the family. It was observed that those who caught more fish tended to consume more fish regardless of their financial conditions.

f. Health affected the consumption of medicine.

[431]
[476]
[554] g. Prestige affected the amount of cash contributions to neighbors.

h. Personal habits -- thrift, fun loving, indulgence, like or dislike of liquor -- affected the amount of personal expense.

i. Presence or absence of children of school age in the family affected the consumption of cookies.

Special Expenses

511 By special expenses we mean major items of expenses which do not occur regularly but which may arise in one time or another. Examples: purchases of land, gold and

178 finally, for a few families, took precedence over rice
463 growing. The relative importance of these new occupations remained low, however, since only a few families were needed to meet the village requirements for such services.

434 The establishment of the primary school some thirty
647 years ago opened up new jobs as teachers and janitors for
875 some educated villagers who were given preference over out-
[872] siders. It should be noted, nevertheless, that at the beginning the primary school teachers were not considered as regular officials and their pay was as low as six baht a month during the prewar years. Even during the war, they did not get as proportionately large a cost-of-living raise as did other regular officials. It was only after the war that they were made regular officials and that their pay rose almost a hundred times to 450 to 550 baht a month with provision for a steady raise to more than one thousand baht
[48] a month. This new occupation in public service also increased with the extension of the central government employment into the rural areas and with improved transportation facilities which permitted an individual to commute daily between his office in Bangkok and his home in Bangchan. Thus, a Bangchan resident is now serving as an educational supervisor in the nearby Minburi District and a few others are on the regular payroll of the government-owned Bangkok Wharf.

*243 With the background knowledge of the situation of
464 Bangchan farm laborers previously described in mind, we may
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463

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The Chinese druggists, many of whom stocked among their traditional pharmacopeia a few modern medications, gave out occasionally to their customers information derived from the manufacturer's instructions for use. People with minor indispositions sometimes sought a druggist's advice. He suggested traditional or modern remedies, depending on the wishes of the customer. Thus, the druggists also acted as a bridge to the use of modern remedies.

Facets of Social Life Pertinent to Childbearing:

Communication and Transportation

People went to Minburī, and less often to Bangkok, to buy, sell, work, or visit relatives. A few adults had never been outside Bang Chan.

Along the road buses passed Bang Chan every two or three hours during the daytime only. Minburī was a ten minute ride, Bangkok, an hour. Minburī had no taxis, and no telephone existed to call a taxi from Bangkok. Two or three persons owned bicycles.

Within Bang Chan, transportation varied with the season. From June to February travel was entirely by boat, even to a neighbor. A message to a local midwife, for instance, could be carried quickly by a speedy paddler in his skiff. If an emergency trip to the Minburī Health Center appeared necessary, a person could be rowed fairly comfortably along the canal that bordered the road. Going by boat to Bangkok, a whole day's row away, or four hours by the motor boat from Minburī, was not considered convenient even for passenger traffic, much less for a sick person or a woman in labor.

The inconvenient time of year was the three month dry season. Boats then could hardly go on the canal that ran through the middle of Bang Chan, while the smaller canals became muddy or even dry. Walking barefoot over sharp stubble in tropical sun was hard. To transport a woman in labor, assuming she could stand it, an improvised stretcher could be made, but to subject her to the jolting bus was usually foolhardy. It was not customary to flag down passing cars. If things went wrong for a woman in labor during the hot, dry season, there was practically no chance of getting her to a hospital, and none of getting modern help to her.

Work Habits in the Economy

Because of the annual flood the land was admirably suited to growing a single bounteous crop of rice. After all needs for

Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was composed of seven neighboring hamlets. In 1954, the population was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

The climate together with the overflowing Chao Phraya river, provided natural conditions for raising a single crop of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

Wat Bang Chan, the Buddhist monastery and place for religious exercises, was also the center of social life in the community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part of the Thai-Buddhist community. Information to be presented on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

Although for six or more months of the year the fields were covered with water, sometimes to a depth of a meter or more, a year-round road, connecting Bangkok and Minburi, the nearest market town, ran through one edge of the village. Bus service was available along this road, to either Bangkok or Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

4:Phillips E-4,5 (1956-1957) 1966
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Bang Chan

Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

423 184 from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

369 177 A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital [494] does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey [484] conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise 369 177 of regular wages, lighter work, and the bright lights of the city, leave Bang 167 Chan with the hope that they will never have to return, although of course [464] many do. The Goldsen-Ralis survey reveals that 26 percent of their re- [701] spondents had lived in Bangkok for a year or more, although for most this was in fulfillment of military service.

369 177 181 Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

369 177 The frequent transit between Bang Chan and Bangkok,[8] however,

[209] [204] [871] [8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Pattern	
	With hands (242)	With fork and/or spoon (84)
Listens to radio		
Regularly (daily)	10%	23%
Occasionally	17	28
Seldom	51	35
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	15
2 - 4 times	29	23
5 or more times	28	55

When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive to urban influence are twice as likely as others to use fertiliser (21 per cent versus 9 per cent), one and a half times as likely to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per cent versus 61 per cent). There is no noticeable relationship, however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for those on high as well as low economic levels and also for the literate as well as illiterate farmers.

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Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 16.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)		Twice or more (Proportion who own or use the motor)	
Illiterate	44%	(40)	58%	(51)
Literate	83	(36)	88	(83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

as apt to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	38%	(40)	86%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	50%	(67)	85%	(76)
One or more	57	(24)	88	(43)

*Male farmers only

However, no such relationship was discerned between these culture contacts and trying out either fertiliser, tilapia, or mushrooms.

Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertiliser or mushrooms.

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"Have you ever been to a clinic or a hospital? (If yes) For what various reasons?

No, never went	37%
Yes	63
For treatment or hospitalization	37*
To bring a patient there	23*
To visit relative(s) or friend(s)	14*
Other reasons	3*

* These responses should not be cumulated since some respondents reported more than one reason for going.

If, indeed, the responses to this question are to be considered a valid index, one would expect respondents who reported having used these facilities also to report a higher incidence of visits to Bangkok, where the available hospitals are located. This expectation is confirmed by the responses to the two relevant questions.

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TABLE 23. INCIDENCE OF TRIPS TO BANGKOK IS HIGHER AMONG RESPONDENTS WHO REPORT VISITS TO CLINIC OR HOSPITAL

"In the past year, how many times did you go to Bangkok...?"	Have you ever been to a clinic or a hospital?"		
	Yes, for treatment (123)	Yes, for other reasons (91)	No (118)
Ten or more times	32%	31%	17%
Two to nine times	40	37	29
Once	13	12	25
Never	15	20	30

The present study now asks what factors are associated with use of modern health facilities.

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Demographic Characteristics of Hospital Users

It is important to answer one question in advance of more detailed analysis. Does an affirmative reply to the question, "Have you ever been to a hospital or clinic" measure need for medical care rather than acceptance of modern health practices.

No direct measure is available of the actual state of health of the survey respondents. But, assuming that older people need medical care more than younger people, then we have an indirect index of whether or not hospital use is higher among people of advanced age. The data show no such relationship.

*178 With more frequent exposure to these media, the link between literacy and use of hospitals or clinics decreases.
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TABLE 30. EXPOSURE TO MASS MEDIA IS LINKED TO HOSPITAL USE, ESPECIALLY AMONG ILLITERATES

	Literate (Proportion reporting use of hospital or clinic)		Illiterate (Proportion reporting use of hospital or clinic)	
Movie Attendance				
High (ten or more times)	78%	(103)	71%	(38)
Low (nine times or less)	64	(56)	48	(111)
Radio Listening				
High (listen "frequently")	81%	(68)	79%	(42)
Low (listen "seldom or never")	66	(86)	48	(122)

*178 Acceptance of Urban Practices
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Table 17 showed that acceptance of certain urban practices was linked to acceptance of the major agricultural innovations. Acceptance of urban practices is also associated with use of clinics and hospitals. Use of modern medicine is significantly higher among those who no longer eat with their hands than among those who do.

TABLE 31. ACCEPTANCE OF URBAN PRACTICES IS LINKED TO USE OF CLINIC AND HOSPITAL FACILITIES

	Customarily Eat With Fork or spoon (84)	Hands (242)
Have you ever been to a clinic or a hospital?		
No, never	28%	39%
Yes, for treatment	48	33
Yes, for other reasons	24	28

*178 Contact Outside Bang Chan
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It has already been reported (see Table 23) that hospital and clinic use is higher for those who, during the past year, have paid more frequent visits to Bangkok. This correlation may seem, at first, spurious, since the main centers of medical care are situated in Bangkok. But the questions asked about contact with Bangkok for the one-year period preceding the survey, and visits to the hospital or clinic over an unspecified time period show

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that the relation of these two indices appears valid. In addition there is further substantiation of the hypothesis that contacts with the world outside Bang Chan are linked with use of modern medical practices: The incidence of such use is significantly higher among those who have visited the airport than among those who have never done so.

TABLE 32. INCIDENCE OF HOSPITAL OR CLINIC USE IS HIGHER AMONG THOSE WHO HAVE VISITED THE AIRPORT

	Trips to the Airport: None (148)	One (50)	Two or more (134)
Have you ever been to a clinic or a hospital?			
No, never	41%	36%	28%
Yes, for treatment	35	40	39
Yes, for other reasons	24	24	33

Moreover, additional support for this contention is found in the higher incidence among hospital and clinic users, of knowledge of the world outside the community.

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It is reasonable to assume that greater contact with the capital city is likely to increase the farmers' awareness of its major public figures. And, indeed, the incidence of hospital and clinic use is highest among those who are able to name correctly certain of Thailand's major public figures, as the Prime Minister and the National Police Chief.

TABLE 33. INCIDENCE OF HOSPITAL OR CLINIC USE IS MORE WIDESPREAD AMONG VILLAGERS WHO ARE AWARE OF THAILAND'S PUBLIC FIGURES

	Have you ever been to a hospital or a clinic?			
	No, Never	Yes, for other reasons	Yes, for treatment	Total 100%
...Who is now the Prime Minister of Thailand ...Would you please tell me his name?				
Names Prime Minister	27%	30%	43%	(192)
Does not know	48	23	29	(140)
...Who is now the Chief of Police of Thailand...Would you please tell me his name:				
Names Chief of Police	23%	31%	46%	(166)
Does not know	49	23	28	(164)

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53. Which of the following six qualities do you feel is the best thing for man: Virile, friendly, educated, rich, religious, lazy? [577]

5.	To be virile	2
6.	To be friendly	31
7.	To be educated	86
8.	To be rich	43
9.	To be religious	136
X.	Not to be lazy	57
Y.	Unascertainable	15
—	No Answer	3

54. Do you drink too frequently, occasionally, seldom, or never? [272]

1.	Often	22
2.	Occasionally	68
3.	Seldom	158
4.	Never	85

55. Do you drink whiskey frequently, occasionally, seldom, or never? [273]

5.	Often	29
6.	Occasionally	73
7.	Seldom	157
8.	Never	74
9.	Unascertainable	—

56.a. In Thailand are many people who smoke opium. Excuse me, during your life have you ever smoked opium, or not? [276]

1.	Yes	45
2.	No	287
3.	Unascertainable	1

b. IF NO: Excuse me, do you think there is anything wrong with smoking opium, or not?

4.	Yes, it is wrong	281
5.	No, it is not wrong	5
6.	Unascertainable	1

c. IF SOMETHING WRONG: What are the various reasons why you think it is wrong?

7.	Bad for health	43
8.	Habit forming	62
9.	Waste of money	220
X.		
Y.	Other reasons, specify_____	40
0.	Unascertainable	

57.a. In the last month, how many times did you go to Nimburi or didn't you go at all? [484]

0.	Did not go at all	67
1.	Once	55
2.	2 to 4 times	120
3.	5 to 9 times	39
4.	10 to 19 times	30
5.	20 times or more	20
6.	Unascertainable	8

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[484]

57.b. IF R DID NOT GO DURING LAST MONTH: How many months ago was the last time you went to Minburi?

7.	Within last 3 months	34
8.	More than 3 months ago	25
9.	Never been to Minburi	1
X.	Unascertainable	3
—	No Answer	4

58. This past year, how many times did you go to Bangkok, or didn't you go at all?

0.	None	71
1.	Once	56
2.	2 to 4 times	90
3.	5 to 9 times	28
4.	10 times or more	87
5.	Unascertainable	1

59. In your life, how many times have you been to Don Muang Airport, or haven't you been there at all?

6.	None	148
7.	Once	58
8.	2 to 4 times	72
9.	5 times or more	52
X.	Unascertainable	3

60. In your life, how many times have you been to the annual agricultural fair or the Agricultural Experimental Station at Bang Khan, or haven't you been there at all?

0.	None	227
1.	Once	47
2.	2 to 4 times	45
3.	5 times or more	14
4.	Unascertainable	

61. In your life, have you ever been beyond the boundaries of Thailand, or not?

X.	Yes	13
Y.	No	318
0.	Unascertainable	2

62.a. Have you ever lived in Bangkok, or not?

1.	Yes	117
2.	No	216
—	Unascertainable	

[464]

b. IF YES: What various duties or jobs did you have when you lived in Bangkok?

4.	Soldier	37
5.	Police	10
6.	Student	22
7.	Artisan	1
8.	Laborer	23
9.	Other, specify _____	33
0.	Unascertainable	2

*128 511 crop year. Except for a few exceptional cases, no new item appeared during the few months that lapsed because rice farmers customarily make their major purchases during the dry season following harvesting time. Special expenses of the 96 continuing families during the period from March, 1948 to February, 1953 were shown in Table 57.

511 Some explanations are necessary for Table 57. In the first place, whereas ordinary household expenses are estimates based on experience of farm operators, these special expenses are actual amounts spent during the specified period of five years. [432] Most of the expenses on land purchases were down payments and subsequent partial payments. Of the four families reporting purchases of household equipment, three bought guns and one bought a sewing machine. [757] [755] All major repairs were for dwellings. The major medical expenses did not include small amounts of money regularly spent on drugs for headache and stomachache or even on delivery of babies which was done by traditional midwives whose fees were nominal. In fact, there were only three cases of major medical expenses. The largest one included Bangkok hospital bills amounting to 14,000 baht. The 36,190 [525] [484] [691] baht of odd expenses included 3,000 baht on gambling(only two operators reported expenses on this item, others admitted win and losses but did not give the amounts), 2,000 baht on purchases of government lotteries which are issued once a week and also on several other occasions, 500 baht on legal prosecution, 300 baht on reward for the

[TEXT CONTINUED ON PAGE 331]

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recovery of a boat stolen, 390 baht on "laxity", and 30,000 baht on a trip to Mecca. The gifts to offspring included only gifts presented when offspring left the family to start an independent family of their own.

Special Receipts

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By special receipts we mean major items of receipts in addition to those regularly obtained from crops, labor, rent, and interest on loans extended. These are counterparts of special expenses, and informations about them were obtained from the 96 sample-families in the same manner and almost concurrently. Examples of these special receipts are: sales of land, gold, and major farm equipment; loans obtained, full or partial settlement of loans extended; gifts and remittances; and odd receipts like those from government lottery prizes, running a gambling house, and laxity practices. Special receipts of the 96 sample-families during the period from March, 1948 to February, 1953 were shown in Table 58.

Some of these items of special receipts need explanation. Land sold by two farm operators were sold for cash needed for loan repayment. It is perhaps worth noting that one of these two operators was in the habit of heavy drinking and had been in recent years spending about two thousand baht annually on liquor alone, while the other was in the habit of gambling. All five operators reporting sales of gold gave the reason for the sale that cash was needed to either buy farm equipment (buffaloes) or to repay

[TEXT CONTINUED ON PAGE 333]

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to make use of modern facilities one suffered confusing and unhappy experiences. Bangkok traffic was dizzying, even if one knew just where to go. Hospitals had beds, not mats, and the personnel were strangers. Foods were often unfamiliar or violated traditional injunctions concerning heating and cooling. People were brusque, impersonal, and overbearing to country people. One woman complained, "I am afraid of the doctor there. She scolds me and does not treat me like city people. She will not explain what the sickness is." Mīnburī's clinic was small, set up in more familiar terms, and the staff known personally to many villagers.

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Finally, there was the problem of finding an experienced escort, i.e. someone who "knew the way." More was involved than just convenience. In all walks of Bang Chan's life, no one ever presented himself to a school, to a household, anywhere, without a personal introduction from someone who had been there before, and so was accustomed (khoei) to it. It was not hard to find someone who had been to the Mīnburī Health Center, but it was difficult to find one who had been to a hospital in Bangkok, knew what to do, and had the time, money, and inclination to act as escort. The latter was always a relative by blood or marriage or the sick person's mǭ himself (Hanks and Hanks, 1955: 160). Actually, five or ten persons might accompany an ill person, only one of which was acting as the recognized go-between. Many of those who had been to a hospital or clinic as patients had previously accompanied others merely as escort, or to visit (Goldsen and Ralis 1955:31).

758 743 184 178 [369] [844] [554]

Who had actually tried modern medicine for one reason or another? About a third of the household heads had used some modern clinic or hospital for treatment or hospitalization (Goldsen and Ralis 1955:31). Use was more frequent among (1) the literate, (2) those exposed to the mass media of radio and movies, (3) those accepting certain urban ways, and (4) those having greater contacts with the city in the way of visits, but users were not of a noticeably higher economic level (ibid:37). Women went no more frequently than men (ibid:32). No figures indicated how many of these occasions were for childbirth, but our interviews point to a small number. Taking the will for the deed, two women teachers who appeared to be the first to plan ahead to be delivered at the Mīnburī Health Center--but who did not get there because labor was too quick--seemed to be viewing the use of modern methods as a means to higher status.

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Why was modern obstetrics so largely eschewed? What had been Bang Chan's experience, unfavorable or favorable, that colored their attitudes? First, home was the most convenient place for care. Bangkok was ruled out categorically as too far. In fact, Mīnburī might be too far if labor manifested its normal celerity as the case of the two teachers showed, or if complications had developed. Furthermore, a Chinese resident of Bang

443 noodles. Their prices were higher than in Minburi or Bangkok, but their service was such a convenience that many people rarely went to town. Some adults in Bang Chan had never been to Bangkok though almost all had visited Minburi, about 3 [43] miles from the temple. Venders often extended credit, and also accepted items such as fresh fish, fruit, and eggs on a barter basis, thus providing an outlet for small amounts of home products. When the subsidiary canals were dry, however, venders could not get to some parts of the village.

Home Sites and Houses

General Arrangement

361 Since the canals provided the chief means of local
• 487 transportation for much of the year, and also supplied water for many household uses, houses were built near the canal, usually within sight of a neighbor's. Home sites were mounded up to a level of two or three feet above that of the fields, but even so, water might cover the mound at the peak of the rainy season. Old wooden houses were set in a grove of bamboo, bananas and other fruit trees and vines, occa-
343 sionally betel and coconut palms. Nearby might be a shed for the water buffalo which were the draught animals used in farming. Rarely one saw a walled privy.[1] On the same mound might be a cottage built by parents for married children or by an affluent farmer for a hired hand. In this case, the threshing floor, firewood from trees on the mound, and area
342 for kitchen garden would be shared. Many houses were built on stilts to avoid flooding when the water level was high. If the house was elevated sufficiently, the area underneath provided a relatively cool shelter during the hot season for the buffalo, and even for family members for some of their daytime activities.

Depending on the resources of the family, houses were built of either thatch or wood, roofed with thatch, galvan-
352 ized iron or occasionally, tile. Split bamboo or matting might be used for dividing walls if the house had more than one room. Wooden flooring was usual, but in simpler thatched houses with dirt floors, the buffalo might be sheltered under the same roof with the family. In such a house, one or more low wooden platforms were built for sitting and sleeping. Wide cracks between floor boards conveniently permitted betel
364 chewers to spit without the need for a spittoon. Those who
264 were preparing food or clearing up after a meal could also thus discard refuse or dispose of leftover food that was to
349 be given to chickens, without leaving the kitchen. Some

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1. cf. Hauck, 1956, p. 45-6 for description of latrine facilities.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

[P. 14]

I

The Village of Bang Chan

Geographical and Cultural Setting

T
133 The heartland of Siam is the Mɛ̄naam or Caw Phrajaa Valley, a vast
361 alluvial plain stretching out for some 250 miles north of the Gulf of
161 Thailand and the capital city of Bangkok, where approximately 40 percent
137 of the nation's 26.3 million persons (1960) live.[1] This Central region is
563 distinguished geographically, and to a lesser extent culturally, from the three other major areas of Thailand: the North, a forested mountain area dominated by Chiengmai, Thailand's second largest city, and in whose outer reaches live many of the tribal peoples of Siam; the Northeast, a broad plateau region which is the largest and economically poorest area of the country; and the South, or Peninsular Thailand, a jungle and mountain area where the heaviest concentration of Thai Malay–Moslems live.

C
13 The community of Bang Chan is located some 31 kilometers northeast
• 487 of Bangkok on what is essentially a flat, seemingly endless rice field, broken
361 occasionally by tall Asiatic pines, strings of houses along canals, or clumps
[491] of trees shielding some isolated homesteads. A person seeing Bang Chan for the first time is struck particularly by the intense green of the landscape and, once off the macadam road that connects the village to Bangkok and to the market town of Minburi four kilometers to the east, the stillness of the setting, even along the thickly populated main canal where voices are muffled by the heavy foliage surrounding each house. Often in the early hours of the afternoon the only sound that one can hear in Bang Chan is the dip of the paddles of boats moving up the canal or the barking of dogs.

T
[114]

[1] There is no general agreement on the precise boundaries of the Mɛ̄naam Valley. Zimmerman (1931), Andrews (1935), Blanchard *et al.* (1958), and most Thai government documents use the term synonymously with "Central region," which would include the provinces east and southeast of Bangkok to the Cambodia frontier, west to the Burma border, and north of the Gulf of Thailand. Credner (1935) and deYoung (1955) on the other hand limit the term to only that portion of the Central region which falls north of Bangkok, equivalent to what Pendleton (1962) calls the "Bangkok Plain." Our population figure refers to the former usage.

BANG CHAN

FOREWORD

The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, Minburi. A century-old canal and to the north of it a post-war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

In 1954, when data for the present study were still being gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the households were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupation of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple food of the people. During the wet season and into the cooler dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

The Thai countryside is divided into hamlets, each with a headman in charge of the thirty to sixty households of the hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

Chapter I

THE COMMUNITY OF BANG CHAN

The Geographical Setting

In the populous flat central plain of Thailand where Bang Chan was located, fenceless geometric rice-fields, dotted by clumps of trees, stretch as far as the eye can see. Houses, clustering occasionally into hamlets, line the canals that serve for domestic use, drainage, irrigation, and communication. A few mounded-up roads lead out from Bangkok, the national capital on the Menam Chao Phraya, the great central river.

The monsoon divides the year into three seasons: a hot and wet (late May through November); a cool and dry (December to mid-February); and a hot and dry (late February to mid-May). The temperatures range annually from 59° to 89° F. (15° to 32° C.) with monthly means of 77° to 86° F. (25° to 30° C.) (de Young:5). A drop at night averages around 18° F. (10° C.) in April, and 22° F. (12° C.) in January, while the relative humidity varies between 85 per cent and 81 per cent (Hauck, et al.:12). Rainfall averages about 50 inches a year, 40 of which fall in the wet season (Janlekha:21). Because of the run-off from the mountains in the north, once a year the Menam Chao Phraya slowly rises, fills the canals and then overflows its banks, covering the plain for hundreds of miles to a depth of three feet or more. In Bang Chan, the water stood on the land from June until January, with its peak in October. From February to May the canals ran low, and the land dried and cracked from the intense heat.

The Community

In 1954, 1700 persons (336 families) lived in Bang Chan. Muslims, comprising 10 per cent of the population, lived as fully Thai citizens in all parts of the community in economic and social symbiosis with Buddhists. A few ethnic Chinese had married into Thai families and were accepted.

The community spread over an area of about 7000 rai (1000 hectares or 5 square miles). Bang Chan Canal bissected

Bang Chan Canal bissected the community and joined, about one mile south, Sēnsēab Canal, a broad old waterway connecting Bangkok and Minburī with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Minburī, two miles east, cut through one side of the area. On it lay Bang Khūat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō paet," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Minburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Minburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-venders who plied the canals. During the dry months, or for large festivities, people marketed at Minburī, Kilō paet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoe), one located in Minburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (sureo) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

1. A new large school has since been built away from the temple compound.

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The climate together with the overflowing Chao Phraya river, provided natural conditions for raising a single crop of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

Wat Bang Chan, the Buddhist monastery and place for religious exercises, was also the center of social life in the community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part of the Thai-Buddhist community. Information to be presented on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

Although for six or more months of the year the fields were covered with water, sometimes to a depth of a meter or more, a year-round road, connecting Bangkok and Minburi, the nearest market town, ran through one edge of the village. Bus service was available along this road, to either Bangkok or Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

[P. 14]

I

The Village of Bang Chan

Geographical and Cultural Setting

The heartland of Siam is the Mɛ̀ɛnaam or Caw Phrajaa Valley, a vast alluvial plain stretching out for some 250 miles north of the Gulf of Thailand and the capital city of Bangkok, where approximately 40 percent of the nation's 26.3 million persons (1960) live.[1] This Central region is distinguished geographically, and to a lesser extent culturally, from the three other major areas of Thailand: the North, a forested mountain area dominated by Chiengmai, Thailand's second largest city, and in whose outer reaches live many of the tribal peoples of Siam; the Northeast, a broad plateau region which is the largest and economically poorest area of the country; and the South, or Peninsular Thailand, a jungle and mountain area where the heaviest concentration of Thai Malay–Moslems live.

The community of Bang Chan is located some 31 kilometers northeast of Bangkok on what is essentially a flat, seemingly endless rice field, broken occasionally by tall Asiatic pines, strings of houses along canals, or clumps of trees shielding some isolated homesteads. A person seeing Bang Chan for the first time is struck particularly by the intense green of the landscape and, once off the macadam road that connects the village to Bangkok and to the market town of Minburi four kilometers to the east, the stillness of the setting, even along the thickly populated main canal where voices are muffled by the heavy foliage surrounding each house. Often in the early hours of the afternoon the only sound that one can hear in Bang Chan is the dip of the paddles of boats moving up the canal or the barking of dogs.

[1] There is no general agreement on the precise boundaries of the Mɛ̀ɛnaam Valley. Zimmerman (1931), Andrews (1935), Blanchard *et al.* (1958), and most Thai government documents use the term synonymously with "Central region," which would include the provinces east and southeast of Bangkok to the Cambodia frontier, west to the Burma border, and north of the Gulf of Thailand. Credner (1935) and deYoung (1955) on the other hand limit the term to only that portion of the Central region which falls north of Bangkok, equivalent to what Pendleton (1962) calls the "Bangkok Plain." Our population figure refers to the former usage.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

BANG CHAN

FOREWORD

114 The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

[113] The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on [128] health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

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621 In 1954, when data for the present study were still being 162 gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the house- [592] holds were made up of independent nuclear families consisting of parents and unmarried children. The average size for all 243 families was 5.7 persons. Rice farming was the main occupa- 241 tion of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With [463] the exception of some 120 acres (300 rai) used for the home [311] sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple [132] food of the people. During the wet season and into the cooler 221 dry season, from May or June to February, the growing of the [517] single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

MAP I

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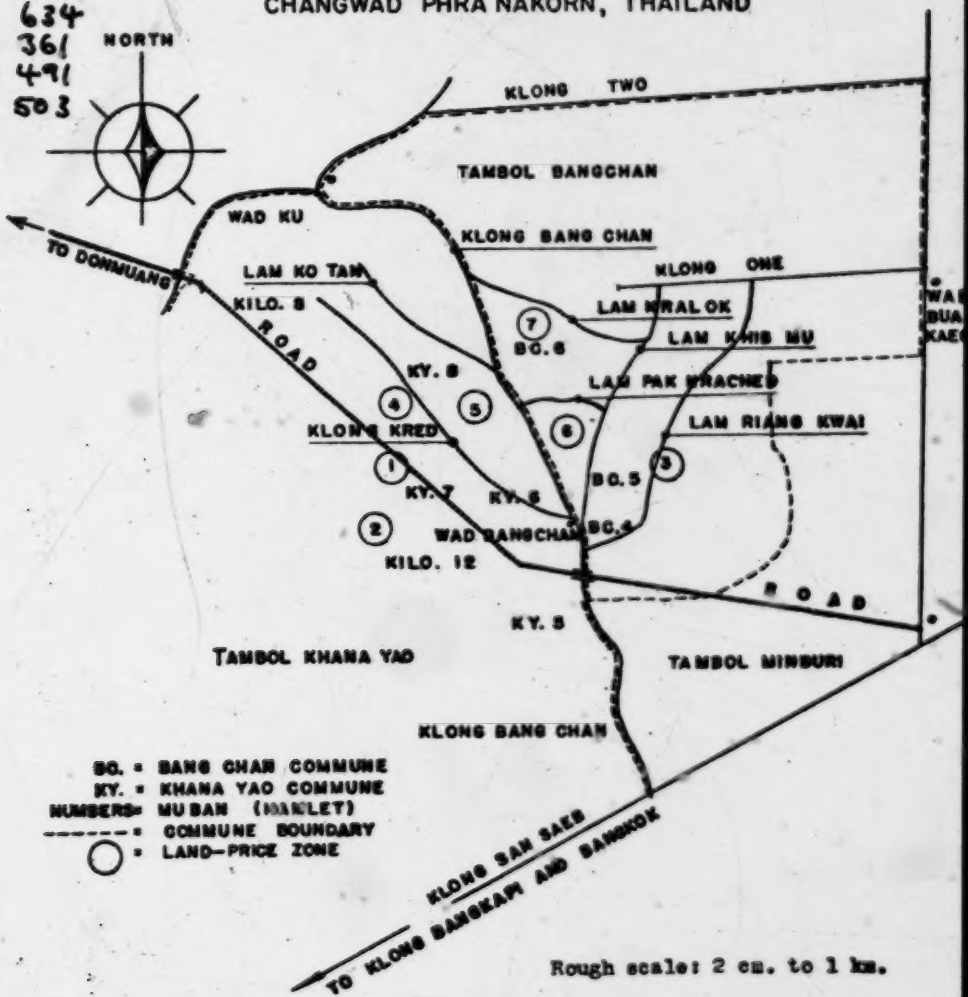
SKETCH MAP OF TAMBOL KHANA YAO, AMPHOE BANGKAPI
AND TAMBOL BANGCHAN, AMPHOE MINBURI
CHANGWAD PHRA NAKORN, THAILAND



Rough scale: 2 cm. to 1 km.

278 [563] The Chinese druggists, many of whom stocked among their traditional pharmacopeia a few modern medications, gave out occasionally to their customers information derived from the manufacturer's instructions for use. People with minor indispositions sometimes sought a druggist's advice. He suggested traditional or modern remedies, depending on the wishes of the customer. Thus, the druggists also acted as a bridge to the use of modern remedies.

484 Facets of Social Life Pertinent to Childbearing:

Communication and Transportation

People went to Minburi, and less often to Bangkok, to buy, sell, work, or visit relatives. A few adults had never been outside Bang Chan.

494 [484] [206] [493] Along the road buses passed Bang Chan every two or three hours during the daytime only. Minburi was a ten minute ride, Bangkok, an hour. Minburi had no taxis, and no telephone existed to call a taxi from Bangkok. Two or three persons owned bicycles.

505 484 Within Bang Chan, transportation varied with the season. From June to February travel was entirely by boat, even to a neighbor. A message to a local midwife, for instance, could be carried quickly by a speedy paddler in his skiff. If an emergency trip to the Minburi Health Center appeared necessary, a person could be rowed fairly comfortably along the canal that bordered the road. Going by boat to Bangkok, a whole day's row away, or four hours by the motor boat from Minburi, was not considered convenient even for passenger traffic, much less for a sick person or a woman in labor.

484 844 [494] The inconvenient time of year was the three month dry season. Boats then could hardly go on the canal that ran through the middle of Bang Chan, while the smaller canals became muddy or even dry. Walking barefoot over sharp stubble in tropical sun was hard. To transport a woman in labor, assuming she could stand it, an improvised stretcher could be made, but to subject her to the jolting bus was usually foolhardy. It was not customary to flag down passing cars. If things went wrong for a woman in labor during the hot, dry season, there was practically no chance of getting her to a hospital, and none of getting modern help to her.

243 433 Work Habits in the Economy

Because of the annual flood the land was admirably suited to growing a single bounteous crop of rice. After all needs for

177 22
178
207 Exposure to the media of mass communication seems to act, in
212 a sense, as a substitute for literacy. It may be that through
546 these means either an illiterate farmer can obtain information
about the more complex agricultural tools and methods or motivation
to try improvements, or both, even though he may not know how to
read and write. One may infer that he tends to act on the infor-
mation thus obtained, since he is more likely than his unexposed
opposite number to try out these innovations.

178
177 Acceptance of Urban Patterns

369 The printed word and the mass media are, of course, not solely
channels for the communication of knowledge. They are, at the
same time a means whereby the farmers may establish some sort of
contact with the more sophisticated world outside the community
even with highly urban Bangkok.

The survey indicates in a general way the extent to which
[291] the people of Bang Chan have accepted urban patterns. Their grow-
[416] ing acceptance of urban modes is readily apparent even to a casual
[207] visitor: many own shoes, flashlights, wrist watches, radios,
bicycles, fountain pens, modern furniture.* Other urban behavior
is likewise beginning to be noticeable.

• [493] One very simple indication of the degree to which urban in-
[413] fluences have penetrated is the change in manners of taking
[358] food. The farmers traditionally eat with their hands rather than
using a fork or spoon. In Bangkok, however, eating utensils are
customarily served with the meals in restaurants and are widely
adopted as well by the city population. Some Bang Chan inhabi-
177 tants have picked up this simple urban custom and have substituted
178 it for eating mainly with their hands. In Bang Chan of 1955, for
264 example, a sizeable minority (24 per cent) report that they use a
369 spoon, fork or both for the evening meal.

That such a simple question can roughly measure exposure
[207] to urban influences, is indicated in the following table, which
[546] shows that respondents who report customarily eating with "urban
utensils" are more likely to be exposed frequently to radio and
motion pictures and are more likely to have visited in Bangkok.

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[412] * Survey respondents report that their households possess a
flashlight (81 per cent); scissors (66 per cent); kerosene lamp
(27 per cent); radio (14 per cent). About 41 per cent say they
own at least one pair of shoes.

8

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Bang Chan

423 184 from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

369 179 A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital [494] does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey [484] conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise 369 179 of regular wages, lighter work, and the bright lights of the city, leave Bang 169 Chan with the hope that they will never have to return, although of course [464] many do. The Goldsen-Ralis survey reveals that 26 percent of their re- [701] spondents had lived in Bangkok for a year or more, although for most this was in fulfillment of military service.

369 179 181 Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

369 179 The frequent transit between Bang Chan and Bangkok,[8] however,

[809] [204] [891] [8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

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AO7 Central Thai AO7
Bang Chan

since even the most novel activities eventually become routine or stale, it is obviously impossible for all one's hours to be animated with *sanug*. From a total time perspective, many of the villagers' activities are of course either "sanug-fully" fallow or "sanug-fully" short-lived. To a large extent, this paradox is resolved *subjectively* by the short-term time perspective of the villagers. This is the second major point to be noted about *sanug*, that is, *sanug* reflects a more generalized tendency on the part of the villagers to concern themselves with activities that require only brief time commitments or whose effects are immediately forthcoming. Bang Chaners are not an impatient people in an active, negative sense, but they do have difficulty in attending to tasks that demand from them a sense of compulsiveness or staying power. They will often drop demanding tasks right in the middle once they have recognized that the work is taking longer than originally expected. What is striking is that they will do this with apparently no sense of frustration over not having fulfilled their aims and with no regret over having wasted their time. It is as if their original purposes had simply become irrelevant, and they had gone on to other things. This is precisely the attitude, for example, surrounding the construction of the unusable road referred to earlier leading from the Minburi Highway to the Bang Chan school. After devoting considerable labor to building the high mound that would form the foundation of the road, villagers lost interest when they were unable to obtain funds for its surfacing. Since no one was ever interested in maintaining it, the road now lies in the middle of a rice field, rutted and pitted; much of the foundation has sunk back to the level of the adjacent fields. However, no villager has ever considered the road a fiasco or "folly"; it was just something done in the past and has since been forgotten. The road project might be revived in the future, but from the villagers' point of view that too is irrelevant. The point is that *sanug*, with its emphasis on novelty and diversion, is expressive of this same underlying time orientation. In the villagers' way of thinking, no activity is really worth doing unless it has the potentiality for fun.

Another expression of the villagers' concern with play, related in some respects to what will be discussed in the next section, is their preoccupation with humorous *topics* of conversation. For the most part, they enjoy hearing and telling stories with a "banana peel" twist: of a husband who is caught by his wife sleeping with another woman; of an individual who, through his failure to take heed, is cheated out of his money. Such stories of course always concern other people, not those immediately present. Too, stories that combine whimsy and the supernatural—for example, of a "super-dog" that can find buried treasure or foretell the future—elicit laughter, although often with a tinge of apprehension that the stories may be true. However, what is most impressive about these and similar stories is the amount of time given to them.

462 Besides the work in rice-fields, women dug and cleaned [503] canals and ditches, mounded land, and fished in many ways, the [226] most laborious of which was plunging a heavy basket into the mud to catch burrowing fish. In the household chores, in which men shared to some extent, they carried water, cut and fetched wood, tended livestock, cultivated kitchen gardens, [501] pounded rice in mortars, and cleaned houses. Boats were rowed by paddling or sculled by standing and pushing a single large [354] oar. Cooking was time consuming. The low stoves were on the [352] ground or floor. Since there were no tables or chairs, one squatted two to four hours a day to cut or pound ingredients, [516] stir the curry, or wash the dishes.

868 The training of boys and girls for farm and household 561 work was thorough and started early. By 18 years of age, 461 boys and girls with few exceptions were experienced in every step of farming. Janlekha's chart (1955:82) indicates the progression (parenthetical additions are the present author's):

Age	Method	Kinds of farm work
5 - 7	not forced, but allowed or induced to work if they want to	light hauling, removal of weeds which have been turned over by harrowing
8 - 12	mild pressure	light hauling, removal of weeds which have been turned over by harrowing; some household work and help in the kitchen - girls only - (sometimes boys)
13 - 14	moderate pressure	hauling, weeding, buffalo-tending, transplanting, chicken-feeding, fishing, household work (boys and girls)
15 - 16	high pressure	all kinds of farm work, harrowing, harvesting, and uprooting - boys only - are started at this age.

872 Children worked in the fields before and after school 461 which, compulsory for all children aged eight to fourteen, was held from 9 a.m. to 3 p.m. five and one-half days a week. Vacations coincided with peak work seasons so children could help in the fields or at home.

4

132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [143] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [220] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [435] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part [028] of the Thai-Buddhist community. Information to be presented on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

193 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the nearest market town, ran through one edge of the village. Bus 484 service was available along this road, to either Bangkok or [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

221 The year starts with May, the beginning of the rice-
132 year. At this time the rains began to soften the parched
241 ground, and the heat slackened. School re-opened. Farmers
512 turned to plowing, harrowing, raising the seedlings. Both
871 sexes worked about equally in field labor, boys from 14 and
862 girls from about 15 years of age performing tasks according
883 to skill and strength. Everyone was in the field at dawn. The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy
284 day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third
262 meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

221 With the rains, the canals had filled, so that by June
132 buyers with big rice boats could return. The few farmers who
501 could afford to hold onto a portion of their last year's crop
442 sold it for a better price at this time. Vegetables and
24 fruits which had died in the long drought were replaced, and trees were planted.

24 In July the heavy transplanting season began. Because
221 of cooperative work habits or hiring out, people worked
132 solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly con-
312 trollable. Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School
871 vacation was scheduled at this time so both teachers and
857 children could help. Older children might work in the fields,
887 while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food
432 for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

Chapter I

THE COMMUNITY OF BANG CHAN

The Geographical Setting

In the populous flat central plain of Thailand where Bang Chan was located, fenceless geometric rice-fields, dotted by clumps of trees, stretch as far as the eye can see. Houses, clustering occasionally into hamlets, line the canals that serve for domestic use, drainage, irrigation, and communication. A few rounded-up roads lead out from Bangkok, the national capital on the Menam Chao Phraya, the great central river.

The monsoon divides the year into three seasons: a hot and wet (late May through November); a cool and dry (December to mid-February); and a hot and dry (late February to mid-May). The temperatures range annually from 59° to 89° F. (15° to 32° C.) with monthly means of 77° to 86° F. (25° to 30° C.) (de Young:5). A drop at night averages around 18° F. (10° C.) in April, and 22° F. (12° C.) in January, while the relative humidity varies between 65 per cent and 81 per cent (Hauck, et al.:12). Rainfall averages about 50 inches a year, 40 of which fall in the wet season (Janlekha:21). Because of the run-off from the mountains in the north, once a year the Menam Chao Phraya slowly rises, fills the canals and then overflows its banks, covering the plain for hundreds of miles to a depth of three feet or more. In Bang Chan, the water stood on the land from June until January, with its peak in October. From February to May the canals ran low, and the land dried and cracked from the intense heat.

The Community

In 1954, 1700 persons (336 families) lived in Bang Chan. Muslims, comprising 10 per cent of the population, lived as fully Thai citizens in all parts of the community in economic and social symbiosis with Buddhists. A few ethnic Chinese had married into Thai families and were accepted.

The community spread over an area of about 7000 rai (1000 hectares or 4 square miles). Bang Chan Canal bisected

Bang Chan Canal bissected

the community and joined, about one mile south, Sāensaēb Canal, a broad old waterway connecting Bangkok and Mīnburī with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Mīnburī, two miles east, cut through one side of the area. On it lay Bang Khūat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō pēet," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Mīnburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Mīnburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Mīnburī, Kilō pēet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoē), one located in Mīnburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided, reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

1. A new large school has since been built away from the temple compound.

462
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[226] canals and ditches, mounded land, and fished in many ways, the most laborious of which was plunging a heavy basket into the mud to catch burrowing fish. In the household chores, in which men shared to some extent, they carried water, cut and fetched wood, tended livestock, cultivated kitchen gardens, pounded rice in mortars, and cleaned houses. Boats were rowed [501] by paddling or sculled by standing and pushing a single large oar. Cooking was time consuming. The low stoves were on the [354] ground or floor. Since there were no tables or chairs, one squatted two to four hours a day to cut or pound ingredients, [352] stir the curry, or wash the dishes.
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2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

221 132 246 244 245 292 464 544 503 964 871

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ←WET→							←COOL→		←HOT→		
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	---→ heavy		moderate	←heavy→		←light→			←negligible			
Canals		rising			high	(floods)			lowering fast		low,dry	
Cultivation of Rice		plowing→ seedbed grown				growing	early var. mature					
			TRANSPLANTING				←HARVEST→					
School		vacation						vacation			vacation	
Cash available Source	cash in hand	rice				←cash shortage→					cash in hand	
					cash jobs→				main rice sale			
Fruit;vegetables	→	←new planting→							←annuals die			
Fish: Supplies	ponds drained→								←ponds drained			
Maturation			←many varieties→						←best varieties→			
Preserving	←much→		←moderate→						←most→			
Ceremonies	ceremonies→		←Buddhist Lent→							←ceremonies		
Dietary survey	→	←Round I→		←Round II→				←Round III→		←Round IV		

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 18°F (10°C) in April and 22°F (12°C) in January.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

Houses in the village vary considerably in appearance: from the bamboo and thatch dwellings of the poorest families to the sturdy, great gabled houses of teak built by Bang Chan's original settlers to the tiled and corrugated iron-roofed homes of the newly rich. Most, however, follow the traditional Siamese pattern of being built on posts two to ten feet off the ground, mainly as a protection against flood waters. Many homes in Bang Chan give the impression of being permanently unfinished, the bamboo houses because they require constant refurbishment, the wooden dwellings because they are made of teak which seasons best when left untreated and exposed directly to the elements. The merging upper-class urban pattern of painting teakwood has not yet reached Bang Chan.

The major thoroughfare of the community, bisecting it in a north-south direction and perpendicular to the Bangkok-Minburi highway, is Khlɔɔŋ (or Canal) Bang Chan, which links with Khlɔɔŋ Sɛɛn Sɛɛb three kilometers south of the village. The latter, dug in the 1840's and originally intended as a military route to the Cambodian frontier, is one of several major canals dug during the mid-nineteenth century as part of the vast canal system that was constructed in the Central Plain when the region was opened for commercial rice production. Together with the highway built since World War II, a one-hour bus ride to the capital, Khlɔɔŋ Sɛɛn Sɛɛb, provides the villagers with their major access to Bangkok and the rest of the Central Plain. By motorboat a trip to Bangkok via this large, bustling canal takes approximately three hours.

Despite these relatively good communications facilities and the long-standing Thai peasant tradition to *paj thiaw* ("to go around"—for fun, on visits, pilgrimages, often for long distances) few people outside the immediate vicinity of the village have ever heard of Bang Chan. The community is neither a landmark nor is it located near one; it is not famed for any activities (other than having become the research site for the "American professors"); and because it is not a spatially integrated village, Bang Chan cannot even be found on any map of Thailand. Like most Thai settlements, Bang Chan has a Buddhist monastery and a government elementary school. It is these two structures that give the village its identity and the local people a sense of belonging to a community. People say that they live "at home in Bang Chan" because they make their merit at the monastery of Bang Chan and send their children to the Bang Chan school. Approximately five square miles in size and inhabited by 1,771 people living in 296 households (1956 village census), Bang Chan seems in physical appearance and social significance like the thousands of other communities that dot the rice fields of the great Central Plain.

To what extent Bang Chan may be considered "typical" in an analytic sense of other villages of the Mɛɛnaam Valley, or even of the country as a

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

CHAPTER II

THE COMMUNITY

Geography

131 The community of Bangchan is situated some twenty road-miles northeast of Bangkok in the heart of the economically all-important commercial rice growing area of central 361 Thailand. Surrounded by their rice fields, the population [161] of about 1,600 persons lives on some three hundred small [503] family homesteads scattered along a half dozen connecting [243] canals. The community occupies an area of 6,500 rai,[1] or 2,600 acres, all of which, with the exception of about 300 rai of homesites and narrow strips bordering canals, is given over to the production of wet rice.

134 The soil of Bangchan area is heavy dark clay with 243 an impervious layer at a depth of about six to eight inches and is suited only to rice growing.

133 The area is essentially flat, rising slightly toward 312 the north. It receives, in addition to rain water, irrigation water channeled into it through the Seen-saeb Canal one mile to the south, Samwa Canal one mile to the east, and Khlong-song Canal one mile to the north.[2]

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[804] 1. One rai is equal to two-fifths of an acre.

2. See map on page 162.

361 direction dividing it into two halves, the Bangchan half
312 consisting of BC4, BC5, BC6, and the Kannayao half consistingof KY5, KY6, KY7 and KY8.

621 As mentioned earlier, our functional Bangchan village
634 is under two different administrative authorities, the Bangchan half consisting of part of Tambol Bangchan which is in turn part of Amphur Minburi in Changwad Phra-nakorn (Bangkok) and the Kannayao half consisting of part of Tambol Kannayao which is part of Amphur Bangkapi in the same Changwad Phra-nakorn.

History of Settlement

174 No official records on the history of the settlement
361 of Bangchan could be discovered, but evidence from genealo-
[503] gies provides a few clues on the subject. Following the digging of Saensaeb Canal some one hundred and twenty years ago, settlement was made along the banks of this important canal which provides one of the few connections between the
175 Menam and Bangprakong rivers. It was not, however, until
621 the 1870's, apparently, that people found it necessary to
361 move onto the land away from the canal. At that time, according to one of our older informants, her father was born in what is now Bangchan, his father and mother having come out from Bangkok as a young married couple to take up farm-
175 ing where plenty of land was available from the Crown. These
621 people and their followers, usually kinfolk or friends, cleared off scrub jungle areas in which, it is claimed, tigers and

#243 growing village could not very well be studied in a brief period of only one rice year. Rather, the field study should be extended to cover years of good as well as poor crop.

Land Utilization

Official records show that the area of land privately owned in the seven hamlets comprising Bangchan is 6,404 rai. [503] When an estimated area of 100 rai of public land occupied by the half dozen canals is added to the private land area, the total area of the village may be figured at about 6,500 rai.

#243 951 423 911 621 The area of each of the 298 homelots in Bangchan varied. It is rather difficult to get accurate figures for these homelot areas. We may, however, give an allowance of one rai for each homelot on the basis of crude estimate. This would include space for buildings and all of the home compound including family pools as well as kitchen garden, and in some cases area devoted to fruit trees. Since all of the land area in Bangchan other than homelots is devoted to rice growing, we may estimate the land available for rice production by simply deducting the homelot area from the total area of land privately owned in the village. This was found to be 6,106 rai in 1953 (Table 12).

#243 911 423 621 It should be noted that not all of this area of 6,106 rai was tilled by Bangchan residents, and that some of the villagers also worked on rice fields outside our arbitrary

[TEXT CONTINUED ON PAGE 113]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

MAP I

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103
102
634
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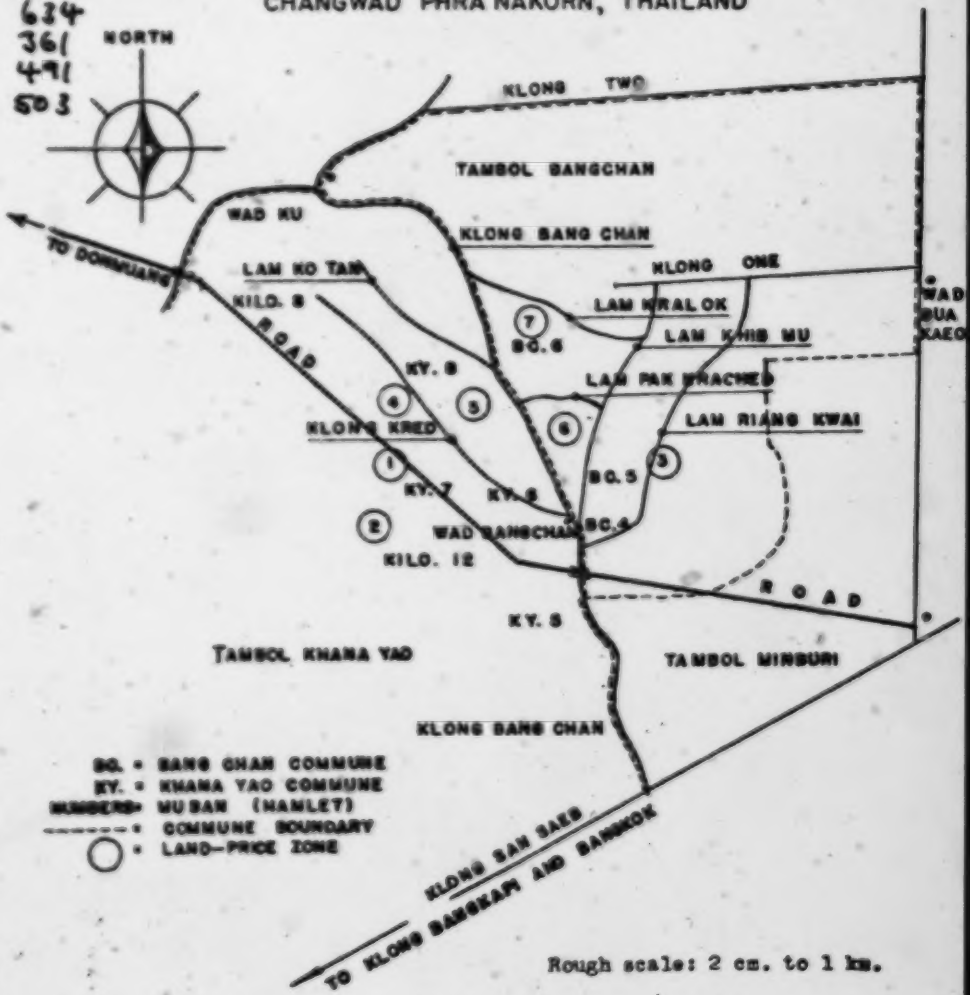
SKETCH MAP OF TAMBOL KHANA YAO, AMPHOE BANGKAPI
AND TAMBOL BANGCHAN, AMPHOE MINBURI
CHANGWAD PHRA NAKORN, THAILAND



Rough scale: 2 cm. to 1 km.

278
[563] The Chinese druggists, many of whom stocked among their traditional pharmacopeia a few modern medications, gave out occasionally to their customers information derived from the manufacturer's instructions for use. People with minor indispositions sometimes sought a druggist's advice. He suggested traditional or modern remedies, depending on the wishes of the customer. Thus, the druggists also acted as a bridge to the use of modern remedies.

484 Facets of Social Life Pertinent to Childbearing:

Communication and Transportation

People went to Minburi, and less often to Bangkok, to buy, sell, work, or visit relatives. A few adults had never been outside Bang Chan.

494 Along the road buses passed Bang Chan every two or three
[484] hours during the daytime only. Minburi was a ten minute
[206] ride, Bangkok, an hour. Minburi had no taxis, and no telephone
[493] existed to call a taxi from Bangkok. Two or three persons owned bicycles.

•505 Within Bang Chan, transportation varied with the season.
484 From June to February travel was entirely by boat, even to a neighbor. A message to a local midwife, for instance, could be carried quickly by a speedy paddler in his skiff. If an emergency trip to the Minburi Health Center appeared necessary, a person could be rowed fairly comfortably along the canal that bordered the road. Going by boat to Bangkok, a whole day's row away, or four hours by the motor boat from Minburi, was not considered convenient even for passenger traffic, much less for a sick person or a woman in labor.

484 The inconvenient time of year was the three month dry
844 season. Boats then could hardly go on the canal that ran through
[494] the middle of Bang Chan, while the smaller canals became muddy or even dry. Walking barefoot over sharp stubble in tropical sun was hard. To transport a woman in labor, assuming she could stand it, an improvised stretcher could be made, but to subject her to the jolting bus was usually foolhardy. It was not customary to flag down passing cars. If things went wrong for a woman in labor during the hot, dry season, there was practically no chance of getting her to a hospital, and none of getting modern help to her.

243 Work Habits in the Economy
433 Because of the annual flood the land was admirably suited to growing a single bounteous crop of rice. After all needs for

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janlekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 16 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complainte especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand [Kingshill 1960:73]).

Besides the work in rice-fields, women dug and cleaned

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 73 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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1. In some large houses, two related family groups lived together but maintained separate kitchens.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

rice land. Water-ways, however, were public areas, and any convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

Mushroom culture as a side line activity of rice farmers developed during the period when this study was in progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

Relatively few foods were purchased, but some of these, such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

Estimates of mean annual consumption and cost of purchased foods, for 106 households in Bang Chan are shown in Table 1.

The list of purchased foods presented by Janlekha (1955) was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)ma-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23--- Analyst]

close touch with each other's activities and needs.

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time.

Wealth Differences:

Way of Life

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable.

262 preserved vegetables which were purchased and used frequently
432 by families participating in the dietary study.

262 The food costs reported by Janlekha (1955) were esti-
435 mates recorded from memory at relatively frequent intervals. The average per capita cost, 0.44 baht per day, was similar to the average cash expenditure of 0.47 baht per person among 11 families participating in the dietary study (based on the average of 4 survey days for each family). Thus, in Bang Chan, cash expenditure for food appeared to be relatively small, i.e. farm families produced a large share of all food consumed. If money were not available to buy, they would still have enough to eat, but it might lack variety. One informant said, for instance, that he usually bought a coconut every other day, but during October, when cash was short, he bought none. Janlekha (1955) considered the estimates obtained for expenditures for fruits and vegetables less reliable than for items purchased more regularly.

262 In Table 2, the percentage distribution of food
• 511

Table 2. Division of Food Expenditures by Food Groups, for Eleven Families that Participated in the Dietary Study, 1953-54

	A 6 families[1] %	B 5 families[1] %
Animal foods	30.8	39.3
Fruits[2]	30.3	26.3
Vegetables[3]	28.7	17.0
Fats and Oils	3.3	8.4
Sugar	3.6	3.5
Pulses, nuts	--[4]	0.9
Spices, etc.	2.7	--[4]
Miscellaneous	0.7	4.5

1. Based on 4 days per family.

2. Primarily coconut.

3. Chiefly non-leafy

4. The dash indicates no purchase or a value of less than 0.1%.

262 expenditures by food groups is shown for the 11 families that
511 participated in the dietary study.

Consumption of canned foods was negligible. Some canned fish and fruits were on sale at stores in the village, in 1952-54, but were seldom seen in homes.

262 Sweetened condensed milk, which was served in coffee
272 sold at the stores, was occasionally bought for the children.
854 On one occasion, a woman was seen buying milk diluted with
855 hot water as a beverage. Among 526 records of food eaten by school children during 24 hour periods, milk appeared twice only, once with coffee. Dried milk, for infant feeding, was used occasionally. During 1952-54, several instances were noted in which dried milk, mixed with water, was used to feed an infant while the mother was at work in the field or engaged in vending, but we encountered one case only of an infant who was not breast fed. This was an infant whose mother died when he was five days old, and who was reared by grandparents.

262 Relatively few items of food were available at the vil-
443 lage stores. In the inventory of the largest of the three
[277] stores in the village in 1948-49 (Sharp et al., 1953, pp. 211-212) the following items of food were listed: big dried chilies, shrimp paste, onion, garlic, fish sauce (fishsoy), salted fish, fresh chilies, limes, coconut, coconut oil[1], brown (palm) sugar, tea, coffee, condensed milk, orangeade and lemonade (carbonated), sweets, liquor, ingredients (including a lime paste) used together in betel chewing.[2]

New stock received in December by a local vender who kept a few items for sale at her house included mature green beans, black beans, peanuts, sweet potatoes, salted turnip, pickled garlic and tomato sauce.

272 Larger stores served as informal men's clubs where tea,
443 coffee with condensed milk, and carbonated beverages were
515 sold primarily for consumption on the premises. The proprietor of a new store, built in December 1952, sold no liquor.

273 We have no estimate of the amount of liquor sold in Bang
[445] Chan, although for those who drank it, its caloric value might be of significance.[3] About 9% of the householders interviewed

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[354] 1. Listed by Sharp et al. with non-food items, as much of it was burned in lamps.

2. Included here as food since some calcium may be obtained from this source.

3. One observer estimated the intake of certain village men who drank regularly as at least 2 oz. of rice liquor (28-35% alcohol) per day, representing about 100 calories. The estimated intake of women who drank regularly was about 1 oz. per day.

per day were calculated for Groups A and B by Round and for all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

Although our sample was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

From the viewpoint of parents, the "peak of life" was the time when children were no longer dependent, but productive, unmarried workers whose earnings stayed within the family. Household 16 was such a family, forward looking, progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analyst]

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Table 8. Summary of Economic Conditions of the Two Groups of Households Participating in Dietary Studies

Household Group and Code No.	Members	Land: Rai Worked	Land: Rai Owned	Buffalo[1]	Food Cost[2]: Total	Food Cost[2]: Per Cap.	No. of Priests Fed	Sources of Income
Group A								
222	5	0	0	0	2.96	0.59	0	Labor contractor; hired out as labor; boat repair; fishing; vegetables sold; canal digging.
12	3	12	0	1	2.70	0.90	0	Rice production; occasional work in Bangkok.
215	5	14	0	1	1.59	0.32	0	Rice production; wife, a medium.
67	5	16	6	1-0	2.52	0.50	0	Rice production; eggs sold; road jobs.
2	6[3]	20	0	2	3.97	0.66	3	Rice production; "professional cook".
103	8	47	12	5	2.04	0.26	2[4]	Rice production; eggs, fish, mushrooms sold; buffaloes raised.
Mean		18.2	3.0	1.6	2.37	0.49	0.7	
Group B								
23	8[3]	6	0	1	1.56	0.19	0	Rice production; selling fish and vegetables; masseur.
21	4	25	25	3	1.92	0.48	3	Rice production; headman
16	8	47	47	5	2.70	0.34	2	Rice production; vegetables, fruit sold; road jobs.
25	8	50	50	3	7.97	1.00	2	Rice production; eggs, mushrooms sold.
20	9	66	51	1[1]	2.47	0.27	2	Rice production; ceremonialist; doctor; carpentry; trading; eggs collected and sold.
Mean		38.8	34.7	2.6[1]	3.32	0.45	1.8	

1. The buffalo belonging to Household 67 died during the year. In Household 20, the brother who moved in owned several buffalo, thus the total for Group B was more than the number shown.

2. Average cash expenditure per day, in baht. (One baht equalled about 5 cents) Household 222 received rice as part of wages.

3. Babies born during Round IV were not included. In Household 23, a 12-year old son served as temple boy and was away from home much of the time.

4. Rainy season only, when priests could come by boat; counted as 1 in computing average.

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from vendors almost every day. They said "Some do not pay money to buy food, but pick or get it from the canal or gardens —this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

433 511 Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

243 645 256 262 Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

244 654 645 Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chilies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

222 262 Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)sa-(5)noo flowers were used by 3 families on one day each;

252 Another, who had time during Round IV to prepare food twice a
262 day, preferred to prepare more in the morning when she expected
264 to offer food to her son who had just been ordained. In two
518 instances an evening meal was not prepared because the father
[525] and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

262 Cost of Food Purchased. - The lowest cash expenditure
495 for food by any household on a survey day was 0.12 baht, for
• 511 a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year pro-
262 gressed was apparent. Most of the rice was sold at the end
432 of Round III. The cash went for capital investments, not
[221] food, during Round IV. With time to drain ponds and to fish intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

146 Calorie and Nutrient Value of Foods Eaten. - The
221 seasonal variation in calorie and nutrient intake of the two
[218] groups of families is shown in Table 15. As one would expect, the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 --- Analyst]

592 Bangchan is thus not a counterpart of the Indian or Chinese
596 extended family and should not be conceived as such. Its
621 outlook is definitely that of the nuclear family. Its assumption of an extended family structure does not indicate an intended role of the conventional extended family but does rather demonstrate the inability, temporarily at least, to provide for an establishment of a new family for the newly
[511] wed members. Most of the 60 'extended' families existing in Bangchan at the time of the second census in 1953 cannot be regarded as well to do, and some are extremely poor, being families of the laboring group without any assured regular income.

592 All of the sixteen one-man families were poor, rang-
621 ing from destitute old people who had been deserted by their kin to small farm operators who had to make the most out of their under-sized farms.

592 There were some 53 dependent relatives staying with
602 twenty-five families. These relatives do not include parents
621 of family heads and family heads' direct descendants and
[597] their spouses. They also do not include 'adopted' children of family heads, who automatically become members of the family. Records show that most dependent relatives remained in the family only for a brief period of time. Seven relatives, however, were able during the period from 1949 to 1953 to assume the headship of the families of which they had been dependent members.[7]

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7. See section on change of family heads, Chapter II.

592 178 621 Although disintegration and annexation of families have a common feature in that in either case the family loses its entity, they have different connotations as to how the family passes out of existence. In order to have a clear picture of the village economy it is necessary to make a distinction between these two dynamic processes. The best way, perhaps, is to study the eleven families individually.

592 178 621 511 Case 1: A poor laboring family of eleven lived in BC4. The family head was in 1949 an old man of 59, his wife an old woman of 64. The family also included a son, age 29, son's daughters, 16 and 10, son's son, 9, daughter, 35, daughter's son, 18, daughter's daughters, 11, 4 and 1. This was the situation when we were first acquainted with them. When we re-visited the village in 1952, however, we found that only two members remained -- A, the old woman now sick with malnutrition and almost immovable, and B, her granddaughter then age 14 and still in the primary school. Presumably the girl was taking care of her grandmother. Except for the clothes they were wearing and a small old shack which was about to collapse, they did not own anything. B said she worked on a three-fourth-rai parcel and did some fishing or vegetable gathering before and after school time. Actually, she did not get much out of that effort; for the rice crop, 30 tang of paddy or roughly 15 tang of clean rice, was barely enough for a few months' consumption, and fishing would not be productive unless she had several long uninterrupted hours. In tracing what had happened to the rest of

178 592 621

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

On the other hand, there are scores of items that have to be bought for daily consumption. These are: (a) Food -- fish, fish sauce, shrimp paste, meat, coconut, onions, garlic, dried chili, curry essence, limes, tamarind, palm sugar, white sugar, salt, and cookies: (b) Stimulant -- dried areca, betel, lime, tobacco, tobacco binder, and liquor: (c) Clothing: (d) Medicine: (e) Soap: (f) Fuel -- Kerosine, matches, charcoal, and fire wood. The list includes only standard items appearing on our check list. Actually, there are more of such items as coffee, tea, lemonade, coca-cola, and pepsi-cola. Articles that are bought but do not appear on the check list for ordinary household expenses for certain technical reasons which will be discussed in the section on consumption later in this chapter are building materials, machinery, farm equipment, furniture and household utensils.

The Operator's Remuneration and Measures of Success

From almost the beginning of the study of farm management in the United States, much effort has been given to measuring the success of farming businesses, or of farm-family undertakings or enterprises, and then of correlating various factors with these, such as size of business, yields per acre or per animal, or work-efficiency measured perhaps as crop acres per man or per horse or per tractor, with a view to discovering some general farm management principles or rules for a farmer or farm family to follow in becoming more successful. Black, Clawson, Sayre and Wilcox give the

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Ordinary Household Expenses

*243 *511 *128 During the inundation period of 1952 (October 1 to December 3)when farmers were not occupied with field work, a study of household expenses was made covering 96 continuing farm operating families and the ten new farm operating families which have branched off from our original sample-families. In this special study, only ordinary household expenses were covered including food, stimulants, clothing, medicine, toilet articles, fuel, cash contributions, and personal expenses.

The method of study has already been described in the chapter on methodology. Annual ordinary expenses of an average farm operating family are shown in Table 53, which is intended to give the kind and quantity and value of each item of expenses consumed by an average family. The frequency distribution of total annual expenses is shown in Table 54.

*243 511 It is seen that total annual expenses average 6,056 baht per family annually. Of this, about half, or to be exact 2,962 baht, is actually purchased, the rest being produced by the family. Major items, in terms of money value, among cash expenses are found to be coconut, palm sugar, cookies, tobacco, clothing, kerosine, contributions to neighbors, and personal expenses, each exceeding 100 baht annually.

The reason for large expenses on coconut and palm sugar is that these two foods have relatively high prices

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 53

AVERAGE ANNUAL ORDINARY EXPENSES OF 106 SAMPLE-FAMILIES
Bangchan, Thailand, 1953
(Average family size, 5.7; average consuming unit, 4.7)

*243
• S11

Items	Quantity		Value in Baht	
Home-produced				
Food				
White rice	1,623	kg	1,623	
Raw fish	151.2	kg	756	
Fermented fish	137.7	lit	413	
Shrimp paste	16.7	kg	75	
Eggs	108	eggs	54	
Vegetables	174	kg	174	
				3,094
Purchased				
Food				
Raw fish	16.6	kg	83	
Fish sauce	36	bottles	54	
Shrimp paste	6	kg	27	
Pork and beef	8.4	kg	84	
Vegetables	1	kg	1	
Coconut	196	fruit	292	
Onion	11.3	kg	34	
Garlic	11.3	kg	34	
Dried chili	7.6	kg	53	
Curry essence			10	
Limes	80	fruit	16	
Tamarind	6.3	kg	19	
Palm sugar	71.4	kg	152	
White sugar	4	kg	16	
Salt	64	lit	8	
Cookies			192	
				1,075
Stimulants				
Dried areca	8	kg	48	
Betel			68	
Lime	3.8	kg	3	
Tobacco	4.4	bundles	120	
Tobacco binder	7	bundles	14	
				253
Clothing				556
Medicine				92
Toilet (soaps)				44
Fuel				
Kerosine	77.7	lit	101	
Matches	104	boxes	26	
				127
Cash contributions				
To temple			82	
To neighbors			261	
				343
Personal				472
Total				6,056

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 54

FREQUENCY DISTRIBUTION OF ANNUAL ORDINARY EXPENSES OF 106 SAMPLE-FAMILIES
Bangchan, Thailand, 1952

*243
• 511

Class Intervals	Number of Farms
baht	
3,000 and under	6
3,001 - 4,000	12
4,001 - 5,000	15
5,001 - 6,000	21
6,001 - 7,000	13
7,001 - 8,000	9
8,001 - 9,000	5
9,001 - 10,000	5
10,001 - 11,000	4
11,001 - 12,000	0
12,001 - 13,000	2
13,001 - 14,000	1
14,001 - 15,000	2
15,001 and over	1
Total	106
Mean	6,056 baht
Median	5,936 baht

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243
511 and that they are consumed daily. Expense on cookies is high because of school children's daily allowances which
243
857 were assumed to be spent entirely on this item. Even though
511 cash is extremely scarce in the village, especially during the period from July until just before harvesting time in January when roughly seven out of ten farm operating families do not have any cash at all, the children still have the privilege of receiving daily cash allowance. This is possible because of the chicken enterprise. The children simply take eggs along and convert them into cash at cooky stalls in the school yard. In this manner, it is seen that the school children have an important part in the daily flow of Bangchan eggs into Bangkok markets.

243
276 The kind of tobacco commonly used in Bangchan is
511 the relatively inexpensive native tobacco which smokers make into cigarettes themselves with the use of a special kind of thatchleaf binder. Bangchan women do not smoke, but they use tobacco heavily while they chew betel. Most men, young and old, are in the habit of smoking, while chewing betel is now limited to elderly people of both sexes. Tobacco is thus rated among major items of expenses because it is used in smoking as well as betel chewing.

243
291 Obviously, clothing is one of the major items of
511 expenses. In fact, it is the highest item after food, averaging 556 baht per family annually. Since rice farmers work partially under water most of the time, the rate of wear and tear of clothing is rather high. Each family worker

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511 needs at least two work suits in each rice season, one during the field preparation and another during the harvesting season.

372
226
511 Kerosine is used every day for lighting purposes. We do not include in this category kerosine which is used in the farm work; but that used with the pressure lamp in fishing by spearing during the night is included in the ordinary household expenses, for we do not consider fishing as a farm enterprise but as a routine activity participated in by all Bangchan residents, farmers and non-farmers alike.

431
476
796
511 Contributions to neighbors is a necessary item of expense in the village. These are cash gifts made by invited guests to the sponsor of such rituals as ordination, cremation, marriage, topnotch-cutting, and teacher worship. [792] [764] [535] These rituals usually take place during the dry season following harvesting when cash is abundant in the village and are always followed by feasts, not uncommonly in a series of two or three days. Since all these rituals necessitate the participation of the priests, they have to be arranged in consultation with the temple to avoid conflicting schedules. Although few rituals have been noted to be in conflict with one another, usually they are spread throughout the dry season and most people are able to attend rituals to which they are invited. In cases where they cannot attend in person, they are obliged by conventional requirement to send in their cash contributions. The standard cash contribution is 5 - 10 baht. Usually, a

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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431 guest contributes exactly the same amount that was given
496 him by the man when he last attended his party. Written
796 account is always kept by the host specifying contributors
• 511 and respective amounts given. When invited to a ritual, the guest consults his book and takes along an appropriate amount of cash. It is on this basis of reciprocal help that a prospective sponsor of a ritual has been able to determine the size of cash contribution he would receive from neighbors. Since a guest normally contributes no more than ten baht and no less than five baht, his annual expense on this item depends largely on the number of parties he attends each year. Our records for 1952 show that this ranges from 30 to 1,000 baht, averaging 343 baht.

27
511 We include in the personal item of expenses the amounts spent on traveling, entertainment, coffee, liquor, etc. To be sure, some of these should be grouped under the stimulant item. We, however, intentionally put coffee and liquor here because the sequence seems to better fit the requirements of the persons responding to questions so that better answers might be obtained. Tobacco, betel, and areca, for example, appear to have somewhat constant rates of consumption. They are usually bought in large quantities which will last for a considerable length of time. As a result, informants are in a position to give more accurate rates of consumption of these items than those of liquor and coffee of which consumption is somewhat irregular and is difficult to estimate.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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• 54 Generally speaking, a remarkable degree of homogenity in the pattern of ordinary expenses has been observed among Bangchan farm families. During the course of the enumerating work of this consumption study, however, it became progressively apparent that each item of ordinary expenses varied differently in its respective rate of consumption by sample families. The quantities of rice and fish consumed each year, for example, could be estimated within a small margin of error when the family composition was known; the amount of money spent on medicine, on the other hand, was unpredictable.

*128 511 In order to determine the degree of variability in the rate of consumption of each item, the figures of consumption must first be reduced to comparable terms. We have already known from Table 32, that the family size of our 106 sample-families range from one to thirteen, averaging 5.7 persons per family. But size in terms of number of persons may mislead, because a child certainly consumes less than an adult. To reduce variation due to age differences, in this consumption study family size is expressed in terms of consuming units. On the basis of information generally given by Bangchan residents that a child consumed about half the amount of rice normally consumed by an adult, we arbitrarily designate one-half a consuming unit to represent each child age 14 or under and one consuming unit represent each adult age 15 or over. Table 55 shows the frequency distribution of the size of family in terms of consuming units of our 106 sample-families. It is seen

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TABLE 55

DISTRIBUTION OF FAMILY BY CONSUMING-UNITS
106 FARM OPERATING FAMILIES
Bangchan, Thailand, 1952

Consuming Units	Number of Families
1.0	2
1.5	0
2.0	4
2.5	7
3.0	14
3.5	10
4.0	15
4.5	5
5.0	9
5.5	8
6.0	9
6.5	5
7.0	9
7.5	4
8.0	3
8.5	0
9.0	1
9.5	0
10.0	1
Total	106
Mean	4.7
Median	4.5
Mode	4.0

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*128 that the size ranges from 1.0 to 10.0 consuming units,
• 511 the mean being 4.7, median 4.5, and mode 4.0 units.

In order to determine the degree of variability of the rate of consumption of each of the 32 items of expenses, a sub-sample was chosen from all the 15 modal-size families of 4.0 consuming units. Since these fifteen families were already of comparable size as far as consumption was concerned, expenses on each of the 32 items could be directly compared to one another. The coefficient of variability of each of these 3[illegible] items of ordinary expenses is shown in Table 56.[7] It is [illegible]en that the variability coefficient varies from 30 per [illegible]nt for rice to 199 per cent for medicine. As expected, rates [illegible] consumption of the basic items were found to vary least [illegible]ong rice, fish, clothing, tobacco, and garlic, and vary most among curry essence, eggs, and medicine.

5x Several factors have been noted to affect the variability of the rate of consumption of these various items of both home-produced and purchased goods. Since food constitutes more than two-thirds of the ordinary household

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7. The standard deviation of each item was first calculated by the formula $S.D.^2 = \frac{\Sigma X^2 - \frac{(\Sigma X)^2}{N}}{N-1}$, where S.D. is standard deviation, X individual items of expenses, and N the number of [illegible]ms; and then converted into coefficient of variability by the formula Coef. var. = $\frac{S.D.}{\bar{X}} \times 10$ where $\bar{X}$ is mean expense.

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TABLE 56

VARIABILITY OF VARIOUS ITEMS OF EXPENSES
OF 15 SAMPLE-FAMILIES
Bangchan, Thailand, 1952

	Coefficient of Variability
	per cent
A. Low variability	
1. Rice	30
2. Fish	31
3. Clothing	39
4. Tobacco	40
5. Garlic	42
B. Moderate variability	
6. Onion	53
7. Soap	57
7. Coconut	57
9. Fish sauce	60
9. Salt	60
11. Palm sugar	62
12. Contribution to wat	63
13. Betel	64
14. Tamarind	67
15. Dried chili	69
15. Fermented fish	69
17. Kerosine	70
18. Shrimp paste	73
19. Areca	76
20. Vegetables	77
21. Limes	78
22. Contribution to neighbors	83
23. Matches	84
24. Lime	87
C. High variability	
25. Personal	100
26. Children's pocket money(coddies	103
27. White sugar	112
28. Pork and beef	123
29. Tobacco binder	125
30. Curry essence	126
31. Eggs	152
32. Medicine	199

511 expenses (Table 53) and the Thai concept of food taking is somewhat different from the Western concept, an explanation of the food habit of Bangchan residents, which in no way differs from that of Thai farmers elsewhere in the country, is perhaps necessary at this juncture.

262 264 By far the most important single dietary item of the Thai is khao or rice, which is the basis for every meal. The general term for "eat" is kin khao which has the literal meaning "to eat rice". Other dietary items are considered as embellishments and are thus called kab-khao (lit., with-rice). Typically, the "with-rice" items contain high seasoning in the form of chili and various hot curries. It is inconceivable for a Thai to eat "with-rice" alone without any rice, for not only the "real food" would then be missing but also there would be nothing to neutralize the highly flavored taste of the "with-rice". Actually, "with-rice" and rice are fed to the mouth in one lump with spoon or hand as the case may be. Eating "with-rice" alone would be just like eating butter without any bread. Moreover, "with-rice" are relatively more expensive than rice. Since the general idea is that they serve only to induce the in-take of rice, for sheer economic reason they should be consumed as little as possible so long as the required amount of rice in-take can be maintained. Accordingly, proper proportion of "with-rice" to rice in each helping has become one of the strictly observed table manners. This is easily noticeable, for only rice is served individually when the

262 family sit at the table while "with-rice" are placed at
264 the center and each person must partake of a small bit of these, just enough to properly go with a spoonful of rice taken each time. This table etiquette is generally observed throughout the country by all classes of people. A story had it that a Thai student of an aristocrat family wrote home objecting to the proposed marriage between his sister and one of his Thai friends in America. One count against the man was that he had been observed to have taken too much "with-rice" while dining out at a Chinese restaurant in New York!

• 511 Among the factors affecting variability of the rate
182 of consumption of various items of goods, the following may be mentioned:

261 a. Relative price of the food in relation to its
511 ability to mollify hunger when taken with rice. When Bangchan
182 farmers were questioned why they did not consume eggs produced at home but instead sold them and bought the inferior platoo fish (Rastrelliger chrysozonus), the answer was that an egg barely induced them to take a plate of rice whereas one platoo fish bought with half the money obtained from the sale of an egg could induce them to take three or four plates of rice and thus satisfying a hearty meal.

511 b. Homogeneity of quantitative need for certain
182 products like rice, fish, clothing, tobacco, and garlic. Consumption per consuming unit of these goods has been observed to be more or less constant regardless of the prices and the family's purchasing power.

182
184 c. The family's purchasing power. Certain goods
• 511 considered as luxuries -- medicine, eggs, pork and beef, and white sugar -- were not consumed by poor families.

184 d. Individual taste and preference. The Moslems
276 would not consume any pork although they had enough money
261 to buy it. Some poor farmers spent more money on curry
182 essence than their more affluent neighbors because they
511 preferred highly flavored dishes, and some tobacco smokers did not spend a cent on tobacco binder because they preferred the home-grown banana leaf binder to the thatch leaf binder which had to be purchased.

182 e. Producing ability of the family. It was observed
511 that those who caught more fish tended to consume more fish
[184] regardless of their financial conditions.

f. Health affected the consumption of medicine.

[431] g. Prestige affected the amount of cash contributions
[476] to neighbors.
[554]

h. Personal habits -- thrift, fun loving, indulgence, like or dislike of liquor -- affected the amount of personal expense.

i. Presence or absence of children of school age in the family affected the consumption of cookies.

Special Expenses

511 By special expenses we mean major items of expenses which do not occur regularly but which may arise in one time or another. Examples: purchases of land, gold and

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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511 jewelries, and major farm and household equipment; expenses on major repairs, sponsoring rituals, major medical cares, and gifts to offspring when they start an independent family; and odd expenses like a trip to Mecca and legal prosecution.

128 511 Fortunately, the somewhat spectacular nature of this type of expenses has caused each item to be remembered well by the farmer even for a period of four or five years. Another factor contributing to good memory on this subject on the part of farm operators is the limited number of incidents which were found to average three per family and range from zero to six during the period from the dry season of 1948 to the end of the crop year of 1952-53.

Records of special expenses were taken very informally when the author revisited the 96 continuing farm operating families (of the original 104 sample-families) in 1952 after an absence from the village of three years. The visit was in part a courtesy call during which time each farm operator was asked how he had been getting along during the three lapsing years. Every person approached was apparently pleased and gave full cooperation when asked to list the kind and amount of his major items of expenses during the period from the dry season of 1948 to the time the interview was made. These were recorded and kept in separate file for each farm operator. To avoid errors of omission these operators were visited several times and the same topic was brought up. The informations on these special expenses were constantly kept up to date until the end of the 1952-53

#128 crop year. Except for a few exceptional cases, no new item
• 511 appeared during the few months that lapsed because rice farmers customarily make their major purchases during the dry season following harvesting time. Special expenses of the 96 continuing families during the period from March, 1948 to February, 1953 were shown in Table 57.

511 Some explanations are necessary for Table 57. In the first place, whereas ordinary household expenses are estimates based on experience of farm operators, these special expenses are actual amounts spent during the specified period of five years. Most of the expenses on land [432] purchases were down payments and subsequent partial payments. Of the four families reporting purchases of household equipment, three bought guns and one bought a sewing machine. [757] All major repairs were for dwellings. The major medical [755] expenses did not include small amounts of money regularly spent on drugs for headache and stomachache or even on delivery of babies which was done by traditional midwives whose fees were nominal. In fact, there were only three cases of major medical expenses. The largest one included [525] Bangkok hospital bills amounting to 14,000 baht. The 36,190 [484] baht of odd expenses included 3,000 baht on gambling(only [691] two operators reported expenses on this item, others admitted win and losses but did not give the amounts), 2,000 baht on purchases of government lotteries which are issued once a week and also on several other occasions, 500 baht on legal prosecution, 300 baht on reward for the

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TABLE 57

SPECIAL EXPENSES OF 96 SAMPLE-FAMILIES
DURING MARCH, 1948 -- FEBRUARY, 1953
Bangchan, Thailand

Items	Amount	Number of Families Reporting	Average for Fam. Reporting	Ranges
	baht		baht	baht
Purchase of land	43,235	9	4,804	1,100 - 9,000
Purchase of gold	64,357	48	1,341	240 - 5,000
Purchase of f. equip.	136,074	56	2,430	150 - 8,050
Purchase of household equipment	8,200	4	2,050	1,550 - 2,800
Major repairs	78,870	34	2,323	350 - 7,000
Loan settlements	101,530	20	5,076	1,100 - 21,000
Loans extended	51,630	14	3,688	300 - 16,000
Net expenses in sponsoring rituals*	156,996	36	4,361	-10 - 15,000
Major medical expenses	19,400	3	6,467	400 - 14,000
Odd expenses	36,190	7	5,170	300 - 30,000
Gifts to offspring	15,600	4	3,900	100 - 10,500
Total	712,182			

* Total expenses minus cash contributions from guests.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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recovery of a boat stolen, 390 baht on "laxity", and 30,000 baht on a trip to Mecca. The gifts to offspring included only gifts presented when offspring left the family to start an independent family of their own.

Special Receipts

By special receipts we mean major items of receipts in addition to those regularly obtained from crops, labor, rent, and interest on loans extended. These are counterparts of special expenses, and informations about them were obtained from the 96 sample-families in the same manner and almost concurrently. Examples of these special receipts are: sales of land, gold, and major farm equipment; loans obtained, full or partial settlement of loans extended; gifts and remittances; and odd receipts like those from government lottery prizes, running a gambling house, and laxity practices. Special receipts of the 96 sample-families during the period from March, 1948 to February, 1953 were shown in Table 58.

Some of these items of special receipts need explanation. Land sold by two farm operators were sold for cash needed for loan repayment. It is perhaps worth noting that one of these two operators was in the habit of heavy drinking and had been in recent years spending about two thousand baht annually on liquor alone, while the other was in the habit of gambling. All five operators reporting sales of gold gave the reason for the sale that cash was needed to either buy farm equipment (buffaloes) or to repay

[TEXT CONTINUED ON PAGE 333]

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TABLE 58

SPECIAL RECEIPTS OF 96 SAMPLE-FAMILIES DURING MARCH, 1948 -- FEBRUARY, 1953
Bangchan, Thailand

Items	Amount	Number of Families Reporting	Average for Family Reporting	Ranges
	baht		baht	baht
Sale of land	18,700	2	9,350	7,700 - 11,000
Sale of gold	12,150	4	3,038	250 - 6,000
Sale of farm equip.	6,500	5	1,300	500 - 3,000
Loan settlements	1,700	2	850	200 - 1,500
Loans obtained	141,100	29	4,866	400 - 30,000
Remittances	6,200	2	3,100	200 - 5,000
Odd receipts	6,500	3	2,167	1,500 - 3,000
Total	192,850			

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*128
434 the loans previously extended to them. Among the five operators reporting sales of farm equipment, one sold his part of the joint ownership of an engine in order to buy a new one for his own, three sold their old buffaloes and bought younger ones, and one -- the inventor of the propeller windmill mentioned earlier in this dissertation -- sold windmills and other farm implements he made for sale.

434 The average amount of money received from loan set-
426 tlement during the past five years of 1,700 baht appeared
432 to be too small considering that the amount of loans ex-
• 511 tended by the sample-families during the period was as high as 51,630 baht and that the ability of these sample-families to settle loans extended to them was 101,530 baht out of a total of 141,100 baht. An explanation for this lies in switching of debt responsibility. At least one case was known where an operator, who was in debt to a fellow farm operator, sold a parcel of land to a third party at 11,000 baht. This buyer, apparently not having enough cash, arranged that he would assume responsibility for the amount of 8,000 baht which the seller of the parcel owed the other farm operator and would pay only the balance of 3,000 baht to the seller in cash. Strictly speaking, the creditor should report that he received a certain amount as loan repayment (actually, 4,000 baht for the principal and 4,000 baht for interest of 25 per cent for four years) and spent this same amount on loan extension. Actually, however, only the seller of the parcel reported that he had sold a

434
426 parcel of land and had cleared off his debt. The creditor
432 did not report anything about this deal, for he really did
511 not receive a cent out of the arrangement.

434
426 Loan obtained is the largest item of special receipts
511 involving 29 farm operators and 141,100 baht. The following were the purposes of the loans sought as given by borrowers: land purchase, 7 cases; buffalo purchase, 3 cases; sponsoring rituals, 3 cases; to partially defray ordinary household expenses which exceeded cash incomes especially in years of poor crop, 16 cases; and to cover major medical expenses, 2 cases (two operators listed two combined purposes of the loan, hence the total becomes 31 instead of 29 if there is only one purpose for each case).

Net Accumulation of Assets

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511 Figures of net accumulation of assets within a certain period are valuable to the understanding of the economic conditions of farm operators in that they show the economic achievement, or the internal saving, of these operators. In order to obtain exact figures, however, it is necessary that we have complete inventories of the farm families at the beginning as well as the end of the period. Since our data on inventories of the sample-families for 1948 and 1953 are incomplete, especially we are totally unaware of the quantitative debt situation in 1948, we cannot use the simple method of subtracting the net worth as of February, 1953 from that as of March, 1948 to determine net accumulation

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of assets during this five-year period. At best, we can only attempt at estimates based on certain known figures from records of special receipts and special expenses described in the two preceding sections.

Assets may conveniently be broken down into land, dwellings, household equipment, farm buildings, farm equipment, livestock, supplies, gold, cash, and accounts receivable (payable). We shall see that some of these may be left out of consideration in our method of calculating net accumulation of assets from records of special receipts and special expenses during March, 1948 and February, 1953.

It was observed that all the sample-families used the same dwelling throughout the period. Any cash outlay in repair should not be considered as an increase in inventory at least as average over the whole sample, for it can be reasonably assumed to be an amount necessary to maintain the dwelling at its original value at the beginning of the five-year period.

Assuming no change in technology, as was observed to be the case, farm buildings and farm equipment can also be left out of consideration for the same reason as the case of dwellings. It was observed that farm operators in Bangchan kept no more farm equipment than necessary. New purchases can thus be assumed to be replacement for worn-out equipment, and should not be considered as inventory increase, again when averaging over the whole sample.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*128
• 511
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[231]
[235]

The only livestock kept on rice farms other than buffalo, which were included under consideration of farm equipment, are chickens and ducks, which are raised "naturally." It was earlier mentioned that the size of the flock was more or less constant. Livestock, therefore, did not figure in significant inventory changes, and can also be left out.

*[243]

The only item of supplies on rice farms is paddy stock. This is used up and sold out each year. For more or less the same size of farm, and spreading over a series of five years, a difference in the average amount of paddy stock at about the same time of the year in 1948 and in 1953 would not figure significantly in inventory change.

It was also already mentioned that rice farmers did not want to keep cash at their homes for fear of robbery, and that any person receiving a large amount of cash quickly passed the money on to others. We can therefore assume that the amount of cash on hand at the same time of the year does not vary much. Cash, then, may also be left out of consideration.

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Of the items of assets enumerated above, there are now to be considered only land, household equipment, gold and accounts receivable (payable). In all purchases of land, gold, and household equipment, only the cash paid was recorded and considered as assets accumulated. For example, when an operator purchased a parcel of land at 7,000 baht and paid the down payment of 1,000 baht, only the 1,000 baht

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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434 was considered as spent in land purchase. If, however,
432 he made another partial payment of 2,000 baht during the
• 511 period covered by the study, a total of 3,000 baht was considered. Since purchases of gold and household equipment are normally made with cash, a total of cash spent on these three items (land, household equipment and gold) would seem to fairly well indicate the extent of internal saving of each family. The assumption here is that one would not
434
426 borrow money to buy gold or a gun. With this correction
511 the figure remaining will represent a change in net assets, if we can assume no other changes in the debt situation. For those who bought these assets, it is very unlikely that any increase in outside debt occurred. The reason for this belief lies in interest rate differences: any person with some cash (which may be borrowed at low rate of interest in case he was about to buy land) would rather settle his high interest bearing debts first before buying household equipment or gold or making down payment for land. For those who did not buy these assets, some increase in debt for consumption purposes may have occurred. Both groups may have decreased debts during this period. The most likely assumption is that those buying land experienced a net decrease in debts other than those incurred in buying land, while those not buying such assets experienced a net increase in debts. The balance was probably one of some increase in debt in the village. Therefore, although these [454] figures for net accumulation of assets provide a fair

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

434
426 representation of internal savings in the community, they
454 probably overstate this increase somewhat.
• 511

When calculated in the manner outlined above, the
511 net accumulation of assets of our 96 sample-families was
434 found to total 84,942 both during the period from March, 1948 to February, 1953, averaging 885 baht per family per year. The frequency distribution of this accumulation of assets is shown in Table 59.

It is seen that of 96 sample-families, 90 had positive accumulation while only 6 had negative accumulation. Fifty-six or more than half of the total number of families studied had an accumulation of assets in the class interval between 0 and 999 baht. The highest amount of accumulation was found to be 9,000 baht, while the lowest was -10,470 baht.

We should examine the figures of Table 59 more closely before drawing a sweeping conclusion from the mere fact that 90 out of 96 sample-families had positive accumulation. In the first place, the raw data show that of the 56 families reporting accumulation in the class interval of 0 - 999 baht, there were 42 families whose accumulation was 0. Thus the number of families with positive accumulation was really not 90, but actually 48 or only half of the total sample-
[435] families. Besides, consideration must be paid to the fact that gold is not only a kind of security but also an article of prestige as well, and a gold necklace of 15 - 30 gram weight valued at 500 - 1,000 baht is usually worn by a rural Thai who can afford one. When a person reappears in the

[TEXT CONTINUED ON PAGE 340]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 59

FREQUENCY DISTRIBUTION OF NET ACCUMULATION OF ASSETS*
BY 96 SAMPLE-FAMILIES
Bangchan, Thailand, March, 1948 -- February, 1953

434
• 511

Accumulation in Baht	Number of Families
9,000 - 9,999	1
8,000 - 8,999	1
7,000 - 7,999	2
6,000 - 6,999	1
5,000 - 5,999	1
4,000 - 4,999	3
3,000 - 3,999	3
2,000 - 2,999	9
1,000 - 1,999	13
0 - 999	56
-1,000 to -1	2
-2,000 to -1,001	0
-3,000 to -2,001	0
-4,000 to -3,001	0
-5,000 to -4,001	1
-6,000 to -5,001	1
-7,000 to -6,001	0
-8,000 to -7,001	1
-9,000 to -8,001	0
-10,000 to -9,001	0
-11,000 to -10,001	1
Total	96

Mean . . . . . 885 baht
Median . . . . . 113 baht

* Includes net purchases of land, gold, and major household equipment.

511
434 village after long absence, his achievement will be judged not by the words from his mouth but by whether he has less or more gold than the time he left the village. The importance of gold as a prestige item being as it is, it is not surprising at all to see that a farm operator who did not have any gold will tend to buy a necklace when he receives a lump sum from the sale of rice although he knows that the amount would not last until the next harvest even without that extra expense on the necklace. When this farm operator ran out of money say in July or August, he would rather go into debt than part with that necklace if it really is his only adornment. Tables 57 and 58 show that within the five-year period there were 48 families buying in gold as against only four families selling out gold and that the average for those buying in was 1,341 baht per family while the average for those selling out was 3,038 baht, indicating that when financial pressure arose it was the families having more gold than necessary for display that tend to sell it. Realizing this situation, the author thinks that it is justifiable to give an allowance of about 1,000 baht for gold purchased for prestige purposes. If we agree on this point, there would remain only 34 families demonstrating accumulation of wealth, possibly through internal savings.

Debt Situation

426
511 In order to understand the debt situation in Bangchan, it is necessary to distinguish debts created by purchasing goods on credit, which we shall henceforth call credit

426 purchase, from debts created by loans. The tendency among
• 511 policy makers and scholars to use the general term "debt" without specifying which is which has often led to confusion which we shall see later in this section.

* 128 Debts, both credit purchase and loans, are the most difficult subject of this study as far as information gathering is concerned. In a culture where prestige counts more heavily than profit, this is a delicate topic from which an ordinary informant usually shies away.

* 128 Although it was realized that farm indebtedness was
426 very essential in the understanding of the economic condition
511 of farm operators in Bangchan as well as elsewhere, in the first year of our study (during 1948-49) only fragmentary information was obtained and we were unable to present comprehensive statistical statements as to the incidence of particular types of credit in the preliminary report in which only categories were given. Since these categories are valuable as background information, they will be restated as follows:

Types of credit

1. According to length of the term
   a. Short term -- a few months
   b. Long term -- one or several years

2. According to amount
   a. Small -- less than 1,000 baht
   b. Large -- 1,000 baht or over

3. According to the nature of relationship between parties to the loan
   a. Among blood relationship or close friendship
   b. Others

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*128
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• 511

4. According to type of security, if any
   a. Land
   b. Gold, jewelry, or other movable asset
   c. No security

5. According to the nature of the contract
   a. Oral contract
   b. Written contract

6. According to rate of interest
   a. High
      (1) For small loans, from 5 per cent per month and over
      (2) For large loans, from 2 1/2 per cent per month and over
   b. Low -- anything lower than above. Some rates would thus be considered low even though they were in excess of the maximum legal rate of 1 1/4 per cent per month
   c. No interest

Types of source of credit

1. According to location
   a. Local -- within the village or immediate neighborhood
   b. Near -- in more distant hamlets in Bangchan and Kannayao Communes, in the market town of Minburi, and in nearby villages like Bangkhuad or Wat Khoo.
   c. Far -- in Bangkok and such towns as Dhonburi or Nonburi.

2. According to lender
   a. Non-affluent persons who give the loan only on the appeal of a relative or friend in need
   b. Affluent farmers who lend money for interest as a secondary income
   c. Villagers whose primary source of income is money-lending
   d. Chinese rice dealers residing nearby who regularly buy local rice surpluses. These dealers lend money for the purposes of:
      (1) Gaining income from interest -- usually loans are small with high rate of interest
      (2) Promoting a rice trade relationship with borrowers -- usually loans are small with low rate of interest or no interest at all
   e. Local store-keepers sell items on credit -- the amount extended depends on character.
   f. Money-lenders in Bangkok and other large population centers -- usually mortgage term is required.

124
426
511 In our second visit during 1952-53 our informants appeared to talk more freely on the topic of debts, especially when they were interviewed on the kinds and amounts of special expenses and receipts. At the beginning we did not ask our sample-operators direct questions on the amount of credit purchase or loan they were having. Only casual information pertaining to debts that arose during the discussion of related topics was noted and filed separately by the informant and also by the person referred to both as a lender and as a borrower. It was noticed that while most informants did not want to lay bare the whole situation of their debts, they were rather cooperative and sometimes even eager to make partial statements as long as an answer to the blunt question "How much do you owe now?" could be avoided. For example, one of the 96 sample-operators was telling the author the amounts of outstanding debts of some of his fellow operators (ranging from 3,000 baht to 15,000 baht) and proceeded on to generalize that rice farmers had to go into debts at one time or another. The author, thinking that that was the most opportune time to ask the man about his own debts, raised the blunt question just mentioned. The informant replied, "Just about the same amounts as these people are owing." He then changed the subject, indicating an unwillingness to give the exact amount of his outstanding debts. In the conversation that followed, however, he eagerly stated that he had been able since 1948 to clear off as much as 21,000 baht of debts. When asked how much a proportion

124 426 511 that was to the total amount of his debts, he paused to calculate and then said it was exactly three-fourths of the total. The author then asked whether he was right in figuring that the man's current outstanding debt was 7,000 baht. The informant admitted that that was the correct figure.

There were, however, some twenty farm operators in our sample who took the author as one of their family members, and were thus very cooperative in giving any information that the author wished to have. Thus, by the end of 1952 we had a considerable amount of data on loans. Constantly checking available information in the files, from the dry season of 1953 onward the author put more effort in getting the debt situation of each of our 96 sample-families, concentrating first on the extent of loans and their respective interest rates. During the inundation period of 1953, effort was shifted to getting information about credit purchases and their respective rates of interest which were brought up to date as of December of the same year. Information on loans was also brought up to date at this same time which may be considered as the end of business year because the early varieties of rice were being harvested at this time of the year. Table 60 shows the classification of farm operators according to kind of debts involved as of the time immediately preceding the sale of the early varieties of rice.

*128 426 511 It is seen that there were only two non-responses out of the total of 96 sample-families. Among these 94 farm

[TEXT CONTINUED ON PAGE 346]

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TABLE 60

CLASSIFICATION OF 96 SAMPLE-OPERATORS ACCORDING TO OUTSTANDING DEBTS
AS OF DECEMBER, 1953
Bangchan, Thailand

Classification	Number of Operators	Amount of Debt in Baht		
		Long-term	Credit Purchase	Total
No debts of any kind	37	—	—	--
Long-term debts only	15	90,600	--	90,600
Credit purchase only	23	--	23,870	23,870
Long-term debts and credit purchase	19	65,850	13,850	79,700
No response	2	—	—	—
Total	96	156,450	37,720	194,170

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 61

FREQUENCY DISTRIBUTION OF CREDIT PURCHASES
OF 96 SAMPLE-OPERATORS
Bangchan, Thailand, December, 1953

426
• 511

Amounts in Baht	Number of Operators
3,500 and over	1
3,000 - 3,499	1
2,500 - 2,999	1
2,000 - 2,499	2
1,500 - 1,999	2
1,000 - 1,499	11
500 - 999	14
Under 500	10
No credit purchase	37
No response	17
Total	96

Mean . . . 898 baht for those reporting any credit purchase

Median . . 911 baht for those reporting any credit purchase

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 62

FREQUENCY DISTRIBUTION OF LONG-TERM LOANS
OF 96 SAMPLE-OPERATORS
Bangchan, Thailand, December, 1953

426
• 511

Amounts in Baht	Number of Operators
30,000 and over	1
20,000 - 29,999	1
10,000 - 19,999	1
9,000 - 9,999	0
8,000 - 8,999	2
7,000 - 7,999	2
6,000 - 6,999	1
5,000 - 5,999	2
4,000 - 4,999	2
3,000 - 3,999	5
2,000 - 2,999	6
1,000 - 1,999	10
Under 1,000	1
No loans	60
No response	2
Total	96

Mean . . . 4,601 baht for those reporting any loan

Median . . 2,850 baht for those reporting any loan

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

22] The year starts with May, the beginning of the rice-
132 year. At this time the rains began to soften the parched
241 ground, and the heat slackened. School re-opened. Farmers
512 turned to plowing, harrowing, raising the seedlings. Both
871 sexes worked about equally in field labor, boys from 14 and
668 girls from about 15 years of age performing tasks according
883 to skill and strength. Everyone was in the field at dawn. The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy
264 day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third
[262] meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

221 With the rains, the canals had filled, so that by June
132 buyers with big rice boats could return. The few farmers who
501 could afford to hold onto a portion of their last year's crop
443 sold it for a better price at this time. Vegetables and
24] fruits which had died in the long drought were replaced, and trees were planted.

24 In July the heavy transplanting season began. Because
221 of cooperative work habits or hiring out, people worked
132 solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly con-
[512] trollable. Lack of rain might be remedied by pumping water
871 from the canals but flooding would drown the plants. School
857 vacation was scheduled at this time so both teachers and children could help. Older children might work in the fields,
883 while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food
[433] for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

221 Despite the availability of fish and of vegetables in
435 the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

221 The two months of September and October during which
[512] the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit
[illegible] and take trips. A few might go on a pilgrimage. Therefore,
264 in this season, all family members were less often together
226 at the evening meal. Fishing was a continuous occupation,
[illegible] with some preserving and home craft. Jobs such as selling
[illegible] food in the market were undertaken for ready cash; houses and
[illegible] equipment were built or repaired. Finally the threshing floor was prepared.

[342] High water caused time-consuming inconvenience only in
[331] earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

243 By November, the earliest varieties of rice matured.
221 Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could
[461] not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into
[226] the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience
434 of purchased food was greatest, cash was exhausted. With
426 rice money in sight, venders might be generous with credit,
443 but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

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[504] 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

For items used less frequently, the figures are correspondingly less than the usual amount eaten. Thus, sweet potato, which is represented as 18 grams per day per person in Group A, actually appeared on 3 records only. One family of 8 persons ate 1200 grams of sweet potato at one meal and a substantial amount later the same day. Most items appear on the lists for both groups, but sweet potato, sweet basil and bananas were included on the list for Group A only, and glutinous rice which is used as a sweet in this area, appears on the list for Group B only. Note that a few common foods account for most of the nutrients in the diets of both groups. These common foods account for only about 80% of the calcium and vitamin A value and slightly less of the ascorbic acid in the diets of Group A. The list for Group B accounts for about 70% of the calcium and 60% of the ascorbic acid in the diets of this group. The variety of green leaves used once or twice only on survey days by Group B, and the number of different seasonal fruits used by both groups in small amounts as snacks, probably account for this.

Contribution of Snacks to the Nutrient Content of Diets. - On the average, 4 out of 5 children had one snack per day, whereas only one adult in 6 did so. The following items appeared most commonly: various kinds of fruit, 40 times (orange 7, banana 6, pineapple, watermelon and mango each 5 times, guava, jujube and Manila tamarind each 2 times, olives, rambutan, rambai, star gooseberry, (2)ta-(1)koo and Thai nutmeg each once,) coconut and bread each 13 times, glutinous rice 8, mung bean 7, truffles 6, products made of rice flour 6 times, and a variety of other items including rice noodles, sweet potato, taro, bean sprouts, lotus stalks, lotus seeds, popcorn, products made of cassava flour, sugar cane, pork and milk from 1 to 4 times each. Salt, and/or palm sugar were eaten with a number of the snacks. Although they contributed only about 2% of the total calories, and from 1 to 3% of most nutrients, snacks contributed 16% of the total ascorbic acid for Group A and 11% for Group B.

Seasonal Variation in Food Preparation, Meal Patterns, Food Costs and Calorie and Nutrient Value of Foods Eaten

In Table 14, a summary including the number of meals prepared, time spent in meal preparation, number of "with-rice" dishes, and cash expenditures for food is given by rounds, for families in each group.

Number of Meals Prepared. - Food was cooked twice on each survey day in 3 of 6 households in Group A and 3 of 5 households in Group B. Heavy farm work or vending which kept the mother away from the house sometimes accounted for once-a-day food preparation. One housewife who took food to market in Bangkok, cooked food twice a day only during the period shortly before the birth of a child, when she was not vending.

[Text continues on page 79 --- Analysis]

Another, who had time during Round IV to prepare food twice a day, preferred to prepare more in the morning when she expected to offer food to her son who had just been ordained. In two instances an evening meal was not prepared because the father and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

Cost of Food Purchased. - The lowest cash expenditure for food by any household on a survey day was 0.12 baht, for a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year progressed was apparent. Most of the rice was sold at the end of Round III. The cash went for capital investments, not food, during Round IV. With time to drain ponds and to fish intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

Calorie and Nutrient Value of Foods Eaten. - The seasonal variation in calorie and nutrient intake of the two groups of families is shown in Table 15. As one would expect, the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 --- Analyst]

APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children. . . . . The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)leg leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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1. In reproducing these notes, slight changes have been made such as substitution of descriptive terms for personal names which appeared in the original.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

4. The good person is one who tries to behave in an honest way.
5. Do not shove anything at anybody or throw anything at anybody.
6. Do not make loud noises when people are working.
7. Do not spit or clear your phlegm or yawn in public.
8. Do not gobble your food or scatter things on your plate or chew loudly.
9. Do not sit or walk carelessly or abruptly against other people.
10. Do not touch or horse-play with people who are your close friends.
11. If you are a superior, wherever you go, you should look after the comfort of your inferior.

Again, although the list is almost self-explanatory, note should be taken of some cultural emphases that run through several of the items: the stress on behaving properly toward superordinates and subordinates; the emphasis upon motoric and emotional self-discipline, and conversely, the implicit fear of losing control over one's impulses (as indicated in the dictum against horseplay, even with one's friends); the general stress of respecting the inviolability of every person; and finally, the great emphasis on the importance of the body in human behavior and social relationships. Although this last point may not seem unusual, in that the dicta are addressed to children—with whom one would expect much concern over the body—it in fact represents an area about which all Thai regardless of age are sensitive. In general Siamese, considerably more than Occidentals, tend to be aware of physical bearing, beauty, and ugliness, as well as the use of the body as a communicative device. A person's physical appearance is an indication of his character, particularly his moral nature, and kinesthetic modes are explicitly used for conveying love, regard, and as suggested above, disrespect.[2]

It is worth reëmphasizing that the above items are standards for, not descriptions of, behavior. The attention given to controlling body movements is simply to emphasize for the child that people will decide whether he is good or bad on the basis of the way he handles his body, and he must therefore exercise extreme care in its use. Items one, nine, and ten are not meant to imply anything fundamentally wrong with touching another. Most Thai, particularly members of the same sex, thoroughly enjoy expressing their mutual affection through bodily contact: by holding hands, grasping the leg or arm of the other, and in Bang Chan, sometimes by sleeping with one another. In the last instance, there is absolutely no sexual contact; often during the cold season the practice serves not only friendship ——— but the additional purpose of keeping the participants warm.

[2] Although it belongs to a different area of behavior, it is not insignificant that in classical Thai dance every body movement—the configuration of the hands, the position of the legs, eye movements—has a specific, conventionalized meaning. In the oldest, or *Kon*, version of the dance, the only means of communication other than that provided by masks are body movements.

125

32. Last night, when you ate at your own house, did you eat with your hands, with fork and spoon, or with spoon alone? [264]

9.	Hands	242
X.	Fork and Spoon	11
Y.	Spoon alone	73
0.	Unascertainable	7

33.a. Have you ever been to a clinic or a hospital? [743]

1.	Yes	214
2.	No	119

b. IF YES: In what various places?

3.	Minburi	156
4.	Bangkok	135
5.	Other place	7
6.	Unascertainable what place.	

c. IF H HAS BEEN TO CLINIC OR HOSPITAL: For what various purposes did you go?

7.	Treatment or hospitalization	123
8.	To bring a patient there	77
9.	Visit relatives or friends	45
X.	Other reason, specify_____	11
0.	Unascertainable	—

34.a. During the last year, did it occur to you frequently, sometimes, or never that you had difficulties falling asleep? [513]

1.	Frequently	73
2.	Occasionally	151
3.	Never	109

b. During the last year, did it occur to you frequently, sometimes, or never that you had a headache? [164]

4.	Frequently	50
5.	Occasionally	174
6.	Never	109

c. During the last year, did it occur to you frequently, sometimes, seldom or never that you lost your appetite?

7.	Frequently	50
8.	Occasionally	173
9.	Never	110

d. During the last year, did it occur to you frequently, sometimes, or never that your hands trembled so as to bother you? [164]

X.	Frequently	17
Y.	Occasionally	93
0.	Never	218
—	No Answer	5

e. During the last year, did it occur to you frequently, sometimes, or never that your heart beat so fast as to bother you?

1.	Frequently	36
2.	Occasionally	154
3.	Never	141
—	No Answer	2

125
[513] f. During the last year, did it occur to you frequently, sometimes, or never that you had a nightmare?

4.	Frequently	16
5.	Occasionally	120
6.	Never	197

[546] 35. In your life, how many times have you seen a movie, or haven't you ever seen one?

5.	Ten times and more	161
6.	4 to 9 times	60
7.	1 to 3 times	75
8.	Never	33
—	No Answer	4

[426] 36.a. Excuse me, I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?

5.	Yes	192
6.	No	140
7.	Unascertainable	1

b. IF YES: Is your debt now higher, or lower, or about the same as it was two years ago?

8.	Higher	68
9.	Lower	95
X.	About the same	28
Y.	Unascertainable	1

c. IF NO: How about two years ago, did you have a debt then or not?

9.	Yes	61
X.	No	78
Y.	Unascertainable	—
—	No Answer	1

[441] 37.a. Do you or anybody in your household buy certain products in order to resell them at a profit?

9.	Yes	85
X.	No	242
Y.	Unascertainable	2
—	No Answer	4

b. IF YES: Do (you/they) sell things regularly, occasionally or just at festival times?

7.	Regularly	31
8.	Occasionally	49
9.	Just at festival times	5
X.	Unascertainable	—

[241] 38.a. And now, I would like to know a little more about fertiliser. Do you think fertiliser is very good, fairly good or bad?

1.	Very good	106
2.	Fairly good	149
3.	Bad	15
4.	Unascertainable	63

843 [775] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phī taj thang klom, caused "the worst of all possible deaths." The phi krasū spirit,[25] entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). The [753] supernatural disease missile called "khun" might also strike. "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extra pain [751] occurring just before the baby comes out." To protect themselves, women wore extra talismans or had 2 dots [304] tattooed under the arm.

843 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 2 visible teeth, which indicated it was a non-human, jak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of women giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (McF.46). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb sat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

the fire for her during the first day or so, lest in her straining, Dūan's womb "move to a new place," but Duan did it herself thereafter. The smoke was harder on others than for her for she was on the floor. She could leave the plank to bathe and to relieve herself through a crack in the floor. As soon as Chāi got over being frightened of her turmeric-yellow stomach, he often came and lay beside her on the plank, though it was a squeeze! She took her medicine and often sipped hot water, feeling very modern with her brand-new thermos bottle. Constantly turning her back or front to the fire, she poked or dripped water on the flames to make coals. Once she tossed on a dry palm leaf, and as it flared up, put a cloth over her head to trap the smoke and heat. Though a rash developed on her body, she was complimented by Lek on the care she was taking of the heating and drying process. Unfortunately, a neighbor who wanted to help brought in some of the wood one day. Not remembering that to make noise with the wood caused diseased red eyes in the baby, she dropped the bundle with a crash! Alas, "sang" disease, of course, came at once. So the near-by mō who always cared for them had to be called, but he used no medicine. "For eyes red from 'sang'," he said, "never use any eye-medicine as drops, or they will be permanently damaged or blind. Such eyes have not enough resistance to win over the strength of the medicine. A drop of mother's milk, any mother's, in the eyes is the cure."

Uterus pain was said to last one day for the first child, 2 days for the second, and so forth, increasingly. As Dūan seemed to be in considerable pain, Lek resorted to an old cure: she secretly took the bamboo knife and the phlai from the baby's tray and put them under Duan's plank bed without telling her. Slowly the pain diminshed.

If anyone spoke of uterus pain to her during the fire period, Dūan would suffer still more. If a visitor spoke of the hotness of the fire, little boils would appear on her body. The fire, being thus made too hot, would have to be put out, and Duan "would be weak for a long time." This was because actions or even words occurring beside the holy fire set a new and permanent pattern. Neighbor's children were kept away lest they inadvertently exclaim about the heat.

A few relatives with gifts of banana, turmeric, and face powder dropped in, but visitors mostly stayed away. "It is an ugly sight," said Dūan, "lying here with only a cloth over me, half naked and yellow, and I fear there might be an unpleasant smell."

The winnowing tray, with the baby on a pillow now covered with a plastic cloth, rested on a low table, the legs of which stood in bowls of water to keep away ants. At first an old dome-shaped fish trap had been set over it to prevent draft and

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14 observed in 9% of the school children 7 to 14 years of age who were examined, and in about 6% of the males and 25% of the females over 15 years of age. Of 337 persons examined, however, 2 only, one child and one adult female, were found to have hemoglobin values under 9.75 g per 100 ml.

744 Modern sanitation was practically unknown in Bang Chan. Few families had covered pit latrines or made any effort to
• [514] cover excreta. Intestinal parasitism was common. Garbage
[164] might be fed to animals, but was frequently thrown into the
[364] canal or elsewhere about the compound. Provisions for protecting foods from contamination were meager.

When rain water was available, it was used for drinking, but several months each year water from the canals or fish ponds was used without prior treatment. For washing vegetables, cooking and washing dishes, canal and pond water was used throughout the year.

744 A few changes in sanitary practices, if they could be
751 brought about, might reduce some kinds of illness substantially. For examplo, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

758 Modern medicine will probably not be readily or
121 generally available to a majority of the residents of Bang Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

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125 specimens. In all, specimens were obtained from 189 or 81% of
126 the children and of these 32% were negative. In 128 stools
164 containing parasites, 196 infecting organisms were found, or an average of 1.5 per infected child. Protozoa and helminths which are pathogenic or which may cause severe diarrhea were identified 126 times, and harmless forms 70 times. Of the harmful forms, Ascaris lumbricoides was found in 96 or 51% of the stool samples, Giardia lamblia in 19, or 10%, and hookworm, Endamoeba histolytica, Trichuris trichiura and Diphyllobothrium in 2% or less. Of the harmless forms noted, Endamoeba coli was found in 45 specimens or 24%, Iodamoeba williamsi in 21 or 11%, Endolimax nana and Chilomastix mesnili each in less than 2%. Doubtless the extent of intestinal parasitism in these school children was greater than the figures indicate, since some cases would be missed in examination of single stool specimens collected in this way. One might expect intestinal parasitism to be relatively common, also, among other family members.

125 Bowel Habits. - In connection with the clinical survey,
147 persons examined were asked whether they had "constipation" or
• 514 "diarrhea" frequently, occasionally, or never, i.e. not within the past 6 months. As the physician phrased the questions concerning "constipation," the replies indicated whether the respondent had daily bowel movements ("never constipated"), or usually had a bowel movement each day ("occasionally constipated") or usually had longer intervals between bowel movements ("frequently constipated"). Replies are summarized in Table 17.A

126 Considering the inadequate sanitation in Bang Chan, and
147 the prevalence of intestional parasitism, the fact that 3/4 of the persons questioned said they "never" had diarrhea, is worthy of note. Most persons who reported having diarrhea,
[146] were troubled occasionally rather than frequently. The fact that nearly 2/5 of those questioned had bowel movements less often than once a day, is not surprising in view of the fact that diets which are relatively low in fibrous foods and in the B complex vitamins frequently result in sluggish behavior of the large intestine. That approximately 3/5 of the respondents in Bang Chan usually had a daily bowel movement is perhaps more noteworthy. Even in areas where diets tend to be much more liberal, some persons usually have bowel movements at intervals of 2 or 3 days or even longer. If such persons have stools of normal character and experience no discomfort, this bowel habit may be considered normal for them.

A [see p. 43 – Analyst]

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Table 17

Bowel Habits of Persons Questioned in Bang Chan, Thailand, 1952-53

Group	Number of Persons Reporting	Frequency of Bowel Movements			Frequency[1] of Diarrhea		
		Daily	Usually 1/day	Usually longer intervals	F	O	N
		%	%	%	%	%	%
Random Sample of village Households	158	57	11	32	2	19	79
Primary school children	233	53	3	44	2	26	72
Total respondents	375[2]	54	7	39	2	23	75

1. F - Frequent; once a week or oftener.
O - occasional; less often than once a week.
N - never; not within the past 6 months

2. Primary school children in random sample counted once only. Information not obtained in a few instances.

251 One family stored cooked food in a basket which was hung from the ceiling. One homemaker frequently covered such foods with a basket, and in one instance a homemaker, who usually took no precautions to protect cooked foods, used a basin to cover food left on a table.

271 312 Source and Treatment of Water For Drinking and Culinary Purposes. - From the time the dietary survey was begun, on May 26, 1953, through January 18, 1954, all families used rain water for drinking.

Of the 14 survey days, spaced at about weekly intervals, between January 28, 1954 through May 8, 1954, canal water was used for drinking on 7 days, water from fish ponds on 4, and rain water on 3 days. No distinction was made in source of drinking water for children and adults.

312 744 [846] All families used canal water for washing vegetables, cooking, and washing dishes, on the survey days from May 26, 1953 through March 18, 1954. On the 6 survey days between March 24 and May 8, 1954, 4 families used water from the fish pond for these purposes. In no instance was the water treated in any way before being used, although alum is known to be used, at times, in the village, to settle or clear water, and boiled water is given mothers and infants to drink during the post partum rest period.

• 514 Disposal of Excreta. - Of 30 families from whom information was obtained, 20 had pits for toilet use, only one of which was equipped with a cover. One other family had a flush latrine. Of the 8 families who had no special place which was used for toilet purposes, 4 reported that family members urinated on the compound, 3 that they used the fields, and 1 that either compound or field might be used for urination. One reported that the compound was used for defecation as well as urination; the remaining 7 said they went to the field to defecate.

Six families with pit latrines covered feces in some way: 3 used earth, 2 ashes, and 1 either earth or ash. A majority of those who used either an uncovered pit or had no designated place, reported that no attempt was made to cover feces. From six families, no information was obtained on this point. Various materials were mentioned as being used in the manner in which western peoples use toilet paper. Cocoanut husks were mentioned most frequently (25 times), and other materials in this order: paper (newspaper 9 times, straw paper once), wood (4 times) and water (3 times).

From the information available, custom and convenience rather than sanitary considerations appear to determine practices that are followed. If improved practices are

• 514 contemplated, use of a pit with cover seems more apt to be adopted than the flush latrine. Moreover, the flush latrine is not only more expensive and difficult to move, but cocoanut husks and the like cannot be thrown into it without clogging the trap. If the husks, paper, etc. are left exposed after use, they attract flies and other insects, and are a possible source of infection.

Choice of a suitable site for a pit latrine in a village such as Bang Chan, which is flooded at times, may be difficult. Certainly it requires the advice of a sanitary engineer.

000 Changes in Sanitary Practices Needed. - A few changes in sanitary practices, if they could be brought about, might reduce some kinds of illness substantially. For example, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

Modern medicine will probably not be readily or generally available to a majority of the residents of Bang Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

had lived outside the village and returned to the home of her mother, a traditional midwife, for delivery. Eight other women who were delivered by the same midwife observed (2)juu (1)faj. Two of these 5 women who, by using a hot ashes chamber, ventured to take a step away from the tradional practice were non-Thai (Chinese and Mon). Another, a woman aged 40, was having her 12th child. When we interviewed this woman during pregnancy she said she expected to lie by the fire, but when we visited her after the baby was born she was using a hot ashes chamber. The wife of one of the school teachers, who had observed the traditional (2)juu (1)faj with her first 5 children, said she found "the new way" more convenient; but by using it she had incurred the displeasure of some of the older women, especially her grandmother. 846

Activity and bathing. - Activity appeared to be rather limited during the postpartum period, but the respondents said they could move about to get some things for themselves, to eliminate, etc. We saw women sit up on the plank which served as bed to nurse the baby, change the cloths under it, and help to weigh and measure it (i.e. to assist us). Because of the warmth of the fire, and to avoid the smoke, the women turned from side to side frequently.

Bathing was customary during the postpartum rest period. For the first three days this was one of the midwife's responsibilities in care of the mother (Hanks, 1959). [315] [759]

Medications. - The 46 women who told us about medications used after childbirth had a total of 63 medicines; i.e., many used more than one kind. With one exception these were taken internally, and all preparations taken internally were mixed with alcoholic liquor (28% alcohol). Of the medications used, only one was prescribed from the Health Center, 4 were home remedies, and the remainder commercial preparations.[1] Two popular brands, snake brand and (1)jaa (1)dauaung, accounted for 60 per cent of the total. 846 278

Milk stimulation. - As already noted, lying by the fire was thought to be favorable to milk secretion. One woman commented that, since she was not a good milk producer, she must lie by the fire more than 7 days. Six women spoke of the hot water which they drank during the postpartum rest period as good for milk production. A large majority of the women mentioned taking (1)kaeaeng (1)liang, a broth made with dried 853

1. According to the label, some of these were supposed to be useful for menstrual and other complaints, as well as for childbirth. Some were even recommended for treatment of various disorders in men as well as women.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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On the other hand, there are scores of items that have to be bought for daily consumption. These are: (a) Food -- fish, fish sauce, shrimp paste, meat, coconut, onions, garlic, dried chili, curry essence, limes, tamarind, palm sugar, white sugar, salt, and cookies: (b) Stimulant -- dried areca, betel, lime, tobacco, tobacco binder, and liquor; (c) Clothing; (d) Medicine; (e) Soap; (f) Fuel -- Kerosine, matches, charcoal, and fire wood. The list includes only standard items appearing on our check list. Actually, there are more of such items as coffee, tea, lemonade, coca-cola, and pepsi-cola. Articles that are bought but do not appear on the check list for ordinary household expenses for certain technical reasons which will be discussed in the section on consumption later in this chapter are building materials, machinery, farm equipment, furniture and household utensils.

The Operator's Remuneration and Measures of Success

From almost the beginning of the study of farm management in the United States, much effort has been given to measuring the success of farming businesses, or of farm-family undertakings or enterprises, and then of correlating various factors with these, such as size of business, yields per acre or per animal, or work-efficiency measured perhaps as crop acres per man or per horse or per tractor, with a view to discovering some general farm management principles or rules for a farmer or farm family to follow in becoming more successful. Black, Clawson, Sayre and Wilcox give the

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Besides the work in rice-fields, women dug and cleaned canals and ditches, mounded land, and fished in many ways, the most laborious of which was plunging a heavy basket into the mud to catch burrowing fish. In the household chores, in which men shared to some extent, they carried water, cut and fetched wood, tended livestock, cultivated kitchen gardens, pounded rice in mortars, and cleaned houses. Boats were rowed [501] by paddling or sculled by standing and pushing a single large oar. Cooking was time consuming. The low stoves were on the [354] ground or floor. Since there were no tables or chairs, one squatted two to four hours a day to cut or pound ingredients, [352] stir the curry, or wash the dishes.

[516]
The training of boys and girls for farm and household work was thorough and started early. By 18 years of age, 868 boys and girls with few exceptions were experienced in every 561 step of farming. Janlekha's chart (1955:82) indicates the 461 progression (parenthetical additions are the present author's):

Age	Method	Kinds of farm work
5 - 7	not forced, but allowed or induced to work if they want to	light hauling, removal of weeds which have been turned over by harrowing
8 - 12	mild pressure	light hauling, removal of weeds which have been turned over by harrowing; some household work and help in the kitchen - girls only - (sometimes boys)
13 - 14	moderate pressure	hauling, weeding, buffalo-tending, transplanting, chicken-feeding, fishing, household work (boys and girls)
15 - 16	high pressure	all kinds of farm work, harrowing, harvesting, and uprooting - boys only - are started at this age.

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Children worked in the fields before and after school which, compulsory for all children aged eight to fourteen, was held from 9 a.m. to 3 p.m. five and one-half days a week. Vacations coincided with peak work seasons so children could help in the fields or at home.

pictured as bowlegged in Chutina's report (1939) are, however, clearly so, and represent more extreme cases than we encountered among the children in Bang Chan in 1952-53. If the incidence of bowleggedness among children in Thailand is indeed decreasing, an investigation into possible causes of the change would be of interest.

To the nutrition specialist on the team, who was not Thai, the knee joints appeared to be large. Moreover, although the term "knock knees" was not included on the schedule, it was entered frequently by the physician under comments (Appendix B, Table 22).[1] Whether this condition is related to heredity, nutritional status, or to some other environmental influence such as the life-time habit of squatting on the heels, is not known.

The physician's estimate of general appearance and vitality were recorded early in the examination, before he sought for specific signs. About 80% of all persons examined were rated as "good," and less than 1% as "poor." About half of all persons rated as "good" in general appearance and vitality were without clinical signs, as compared to about 30% of those rated "fair." Of persons with 3 or more possible signs of malnutrition, however, about 2/3 were rated "good" (Appendix B, Tables 23 and 24). As has been observed frequently, such a general appraisal is not correlated with the presence or absence of clinical signs possibly associated with malnutrition. Clearly, in Bang Chan, there is little or no malnutrition of the sort that causes marked apathy.

In summary, a variety of possible signs of malnutrition were noted both in the school children and the persons in the random sample of village households. More than half of the total number examined had one or more signs possibly due to malnutrition, but the only clearly defined deficiency disease encountered was one case of beri beri[1] in a 49-year old man.

Reproductive Function in Females

Menstrual History. - Information concerning menstrual history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied.

Most of the women from whom information on age at menarche was obtained were under 40 years of age. A few could

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1. History of beribori among nursing mothers and their infants was obtained in several instances, and cases of beri-beri, in both sexes, were seen among persons not included in the population samples which were examined.

[see p.71-Am] [see pp.72,73-Anglyst]

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FOREWORD

114 The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

[113] The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on [128] health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

361 Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, [489] Minburi. A century-old canal and to the north of it a post-war hard surface road connect Minburi and Bangkok so that [491] villagers have easy access to these two centers by boat or bus.

621 In 1954, when data for the present study were still being
162 gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the house-
[592] holds were made up of independent nuclear families consisting of parents and unmarried children. The average size for all
243 families was 5.7 persons. Rice farming was the main occupa-
241 tion of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home
[463] sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet
[311] rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple
[132] food of the people. During the wet season and into the cooler
221 dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season
[517] from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

621 The Thai countryside is divided into hamlets, each with
[622] a headman in charge of the thirty to sixty households of the hamlet. Seven such hamlets constitute the Bang Chan community.
[128] (In the Project studies they are identified by the initials BC and KY followed by a number).

4:Phillips E-4,5 (1956-1957) 1966
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and postural forms expressive of respect cited earlier; the repeated hesitation to place others in embarrassing situations; the hesitation to tell others bad news so that "they will not feel sad" or will not have to dissemble (although more often the less delicate reason is the person's fear of embarrassing himself). Of a still different order is the uneasy affability that is expressed in the nervous giggling accompanying many face-to-face relationships and in the compulsive preoccupation with inconsequential or inoffensive topics while conversing with others. These responses appear to be either attempts to maintain minimal contact with others while jockeying to find out what they are really up to, or, in the negative sense, efforts to fulfill the minimum requirements of interaction while waiting (and hoping) for the contact to come to an end. And still different from all these is the affability associated with trying to make a good impression on others expressed in the constant concern with displaying good manners, with using pleasing or flattering words, with being a good host, and the like. Although this category is in many respects behaviorally similar to the "politeness" referred to above, it seems to differ from the latter motivationally in that it is concerned not with the state and comfort of others *per se*, but with ego's effect on others.

As described above in simple summary terms, these responses might appear quite ordinary and at certain times applicable to any group of human beings. However, what impresses the observer in Bang Chan is the insistence and constancy of their use. These are precisely the forms that the villagers choose in the vast majority of situations for expressing the degree and quality of contact that they feel toward others. That they are in fact social forms—stylized, often ritualized, modes of behaving—should not be overlooked. It is just this characteristic that engenders the theme underlying all the responses and which indeed sets the tone of most Thai interaction: that the relations between people should be friendly, genial, and correct, but need have little personal commitment or involvement. As will be seen below, it is this readiness to phrase most face-to-face contact in terms of social rituals while at the same time feeling little commitment to others that actually lies at the root of what has so often been called Thailand's "loosely structured social system."

Social Play

The first response mentioned above, the tendency to turn social situations into occasions for play, is probably one of the most common of all human tendencies (it is certainly one of the earliest), but one that strangely has received little attention in the psychological literature. The few writers who have expressed any interest in social play have tended to view it simply

4:Phillips E-4,5 (1956-1957) 1966
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as a release mechanism from boredom or tension (Riesman and Bloomberg 1957, Roy 1959–1960), as a "healthy" escape from reality (Flugel 1954, Bateson 1954), or as a normal and desirable regression to childhood pleasures (Freud 1905 and 1928). Running through all these observations is the obvious Western bias that play somehow is divorced from, or a reaction to, the harsh facts of social reality.[6] On reflection, however, it is clear there is no theoretical necessity, either maturational or social psychological, for play to be limited to cathartic functions, or for regarding it as a less realistic or less mature psychological state than that which causes boredom, tension, escape, or regression. In fact, one might logically argue that the conditions which create the latter states are less realistic and immature because they represent retreats to forms of infantile masochism. Such questions of course belong to the realm of interpretive debate. The essential point is that in the process of learning to adapt to the social psychological realities of one's culture there is no inherent, ontogenetic requirement (other than that imposed by the peculiarities of one's culture) for human beings to renounce their motivations for play. Simply stated, having fun need not be so much a retreat from or defense against adult reality and responsibility as it is something to be sought after for its own sake.

The fundamental analytic issue here may well be whether play is a psychobiological "given" of the human animal, on the same order as hunger, sex, and other precultural needs, or a learned, secondary cultural

[6] Of these various interpretations, the most broadly conceived and carefully argued is Freud's, where play activities are linked theoretically to the interrelationships of the id, ego, and superego and the aims of the "pleasure principle." However, even here Freud was caught up in the Western cultural bias that only children, those who have not yet had to come fully to terms with social reality, could easily "afford" the luxury of play. This same cultural bias often appears at a totally different interpretive level in the rather crass pronouncements of journalists and travelers who, in writing about the Thai, refer to the "child-like" behavior of these people who spend so much time, energy, and money in having fun.

Radcliffe-Brown's famous essay on the "joking relationship" (1952) is of course a special sociological case of the "tension release" function of play. In a brief paper, Keesing (1960) lists some seven overlapping functions of play, but here too play is seen largely as divorced from "everyday 'reality' activities." Callois (1958) brings together valuable cross-cultural data in what is otherwise a classification of organized games.

Probably the most comprehensive study of play ever written is *Homo Ludens: A Study of the Play Element in Culture* (1938; English translation 1950) by the late cultural historian, Johan Huizinga. Although Huizinga is concerned mainly with structured play activities (games of skill, chance, guessing games) and with the relationships between play and ceremonials, one of his observations is worth noting: "Nature, so our reasoning mind tells us, could just as easily given her children all those useful functions of discharging superabundant energy, of relaxing after exertion, of training for the demands of life, of compensating for unfulfilled longings, etc., in the form of purely mechanical exercises and reactions. But no, she gave us play, with its tension, its mirth, and its fun. Now this last element, the *fun* of playing, resists all analysis, all logical interpretation. As a concept, it cannot be reduced to any other mental category. . . ."

4:Phillips E-4,5 (1956-1957) 1966
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need. The problem is that we really do not know, although comparative data from primatology (Yerkes 1943, Kroeber 1948: 27–29 and 60–61) clearly suggest that play belongs to the former category. If this is indeed the case it would imply that play is subject to the same degree of cultural influence, channeling, and socialization as are hunger, sex, and aggression, but can no more be fully obliterated than can these needs. Assuming, for the sake of argument, that this reasoning is correct, then the compensatory "escape" and "regressive" functions attributed to play by the authors noted above would not be at all unreasonable: play might well come to serve as an escape from adult reality in the same way that food sometimes serves as an escape from sexual anxiety or sex from food anxiety (Holmberg 1950). However, the point is that these are not the primary or typical functions of these needs, but secondary and defensive ones; although significant, they hardly comprise the necessary conditions for their being. If this approach is valid, we would be considerably wiser in our present state of knowledge (the Protestant Ethic and its intellectual extensions notwithstanding) to direct our attention to identifying the varying forms of play from culture to culture rather than to dwell on its secondary, compensatory functions.

Whatever its ultimate motivational basis, there is no doubting either the spontaneity or ingenuousness with which Bang Chaners turn social situations into occasions for play. For the most part they seem prompted in these situations by the simple desire to have a good time rather than to affect others in a socially pointed way, that is, their humor is not typically aimed at being sarcastic, didactic, or even exhibitionistic, although the person who excels at being funny is quickly recognized as such and is to an extent admired.[7] There is, in the negative sense noted earlier, an element of interpersonal effect operating here: comedy is a technique which almost by definition reduces the potentiality for face-to-face conflict. However, the villagers' play seems aimed primarily at satisfying personalistic function: their *individual* needs for pleasure and amusement.

The forms that these play activities take are numerous.[8] Perhaps their

[7] In the more explicitly institutionalized forms of comedy—*likes* (folk dramatic shows) or newspaper and magazine cartoons—these aims do come into play and often assume extreme, sometimes even biting, proportions. However, this is the comparatively safe world of theatre and "literature." Among themselves, in the world of face-to-face contact, villagers are considerably more gentle (or less sophisticated) and do not focus explicitly on such purposes.

[8] We will be concerned primarily with the forms of play, not its content. For whatever reason, humor and comedy seem to be the last refuge of what is genuinely private in a culture. Intercultural translations may succeed in communicating the manifest content of another people's humor, but they so frequently miss its intent that the result is either perplexity or disappointment ("Yes, and what happens then?").

The dangers of trying to share humor interculturally were perhaps never brought home better than when I tried to get the villagers' reaction to a story that received

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since even the most novel activities eventually become routine or stale, it is obviously impossible for all one's hours to be animated with *sanug*. From a total time perspective, many of the villagers' activities are of course either "sanug-fully" fallow or "sanug-fully" short-lived. To a large extent, this paradox is resolved *subjectively* by the short-term time perspective of the villagers. This is the second major point to be noted about *sanug*, that is, *sanug* reflects a more generalized tendency on the part of the villagers to concern themselves with activities that require only brief time commitments or whose effects are immediately forthcoming. Bang Chaners are not an impatient people in an active, negative sense, but they do have difficulty in attending to tasks that demand from them a sense of compulsiveness or staying power. They will often drop demanding tasks right in the middle once they have recognized that the work is taking longer than originally expected. What is striking is that they will do this with apparently no sense of frustration over not having fulfilled their aims and with no regret over having wasted their time. It is as if their original purposes had simply become irrelevant, and they had gone on to other things. This is precisely the attitude, for example, surrounding the construction of the unusable road referred to earlier leading from the Minburi Highway to the Bang Chan school. After devoting considerable labor to building the high mound that would form the foundation of the road, villagers lost interest when they were unable to obtain funds for its surfacing. Since no one was ever interested in maintaining it, the road now lies in the middle of a rice field, rutted and pitted: much of the foundation has sunk back to the level of the adjacent fields. However, no villager has ever considered the road a fiasco or "folly"; it was just something done in the past and has since been forgotten. The road project might be revived in the future, but from the villagers' point of view that too is irrelevant. The point is that *sanug*, with its emphasis on novelty and diversion, is expressive of this same underlying time orientation. In the villagers' way of thinking, no activity is really worth doing unless it has the potentiality for fun.

Another expression of the villagers' concern with play, related in some respects to what will be discussed in the next section, is their preoccupation with humorous *topics* of conversation. For the most part, they enjoy hearing and telling stories with a "banana peel" twist: of a husband who is caught by his wife sleeping with another woman; of an individual who, through his failure to take heed, is cheated out of his money. Such stories of course always concern other people, not those immediately present. Too, stories that combine whimsy and the supernatural—for example, of a "super-dog" that can find buried treasure or foretell the future—elicit laughter, although often with a tinge of apprehension that the stories may be true. However, what is most impressive about these and similar stories is the amount of time given to them.

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521 522 538 The sociological context of a story-telling is probably what is most important here. Bang Chan is a community where other than cultivating the single rice crop and attending to daily household chores and religious activities, the villagers realistically have little else to do but talk to each other. This is clearly not an inevitable attribute of the peasant condition, but it is true of Bang Chan where little attention is given to such creative leisure activities as craftsmanship, music, and art, and where there is little occupational specialization. In fact, probably more time is given to gossiping than to any other single waking activity except daydreaming. Bang Chaners talk of many things, serious as well as lighthearted: the price of rice, religion, gambling, the doings of "big people," family disputes, and the like. However, by far one of the largest segments of their total conversational repertoire is given over to "funny" stories. Of course, no story is ever *exclusively* humorous in nature; all communication is inherently multidimensional, and even the funniest story has a substantive, non-humorous message. However, if stories may be judged by their behavioral effects (laughter) irrespective of their intellectual content, then the function of a major part of Bang Chan gossip is amusement.[10]

538 154 The motivations for the selection of banana peel type stories are more complex. In part, the choice seems prompted by a "there but for the grace of God go I . . . " mentality. As suggested earlier, Bang Chaners have a keenly developed sense of the possible: to them, this is a world where anything, not only the probable or the predictable, can happen. The banana peel story, with its emphasis on the painfully ludicrous and extreme, is a perfect representation of such an uncertain world. Its beauty is

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[123] [114] [126] [10] During the early stage of field work, I attempted to do systematic naturalistic observations of these gossip groups. The purpose was simply to identify the kinds of topics uppermost in the villagers' minds and the modes of interaction that most frequently developed during the sessions; it was hoped that the latter information might be related to the psychological test materials of the discussants. As a precisely designed and executed project, the effort, however, was dropped after a short time. For one thing, it was too difficult for two observers to record the *simultaneous* verbal and kinesthetic interaction of *several* people without the aid of a self-powered tape recorder and with the added burden of having to strain the material through the translation process. The task was further complicated by the fact that the membership of these groups continually changed as people would leave and enter the conversations. Also the groups would often break down into smaller sub-groups. Most important was the sheer multidimensionality of the conversation: any one utterance could simultaneously be funny, aggressive, boastful, carry practical information, etc. However, enough information was culled from these early attempts and later less ambitious ones to prompt the statements presented here. It is this writer's observation that one of the reasons behind the success of so much of the "small group" research conducted in the United States is that the groups studied have been *problem solving* or *task-oriented*, rather than simple gossip groups. The highly functional nature of the former has provided built-in constraints on the freedom of action permitted the discussants, and has made observational problems comparatively easier to deal with.

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that it is simply a "story," a description of the plight of other people, not the self. The story-teller or listener has the pleasure of a vicarious experience, but none of the pain of the real life situation. He can laugh over his good fortune in not being the person who was cheated out of his money or who was caught philandering by his wife. On the negative side, these stories also serve as a means by which the participants can express, through identification and projection, some of their own hostilities. The veil of humor provides in fact the ideal dress for hostility: one can be completely unabashed about expressing one's feelings (of wanting to steal, say, or wanting to humiliate), since what is expressed, in a form so exaggerated as to be acceptable, is simply the feeling and not the act itself. The hostility is made even more acceptable by the fact that it is projected onto the person in the story rather than referred to ego himself. In these terms, the telling of these stories probably does have something of the cathartic function cited earlier in the chapter: aggressions and hostilities that are otherwise kept under careful control are here permitted to emerge not only painlessly, but with a bit of relish. Finally, some of the laughter at these stories is probably also based on the feelings of embarrassment evoked in listeners. This is similar to the "there but for the grace of God . . ." motive but is different in that it is not based on personal identification with the person who suffers but rather on a diffuse feeling of discomfort over the expression of aggression—aggression toward anybody. There is embarrassment over things not being as they should be, over one's moral universe being temporarily out of joint. Also, the laughter is probably symptomatic of the listener's uneasiness as he becomes aware that the hostilities portrayed in the story are strikingly similar to those he himself harbors toward others. Embarrassed about his own aggressive impulses, he assuages them with laughter.

The motives for focusing on whimsical topics of conversation are less recondite and defensive than the above. Stories of the type describing "super-dogs" who find buried treasure are told because they are at the same time such outrageous and yet gentle distortions of reality. It is the juxtaposition of incongruous elements that is so appealing here. In ordinary Thai thought, for example, the dog is generally considered to be one of the most inconsequential and worthless of creatures. He is tolerated for his ability to warn of strangers and dispose of refuse, but nothing remotely approximating the feeling of "man's best friend" is associated with him. For such a lowly creature to be the sudden possessor of miraculous power is just too foolish. An elephant, monkey, or cobra perhaps, but not a dog.[11] Only "uncivilized" forest people would accept such a story. Yet, because the dog is such a familiar part of one's environment and also a living creature

[11] Doubt would exist for these creatures too, but because of their mythological and historical significance it would be somewhat tempered.

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recognition of the incongruity being portrayed; to have to explicate the way the familiar has been violated is to miss the whole point. Yet the very problem with which the anthropological investigator is characteristically faced is his unfamiliarity with the culturally implicit. His major intellectual task in fact is to make explicit that which is implicitly held by his informants. The only way to deal with this paradox is either to consider humor a special case of anthropological investigation, leave the content alone, and focus principally on forms and functions, or do a humorless exegesis and be prepared for disappointments. As indicated earlier, this writer greatly prefers the former alternative.

Why the frequency and value of the humor should be so different is difficult to say. That the villagers devote considerably more time to this mode of play and place considerably higher value on it than do most Occidentals is clear, especially from the pejorative comments of Westerners who are so disturbed by it. One possible reason may be the simple lack (compared to Occidentals) of time-consuming, functional tasks in the village; that is, given the villagers' definitions of things that have to be done during the cycle of daily activity, there is just more time available to them to be "frittered away" in amusing conversation. However, this negative explanation is at best only a partial solution since many people who have "little to do" manage to make busy work for themselves (in a diagnostic, not deprecating, sense); also, granted the fact that Bang Chaners have time to talk of many things, it does not explain why such a large portion of this time should be given over to humor. Another possible reason was indicated earlier: comedy provides an outlet for certain feelings that otherwise are denied direct expression or are a source of anxiety in the culture. The higher frequency of humor is a function of the degree of prohibition or anxiety, which in the case of some feelings—aggression, for example—is very high indeed. Since, as has probably been detected, much of the villagers' humor does revolve around aggressive situations, there is clearly some cogency to this approach. There is a third possible reason for the villagers' greater concern with humor. Humor, with its emphasis on the exaggerated, the incongruous, and unpredictable is, from a psychological point of view, essentially a form of new experience. In fact, it, and the real life situations to which it refers, are "invention" in the purest meaning of the terms: the breaking through of tried and established patterns of expectation. But people in different cultures look for their new experience, or express their inventiveness, in different ways. There is no inherent necessity (a consideration often overlooked by scholars concerned with culture change) for inventiveness to be expressed primarily through technological, economic, or sociological forms. It might well be, as Keesing has suggested (1960), that in many cultures the favoured modes for expressing the

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521 522 182 innovative impulses are recreative or aesthetic, either in content or form. Simply stated, the reason Bang Chaners may spend more time than Westerners in telling amusing stories to each other is because they feel they are gaining something new and worthwhile from the experience.

Politeness: A Social Cosmetic

57 It has been previously noted that the villagers' ubiquitous politeness appears in several different forms: sometimes it is associated with a genial interest in others or a concern over their welfare and comfort; at other times it is used as a means of handling one's anxiety over the intentions of others or one's uncertainty over the nature and purpose of the relationship; and at other times, it is used as a means of impressing others or getting in their good graces. The term "social cosmetic" is used here because it embraces at one time all these varying usages. A cosmetic not only makes one appear more attractive and conceals one's blemishes, real or imagined, but permits one to deal with others more easily and comfortably. The last consideration is in part a direct consequence of the first two, that is, a person who feels he is attractive to others will in all likelihood be more relaxed in his relationships with them. However, it is probably also a product of the conventionalized, relatively explicit interactional "frame" [13] that the very wearing of the cosmetic creates. The cosmetic indicates that regardless of his basic intentions, the person will conduct himself properly and agreeably; it defines the presence of and prompts conformity to certain behavioral rituals which simplify for the participants the kinds of behavior they may express. In a sense, the cosmetic of politeness represents one of the most "civilized" modes of social interaction: it is based on a fundamental concern with structuring one's behavior (again, irrespective of intentions) so as least to disturb others and thus permit them to act in socially easy, uncomplicated ways. Further, it stresses respect for the dignity and psychological integrity of others. The actual topic of conversation or non-verbal ritual that links the participating individuals together may be either meaningful or inconsequential, but that is essentially irrelevant when compared to the fact that the respect the participants feel for each other is being communicated. In

[13] This term is somewhat akin to what Goffman (1959: 22–24), in his attempt to analyze behavior in a dramaturgical framework, calls the "setting" or the "scenic aspects" of the interactional situation. However, Goffman's terms refer explicitly to the physical layout—the furniture, decor, and the like—of the behavioral situation rather than to the psychological "setting" that is created by the behavior of the participating individuals. On the other hand, his term, "personal front," refers exclusively to the attributes of individuals, rather than to the situational definitions that they create. The term "frame" used here refers to the psychological setting which is created by the behavior of individuals and which defines for all participants the nature of the situation.

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609 Of the various forms politeness takes, its most relaxed, least contrived
574 form in the cordiality that villagers extend to newcomers. Strangers to Bang Chan are hardly swept off their feet, but once contact has been established, they are welcomed with a degree of attention far exceeding simple tolerance of their presence. People express a curious interest in them as individuals, as if somehow their presence were adding a new dimension to the lives of their hosts. In the case of many Bang Chaners, this is probably true: the lives of these villagers are sufficiently routine and insular that the appearance of a new face is identified also with the advent of a significant and new experience. Still other villagers approach the newcomer with an attitude that says in effect: "One should try to meet and know as many persons as possible. Who knows what good may come of it?" The implied meaning here is that the cursory contact may in time develop into a firm relationship of reciprocal rights and obligations, whereby person A could turn to B to borrow money, ask his help in finding a job, help sponsor his son's ordination, and vice versa. There is in this attitude a sense of gentle optimism combined with opportunism. And still other villagers, probably the majority, approach the newcomer with no self reference at all, but with the simple intention of trying to make him feel comfortable. Whatever the intention in each case, however, the dominant behavior exhibited to the newcomer is openness, amiability, and curiosity.

576 The actual expressions of conviviality are at all times simple and
574 straightforward. They involve asking the person such questions as his age,
521 place of birth, whether he is married, or whether he has yet served in the
609 monkhood. (Notice the phrasing of this last question. The polite Thai form is never whether a person has been a monk or not, but rather whether he has already been a monk or not *yet* become one. The syntax of the interrogative form assumes the good intentions of the other person.) If the individual is identified as coming from a locale with special or distinguishing characteristics, the conversation will often involve humorous allusions to the place. For example, if he is from the North, there will most likely be joking references to the beautiful women of Chiengmai; if he is from the Northeast, to the funny accent of the people of that area. If the relative statuses of visitor and host can be quickly identified (based upon age, clothes, speech patterns, and occasionally surname), the conversation may turn to topics whose very purpose is to emphasize status considerations and thus make the participants more comfortable with one another. If they

*156 difficulties (ask his father to save the family land for him; tell the aunt he did not
159 want to marry the girl she had chosen—which he could have done had he felt secure about his relatives' love for him), he politely said nothing. The net result of all of this, as indicated in the text, was a deep sense of personal inadequacy and resentment that loved ones cannot be depended on. Further, Dang had begun to treat others as he felt others had treated him.

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are social peers, the Bang Chaners would easily turn the conversation to a discussion of the technical aspects of rice farming or even gambling. The latter would likely be discussed with a social superior only after some acquaintance. On the other hand, if one were clearly the other's superior, the superior would probably talk not about the methods of rice farming but, more generally and benignly, inquire, "Is all going well with you? Is there any way I might help you?" He might even proffer some unsolicited advice or aid. The tone and theme of the conversation would be expressive largely of the superior's concern with the welfare of his new-found friend, which the latter would typically accept.

All this is usually accompanied by gentle laughter and careful attention to appropriate pronominal forms. The good host will also serve his guest rain water, and if possible, scented rain water. If opportunity and finances permit, he may even offer him a warm Coca-Cola. The youngster who will actually serve the refreshment will make sure that it is on a coaster and that his hands are in the proper ritual position when he offers the drink to the guest. Such are the ingredients from which potential friendships are made.

Although the particulars of the kind of politeness found among family and friends are different from the above, the forms are essentially the same. Villagers do not talk about the funny accents of the people who live next door to them, nor do they rush to serve scented water when a brother comes to call. But they do take pains to express respect for each other by using proper honorific and pronominal forms, by looking to the oldest competent family member for advice, by talking of subjects that are pleasant and amusing, but never threatening or embarrassing.

The avoidance of embarrassing topics—even when the airing of such topics may be crucially important or beneficial to one of the parties concerned—is one of the most pronounced facets of village social life. To a Westerner accustomed to outspokenness, the types of situations that villagers define as embarrassing and the lengths to which they will go to avoid them sometimes appear to border on the sado-masochistic. Detailed interviews with two women whose husbands had taken second wives, for example, indicate that although at the time they were deeply disturbed by their husbands' actions (primarily for economic reasons; secondarily for emotional-sexual ones) they never once even brought the subject up with their husbands. They explained that they were too *ʔaaj* (embarrassed) to do so. In neither case was this embarrassment expressive of any feeling of inadequacy on their parts (the fear of hearing their husbands say, "I took a second wife because you are not adequate"). It was prompted rather by the desire to avoid an awkward and potentially rancorous confrontation. They did not want to put anybody on the spot. (Whether such a confrontation would *actually* lead to overt rancor is almost impossible to ascertain because

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Villagers also recognize the reluctance of an individual to become involved in another person's problems on the grounds of avoiding the accusation of *actually* having caused them. They say (but again, empirical instances of this type are very hard to find) that frequently the person with good intentions is turned on by the very friend he is trying to help, for example, "Since you know so much about the broken windmill perhaps you were the one who broke it!" Both these attitudes result from a rather overinflated view of one's importance to the friend, as if the friend would be more concerned with the agent of information than with the information itself. This is not so much a confusion of means and ends as a re-identification of them. Finally, some of the villagers' reluctance is probably also due to simple indifference or laziness regarding the plight of the friend.

Other expressions of the "ʔaaj-ness" complex are more clearly altruistic than the above. Villagers explain, for example, that the reason there is never any more than one candidate for the post of hamlet or commune headman, on the rare occasions when such elections are held, is to avoid embarrassing the individuals involved. The eventual headman would be embarrassed because the presence of a competitor would suggest doubt about his competence; the candidate who lost would be embarrassed by the very fact that he lost. To avoid hurt feelings, only one candidate is presented, voted on, and elected.

We have been talking above about politeness primarily in a negative sense, that is, about the lengths to which villagers will go to *avoid* discomforting others or upsetting peaceful relationships. This aspect was stressed because its expressions represent a somewhat unique form of patterned social interaction. However, the many positive forms of the villagers' politeness to friends and kin should not be minimized: their concern with choosing topics of conversation they think will interest or entertain others; their search for opportunities to flatter them, sometimes in pseudo-mocking fashion, but more often to make them feel good; their attention to providing others with a pleasing audience—being silent, attentive, and eager when others are declaiming on a favorite subject. Of course, many times the villagers are not listening, but they try to behave as if they were. The aim here is to make others feel that what they are saying is worthwhile. An important part of this is that one almost never directly challenges the veracity or logic of the speaker's statements. If disbelief is the only appropriate response, it should be done silently. Nothing except personal pain and interpersonal tension would be gained from a direct challenge. If one feels strongly enough about the issue, which is very rare,[16] the presentation of an *alternative* view would not be inappropriate. But one

[16] The rarity of strong feelings is due to the fact that so often the very purpose of such conversations is to convey politeness and nothing more. The actual topic of conversation is simply a medium of contact, not a matter to be seriously discussed.

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front, know that it actually elicits and betrays his anxiety, but have such implicit trust in his own resources that he feels no need to alter his behavior. Simply stated: uneasiness when it occurs is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality.

The actual expressions of nervousness and inconsequential conversation vary considerably. Perhaps their most obvious (and justifiable) expression is when a villager, who wants to get something from another person, for example, a job, a loan, higher rent on land, is uncertain about the other's reaction and approaches him by hedging around the issue with giggles and light, irrelevant comments. This mode of behavior typically occurs when there is no history of reciprocal benefits between the parties or when a middleman cannot be used.[17] Although villagers themselves do not consider such comments "irrelevant" (probably because from a ritualistic point of view they are not), it is hard to define a detailed discussion of a person's buttons or belt buckle as anything but a kind of phatic communion. Sometimes conversations of this type will go on for twenty and thirty minutes, often branching off to include more topical interests such as the size of eggs or the calls of birds, before reaching the point. Frequently they never reach the point, since somewhere along the line the individual recognizes from the tone of the conversation that the other person is not in the proper mood to entertain his request; in this case, the individual will explain that he came simply "to chat." Sometimes the friend will begin to giggle uneasily (particularly if the protagonist's references to him contain an excess of flattery) as he becomes aware of the purpose of the conversation and wishes to evade facing the ultimate issue. Very often, even when the final request comes out, he can avoid it simply by giggling. Under such circumstances a giggle is crucially communicative: it is the person's polite substitute for "No," or "Let us bring this particular topic of conversation to an end." Giggling is a wonderfully effective way of carrying on a "conversation" (for those who can read its "vocabulary") because one can so readily convey his refusal, wariness, and even hostility while at all times maintaining the illusion of friendliness. It is precisely because the villagers' giggling frequently rests on such devious attitudes that it appears

[17] The *quid pro quo* basis of the former would permit a considerably more direct approach. It is not difficult to be frank with a person when both you and he realize that you are asking for an earlier obligation to be repaid or that you are creating a new one which may be called upon later when needed. Villagers are highly responsive to such obligations, often going to considerable effort and personal discomfort to meet them. A middleman, on the other hand, is used precisely to avoid the kind of delicate encounter described here. As a disinterested third party, he can be completely candid in his requests. However, for reasons of secrecy (usually when the request involves some potential competition or envy of other villagers, or perhaps some sharp-dealing) the use of a middleman may be inappropriate.

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to be somewhat nervous. Like the conversational topics mentioned above, its purpose is to maintain social contact, but at a minimal substantive level.

Other uses of giggling are less consciously purposeful than the above. Perhaps the most frequent instance of this is when villagers are talking about or responding directly to an unfortunate situation: a flood destroying the rice crop, a friend or relative dying or being beaten up, a person committing suicide. Giggling under these circumstances seems to represent several related sentiments. On the one hand, it indicates a slight feeling of embarrassment over having discovered something or talked about something which would have been better left undiscovered and undiscussed. At the same time, it is an attempt to make light of the misfortune by suggesting that the speaker and those present should not be overly pained by what they are encountering. Giggling here serves very much the same kind of function as the phrase *maj pen raj* ("it is nothing") referred to earlier; it is a means of shrugging off and denying a feeling of distress. Finally, giggling often is also a kind of ironic commentary on the human situation—not in any abstract philosophical way, but in the sense that a tragedy is so often actually felt to be a comic exposure of human hopes and intentions. A little exchange between the writer and an elderly villager perhaps best illustrates this. During one of the two rainy seasons I spent in Thailand, the rains were especially heavy in the Central Plain and destroyed the rice crop of many Bang Chan farms. As might be expected, it was a topic of considerable discussion. Paddling down the canal one morning, we met a villager who was returning from inspecting his fields, and we stopped to chat. The discussion inevitably turned to the flood, and he told us, in a completely matter-of-fact way, that he had already lost about 50 percent of his crop. He then giggled nervously over what he had said, and followed it up with, "But that person over there has lost everything." His giggles then turned into laughter as he nodded his head in an attitude of pain. Months later, when things were considerably more comfortable for the villager (as it turned out, he had lost only about 5 percent of his crop) I recalled our meeting and asked him what he thought was so funny about the flood. He did not remember, but volunteered in a nice, didactic way: "When something like a flood happens, all you can do is laugh."

Giggling is also a favored mode of dealing with the countless situations that arise in daily life that are perceived by the villagers as potentially, or imminently, embarrassing. Here giggling is a substitute for an explanation of one's actions, particularly those that are considered annoying to others. Villagers who have missed an *important* appointment (lesser ones are missed with few qualms) will tend to giggle when they finally meet the person and there is the slightest indication of the latter's displeasure.

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*125 syntax is in our culture—and except for certain ritual occasions, perhaps in all cultures—one of the basic symptoms of psychopathy. Witness the "word salads" of hebephrenic schizophrenics and the "mental lapses" of aphasics. (See White 1948: 527; Brown 1958: 293; Goldstein 1948; and Jakobson 1957.)

On occasion some of our Bang Chan informants would ignore syntactic considerations and use the sentence cues as triggering devices for their own unanchored thoughts and preoccupations: *"When I realize other people do not like me, I feel . . .* that's happened to me sometimes. When you see that other people don't like you, you should avoid them. The Lord Buddha says. . . ." And then the completion might develop into a brief lecture on morality. At other times, the cue would trigger off an autistic explosion: *"His most unattractive quality is . . .* don't have anything to do with him! He is a wicked person. I do not want to speak to him. He doesn't talk sense. One day while I was fishing, he came along and asked me to have intercourse with him. I cursed him!" (Other data on this informant indicate that she was referring to her estranged husband.) These types of [124] "ungrammatical" responses seem to derive from the social aspects of the [123] interviewing situation—the informant has a friendly listener with a willing ear and thus occasionally ignores the original definition of the SCT task to • [521] declaim on his favorite subject[2]—and also from the fact that in social discourse our Thai villagers seem to indulge more in, and have considerably greater tolerance for, autistic thought than do most Americans. That is, the villagers are more accustomed to making and hearing statements that have little apparent "objective" meaning (or in the language of psycholinguistics, "referential" meaning: Brown 1958: 315) but which are symptoms of inner states and preoccupations. The crucial point here is that a listener often does not know—or care—precisely what a speaker is talking about, but simply accepts the other person's utterances as expressions of inner, unknown concerns. Such expressions involve the leaping over of connective thought and syntactic constraints (as in the above example of the lecherous husband) or indifference to the logical currents of the discussion.[3]

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[2] Sometimes his discussions are simply expressions of phatic communion—the desire to indulge in chitchat for its own sake. (See Malinowski 1923: 315; and Hockett 1958: 585.)

[191] [3] It should be remembered that speech is not only a device for carrying on social interaction but also a mechanism for articulating one's inner preoccupations, whether or not other people understand. It is this latter use (which, incidentally, is ontogenetically the more basic: Piaget 1932; and Langer 1942: 35) about which Bang Chaners seem particularly tolerant. In general, a speaker in Bang Chan is not held very responsible for what he says. One rarely hears in the village—except from prying anthropologists—such charges as "I do not know what you are talking about. Explain yourself." For one thing, such a query would not be particularly polite; and in the villagers' scheme of things, what a person says is really his own business, re-

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Thus, in explaining why he loves one of his closest friends, a villager says:

> We love each other because we never contradict each other or disagree. That is why we love each other. If we disagreed, there would be no love. [Investigator: "It is normal sometimes even for close friends to disagree. About what kind of things do you and your close friend disagree?"] We never disagree. Only people who are drunkards and take opium disagree. That is why our friendship has lasted so long. [Investigator: "What would happen if you disagreed?"] We would not love each other, and maybe he would take revenge on me.

In another place, this same informant says of his relationship with his wife: "My wife and I never quarrel. If we quarreled, we would have to separate. There would be nothing to divide—except the children." As indicated earlier, many villagers, fearing the volatility of a quarrel, actually do separate, often even before the dispute gets going. Similarly, individuals, particularly if they are in subordinate positions, hesitate even to approach others lest they stimulate, let alone elicit, anger. Villagers will hesitate to approach others even if they are not the object, but simply a possible catalyst, of another's potential aggression: witness the cases of the land sale deal and the broken noria cited earlier. Note that in these cases it is not manifest aggression but merely the anticipation of it that inhibits villagers from initiating or maintaining interpersonal involvements.

Although villagers decline to express or to be exposed to direct aggression, they do have several indirect, if somewhat more complicated, ways of venting these feelings. Of these, the simplest is to gossip nastily *about* people. The frequency of this characteristic peasant activity is considerable in the village: in fact, an uncharitable observer might, on the basis of Bang Chan, just as readily entitle a book about Thailand *Land of Gossip* as *Land of Smiles*. However, the very frequency of gossip seems to mitigate its intensity or effect. Villagers are so accustomed to it that it is almost a *way* of talking, a style of speech. And as is the case with much village speech, villagers listen to, but do not necessarily believe, the nasty things one person might say about another. Also, excepting those cases where a person's complaints are either realistic or justifiable, people are just as likely to listen to an individual's gossip for what it says about him as for what it says about the person whom he is criticizing. None of this is to suggest that the person gossiping does not attain release, or that the person about whom he is gossiping, *if* he found out, would not be hurt or peeved. Rather, it is the situation in which the hostility is expressed that mitigates its effect.

Less frequent and more painful than the above are the formal, almost

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need. The problem is that we really do not know, although comparative data from primatology (Yerkes 1943, Kroeber 1948: 27–29 and 60–61) clearly suggest that play belongs to the former category. If this is indeed the case it would imply that play is subject to the same degree of cultural influence, channeling, and socialization as are hunger, sex, and aggression, but can no more be fully obliterated than can these needs. Assuming, for the sake of argument, that this reasoning is correct, then the compensatory "escape" and "regressive" functions attributed to play by the authors noted above would not be at all unreasonable: play might well come to serve as an escape from adult reality in the same way that food sometimes serves as an escape from sexual anxiety or sex from food anxiety (Holmberg 1950). However, the point is that these are not the primary or typical functions of these needs, but secondary and defensive ones; although significant, they hardly comprise the necessary conditions for their being. If this approach is valid, we would be considerably wiser in our present state of knowledge (the Protestant Ethic and its intellectual extensions notwithstanding) to direct our attention to identifying the varying forms of play from culture to culture rather than to dwell on its secondary, compensatory functions.

Whatever its ultimate motivational basis, there is no doubting either the spontaneity or ingenuousness with which Bang Chaners turn social situations into occasions for play. For the most part they seem prompted in these situations by the simple desire to have a good time rather than to affect others in a socially pointed way, that is, their humor is not typically aimed at being sarcastic, didactic, or even exhibitionistic, although the person who excels at being funny is quickly recognized as such and is to an extent admired.[7] There is, in the negative sense noted earlier, an element of interpersonal effect operating here: comedy is a technique which almost by definition reduces the potentiality for face-to-face conflict. However, the villagers' play seems aimed primarily at satisfying personalistic function: their *individual* needs for pleasure and amusement.

The forms that these play activities take are numerous.[8] Perhaps their

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The dangers of trying to share humor interculturally were perhaps never brought home better than when I tried to get the villagers' reaction to a story that received

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571 522 524 most subtle expression is in the marvelous word games that the villagers play. What is striking about these games from an analytic viewpoint is not so much that they are funny, but that villagers are continually attentive to opportunities for playing them, and actively try to structure situations along such lines. In a sense, they are not "games" at all but verbal asides that emerge spontaneously from the discourse of everyday contact, and which serve to make such contacts enjoyable. One form of word play is particularly popular. For the lack of a better term, it could be called "silent stinky pinky." [9] Here two persons are chatting, and person A works into the conversation a statement that sounds completely innocuous. (A man, for example, says to a woman, *hew mii*, meaning "see the bear.") Person B, forever attentive, knows that words are deceptive: although A *said* one thing, he was really *thinking* of, and expects B to be *thinking* of, its rhymed phonemic inversion, which is vulgar or insulting. (Although the man said to her, *hew mii*, he was really thinking of *mew hii*, meaning "your vulva smells.") Person B picks up the cue and responds with a statement that sounds equally innocuous but which when mentally inverted is just as scatological. The game continues until one of the parties gives up, whereupon the conversation returns with laughter to its original concerns. It must be emphasized that although this game is phrased in terms of a verbal contest, its purpose is not to best the other person but to work out with him or her a dialogue entertaining to both.

524 522 123 Sometimes these games arise and die out so quickly that it is difficult even for other, nonparticipating Siamese to spot them. The particular example cited here is one that has become almost part of the folklore of conversational gambits. However, what delights many of the villagers is the unpredictability of these patterns. On one occasion, I unwittingly juxtaposed a few English phonemes that had two informants and my assistant literally rolling on the floor with laughter. We were talking about the

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[123] [571] [522] wide currency in Bangkok newspapers during 1936. It seemed that a husband was waiting outside a brothel to escort his wife, one of the prostitutes, home. She was busy with a customer. The husband called to her, telling her to hurry. She called back, saying that she would be through shortly. A few minutes later, he called again, and once more she said that she would be coming along. Finally, the husband went in and shot both his wife and her customer "because I lost my patience." When I told this story to several villagers, I was the only one who chortled. Most of them either commented on the sadness of the story or said the husband was stupid for killing the family breadwinner.

[9] In American stinky-pinky, people try to guess the rhymed equivalents of abstract definitions. Thus, if person A says, "I am thinking of a 'cadaverous Marxist,'" person B might say, "a dead red." The Thai version differs from its American cousin in that it is not only unspoken but is not really a parlor game. The tonal, monosyllabic nature of the Thai language probably is an important preconditioning factor here. (See also Haas 1951 and 1957 for illustrations of other kinds of verbal play.)

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various kinds of ants living in Thailand and the United States. (Such are the topics that interest villagers.) The villagers wanted to know the English names for small red ants, normal black ones, and the large, rusty colored variety that are indigenous to the tropics. I named the first two with no difficulty. For the third, I said simply, "a giant ant." The assistant, turning to one of the informants, first gave the literal Thai equivalent of "giant," and then, as if this were the funniest thing he had heard that week, began to repeat, "giant, gi-ant, gi-ant." In a few seconds, they were all bursting with laughter.

Different, yet part of the same psychological constellation, is the whole complex of behaviors associated with the term, *sanug*. *Sanug* is usually translated into English simply as "fun." However, this translation conveys little of the motivational significance of the term. Essentially, *sanug* is a quality inherent in all situations which are not only fun but also emotionally worthwhile. In fact, these two states are often thought of as reciprocals of one another. An activity that is novel, diverting, or that can be done comfortably, is *sanug dii* (good fun); one that is tedious, overdemanding, that lacks the opportunity for frivolity, is not *sanug* and should be avoided. Harvesting rice in coöperative work groups, attending a ceremonial, participating in an election (see Phillips 1958: 45–46), or even taking something as outlandish as a Sentence Completion Test are all *sanug*. (The unifying elements of these diverse activities are either their novelty or the fact that they involve the presence of relatively large numbers of people but require no genuine interchange with them.) On the other hand, going into the army or working for a demanding superior are not *sanug*.

The importance of *sanug* is that it provides the villagers with a standard of value, a measure of how much they wish to commit themselves to a particular activity. The role of this standard should not be underestimated. Villagers who have taken a job in the city, often involving a time-bound daily routine or continuous, sustained attention to a task (work in a small factory, for example) frequently return to the village explaining that they quit "because it wasn't *sanug*. How can you work on a job if there is never any time for fun?" Foreign employers, with their greater concern for the job than with the person who does it and with their annoying tendency to be *cuu cii* (compulsive, fussy, exacting) are a particular target for this indictment, although this is usually based on hearsay rather than personal experience. On the other hand, villagers will often take on free of charge a major job (for example, helping a neighbor build a house) precisely because it is *sanug*. Although there are other considerations operating here—creating or repaying a personal obligation, doing a *bunkhun* ("a goodness") for a neighbor—the "sanug-ful" aspects of the task are always

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since even the most novel activities eventually become routine or stale, it is obviously impossible for all one's hours to be animated with *sanug*. From a total time perspective, many of the villagers' activities are of course either "sanug-fully" fallow or "sanug-fully" short-lived. To a large extent, this paradox is resolved *subjectively* by the short-term time perspective of the villagers. This is the second major point to be noted about *sanug*, that is, *sanug* reflects a more generalized tendency on the part of the villagers to concern themselves with activities that require only brief time commitments or whose effects are immediately forthcoming. Bang Chaners are not an impatient people in an active, negative sense, but they do have difficulty in attending to tasks that demand from them a sense of compulsiveness or staying power. They will often drop demanding tasks right in the middle once they have recognized that the work is taking longer than originally expected. What is striking is that they will do this with apparently no sense of frustration over not having fulfilled their aims and with no regret over having wasted their time. It is as if their original purposes had simply become irrelevant, and they had gone on to other things. This is precisely the attitude, for example, surrounding the construction of the unusable road referred to earlier leading from the Minburi Highway to the Bang Chan school. After devoting considerable labor to building the high mound that would form the foundation of the road, villagers lost interest when they were unable to obtain funds for its surfacing. Since no one was ever interested in maintaining it, the road now lies in the middle of a rice field, rutted and pitted; much of the foundation has sunk back to the level of the adjacent fields. However, no villager has ever considered the road a fiasco or "folly"; it was just something done in the past and has since been forgotten. The road project might be revived in the future, but from the villagers' point of view that too is irrelevant. The point is that *sanug*, with its emphasis on novelty and diversion, is expressive of this same underlying time orientation. In the villagers' way of thinking, no activity is really worth doing unless it has the potentiality for fun.

Another expression of the villagers' concern with play, related in some respects to what will be discussed in the next section, is their preoccupation with humorous *topics* of conversation. For the most part, they enjoy hearing and telling stories with a "banana peel" twist: of a husband who is caught by his wife sleeping with another woman; of an individual who, through his failure to take heed, is cheated out of his money. Such stories of course always concern other people, not those immediately present. Too, stories that combine whimsy and the supernatural—for example, of a "super-dog" that can find buried treasure or foretell the future—elicit laughter, although often with a tinge of apprehension that the stories may be true. However, what is most impressive about these and similar stories is the amount of time given to them.

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521 The sociological context of a story-telling is probably what is most
• 522 important here. Bang Chan is a community where other than cultivating
538 the single rice crop and attending to daily household chores and religious activities, the villagers realistically have little else to do but talk to each other. This is clearly not an inevitable attribute of the peasant condition, but it is true of Bang Chan where little attention is given to such creative leisure activities as craftsmanship, music, and art, and where there is little occupational specialization. In fact, probably more time is given to gossiping than to any other single waking activity except daydreaming. Bang Chaners talk of many things, serious as well as lighthearted: the price of rice, religion, gambling, the doings of "big people," family disputes, and the like. However, by far one of the largest segments of their total conversational repertoire is given over to "funny" stories. Of course, no story is ever *exclusively* humorous in nature; all communication is inherently multidimensional, and even the funniest story has a substantive, non-humorous message. However, if stories may be judged by their behavioral effects (laughter) irrespective of their intellectual content, then the function of a major part of Bang Chan gossip is amusement.[10]

538 The motivations for the selection of banana peel type stories are more
154 complex. In part, the choice seems prompted by a "there but for the grace of God go I . . . " mentality. As suggested earlier, Bang Chaners have a keenly developed sense of the possible: to them, this is a world where anything, not only the probable or the predictable, can happen. The banana peel story, with its emphasis on the painfully ludicrous and extreme, is a perfect representation of such an uncertain world. Its beauty is

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[123] [10] During the early stage of field work, I attempted to do systematic naturalistic
[114] observations of these gossip groups. The purpose was simply to identify the kinds of
[126] topics uppermost in the villagers' minds and the modes of interaction that most frequently developed during the sessions; it was hoped that the latter information might be related to the psychological test materials of the discussants. As a precisely designed and executed project, the effort, however, was dropped after a short time. For one thing, it was too difficult for two observers to record the *simultaneous* verbal and kinesthetic interaction of *several* people without the aid of a self-powered tape recorder and with the added burden of having to strain the material through the translation process. The task was further complicated by the fact that the membership of these groups continually changed as people would leave and enter the conversations. Also the groups would often break down into smaller sub-groups. Most important was the sheer multidimensionality of the conversation: any one utterance could simultaneously be funny, aggressive, boastful, carry practical information, etc. However, enough information was culled from these early attempts and later less ambitious ones to prompt the statements presented here. It is this writer's observation that one of the reasons behind the success of so much of the "small group" research conducted in the United States is that the groups studied have been *problem solving* or *task-oriented*, rather than simple gossip groups. The highly functional nature of the former has provided built-in constraints on the freedom of action permitted the discussants, and has made observational problems comparatively easier to deal with.

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538 231 ("Who knows what he was in earlier lives and what powers he brought with him into this one?"), there is enough reality about the tale to make people want to listen. Moreover, it is wish-fulfilling fantasy; people laugh because reality has been outraged, but with a lingering desire that it really could be.

• 522 [538] The kinds of stories outlined above do not exhaust the villagers' stock of conversational humor. There are also tall stories without the supernatural touch, broad burlesques, "dirty" jokes,[12] and the countless epigrams that work their way into almost any conversation; the last are not so much topics of conversation as they are means of punctuating a point. However, enough has been said to indicate that in its cognitive stylization and social psychological purposes, Bang Chan humor is not too different from Western humor. It is rather the content, frequency, and evaluation of the humor that is so distinctive. That the content should be distinctive is of course self-evident, since all humor is rooted in the implicit and familiar premises of workaday, cultural life. In fact the very essence of a joke is seeing the 522 121 culturally familiar in an entirely new light. This may help to explain, incidentally, why it is always so painfully self-defeating to try "to explain" the content of a joke: its entire effect is dependent on the listener's implicit

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522 831 538 [181] [12] Sexual and scatological humor in Bang Chan pose some special problems. On the one hand, because villagers take such a matter-of-fact approach to sex, there are actually few jokes and stories that aim explicitly at being titillating or risqué. For most Bang Chaners, sex is something to be experienced and enjoyed in private, not snickered about barracks-style; there is no *sanug* in *talking* about sex (although there may be in playing with tabooed words, especially if cleverly done). Also, villagers seem to lack any interest in lewdness for its own sake. Not only Bang Chan, but Thai culture in general, is striking for its relative absence of attempts to edify sex: there is nothing in Thai literature or art, for example, approximating the exaggerated bawdiness of Rabelais or the graphic sensuality of the kind of sculpture found at Khajuraho and Konarak in India.

On the other hand, sexual situations are very often used as vehicles for portraying the foibles and stupidities of people. Villagers particularly enjoy stories of individuals of either sex who devise ways for seducing the unsuspecting, or of individuals who manage to outwit their spouses while philandering with their lovers; the more complex their machinations, the more amusing the stories. However, it is the social psychological, not the sexual, dimensions of these tales that form the major bases of their appeal.

Finally, it should be noted that villagers tend to distinguish between what could be called "genital" and "anal" modes of humor. The latter type has considerably fewer taboos associated with it. Thus, whereas most villagers would avoid going into descriptive detail in reporting the physical aspects of a tale of sexual conquest, they would have few qualms about discussing (and often with acoustical detail) such things as people who pass air in public or who otherwise get themselves into compromising anal situations. (Interestingly, J. Marvin Brown in his linguistic work with Thai informants, often including female university students, reports in a personal communication that he encountered difficulty in obtaining the various Thai terms for sexual organs and acts, but that the terms for anal and excretory behavior were given with little hesitation.)

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recognition of the incongruity being portrayed; to have to explicate the way the familiar has been violated is to miss the whole point. Yet the very problem with which the anthropological investigator is characteristically faced is his unfamiliarity with the culturally implicit. His major intellectual task in fact is to make explicit that which is implicitly held by his informants. The only way to deal with this paradox is either to consider humor a special case of anthropological investigation, leave the content alone, and focus principally on forms and functions, or do a humorless exegesis and be prepared for disappointments. As indicated earlier, this writer greatly prefers the former alternative.

Why the frequency and value of the humor should be so different is difficult to say. That the villagers devote considerably more time to this mode of play and place considerably higher value on it than do most Occidentals is clear, especially from the pejorative comments of Westerners who are so disturbed by it. One possible reason may be the simple lack (compared to Occidentals) of time-consuming, functional tasks in the village; that is, given the villagers' definitions of things that have to be done during the cycle of daily activity, there is just more time available to them to be "frittered away" in amusing conversation. However, this negative explanation is at best only a partial solution since many people who have "little to do" manage to make busy work for themselves (in a diagnostic, not deprecating, sense); also, granted the fact that Bang Chaners have time to talk of many things, it does not explain why such a large portion of this time should be given over to humor. Another possible reason was indicated earlier: comedy provides an outlet for certain feelings that otherwise are denied direct expression or are a source of anxiety in the culture. The higher frequency of humor is a function of the degree of prohibition or anxiety, which in the case of some feelings—aggression, for example—is very high indeed. Since, as has probably been detected, much of the villagers' humor does revolve around aggressive situations, there is clearly some cogency to this approach. There is a third possible reason for the villagers' greater concern with humor. Humor, with its emphasis on the exaggerated, the incongruous, and unpredictable is, from a psychological point of view, essentially a form of new experience. In fact, it, and the real life situations to which it refers, are "invention" in the purest meaning of the terms: the breaking through of tried and established patterns of expectation. But people in different cultures look for their new experience, or express their inventiveness, in different ways. There is no inherent necessity (a consideration often overlooked by scholars concerned with culture change) for inventiveness to be expressed primarily through technological, economic, or sociological forms. It might well be, as Keesing has suggested (1960), that in many cultures the favoured modes for expressing the

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521 innovative impulses are recreative or aesthetic, either in content or form.
• 522 Simply stated, the reason Bang Chaners may spend more time than West-
182 erners in telling amusing stories to each other is because they feel they are gaining something new and worthwhile from the experience.

Politeness: A Social Cosmetic

57 It has been previously noted that the villagers' ubiquitous politeness appears in several different forms: sometimes it is associated with a genial interest in others or a concern over their welfare and comfort; at other times it is used as a means of handling one's anxiety over the intentions of others or one's uncertainty over the nature and purpose of the relationship; and at other times, it is used as a means of impressing others or getting in their good graces. The term "social cosmetic" is used here because it embraces at one time all these varying usages. A cosmetic not only makes one appear more attractive and conceals one's blemishes, real or imagined, but permits one to deal with others more easily and comfortably. The last consideration is in part a direct consequence of the first two, that is, a person who feels he is attractive to others will in all likelihood be more relaxed in his relationships with them. However, it is probably also a product of the conventionalized, relatively explicit interactional "frame" [13] that the very wearing of the cosmetic creates. The cosmetic indicates that regardless of his basic intentions, the person will conduct himself properly and agreeably; it defines the presence of and prompts conformity to certain behavioral rituals which simplify for the participants the kinds of behavior they may express. In a sense, the cosmetic of politeness represents one of the most "civilized" modes of social interaction: it is based on a fundamental concern with structuring one's behavior (again, irrespective of intentions) so as least to disturb others and thus permit them to act in socially easy, uncomplicated ways. Further, it stresses respect for the dignity and psychological integrity of others. The actual topic of conversation or non-verbal ritual that links the participating individuals together may be either meaningful or inconsequential, but that is essentially irrelevant when compared to the fact that the respect the participants feel for each other is being communicated. In

[13] This term is somewhat akin to what Goffman (1959: 22–24); in his attempt to analyze behavior in a dramaturgical framework, calls the "setting" or the "scenic aspects" of the interactional situation. However, Goffman's terms refer explicitly to the physical layout—the furniture, decor, and the like—of the behavioral situation rather than to the psychological "setting" that is created by the behavior of the participating individuals. On the other hand, his term, "personal front," refers exclusively to the attributes of individuals, rather than to the situational definitions that they create. The term "frame" used here refers to the psychological setting which is created by the behavior of individuals and which defines for all participants the nature of the situation.

264 would not come willingly to work. When a family with a repu-
476 tation for stinginess diluted the (3)khaaw (3)tom too much,
[574] the group refused to eat any, thereby reminding the host of his obligation for hospitality.

574 Guests to whom meals were served fell into four categories: 1) kin, 2) visiting dignitaries, 3) priests and 4) drinking companions. Kinfolk who came as guests were married children, or those who were away at school or work, or kinsmen from Bangkok or elsewhere. The older the relative or the greater the distance travelled, the greater the honor accorded him. Foods were exchanged. Two visiting ladies travelling in a large boat, made an annual round of all their relatives, bringing certain "city" foods and receiving substantial gifts of rice, fish and fruit. They stayed for several days as guests of one family, then moved on. Every person from Bang
[430] Chan who visited a relative in Bangkok carried big packages of food, usually rice or eggs, as gifts. With the inflated prices in Bangkok, it was advantageous to have a "country cousin" who might bring food. Visiting kinsmen always recognized the need for eventual reciprocity.

Visiting dignitaries were usually entertained by hamlet headmen. Meals served to visiting officials, policemen and others might be elaborate, involving cooperative help in preparation, but reciprocity, if any, rarely took the form of a return meal.

[792] Regular visits of the priests, as well as the invitation of priests to the house for special events, have been mentioned. Priests might also come from afar, usually staying at the temple but receiving generous offerings of food from people of the community.

[562] The custom of convivial get-togethers of either or both sexes was well established. Men traditionally enjoyed "stag" dinners of four up to twenty or more whenever the ingredients for a turtle, frog, cobra or other snake curry were available. Chicken curry might also be thus served, and once a catfish mash was prepared by a male visitor from the north. Those curries were cooked by men, and the host served liquor freely.
784 The all-male character of the occasion reflected the old re-
788 strictions on women's partaking of flesh foods (see p. 42),
273 but older women did not hesitate to join in the drinking.
[524] Women also got together in drinking parties, sometimes to play cards.

In addition to sharing food with people in these four categories, the general rules of hospitality required that anyone who came to the house at meal time, should be offered food, or at least a drink of liquor, tea, or plain water.

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most subtle expression is in the marvelous word games that the villagers play. What is striking about these games from an analytic viewpoint is not so much that they are funny, but that villagers are continually attentive to opportunities for playing them, and actively try to structure situations along such lines. In a sense, they are not "games" at all but verbal asides that emerge spontaneously from the discourse of everyday contact, and which serve to make such contacts enjoyable. One form of word play is particularly popular. For the lack of a better term, it could be called "silent stinky pinky."[9] Here two persons are chatting, and person A works into the conversation a statement that sounds completely innocuous. (A man, for example, says to a woman, *hen mii*, meaning "see the bear.") Person B, forever attentive, knows that words are deceptive: although A *said* one thing, he was really *thinking* of, and expects B to be *thinking* of, its rhymed phonemic inversion, which is vulgar or insulting. (Although the man said to her, *hen mii*, he was really thinking of *men hii*, meaning "your vulva smells.") Person B picks up the cue and responds with a statement that sounds equally innocuous but which when mentally inverted is just as scatological. The game continues until one of the parties gives up, whereupon the conversation returns with laughter to its original concerns. It must be emphasized that although this game is phrased in terms of a verbal contest, its purpose is not to best the other person but to work out with him or her a dialogue entertaining to both.

Sometimes these games arise and die out so quickly that it is difficult even for other, nonparticipating Siamese to spot them. The particular example cited here is one that has become almost part of the folklore of conversational gambits. However, what delights many of the villagers is the unpredictability of these patterns. On one occasion, I unwittingly juxtaposed a few English phonemes that had two informants and my assistant literally rolling on the floor with laughter. We were talking about the

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wide currency in Bangkok newspapers during 1956. It seemed that a husband was waiting outside a brothel to escort his wife, one of the prostitutes, home. She was busy with a customer. The husband called to her, telling her to hurry. She called back, saying that she would be through shortly. A few minutes later, he called again, and once more she said that she would be coming along. Finally, the husband went in and shot both his wife and her customer "because I lost my patience." When I told this story to several villagers, I was the only one who chortled. Most of them either commented on the sadness of the story or said the husband was stupid for killing the family breadwinner.

[9] In American stinky-pinky, people try to guess the rhymed equivalents of abstract definitions. Thus, if person A says, "I am thinking of a 'cadaverous Marxist,'" person B might say, "a dead red." The Thai version differs from its American cousin in that it is not only unspoken but is not really a parlor game. The tonal, monosyllabic nature of the Thai language probably is an important preconditioning factor here. (See also Haas 1951 and 1957 for illustrations of other kinds of verbal play.)

4:Phillips E-4,5 (1956-1957) 1966
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various kinds of ants living in Thailand and the United States. (Such are the topics that interest villagers.) The villagers wanted to know the English names for small red ants, normal black ones, and the large, rusty colored variety that are indigenous to the tropics. I named the first two with no difficulty. For the third, I said simply, "a giant ant." The assistant, turning to one of the informants, first gave the literal Thai equivalent of "giant," and then, as if this were the funniest thing he had heard that week, began to repeat, "giant, gi-ant, gi-ant." In a few seconds, they were all bursting with laughter.

Different, yet part of the same psychological constellation, is the whole complex of behaviors associated with the term, *sanug*. *Sanug* is usually translated into English simply as "fun." However, this translation conveys little of the motivational significance of the term. Essentially, *sanug* is a quality inherent in all situations which are not only fun but also emotionally worthwhile. In fact, these two states are often thought of as reciprocals of one another. An activity that is novel, diverting, or that can be done comfortably, is *sanug dii* (good fun); one that is tedious, overdemanding, that lacks the opportunity for frivolity, is not *sanug* and should be avoided. Harvesting rice in coöperative work groups, attending a ceremonial, participating in an election (see Phillips 1958: 45–46), or even taking something as outlandish as a Sentence Completion Test are all *sanug*. (The unifying elements of these diverse activities are either their novelty or the fact that they involve the presence of relatively large numbers of people but require no genuine interchange with them.) On the other hand, going into the army or working for a demanding superior are not *sanug*.

The importance of *sanug* is that it provides the villagers with a standard of value, a measure of how much they wish to commit themselves to a particular activity. The role of this standard should not be underestimated. Villagers who have taken a job in the city, often involving a time-bound daily routine or continuous, sustained attention to a task (work in a small factory, for example) frequently return to the village explaining that they quit "because it wasn't *sanug*. How can you work on a job if there is never any time for fun?" Foreign employers, with their greater concern for the job than with the person who does it and with their annoying tendency to be *cuu cii* (compulsive, fussy, exacting) are a particular target for this indictment, although this is usually based on hearsay rather than personal experience. On the other hand, villagers will often take on free of charge a major job (for example, helping a neighbor build a house) precisely because it is *sanug*. Although there are other considerations operating here—creating or repaying a personal obligation, doing a *bunkhun* ("a goodness") for a neighbor—the "sanug-ful" aspects of the task are always

252 Another, who had time during Round IV to prepare food twice a
262 day, preferred to prepare more in the morning when she expected
264 to offer food to her son who had just been ordained. In two
512 instances an evening meal was not prepared because the father
[525] and mother had been invited to a feast in connection with an ordination ceremony, on one occasion a mother did not prepare food because she was gambling. In all of these cases, the evening meal at home consisted of leftover rice and other foods prepared earlier. The housewife in Household 215 sometimes received cooked foods from visitors in return for her services as medium, and these were used, together with leftover foods, for the evening meal. The meal patterns of the two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Prepared. - In general, the time for meal preparation varied with the number and type of "with-rice" dishes prepared. The "hot" dishes usually required more preparation time than the mild ones, because of the time required to pound spices, and to cut up ingredients. Once-a-day food preparation reduced the time required for cooking. More time was apt to be spent on food preparation when the housewife was least busy with farm work or other work outside the home. Some of the families visited early in Round I had not begun heavy farm work, and in some, children, who were less skilled, did the cooking.

262 Cost of Food Purchased. - The lowest cash expenditure
435 for food by any household on a survey day was 0.12 baht, for
511 a family in Group A, and the highest 16.24 bahts, for a household in Group B (Table 14, p. 78). On a per capita basis, however, the mean cash expenditure for food by Group A households, for all survey days, was slightly higher than for households in Group B (Table 8, p. 62), and no evidence was obtained that in general households in one group tended to spend more for food than households in the other. Despite the wide variation in cash expenditures for food on the survey days, the tendency for cash expenditures for food to decrease in both groups of households as the survey year pro-
262 gressed was apparent. Most of the rice was sold at the end
432 of Round III. The cash went for capital investments, not
[221] food, during Round IV. With time to drain ponds and to fish intensively, and with ceremonies to attend, people did not need to buy fish and meat which were relatively expensive.

146 Calorie and Nutrient Value of Foods Eaten. - The
221 seasonal variation in calorie and nutrient intake of the two
[28] groups of families is shown in Table 15. As one would expect, the average calorie intake was higher during Rounds I and III, when relatively heavy farm work associated with planting and harvesting was under way, than during Round II, which was primarily the growing season for rice, or Round IV, when the harvest was in, and the earth was dry so that preparation for the next planting had not yet begun. Greater consumption of rice in Rounds I and III was largely responsible for the

[Text continues on page 81 --- Analyst]

125 64.a. IF YES: At what age did he leave BO?

[166]	1. Below 15 years	8
	2. 15 to 19 years	28
	3. 20 to 29 years	50
[592]	4. 30 years or more	5
	5. Unascertainable	6

d. IF YES: For how long has he (she, they) been gone from BO?

	6. Less than one year	12
	7. 1 to 4	42
	8. 5 to 9	19
	9. 10 years or more	19
	X. Unascertainable	

[4.64] e. IF YES: What various duties or jobs does he (she, they) do in Bangkok?

[463]

	1. Housewife	17
	2. Unskilled laborer	19
	3. Skilled laborer	33
	Armed forces	17
	Service	9
	Employee	5
	4. Other (retired, selling things)	2
	5. Unascertainable	4

[166] f. IF YES: During the last year, have you seen this person(s) several times, once, or not at all?

[593]

[602]

	9. Several times	65
	X. Once	16
	Y. Not at all	8
	O. Unascertainable	3

g. IF YES: Does he (she, they) make regular remittances to this house?

	X. Yes	31
	Y. No	56
	O. Unascertainable	5

[207] 65. Do you listen to the radio regularlyy daily, occasionally, seldom, or never?

	6. Regularly-daily	45
	7. Occasionally	66
	8. Seldom	148
	9. Never	60
	— Unascertainable	14

[525] 66.a. Do you play the lottery regularly, occasionally, seldom, or never?

	1. Regularly	20
	2. Occasionally	54
	3. Seldom	220
	4. Never	38
	5. Unascertainable	—
	— No Answer	1

b. IF REGULARLY, OCCASIONALLY, OR SELDOM: Suppose you were to win the second prize of 40,000 baht. What various things would you do with this money?

(See code)

		Qu 46B	Qu 41B
125	1. Too old to move, old man	33	12
621	2. Easy to make living here, more comfortable, happy here	36	8
	3. Loves place, born here, would like to die here	37	26
	4. Doesn't like to leave area	10	4
	5. Relatives are here, likes neighbors, family here	32	28
	6. Own land	19	15
	7. Can't move her house, worried about housing in new place	7	1
	8. Change career, use other occupation	2	18
	9. Other: Big family, had to move too far, wouldn't know how to find a new place, people here one can trust, will help you	39	13
	0. D.A.	130	205
	X. No answer, unascertainable	7	23

		Qu 47B (labor contrib)	Qu 47D (money contrib)
125			
653	4. D.A.	238	202
	5. School	23	51
	6. Bridge	36	36
	7. Canal	16	8
	8. Road	13	23
	9. Other: district office, festival shelter, marriage of neighbors	8	8
	0. N.A.	1	9
	X. Rest house	5	5

		Qu 66B
125	1. Make merit, give alms, buy a golden belt, build a mosque	172
525	2. Purchase land	91
	3. Trade, build a market, open rice mill	34
	4. Spend for the family, unspecified, improve group condition	68
	5. Build a house	40
	6. Purchase of farming equipment or stock	22
	7. Pay debt	7
	8.	
	9. Other: Offer some to Thai army, to be carpenter, keep money in bank and collect interest, educate children, benefit country	44
	0. D.A.	39
	X. No Answer	2

*128 511 crop year. Except for a few exceptional cases, no new item appeared during the few months that lapsed because rice farmers customarily make their major purchases during the dry season following harvesting time. Special expenses of the 96 continuing families during the period from March, 1948 to February, 1953 were shown in Table 57.

511 Some explanations are necessary for Table 57. In the first place, whereas ordinary household expenses are estimates based on experience of farm operators, these special expenses are actual amounts spent during the specified period of five years. [432] Most of the expenses on land purchases were down payments and subsequent partial payments. Of the four families reporting purchases of household equipment, three bought guns and one bought a sewing machine. [757] [755] All major repairs were for dwellings. The major medical expenses did not include small amounts of money regularly spent on drugs for headache and stomachache or even on delivery of babies which was done by traditional midwives whose fees were nominal. In fact, there were only three cases of major medical expenses. The largest one included [525] Bangkok hospital bills amounting to 14,000 baht. The 36,190 [484] [691] baht of odd expenses included 3,000 baht on gambling(only two operators reported expenses on this item, others admitted win and losses but did not give the amounts), 2,000 baht on purchases of government lotteries which are issued once a week and also on several other occasions, 500 baht on legal prosecution, 300 baht on reward for the

[TEXT CONTINUED ON PAGE 331]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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recovery of a boat stolen, 390 baht on "laxity", and 30,000 baht on a trip to Mecca. The gifts to offspring included only gifts presented when offspring left the family to start an independent family of their own.

Special Receipts

By special receipts we mean major items of receipts in addition to those regularly obtained from crops, labor, rent, and interest on loans extended. These are counterparts of special expenses, and informations about them were obtained from the 96 sample-families in the same manner and almost concurrently. Examples of these special receipts are: sales of land, gold, and major farm equipment; loans obtained, full or partial settlement of loans extended; gifts and remittances; and odd receipts like those from government lottery prizes, running a gambling house, and laxity practices. Special receipts of the 96 sample-families during the period from March, 1948 to February, 1953 were shown in Table 58.

Some of these items of special receipts need explanation. Land sold by two farm operators were sold for cash needed for loan repayment. It is perhaps worth noting that one of these two operators was in the habit of heavy drinking and had been in recent years spending about two thousand baht annually on liquor alone, while the other was in the habit of gambling. All five operators reporting sales of gold gave the reason for the sale that cash was needed to either buy farm equipment (buffaloes) or to repay

[TEXT CONTINUED ON PAGE 333]

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at other seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

A discussion of food habits in Bang Chan would be incomplete without some description of ceremonies ((l)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and at festivities. Thus, there was reason to make a (l)ngaan as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

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1. Significantly the same Thai word is used for work and for ceremony.

2. Topknots, formerly worn by all Thai children, used to be cut ritually at the time of puberty. In Bang Chan, the growing of a topknot had become primarily an attempt to improve a child's health. Few school age children wore topknots. They were usually cut earlier than puberty.

3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)daeng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chauaun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be suspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A big cremation might require planning in detail for years ahead: invitations to priests and relatives in distant parts of the country; hiring an orchestra and obtaining ceremonial gear. For the largest events, when the guest lists ranged upward to 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person, usually one of the "professional" cooks of the village. The day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

In Appendix A, p. 102 is a list of foods bought for an annual homage-to-the-teacher rite. It is the nearest approximation to a quantitative record of food for a ceremony that the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

On the great day, the priests were served first, either at 7 a.m. or 11 a.m., or both, always at least in part by the host, who sat and chatted with them. No one else ate until

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 16.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)		Twice or more (Proportion who own or use the motor)	
Illiterate	44%	(40)	58%	(51)
Literate	83	(36)	88	(83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

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need. The problem is that we really do not know, although comparative data from primatology (Yerkes 1943, Kroeber 1948: 27–29 and 60–61) clearly suggest that play belongs to the former category. If this is indeed the case it would imply that play is subject to the same degree of cultural influence, channeling, and socialization as are hunger, sex, and aggression, but can no more be fully obliterated than can these needs. Assuming, for the sake of argument, that this reasoning is correct, then the compensatory "escape" and "regressive" functions attributed to play by the authors noted above would not be at all unreasonable: play might well come to serve as an escape from adult reality in the same way that food sometimes serves as an escape from sexual anxiety or sex from food anxiety (Holmberg 1950). However, the point is that these are not the primary or typical functions of these needs, but secondary and defensive ones; although significant, they hardly comprise the necessary conditions for their being. If this approach is valid, we would be considerably wiser in our present state of knowledge (the Protestant Ethic and its intellectual extensions notwithstanding) to direct our attention to identifying the varying forms of play from culture to culture rather than to dwell on its secondary, compensatory functions.

Whatever its ultimate motivational basis, there is no doubting either the spontaneity or ingenuousness with which Bang Chaners turn social situations into occasions for play. For the most part they seem prompted in these situations by the simple desire to have a good time rather than to affect others in a socially pointed way, that is, their humor is not typically aimed at being sarcastic, didactic, or even exhibitionistic, although the person who excels at being funny is quickly recognized as such and is to an extent admired.[7] There is, in the negative sense noted earlier, an element of interpersonal effect operating here: comedy is a technique which almost by definition reduces the potentiality for face-to-face conflict. However, the villagers' play seems aimed primarily at satisfying personalistic function: their *individual* needs for pleasure and amusement.

The forms that these play activities take are numerous.[8] Perhaps their

[7] In the more explicitly institutionalized forms of comedy—*likes* (folk dramatic shows) or newspaper and magazine cartoons—these aims do come into play and often assume extreme, sometimes even biting, proportions. However, this is the comparatively safe world of theatre and "literature." Among themselves, in the world of face-to-face contact, villagers are considerably more gentle (or less sophisticated) and do not focus explicitly on such purposes.

[8] We will be concerned primarily with the forms of play, not its content. For whatever reason, humor and comedy seem to be the last refuge of what is genuinely private in a culture. Intercultural translations may succeed in communicating the manifest content of another people's humor, but they so frequently miss its intent that the result is either perplexity or disappointment ("Yes, and what happens then?").

The dangers of trying to share humor interculturally were perhaps never brought home better than when I tried to get the villagers' reaction to a story that received

4:Phillips E-4,5 (1956-1957) 1966
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bringing them into the world; of helping siblings because of the kind things they have done; of loving children so that they will care for them when they are old [11]—but they do condition how and when such sentiments will be expressed. It is difficult to recall any instance of a Bang Chaner being caught in a situation of which *he was aware of* a conflict between satisfying his own desires and fulfilling his obligations to kin, so it is difficult to say which sentiment would ordinarily take precedence in his own mind; but to an observer, it would seem that the former would most likely have priority. (See Hanks and Phillips 1961 for evidence in support of this point.) [12] Actually, most villagers seem eminently successful in keeping the sentiments apart, which helps to account in part for the "centripetal" forms of kinship arrangement referred to earlier. Self-interest is of course not the same as selfishness, and when circumstances and inclinations permit, Bang Chaners can become among the most generous and hospitable of people (and in no sense paradoxically). Rarely have I seen, for example, people derive so much genuine pleasure from doing favors for others. In fact, these are among the first things that one notices about them: free agents helping others—but also ignoring them—when they see fit.

[11] This phrasing here in terms of *reciprocal benefits* is in the villagers' idiom, not mine.

[12] It is not insignificant that nowhere in Thai folklore does one find a recognition of possible conflict between the motives of self-interest and family obligation or of any moral lesson to be drawn from it; that is, there are no stories of a parent sacrificing himself for his children, or of children for their parents or, for that matter, of any moral value at all in self-sacrifice. On the other hand, one does find stories of individuals in conflict over which of two self-satisfying alternatives to select. In *Khun Chang and Khun Phaen*, for example, Wan Thong, the inconstant lover, could not make up her mind between love and wealth, and eventually was slain because of her indecision, the moral being that the person who cannot make up his mind deserves nothing.

On a more realistic level, one rarely finds anyone in Bang Chan being condemned for self-interest—the mother who abandons her children or the gallivanting husband—although one very frequently does encounter sympathy for those who suffer, the sympathy being elicited by the person or the fact of suffering, not the cause. The majority of Bang Chaners generally consider the motives of the self-interested party as the person's own business. This concern with sympathy (*sonsaan*) for those in difficulty, and simultaneous indifference to the source of their problem, has deep roots in Buddhist doctrine and should not be glossed over.

To have compassion (*mettaa* and *karunaa*) is among the noblest of Buddhist virtues. It is at one time a kindly expression of concern with others and a recognition of—or coming to terms with—what is considered intrinsic to the human situation. "Life is suffering" is the first of Buddhism's Four Noble Truths. However, since such suffering is intrinsic, there is little to be gained by assigning blame for it. Equally important, villagers assume that a person who suffers may well have brought it upon himself. The other person, acting in his own natural self-interest, may have simply been an agent or catalyst. His motives are his own business because they will eventually contribute, for better or worse, to his own denouement. The dynamics of these attitudes are discussed in detail in the next chapter.

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fundamentals of that structure or of the ultimate values upon which it is based. In a very real sense, the educated group is a class with a vested interest. Consequently it is conservative and pragmatic rather than radical and speculative . . .

The closest approximation to a psychological literature resulting from these fundamental intellectual orientations are religious and secular didactic essays, public school texts on morality, self-help or "peace of mind" tracts, and satirical or didactic fiction and poetry. (Mosel 1961 provides an excellent discussion of contemporary Thai poetry.)

Addressed to the reading public at large, these writings do not purport to be concerned with any particular group or class of Thai society: peasants, Bangkokians, Northeasterners, or others. Since they are for the most part written by the educated elite, however, they tend to reflect their authors' interests and standards. To what extent their standards differ from those held by peasants is difficult to determine with precision, although impressionistically it would seem that in psychological questions the educated elite give considerably more attention to the importance of social forms, the desirability of pleasing others, and also reveal a greater sense of compulsiveness, achievement, and social uneasiness than do peasants. Villagers simply seem more relaxed and self-accepting. However, these differences are very much a matter of degree. A Bang Chan child who learns about proper modes of behavior from *Sombad Khɔɔŋ Phuu Dii*, discussed below, may not have the same compulsion nor experience the same pressures to implement his studies as does the child of the Ministry of Education official who wrote the text. However, he thoroughly understands the teachings, their relevance and importance; knowing them is part of being Thai. A few illustrations will provide some of the flavor of these writings.

One of Thailand's most famous men of letters is M. R. Khukrit Pramoj, a publisher, editor, author, lecturer, and recently, movie actor. Educated in England and a member of the royalty, he is known to most Westerners as a kind of Siamese equivalent of Henry R. Luce, but to most Thai (although to no more than a handful of Bang Chaners, the majority having never even heard his name) he is known for his all-around knowledge of human affairs. His most popular work is *Panhaa Pracamwan*, or *Problems of Everyday Life*, a multi-volumed set of dialogues based on a column he wrote for his own newspaper in which he answers questions from hypothetical individuals who have "written" for advice on problems of ordinary living. These problems concern such matters as how to handle one's jealousy, how to treat those below and above one in the hierarchy, and how to control one's feelings of spleen and anger.

The following excerpt from volume iv of these essays (1952: 337–339) is not only representative of Khukrit's thinking, but bespeaks a

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need. The problem is that we really do not know, although comparative data from primatology (Yerkes 1943, Kroeber 1948: 27–29 and 60–61) clearly suggest that play belongs to the former category. If this is indeed the case it would imply that play is subject to the same degree of cultural influence, channeling, and socialization as are hunger, sex, and aggression, but can no more be fully obliterated than can these needs. Assuming, for the sake of argument, that this reasoning is correct, then the compensatory "escape" and "regressive" functions attributed to play by the authors noted above would not be at all unreasonable: play might well come to serve as an escape from adult reality in the same way that food sometimes serves as an escape from sexual anxiety or sex from food anxiety (Holmberg 1950). However, the point is that these are not the primary or typical functions of these needs, but secondary and defensive ones; although significant, they hardly comprise the necessary conditions for their being. If this approach is valid, we would be considerably wiser in our present state of knowledge (the Protestant Ethic and its intellectual extensions notwithstanding) to direct our attention to identifying the varying forms of play from culture to culture rather than to dwell on its secondary, compensatory functions.

Whatever its ultimate motivational basis, there is no doubting either the spontaneity or ingenuousness with which Bang Chaners turn social situations into occasions for play. For the most part they seem prompted in these situations by the simple desire to have a good time rather than to affect others in a socially pointed way, that is, their humor is not typically aimed at being sarcastic, didactic, or even exhibitionistic, although the person who excels at being funny is quickly recognized as such and is to an extent admired.[7] There is, in the negative sense noted earlier, an element of interpersonal effect operating here: comedy is a technique which almost by definition reduces the potentiality for face-to-face conflict. However, the villagers' play seems aimed primarily at satisfying personalistic function: their *individual* needs for pleasure and amusement.

The forms that these play activities take are numerous.[8] Perhaps their

[7] In the more explicitly institutionalized forms of comedy—*likes* (folk dramatic shows) or newspaper and magazine cartoons—these aims do come into play and often assume extreme, sometimes even biting, proportions. However, this is the comparatively safe world of theatre and "literature." Among themselves, in the world of face-to-face contact, villagers are considerably more gentle (or less sophisticated) and do not focus explicitly on such purposes.

[8] We will be concerned primarily with the forms of play, not its content. For whatever reason, humor and comedy seem to be the last refuge of what is genuinely private in a culture. Intercultural translations may succeed in communicating the manifest content of another people's humor, but they so frequently miss its intent that the result is either perplexity or disappointment ("Yes, and what happens then?").

The dangers of trying to share humor interculturally were perhaps never brought home better than when I tried to get the villagers' reaction to a story that received

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since even the most novel activities eventually become routine or stale, it is obviously impossible for all one's hours to be animated with *sanug*. From a total time perspective, many of the villagers' activities are of course either "sanug-fully" fallow or "sanug-fully" short-lived. To a large extent, this paradox is resolved *subjectively* by the short-term time perspective of the villagers. This is the second major point to be noted about *sanug*, that is, *sanug* reflects a more generalized tendency on the part of the villagers to concern themselves with activities that require only brief time commitments or whose effects are immediately forthcoming. Bang Chaners are not an impatient people in an active, negative sense, but they do have difficulty in attending to tasks that demand from them a sense of compulsiveness or staying power. They will often drop demanding tasks right in the middle once they have recognized that the work is taking longer than originally expected. What is striking is that they will do this with apparently no sense of frustration over not having fulfilled their aims and with no regret over having wasted their time. It is as if their original purposes had simply become irrelevant, and they had gone on to other things. This is precisely the attitude, for example, surrounding the construction of the unusable road referred to earlier leading from the Minburi Highway to the Bang Chan school. After devoting considerable labor to building the high mound that would form the foundation of the road, villagers lost interest when they were unable to obtain funds for its surfacing. Since no one was ever interested in maintaining it, the road now lies in the middle of a rice field, rutted and pitted; much of the foundation has sunk back to the level of the adjacent fields. However, no villager has ever considered the road a fiasco or "folly"; it was just something done in the past and has since been forgotten. The road project might be revived in the future, but from the villagers' point of view that too is irrelevant. The point is that *sanug*, with its emphasis on novelty and diversion, is expressive of this same underlying time orientation. In the villagers' way of thinking, no activity is really worth doing unless it has the potentiality for fun.

Another expression of the villagers' concern with play, related in some respects to what will be discussed in the next section, is their preoccupation with humorous *topics* of conversation. For the most part, they enjoy hearing and telling stories with a "banana peel" twist: of a husband who is caught by his wife sleeping with another woman; of an individual who, through his failure to take heed, is cheated out of his money. Such stories of course always concern other people, not those immediately present. Too, stories that combine whimsy and the supernatural—for example, of a "super-dog" that can find buried treasure or foretell the future—elicit laughter, although often with a tinge of apprehension that the stories may be true. However, what is most impressive about these and similar stories is the amount of time given to them.

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521 522 538 The sociological context of a story-telling is probably what is most important here. Bang Chan is a community where other than cultivating the single rice crop and attending to daily household chores and religious activities, the villagers realistically have little else to do but talk to each other. This is clearly not an inevitable attribute of the peasant condition, but it is true of Bang Chan where little attention is given to such creative leisure activities as craftsmanship, music, and art, and where there is little occupational specialization. In fact, probably more time is given to gossiping than to any other single waking activity except daydreaming. Bang Chaners talk of many things, serious as well as lighthearted: the price of rice, religion, gambling, the doings of "big people," family disputes, and the like. However, by far one of the largest segments of their total conversational repertoire is given over to "funny" stories. Of course, no story is ever *exclusively* humorous in nature; all communication is inherently multidimensional, and even the funniest story has a substantive, non-humorous message. However, if stories may be judged by their behavioral effects (laughter) irrespective of their intellectual content, then the function of a major part of Bang Chan gossip is amusement.[10]

538 154 The motivations for the selection of banana peel type stories are more complex. In part, the choice seems prompted by a "there but for the grace of God go I . . . " mentality. As suggested earlier, Bang Chaners have a keenly developed sense of the possible: to them, this is a world where anything, not only the probable or the predictable, can happen. The banana peel story, with its emphasis on the painfully ludicrous and extreme, is a perfect representation of such an uncertain world. Its beauty is

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[123] [114] [126] [10] During the early stage of field work, I attempted to do systematic naturalistic observations of these gossip groups. The purpose was simply to identify the kinds of topics uppermost in the villagers' minds and the modes of interaction that most frequently developed during the sessions; it was hoped that the latter information might be related to the psychological test materials of the discussants. As a precisely designed and executed project, the effort, however, was dropped after a short time. For one thing, it was too difficult for two observers to record the *simultaneous* verbal and kinesthetic interaction of *several* people without the aid of a self-powered tape recorder and with the added burden of having to strain the material through the translation process. The task was further complicated by the fact that the membership of these groups continually changed as people would leave and enter the conversations. Also the groups would often break down into smaller sub-groups. Most important was the sheer multidimensionality of the conversation: any one utterance could simultaneously be funny, aggressive, boastful, carry practical information, etc. However, enough information was culled from these early attempts and later less ambitious ones to prompt the statements presented here. It is this writer's observation that one of the reasons behind the success of so much of the "small group" research conducted in the United States is that the groups studied have been *problem solving* or *task-oriented*, rather than simple gossip groups. The highly functional nature of the former has provided built-in constraints on the freedom of action permitted the discussants, and has made observational problems comparatively easier to deal with.

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that it is simply a "story," a description of the plight of other people, not the self. The story-teller or listener has the pleasure of a vicarious experience, but none of the pain of the real life situation. He can laugh over his good fortune in not being the person who was cheated out of his money or who was caught philandering by his wife. On the negative side, these stories also serve as a means by which the participants can express, through identification and projection, some of their own hostilities. The veil of humor provides in fact the ideal dress for hostility: one can be completely unabashed about expressing one's feelings (of wanting to steal, say, or wanting to humiliate), since what is expressed, in a form so exaggerated as to be acceptable, is simply the feeling and not the act itself. The hostility is made even more acceptable by the fact that it is projected onto the person in the story rather than referred to ego himself. In these terms, the telling of these stories probably does have something of the cathartic function cited earlier in the chapter: aggressions and hostilities that are otherwise kept under careful control are here permitted to emerge not only painlessly, but with a bit of relish. Finally, some of the laughter at these stories is probably also based on the feelings of embarrassment evoked in listeners. This is similar to the "there but for the grace of God . . ." motive but is different in that it is not based on personal identification with the person who suffers but rather on a diffuse feeling of discomfort over the expression of aggression—aggression toward anybody. There is embarrassment over things not being as they should be, over one's moral universe being temporarily out of joint. Also, the laughter is probably symptomatic of the listener's uneasiness as he becomes aware that the hostilities portrayed in the story are strikingly similar to those he himself harbors toward others. Embarrassed about his own aggressive impulses, he assuages them with laughter.

The motives for focusing on whimsical topics of conversation are less recondite and defensive than the above. Stories of the type describing "super-dogs" who find buried treasure are told because they are at the same time such outrageous and yet gentle distortions of reality. It is the juxtaposition of incongruous elements that is so appealing here. In ordinary Thai thought, for example, the dog is generally considered to be one of the most inconsequential and worthless of creatures. He is tolerated for his ability to warn of strangers and dispose of refuse, but nothing remotely approximating the feeling of "man's best friend" is associated with him. For such a lowly creature to be the sudden possessor of miraculous power is just too foolish. An elephant, monkey, or cobra perhaps, but not a dog.[11] Only "uncivilized" forest people would accept such a story. Yet, because the dog is such a familiar part of one's environment and also a living creature

[11] Doubt would exist for these creatures too, but because of their mythological and historical significance it would be somewhat tempered.

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("Who knows what he was in earlier lives and what powers he brought with him into this one?"), there is enough reality about the tale to make people want to listen. Moreover, it is wish-fulfilling fantasy; people laugh because reality has been outraged, but with a lingering desire that it really could be.

The kinds of stories outlined above do not exhaust the villagers' stock of conversational humor. There are also tall stories without the supernatural touch, broad burlesques, "dirty" jokes,[12] and the countless epigrams that work their way into almost any conversation; the last are not so much topics of conversation as they are means of punctuating a point. However, enough has been said to indicate that in its cognitive stylization and social psychological purposes, Bang Chan humor is not too different from Western humor. It is rather the content, frequency, and evaluation of the humor that is so distinctive. That the content should be distinctive is of course self-evident, since all humor is rooted in the implicit and familiar premises of workaday, cultural life. In fact the very essence of a joke is seeing the culturally familiar in an entirely new light. This may help to explain, incidentally, why it is always so painfully self-defeating to try "to explain" the content of a joke: its entire effect is dependent on the listener's implicit

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[12] Sexual and scatological humor in Bang Chan pose some special problems. On the one hand, because villagers take such a matter-of-fact approach to sex, there are actually few jokes and stories that aim explicitly at being titillating or risqué. For most Bang Chaners, sex is something to be experienced and enjoyed in private, not snickered about barracks-style; there is no *sanug* in *talking* about sex (although there may be in playing with tabooed words, especially if cleverly done). Also, villagers seem to lack any interest in lewdness for its own sake. Not only Bang Chan, but Thai culture in general, is striking for its relative absence of attempts to edify sex: there is nothing in Thai literature or art, for example, approximating the exaggerated bawdiness of Rabelais or the graphic sensuality of the kind of sculpture found at Khajuraho and Konarak in India.

On the other hand, sexual situations are very often used as vehicles for portraying the foibles and stupidities of people. Villagers particularly enjoy stories of individuals of either sex who devise ways for seducing the unsuspecting, or of individuals who manage to outwit their spouses while philandering with their lovers; the more complex their machinations, the more amusing the stories. However, it is the social psychological, not the sexual, dimensions of these tales that form the major bases of their appeal.

Finally, it should be noted that villagers tend to distinguish between what could be called "genital" and "anal" modes of humor. The latter type has considerably fewer taboos associated with it. Thus, whereas most villagers would avoid going into descriptive detail in reporting the physical aspects of a tale of sexual conquest, they would have few qualms about discussing (and often with acoustical detail) such things as people who pass air in public or who otherwise get themselves into compromising anal situations. (Interestingly, J. Marvin Brown in his linguistic work with Thai informants, often including female university students, reports in a personal communication that he encountered difficulty in obtaining the various Thai terms for sexual organs and acts, but that the terms for anal and excretory behavior were given with little hesitation.)

All food was also made up of the 4 elements. Here rice was of particular importance. The body was seen as built and maintained by rice. Flesh in fact was rice, an image probably derived from Buddhist scriptures. 11

Each element carried with it its substantive aspect of heat, flowing, etc., and its astrological nature and relations. Elements could be compatible or incompatible with each other. Earth, water, wind, iron, and wood for instance were compatible. Gold "got along" with all elements. Fire, though, was incompatible with wind, water, and wood for it could destroy their proper proportion.

The effect of astral and planetary relationships at the moment of birth on one's constituent elements induced qualities of character.[12] Mind and body were a continuum. Because family members were born at different moments of time, intrafamilial temperamental differences were expected.[13] Persons made up of incompatible elements quarreled. Thus, friction might occur between parents and children. For a husband and wife, who lived in especially close proximity, the constitutional elements were of special importance. Through marital relationships their elements were in physical contact. Consequently, in the old days, a couple contemplating marriage ascertained through their horoscopes the compatibility of their natal elements to determine whether they could live together without destroying each other. For instance, a girl with much fire in her make-up was easily angered and prone to fevers. She could not make a successful marriage with a boy with much wood.

Physiology

A single physiological process controlled the functioning of the body and the mind; i.e., the equilibrium of its elements. If the elements were in proper balance, proportion or harmony, a person was healthy; if an element were excessive or deficient,

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11. "This, my formed body, is composed of the 4 Elements, generated by Father and Mother, built up from rice, porridge and sour gruel," says the Buddha (Suriyabongse 1951:11).

12. Merit, the other determinant of character, is discussed in "Influences on Health" below.

13. Cf. the proverb "The joints (knots) on the same stem are nevertheless unequally spaced, so even brothers are of different minds," (Gerini 1904:14).

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seen childbirth not once, but many times, so willing hands abounded. So, one day, Dūan went to Sāi. "Will you help me, and come when I call you? Please do not go far at that time." Sāi agreed, knowing in her heart she had expected to care for Dūan. No day could be calculated because the baby decided when to be born. Dūan came home very fast, for doing so would help ensure a fast delivery.

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As the weeks passed, Song, the new child's father, collected outside the house a great cone of sakae firewood from their land. This wood was for the post-partum fire beside which Dūan would lie for many days. As the fire had to be very hot, a great deal of wood was needed, all to be collected beforehand. Song also covered the outside of the pile with thorny woods to keep away evil spirits. On her part, Dūan knew that everything needed for delivery was ready in the house as part of the regular household staples or utensils. Nothing need be bought except possibly a little Borneo camphor to mix with lemon grass for faintness, and alum. The midwife should never bring anything with her because it was essential to use what was in the house. Anything lacking could be quickly borrowed after the pains started. The little cushion on which the baby was to lie was cut, and half-filled with kapok. It was not sewn up, lest it induce by example a closed-up exit from the womb, or suggest a mal-placed or deformed baby which had to be delivered onto a pillow. No one wanted to prepare for such an unhappy event. No clothing was bought for the child ahead of time for then the child might die, and all would have to be destroyed.

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Dūan felt at ease and yet somewhat frightened at the prospect of the pain ahead. At an ordination she attended one night she listened again to the chant she had heard many times:

> "In childbirth a woman has pain all over her body...She is losing her soul and feels so frightened, despairing, and suffering that she throws herself up and down from time to time as if her mind were terribly wounded by the poisonous arrow of a hunter. She is uneasy and moans loudly as if a big mountain had fallen down upon her, and she is supposed to wait for death. She does not recover even if massaged by someone. She does not think of her pain, but tries to save the child's life, when, after the pushing wind comes, he is born" (S.S.).

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On other occasions she pondered the deep satisfaction of her maternal role, then laughed in recalling a crafty woman who

844 989 852 would later manifest their characteristics. Much as Dûan loved her own mother, Lek ought not to winnow the child because she had had the misfortune to lose 3 babies in infancy. An older person was desirable, for longevity, too, indicated virtue, and the child would then also live long. Of all the women present, besides her mother, Sâi was the one Dûan trusted and respected most, and Sâi had raised healthy babies. Dûan turned to her. "Please winnow and bless the baby." She wanted, as every mother did, to catch and so claim the child for herself.

Sâi seated herself close to Duan, picked up and raised high the tray with the little boy and the auspicious items. Waving the tray in a circular motion slowly from left to right, clockwise, she recited the old words: "Three days [539] a spirit child; on the fourth day, a human child! Whose child is this? Is this the child of a female pot? Of a jar? Come, take this child!" Three times Sâi chanted these old words and on the third, Dûan cried out, "Mine!" The tray with the child was gently tossed in her direction. She caught it as it slid toward her. Then Sâi took the [774] holy thread and tied some around each of the child's wrists and ankles to seize and "welcome" its soul (kânrapkhwan), giving the while the traditional blessing. "Come, khwan! [539] Come my own child! Stay well and eat well! Do not get sick or have fever! Be cool and happy! Feed your father and mother until they are old. Hold the walking stick with the gold head, or the stick with jewels on its top! Stay at home like the bottom of the house post! Watch the house like a cat! Eat and stay here! Never go roaming! Be fat as the golden ash pumpkin, heavy as the long melon, strong as an elephant in must! Be the head priest when ordained and the leader of men when you leave the priesthood! Come, khwan!"[35] Thus, Dûan claimed the child for herself and for her family, to nourish and raise. Because such a fine person as Sâi had started this son on its life-habits, and Dûan was already sparing no efforts in assuring his progress, he would be a good boy, and reciprocate her pain and effort.

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[539] 35. Another version added the words, "Have the strength of Hanuman! Hold the stick with the iron head! Be a student." For a girl, "If you have a family, keep cool and happy! Earn your livelihood (tham mâ hâ kin)! Have enough to use and eat! Do not lower (tam) your face, or eyes," i.e. "don't be poorer than your friend." A China-born Thai woman's blessing was "Mother, nourish, and care for this child. Do not let it be hurt or have fever."

before completing these obligations, the parents lost out on their anticipated reward (cf. L.M. Hanks, 1962).

Since waywardness (pai thîao) was considered a continuous threat, magical means were taken at the moment of birth to ensure that a child stay close to the family that raised him. The blessing following the winnowing ceremony invoked immovable things: the post, the cat that traditionally never roamed far, the pumpkin that sat and fattened:

> "...Stay at home like the bottom of the house post. Watch the house like a cat. Eat and stay here! Never leave home. Be fat and heavy as the ash pumpkin..."

The most important binding actions utilized, or brought the child into physical contact with, objects long associated with family, in particular the house and land. The umbilical cord was cut on earth or phlai dug from the house-land itself with a bamboo "knife" sliced from one of the deeply sunk house posts. Of these "the knife is the important thing." The phlai also had medicinal purposes. With a feather "from the mother's house" the baby's navel was smeared with cobwebs from a spider whose web indicated long undisturbed residence. They buried the placenta either under some large old tree that stood near the house, or under the house stair. The old family winnowing tray, old clothes, and well-used family possessions were used first before any new furnishings were purchased for the baby. A fire of sakae wood grown on premises boiled the water for the baby and mother, and heated the mother. Sakae "was planted when a house was first built so that every generation of occupants would have it available for use at confinement" and also for firewood at other times (cf. McF. 834). All these binding rites assured that the child being rooted to a home terrain, would not wander frightened, and so "would not cry." He also would be at home to participate in the merit-making that would reconstitute the family in another existence.

If a child were born away from home, how was this bond to his locality established? On one to two occasions when the child was born at the Minburi Health Center, Hauck (notes, 1954) observed a solution to this dilemma. The mothers returned home, as was customary, within a few hours of delivery and were established by their respective fires. Their babies were winnowed and laid on their trays with the usual suspicious book, pencil, and needle. Neither tray held any bamboo, clod, nor phlai, however, for these had not been used. On one tray, though, was laid a steel knife from the kitchen, mute proof that a family cutting instrument ought to be there. On another occasion, a father asked to be given his child's placenta so as to bury it on the house site. In so far as possible, people in Bang Chan tried to carry on the old rites.

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with men's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mō, she could do everything a mō could do. Men were never mediums. Bang Chan's only medium was possessed by a male mō.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than here, but limited in her speical province.

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[832] [156] [628] [626] [593] 59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasū as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "auk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasū's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)khaa-(5)nom (3)tom (1)daaeng) and white ((2)khaa-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chaaeun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chichaa, salt, and rice might appear. As these ceremonies were thought to be suspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)thaam-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

Communications Media

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With the increasing use of mass communications, the community member is exposed to sources of information other than the printed word. Ownership of radios has nearly tripled in about five years (in the 1955 survey radios were reported in 14 per cent of the households, whereas in 1949* only 5 per cent of the households reported owning a radio). Quite apart from ownership, radio listening is widespread; less than one-fifth of the people in Bang Chan claim they never listen to the radio (18 per cent). Motion pictures are also popular. Only one-tenth claim to having never attended a movie, while half (49 per cent) say they have seen motion pictures more than ten times.

There is, of course, a strong relationship between exposure to one of these media and exposure to the other. Table 13 below indicates that the majority (64 per cent) of respondents who listen to the radio likewise report frequent movie attendance. Similarly, the majority (67 per cent) of those who say they never listen to the radio, reported that they go to movies rarely or never.

TABLE 13. EXPOSURE TO RADIO AND MOVIES SHOWS HIGH INTERRELATION

	Radio Listening		
Movie Attendance	High Exposure (regular or occasional listeners) (111)	Low Exposure (listen seldom) (148)	No Exposure (60)
High exposure (10 times or more)	64%	32%	12%
Medium exposure (4 to 9 times)	19	17	21
Low Exposure (0 to 3 times)	16	51	67

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Exposure to the communications media is strongly linked to acceptance of a basic innovation such as the motor. It is not directly linked to acceptance of the other agricultural innovations (fertilizer, tilapia, mushrooms). Respondents who report frequent exposure to radio listening and motion picture attendance are significantly more likely than others to say they own or have used the motor. (Among daily radio listeners 88 per cent report use of the motor; and this proportion declines steadily until among those who never listen, only 46 per cent use the motor; for movies, the corresponding proportion of users ranges from 76 to 36 per cent.)

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* Siamese Rice Villages, op. cit.

TABLE 14. HIGH EXPOSURE TO COMMUNICATIONS MEDIA IS LINKED TO ACCEPTANCE OF THE MOTOR

	Exposure to Radio			
	High			Low
	Listens Daily (45)	Listens Occasionally (66)	Listens Seldom (148)	Never Listens (60)
Small Engine Motor				
Used it	89%	78%	64%	48%
Didn't use it	11	22	36	54

	Exposure to Movies			
	High			Low
	Ten times or more (161)	4-9 times (60)	1-3 times (75)	None (33)
Used it	76%	69%	39%	36%
Didn't use it	24	31	31	64

Of course it is important to check whether these relationships hold true when people on different economic levels are examined separately; for literates as well as for illiterates. We infer that the basic link between use of the motor and exposure to the media of communication holds for literate as well as illiterates; for poorer as well as for richer farmers. More specifically, the relationship between exposure to the communications media and decision to use the motor is even more marked for less well-to-do and for the illiterate farmers, in contrast to the better-off farmers and those who can read and write.

TABLE 15. EXPOSURE TO MOTION PICTURES IS LINKED TO ACCEPTANCE OF MOTOR ESPECIALLY FOR THE ILLITERATES AND FOR THE ECONOMICALLY LESS WELL-OFF*

	Exposure to Motion Pictures			
	High		Low	
	(Percentage Using Motor)			
Economic Level				
Low	76%	(47)	44%	(32)
High	83	(84)	75	(45)
Literacy				
Illiterate	63%	(36)	44%	(35)
Literate	88	(77)	82	(41)

* Male Farmers Only

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207 Exposure to the media of mass communication seems to act, in
a sense, as a substitute for literacy. It may be that through
212 these means either an illiterate farmer can obtain information
about the more complex agricultural tools and methods or motivation
• 546 to try improvements, or both, even though he may not know how to
read and write. One may infer that he tends to act on the infor-
mation thus obtained, since he is more likely than his unexposed
opposite number to try out these innovations.

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*177 Acceptance of Urban Patterns

369 The printed word and the mass media are, of course, not solely
channels for the communication of knowledge. They are, at the
same time a means whereby the farmers may establish some sort of
contact with the more sophisticated world outside the community
even with highly urban Bangkok.

The survey indicates in a general way the extent to which
[291] the people of Bang Chan have accepted urban patterns. Their grow-
[416] ing acceptance of urban modes is readily apparent even to a casual
[207] visitor: many own shoes, flashlights, wrist watches, radios,
bicycles, fountain pens, modern furniture.* Other urban behavior
is likewise beginning to be noticeable.

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[413] One very simple indication of the degree to which urban in-
[358] fluences have penetrated is the change in manners of taking
food. The farmers traditionally eat with their hands rather than
using a fork or spoon. In Bangkok, however, eating utensils are
customarily served with the meals in restaurants and are widely
adopted as well by the city population. Some Bang Chan inhabi-
*177 tants have picked up this simple urban custom and have substituted
*178 it for eating mainly with their hands. In Bang Chan of 1953, for
example, a sizeable minority (26 per cent) report that they use a
264 spoon, fork or both for the evening meal.
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That such a simple question can roughly measure exposure
[207] to urban influences, is indicated in the following table, which
[546] shows that respondents who report customarily eating with "urban
utensils" are more likely to be exposed frequently to radio and
motion pictures and are more likely to have visited in Bangkok.

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[412] * Survey respondents report that their households possess a
flashlight (81 per cent); scissors (66 per cent); kerosene lamp
(27 per cent); radio (14 per cent). About 41 per cent say they
own at least one pair of shoes.

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TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Pattern	
	With hands (242)	With fork and/or spoon (64)
Listens to radio		
Regularly (daily)	10%	25%
Occasionally	17	28
Seldom	51	35
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	15
2 - 4 times	29	23
5 or more times	28	55

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When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive [241] to urban influence are twice as likely as others to use fertiliser (21 per cent versus 9 per cent), one and a half times as likely [244] to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per [402] cent versus 61 per cent). There is no noticeable relationship, [228] however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for [212] those on high as well as low economic levels and also for the [434] literate as well as illiterate farmers.

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 16.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (43 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)	Twice or more (Proportion who own or use the motor)
Illiterate	44% (40)	58% (51)
Literate	83 (36)	88 (83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

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TABLE 28. INCIDENCE OF HOSPITAL AND CLINIC USE IS HIGHER AMONG LITERATE VILLAGERS

Have you ever been to a clinic or a hospital?	Literate (163)	Illiterate (169)
No, never	27%	44%
Yes, for treatment	42	33
Yes, for other reasons	31	23

Apparently here, too, exposure to sources of information predisposes the inhabitants to greater acceptance of modern health practices.

Exposure to Mass Media

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Again, as with agricultural innovations, exposure to the media of mass communication is linked to acceptance of modern health practices.

TABLE 29. INCIDENCE OF HOSPITAL AND CLINIC USE IS HIGHER AMONG VILLAGERS EXPOSED TO MASS MEDIA

Have you ever been to a clinic or hospital?	Movie Attendance: Ten or more times (161)	4-9 times (60)	Three times or less (108)
No, never	23%	32%	55%
Yes, for treatment	48	33	22
Yes, for other reasons	27	35	23

	Radio Listening: Daily or occasionally (111)	Seldom (148)	Never (60)
No, never	20%	39%	58%
Yes, for treatment	52	33	18
Yes, for other reasons	28	28	23

Mass Media as a Substitute for Literacy

It will be recalled (see p. 21) that the mass media seem to act as a substitute for literacy. The same relationship reappears here. The table following indicates that literacy links with use of hospitals or clinics only when exposure to mass media is rare. [212]

*178 With more frequent exposure to these media, the link between literacy and use of hospitals or clinics decreases.
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TABLE 30. EXPOSURE TO MASS MEDIA IS LINKED TO HOSPITAL USE, ESPECIALLY AMONG ILLITERATES

	Literate (Proportion reporting use of hospital or clinic)		Illiterate (Proportion reporting use of hospital or clinic)	
Movie Attendance				
High (ten or more times)	78%	(103)	71%	(58)
Low (nine times or less)	64	(36)	48	(111)
Radio Listening				
High (listen "frequently")	81%	(68)	79%	(42)
Low (listen "seldom or never")	66	(86)	48	(122)

*178 Acceptance of Urban Practices
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Table 17 showed that acceptance of certain urban practices was linked to acceptance of the major agricultural innovations. Acceptance of urban practices is also associated with use of clinics and hospitals. Use of modern medicine is significantly higher among those who no longer eat with their hands than among those who do.

TABLE 31. ACCEPTANCE OF URBAN PRACTICES IS LINKED TO USE OF CLINIC AND HOSPITAL FACILITIES

	Customarily Eat With Fork or spoon (84)	Hands (242)
Have you ever been to a clinic or a hospital?		
No, never	26%	39%
Yes, for treatment	48	33
Yes, for other reasons	26	28

*178 Contact Outside Bang Chan
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It has already been reported (see Table 25) that hospital and clinic use is higher for those who, during the past year, have paid more frequent visits to Bangkok. This correlation may seem, at first, spurious, since the main centers of medical care are situated in Bangkok. But the questions asked about contact with Bangkok for the one-year period preceding the survey, and visits to the hospital or clinic over an unspecified time period show

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and acceptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike accepters of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

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[513] f. During the last year, did it occur to you frequently, sometimes, or never that you had a nightmare?

4.	Frequently	16
5.	Occasionally	120
6.	Never	197

[546] 35. In your life, how many times have you seen a movie, or haven't you ever seen one?

5.	Ten times and more	161
6.	4 to 9 times	60
7.	1 to 3 times	75
8.	Never	33
—	No Answer	4

[426] 36.a. Excuse me, I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?

5.	Yes	192
6.	No	140
7.	Unascertainable	1

b. IF YES: Is your debt now higher, or lower, or about the same as it was two years ago?

8.	Higher	68
9.	Lower	95
X.	About the same	28
Y.	Unascertainable	1

c. IF NO: How about two years ago, did you have a debt then or not?

9.	Yes	61
X.	No	78
Y.	Unascertainable	—
—	No Answer	1

[441] 37.a. Do you or anybody in your household buy certain products in order to resell them at a profit?

9.	Yes	85
X.	No	242
Y.	Unascertainable	2
—	No Answer	4

b. IF YES: Do (you/they) sell things regularly, occasionally or just at festival times?

7.	Regularly	31
8.	Occasionally	49
9.	Just at festival times	5
X.	Unascertainable	—

[241] 38.a. And now, I would like to know a little more about fertiliser. Do you think fertiliser is very good, fairly good or bad?

1.	Very good	106
2.	Fairly good	149
3.	Bad	15
4.	Unascertainable	63

262 people did not want to spend much on a baby, therefore they
261 said that if a child ate too much "with-rice" he would be potbellied but thin in the upper part of the body, and that eating eggs would cause dental caries. This grandfather said he believed the truth to be just the opposite, but that goods things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice," one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

262 Secondly, Chutima suggests that particular foods were associated with, or suitable for, particular age levels, and a given sex. Data obtained in Bang Chan indicate that certain foods were associated with conditions such as pregnancy, lactation, and the puerperium, with occupation, and even
● 853 socio-economic levels. For infants, breast milk was considered most suitable. The newborn infant was not usually put to the mother's breast for about 3 days after birth, and if a relative or neighbor did not nurse the infant, the small banana called (3)kluaj (4)nam-(4)waa (see p. 46), raw or baked, was crushed and fed to him before his mother's milk was available. This banana and rice, as (3)khaaw (3)tom and (3)khaaw (2)piag (two watery preparations), sometimes crushed with (3)kluaj (4)nam-(4)waa, were always the first solid foods introduced while the infant was breast fed. No other foods were introduced early. Some infants received fish and egg by 6 months of age, and a majority ate these foods by the time they were a year old. Some two year olds had not yet been given vegetables, and very few infants ate them before they were one year old.

855 Giving of "holy food"[1] to children suggests concern for
[716] strengthening children through dietary as well as other ritual means.

262 At the other end of life, as old age approached, the
883 diet was supposed to change, ideally to a completely vegetarian one. Since one was soon to face death, one gave up eating meat and even fish, if possible, so as to avoid taking life. It was considered pitiful or wrong for an old person to fish. Being able to go without food was associated with merit. Those who stayed overnight at the temple on the Buddhist holy day went without solid food from before noon until the next morning as the priests did. One elderly woman remarked that when she stayed overnight at the temple she did not feel hungry, and did not eat anything at night, but other women, feeling hungry, drank coffee or milk at night. She

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1. See p. 50.

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in the khwan khăo "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mŏ or to the Mĭnburī Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

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Though living like other elder citizens of the community, in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mŏ was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (thăm ăchĭp [Mc.F. 990]) when others who had equal or more experience were not so considered?

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to make use of modern facilities one suffered confusing and unhappy experiences. Bangkok traffic was dizzying, even if one knew just where to go. Hospitals had beds, not mats, and the personnel were strangers. Foods were often unfamiliar or violated traditional injunctions concerning heating and cooling. People were brusque, impersonal, and overbearing to country people. One woman complained, "I am afraid of the doctor there. She scolds me and does not treat me like city people. She will not explain what the sickness is." Minburi's clinic was small, set up in more familiar terms, and the staff known personally to many villagers.

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Finally, there was the problem of finding an experienced escort, i.e. someone who "knew the way." More was involved than just convenience. In all walks of Bang Chan's life, no one ever presented himself to a school, to a household, anywhere, without a personal introduction from someone who had been there before, and so was accustomed (khoei) to it. It was not hard to find someone who had been to the Minburi Health Center, but it was difficult to find one who had been to a hospital in Bangkok, knew what to do, and had the time, money, and inclination to act as escort. The latter was always a relative by blood or marriage or the sick person's mo himself (Hanks and Hanks, 1955: 160). Actually, five or ten persons might accompany an ill person, only one of which was acting as the recognized go-between. Many of those who had been to a hospital or clinic as patients had previously accompanied others merely as escort, or to visit (Goldsen and Ralis 1955:31).

758 743 184 178 [369] [844] [554]

Who had actually tried modern medicine for one reason or another? About a third of the household heads had used some modern clinic or hospital for treatment or hospitalization (Goldsen and Ralis 1955:31). Use was more frequent among (1) the literate, (2) those exposed to the mass media of radio and movies, (3) those accepting certain urban ways, and (4) those having greater contacts with the city in the way of visits, but users were not of a noticeably higher economic level (ibid:37). Women went no more frequently than men (ibid:32). No figures indicated how many of these occasions were for childbirth, but our interviews point to a small number. Taking the will for the deed, two women teachers who appeared to be the first to plan ahead to be delivered at the Minburi Health Center--but who did not get there because labor was too quick--seemed to be viewing the use of modern methods as a means to higher status.

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Why was modern obstetrics so largely eschewed? What had been Bang Chan's experience, unfavorable or favorable, that colored their attitudes? First, home was the most convenient place for care. Bangkok was ruled out categorically as too far. In fact, Minburi might be too far if labor manifested its normal celerity as the case of the two teachers showed, or if complications had developed. Furthermore, a Chinese resident of Bang

178 a new way was a woman bearing her first child because she
184 was not yet ritually matured. This she wanted to be.
Moreover, her self-interest led her to try to profit as
312 much as possible from the experience of elders by first
846 following the old way. By incorporating the experience
885 of successful child-bearers into her own and the baby's life and by asking them to initiate actions auspiciously, she augmented by that much her own competence, and laid the groundwork for her future progress. Self-responsibility engendered respect for elders. Thus there was no split between old and young over innovations. Experience gave grounds both for conservatism and for changing, but at different age levels.

178 Secondly, changes were adopted by the rich who,
184 spending their money rather conspicuously, sought to main-
556 tain and enhance their social position. Their wealth and position were in themselves unquestioned as signs of merit earned in another incarnation.

178 The changes being introduced to Bang Chan were of two
• 554 kinds: first the prestigeful, and second, those giving no increment of esteem, i.e. idiosyncratic changes of taste or convenience; or those reflecting individual circumstances. The prestigeful innovations were oriented towards the use of market novelties, modern medical care, urban standards of cleanliness and beauty, and other ways termed "progressive" associated with the city of Bangkok, cynosure of the eyes of the rich. These values were leading certain families away from their original occupation of farming, into the fields of teaching, trading, carpentering, cottage-industry, etc. Since these new occupations brought in steady cash and large land holders, too, had a good income, an association was found of
372 wealth, prestige, urban interests, and innovation. Com-
846 ment on the hot ashes container (fai chut) indicated that
178 it was a strong symbol of prestige and progress. To use it was "to get away from ignorance and the old way of doing things." It was "cleaner, not hot or ugly, and more convenient." One teacher took it up after reading an advertisement in the newspapers that described glowingly its more efficient healing effect. On the other hand, one woman abandoned the fai chut because "it was not hot enough to rid her of stiff muscles," so she went back to the use of the fire. "It is all right for rich Bangkok ladies who want to avoid a scar, but it does not give
177 enough strength for a farmer." She had no urban preten-
178 sions. Also in this prestigeful aggregate, observed here
278 and there, were the market novelties mentioned above:
854 bed, mat, and mosquito net instead of the plank-bed; kits of medicine from the Chinese pharmacist instead of the old

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home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

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To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Minburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 7 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccessibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grew up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

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In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Minburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

251 which did not attract them could be left anywhere out of reach of dogs. Raw rice was stored in a large jar or oil can while salt, fermented fish, shrimp paste[1] and fishsoy[1] were kept in smaller jars or bottles. Such containers were customarily covered. Dried food materials such as onions, garlic, chili peppers and other seasonings were often kept in a basket hung from the roof. Paddy, i.e. unhusked rice, was kept in a large bin of matting or wood, the excess sometimes simply piled on an uncovered mat on the floor.

123 Descriptions of two kitchens, one in a relatively prosperous household and one in a poorer home in Bang Chan, are included in excerpts from field notes, Appendix A, p. 93.

312 In a few homes, a clay water jar was kept in the kitchen or nearby, but more frequently foods were washed, and cooking water obtained at the canal or fish pond.

The water level varied between heavy flood and threatened drought. There were no deep wells in the whole area. Rainwater was collected from the roofs and stored in jars, but during the dry season, the canal or fishpond, although low, must supply the needs of the household. In some, drinking water drawn from the fishpond was preferred, and an effort might be made to keep buffalo from wallowing in it, and to avoid contaminating it with fecal or food wastes or by bathing. Others considered the moving water of the canal preferable to pond water.

General Social Factors Affecting Nutritional Level

462 In Bang Chan, most farm and household tasks were shared by men and women. Both sexes plowed, planted, harvested and dealt with rice buyers; managed buffaloes, boats, and children; cooked, fished and cut wood for fuel; hired out as labor hands, "living in" if desired.

554 189 Though there were clear differences in socio-economic status, the daily life of the people was much alike: whether owners of land or renters, whether farming large or small acreages, the rich and the poor worked in the fields at the same tasks, produced or gathered much of their sustenance, and ran out of cash periodically. Socio-economic status was roughly defined in terms of food: a poor man "had one meal only to forego another;" a rich man "had or could get what he wanted to eat." (Sharp et al. 1953, p. 264.)

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1. Description of these products will be found on pp. 17-18.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Nalis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

271 contaminated drinking water, but the traditional use of boiled water for newborn infants and their mothers, and its occasional use for sick persons, might provide the starting point for a desirable change.

Meal Preparation and Service

Processes and Equipment

252 The principal processes involved in food preparation for which equipment was required are: cutting solid food into bite-size pieces, pounding spices and flavoring materials, grating coconut, straining, boiling, sauteing in a small amount of fat, steaming, and roasting on a stick or metal support over the fire. Although foods were steamed or roasted only occasionally, the processes were familiar to all.

358 The Thai kitchen had no oven. When the term "baked" was used, it might mean cooking with dry heat on a rack over the fire (as banana baked in the skin) or without fat in the frying pan (as small dried fish toasted in this way).

128 Equipment used during meal preparation by the 11 fami-
415 lies observed on 44 survey days is listed in Appendix A, p. 96, that used in serving and eating food, on p. 96.

252 The type of food preparation and service was much the
415 same in the relatively well-to-do and the poorer households
553 in Bang Chan. The chief difference in equipment for food
184 preparation and service in families of different economic status was in the number of items of one kind which were owned. Thus a poor family might own one knife and one clay water jar, whereas an affluent family would probably own several knives and a number of water jars. Equipment used on special occasions, as in preparation of food for large numbers of people, was owned by well-to-do families only. Some had enough equipment for large cooperative work parties.

Persons Responsible for Food Preparation

252 Food was usually prepared by the homemaker and/or older
462 daughter, if one were at home, but all members of the family who were old enough to help, had some knowledge of food preparation and did prepare food as the occasion demanded. While preparing, cooking and serving food were more frequently carried out by women than by men, adults and school-age children of both sexes had some competence in this area. "While certain activities are normally assigned to men and others to women, the Thai maintain no rigid compartmentalization and are unembarrassed when a woman does a man's job or a man does

252 a woman's" (Sharp et al., 1953, p. 88). For instance, the
462 husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was
252 sick or resting after childbirth. The ability of boys as well
867 as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had
252 (Hauck, 1953). Responsibility for food preparation increased
883 with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a
897 daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 Certain men of eminence, e.g. headmen and elders, would
551 not be asked to cook at all, but as they aged, they might re-
891 turn to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for
252 2 months because his wife had back trouble. Some dishes were
542 cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 A premium was put on good cooking, and certain women
261 who were noted for their cooking were in great demand for large
868 scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 Food was commonly prepared twice a day, in the morning
264 and late afternoon. The meal pattern was the same for breakfast

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114 1. Suvarnakich (1950) described the Thai diet in a
262 general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

262 796 A discussion of food habits in Bang Chan would be incomplete without some description of ceremonies ((1)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

796 The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-
527 teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion
274 of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

[786] Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could
554 afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and
527 at festivities. Thus, there was reason to make a (1)ngaan
796 as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

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[798] 1. Significantly the same Thai word is used for work and for ceremony.

[802] 2. Topknots, formerly worn by all Thai children, used to be cut ritually at the time of puberty. In Bang Chan, the growing of a topknot had become primarily an attempt to improve a child's health. Few school age children were topknots. They were usually cut earlier than puberty.

[976] 3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)deeseng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chaunun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the woman who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

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In Bang Chan when donations for a new school
264 building warranted buying the foundation materials, so that
476 volunteer labor was solicited for their installation, some of
546 the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

782 The spirit-offering, or the portions eaten by a partic-
854 ipant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests.
862 The pork was cut up and eaten with a hot sauce, or put into a
882 "with-rice" dish. It was especially appropriate with liquor.

262 The use of food ritually was not limited to the ceremon-
755 ial season nor to big events. The same purposes underlay the
852 use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

43 The benefits of a (l)ngaan accrued to every participant
554 down to the last worker and contributor according to the degree
796 of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

796 One assistance in the financing was that every invited
476 guest made a contribution, customarily 5 to 10 baht, which
435 helped defray the costs. In 1952, household heads reported these contributions as totalling from 30 to 1.000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (l)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from venders almost every day. They said "Some do not pay money to buy food, but pick or get it from the canal or gardens —this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

433 511 Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

293 449 256 262 Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

844 Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chilies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

222 262 Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)sa-(5)noo flowers were used by 3 families on one day each;

000 First steps toward a better diet are suggested by the best dietary practices observed. Although the calculated intake of no family on any survey day approximated or exceeded the estimated allowances for all nutrients, sharp contrasts were evident in individual records. Two sample calculations in Appendix C (pp. 121-122) represent one of the better and one of the poorer records obtained. The food for Household 12, on Jan. 14, 1954 consisted chiefly of polished rice, fish, and non-leafy vegetable, with seasonings. In contrast, on July 23, 1953, Household 16 used home-milled rice, and about 60 gm. per person of swamp cabbage, with other vegetables and fish. These choices enhanced the potential nutritive value of the diet markedly without increasing its cash cost. Family labor was involved, however, in gathering greens and milling rice.

000 Since rice is the chief solid food for all ages, improving this major item will be considered first. An important step would be to teach the people to cook rice with just enough water so that all would be absorbed. The Thai government has sought to encourage this. So long as the practice of cooking rice in excess water persists, much of its vitamin and mineral content will be discarded, and efforts to improve the nutrient content of rice will be largely nullified. Some rice water could be used as a beverage, and for cooking certain vegetables which are commonly served with a thickened sauce. This would be preferable to discarding the rice water, but encouraging its use must be considered as an alternative to cooking rice without excess water, since the two practices are mutually exclusive.

Use of under-milled and processed rice, and of the rice polishings, has the advantage that a large part of the original B-complex content is conserved, whereas vitamins for enrichment are at present imported, and are apt to be for years to come. Since home milling persisted to some extent in Bang Chan, it might be encouraged, in some families. One highly respected headman continued to mill rice at home, hence the "prestige value" of white rice may not be so important in Bang Chan as it is among city Thai, who sometimes regard undermilled rice as "prisoner's food." The time and effort involved in home milling, however, may deter those who have given it up from returning to it; and since deepening the main canal has made the mill accessible to more families the year round, a program based on the assumption that commercial milling of rice will increase is probably more realistic than an attempt to encourage the return to home milling where it has been abandoned.

256 At present, no processed rice is made in Thailand. A plan to buy and install a Malekizing plant to process rice for the Royal Thai Navy was announced in 1953, but the plan has not materialized. Enriched rice has been sold by the Thai Rice Company for some years, but the best grades only,

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959*b*: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be real Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family;

home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

858 828 child is clearly a social inferior, and is due all the prerogatives of his position: he is to be dealt with gently, kindly, and benevolently, with sympathetic regard for his incompetence; correlatively, he must be taught to express deference and obedience to superiors. Rather, the equality awarded the child results from the recognition that in the workings of the cosmic scale it is impossible to ascertain what the child could once have been or eventually will become, and he, like any soul, is always *potentially* of the same value as any other person. It is precisely for this reason that most Bang Chaners, if they mention it at all, are only mildly pleased rather than particularly proud that one of their own grew up to become an admiral in the Thai Navy. It comes as no great surprise that such a thing can happen. To them, it is no more unusual than that the prime minister himself should be a person who was born and reared in a village. (By the same token, the peasant background of these two individuals creates no special sense of personal identification with them on the part of the villagers. They are perceived simply as two unique *individuals*, their peasant roots being viewed as only one of the literally countless factors that made them what they are today.)[27] To a large extent, the equality of the child derives from the premise that he is not so much a child as he is a human being who happens to be at a particular stage in his ontological

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time). When probed further and asked if their parents' training may have had any influence on these individuals, they replied "yes" and "maybe" in the case of the admiral, but disavowed all parental influence in the case of the *nagkleeng*. A few said that the *nagkleeng* became that way because of bad friends.

One villager, phrasing his comment as a personal conjecture, volunteered that the notion of parents being the major influence on a child's character is a "modern" idea. Another informant, the wife of a school teacher and well versed in her husband's teaching training manual (prepared in Bangkok by Western-trained educators) argued that a person's character is dependent "mostly on the influence of the home and school." However, since on other occasions she complained to me that one of her sons "does not have an *?upanidsaj* for studying, and there is nothing a parent can do but let the child have his own way," it would suggest that her commitment to the pronouncements of her husband's mentors was not too well internalized. [115]

To avoid confusion, it might be added that from a historical point of view only one of the above cosmological forces (*kam*) is strictly Buddhistic in origin. The others are either Brahmanic (*khwaam* and *phroomlʔkhid*) or traditionally Thai (*?upanidsaj*, *winjaan*, and *caj*). Of all the terms, *kam* and *?upanidsaj* are the ones most frequently referred to when discussing an individual's character.

[27] It is precisely for this reason, as I indicated in an earlier writing on Thai social structure (see Sharp *et al.* 1956: 163) that Thai society "cannot be said to have a class system in the classical European sense of the term." People identify with others as individuals, not as representatives of social classes. [565] [591]

The very fact that individual peasant boys can climb the social ladder to attain some of the highest social positions of the land, without it even being considered particularly noteworthy, attests to the fundamental equalitarian nature of the ideas underlying the Thai social system despite the obvious emphasis given to status and hierarchy in individual face-to-face relationships. [554]

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

Chan. However, there remains the crucial question of how villagers manage to develop the long-term relationships that they do have, for despite the inevitable unpredictability of all human contacts, most Bang Chaners do live together in family units for more or less sustained periods of time, fathers do save for years in order to give their sons respectable ordinations into the monkhood, relatives and friends who have not seen each other since childhood do assemble for the cremation of a late kinsman or mutual friend, and mature adults do continue to feel a profound sense of respect and obligation to individuals who were their teachers when they were youngsters. What are the bases and rewards for these enduring interpersonal commitments?

The immediate rewards for these commitments are, on the one hand, quite apparent. They involve such things as the simple, unrationalized kind of love found among any group of kin or close friends. In the case of the ordination and cremation, there is the reward of making merit, not only for the son and the departed soul, but for all those who sponsor and participate in the ceremonials. The satisfactions gained from increasing one's social prestige by putting on an ostentatious ceremonial are not to be overlooked either. At a more subtle level in the case of the respectful student, the reward is gained from knowing that one is behaving in a proper and courteous way toward one's *aacaan* (in its social psychological connotations, similar to the Indian term *guru*) and is thus upholding established normative patterns. The rewards of maintaining the rituals of the moral order are not to be glossed over for Bang Chaners, like most Siamese, are a deeply ethical people. This is not meant as an evaluation of their behavior or as a statement of their capacity to conform to their ethical prescriptions, but simply as a statement of their preoccupation with ethical concerns. The rewards of *feeling* (genuinely or self-deceptively) that one has behaved in an ethically and ritualistically prescribed way are among the most satisfying of sentiments, although as indicated in the discussion of "social cosmetics," villagers often use the rituals of ethical behavior as substitutes for more demanding interpersonal involvements. Indeed, the great emphasis given to the performance of ethical rituals (speaking in soft and gentle words, honoring one's mentors) helps perpetuate the loosely structured relationships found in the community in that conformity to these rituals is perceived by many as comprising the fulfillment of their interpersonal obligations. Beyond this they are free to pursue their own interests. To a large extent the ritualistic forms serve as a comforting psychological justification for the pursuit of individualistic concerns, *i.e.*, "But I otherwise treat others so nicely." [20] This is not the result of conscious

[20] In one of his more recent and typically penetrating works, Goffman (1963) coins the terms "Involvement Shields," "Main Involvements," and "Subordinate

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to landholders than to renters and the landless. So also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

novice; there was noticeable increases in those for farm laborers and traders, and a slight increase in that for investors, which were offset by a marked decrease in figures for farm operators and slight drops in those for the professional and home enterprisers. In order to understand these changes in the occupational structure of the village, more information on some of these occupation than that given in our operational definitions at the beginning of this chapter is necessary.

Farm operation is a traditional way of life in the village. The primary motive is to secure enough rice for consumption. A secondary motive is to have cash from sale of surplus rice to buy goods that are not produced locally.

Farm laboring as a profession is limited to the poor. Farm laborers, occupying the lowest status in the village, are the most unstable and socially disintegrated group. They are not fully employed even during the work seasons of the year because there are too many of them in the locality. Thus, they exist in the village not because of demand for their work but because they have no opportunity for other occupations.

There were twenty-one families that were classified as traders in 1953. Of these, nine were permanent storekeepers, and twelve were peddlers selling food stuffs from door to door. Stores were situated at strategic places in the village -- two at the crossing of Minburi Road and Bangchan Canal which is the natural entrance into the village,

243 parcels by siblings who failed to include their share in
423 those parcels in the reporting of areas owned. For want
427 of a proper basis for adjustment, we chose to let the figures
128 stand as they were reported.

Table 19 shows that the combined area in rice of all the 216 farms in Bangchan was 6,638 rai, or almost 99 per cent of total area planted to rice by the residents, the balance of 84 rai being worked on by residents whose occupations were those other than farm operating. Of these 216 farms, 48 were classified as all owned, 88 part owned, and 80 all rented.

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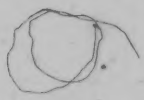
The conventional system of classifying farms according to land tenure into all owned (owner-operator), part-owned (part-owner), and all rented (tenant) should not be used without modification as a classification of economic or social status in population pressure areas where an efficient size farm is usually an exception rather than a rule. In these areas, it does not hold, as it seems to imply, that an owner-operator has a superior economic status than a part-owner and that a part-owner is still in a better economic position than a tenant. There is a wide range in size of farm operation and hence of incomes within these categories.

[434]

Within the category of owner-operator, there are major differences in size of operation and hence economic and social status. If a farmer -- to cite a specific case, Farmer A in BC4 -- owns the large area of rice of 235 rai,

[TEXT CONTINUED ON PAGE 133a]



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he may rent out some and retain only the part he can operate well. In this case he chose to operate 65 rai in 1953, renting out the balance of 170 rai. On the other hand, another farmer -- Farmer B, also in BC4 -- who owns only a small parcel of nine rai may not be able to rent in additional land to make an efficient size farm. In this case, B was not able to rent in any land and had to work on only nine rai of his own in 1953. In an area of relatively low population pressure, the probability of failure to rent in some more land may be small, but it is not so small in the relatively high population pressure areas such as Bangchan. The difference between farmers owning a small area of land and a large area is so great from the standpoint of economics and social position as to warrant having two sub-divisions of the conventional "owner-operators".

Small "owner-operators" may increase their size of operation by renting in some more land and thus becoming part-owners. These farmers actually improve their socio-economic status if they are able to move from the group of owner-operators into the group of part-owners. To use another concrete example, Farmer B, mentioned in the preceding paragraph, who worked on the nine-rai parcel of his own, does not earn more farm income than Farmer C, also in BC4, who owned 20 rai and still rented in 30 more rai in order that his four family workers including himself might be fully employed with a 50-rai farm.

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184 c. The family's purchasing power. Certain goods
511 considered as luxuries -- medicine, eggs, pork and beef, and white sugar -- were not consumed by poor families.

184 d. Individual taste and preference. The Moslems
276 would not consume any pork although they had enough money
261 to buy it. Some poor farmers spent more money on curry
182 essence than their more affluent neighbors because they
511 preferred highly flavored dishes, and some tobacco smokers did not spend a cent on tobacco binder because tney preferred the home-grown banana leaf binder to the thatch leaf binder which had to be purchased.

182 e. Producing ability of the family. It was observed
511 that those who caught more fish tended to consume more fish
[184] regardless of their financial conditions.

f. Health affected the consumption of medicine.

[431] g. Prestige affected the amount of cash contributions
[476] to neighbors.
[554]

h. Personal habits -- thrift, fun loving, indulgence, like or dislike of liquor -- affected the amount of personal expense.

i. Presence or absence of children of school age in the family affected the consumption of cookies.

Special Expenses

511 By special expenses we mean major items of expenses which do not occur regularly but which may arise in one time or another. Examples: purchases of land, gold and

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area.

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them.

As the survey results indicate, about 80 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack seasons. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor.

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. Up also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order harmonizes a moderate level of probability admitting many exceptions.

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close touch with each other's activities and needs. 621

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time. 621 844 592 844 472 593 [462]

Wealth Differences:

Way of Life 556 875 441

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable. [464] 556 511 178 369

Housing

342 The type of house, whether big or lowly, made a difference in the comfort and care of women. The big houses were teak-paneled and floored with a good roof of thatch, tile or corrugated iron. Their high piles insured dryness during flood season. The sleeping and living space was a single airy open room, often with one or two sides balustraded rather than solid, and protected from the weather by the roof's overhang. The kitchen was sometimes a separate room. There was always one small enclosed room, perhaps ten feet square, or larger, with a door and a window. This room was used for keeping valuables under lock, and whenever privacy was desired: as a marriage chamber for bride and groom, or as a quiet room for a senile parent. Because of its almost solid walls, it was poorly ventilated and hot. Childbirth took place in this little room, [844] if convenient, or out in the main part of the house. The fire-rest was in this room so that the dreaded wind could be kept out.

342 The poor lived in modest earth-floored cottages of bamboo
184 frame, thatch sides and roof, with one or two raised wood plat-
352 forms for sleeping and sitting. In the rainy season, these
844 cottages could be damp. In fact, one October the water was observed ankle deep inside a house, and the wife splashed around at her chores. Under the latter conditions, a woman in childbirth would be moved to some kinsmen's house. Delivery took place on one of the sleeping platforms, and post-partum rest was on a plank raised off the earth floor, unless space permitted that the plank and temporary fire-floor be placed on the platform. On one observed occasion reed mats as protection from drafts were temporarily set up, making an enclosure about three feet high within which a mother lay in her post-partum rest period.

Cash

434 Cash was short to everyone. The poor felt very poor and
426 the rich did not feel rich. This was because the rice-money,
[556] which came in a lump sum once or twice a year, was at once turned over to clear debts, to make large purchases of agricultural equipment, to repair the house, or to perform elaborate ceremonies. What was left over was not kept around the house for day-to-day expenses for fear of robbery, but was immediately loaned out. Thus cash was not available for emergencies
434 which in childbirth might mean taxis or hospital care. Being
844 rich or poor made little difference in Bang Chan, however, as
556 to the quality of the obstetrical help given.

178 a new way was a woman bearing her first child because she
184 was not yet ritually matured. This she wanted to be.
312 Moreover, her self-interest led her to try to profit as
846 much as possible from the experience of elders by first
885 following the old way. By incorporating the experience of successful child-bearers into her own and the baby's life and by asking them to initiate actions auspiciously, she augmented by that much her own competence, and laid the groundwork for her future progress. Self-responsibility engendered respect for elders. Thus there was no split between old and young over innovations. Experience gave grounds both for conservatism and for changing, but at different age levels.

178 Secondly, changes were adopted by the rich who,
184 spending their money rather conspicuously, sought to main-
556 tain and enhance their social position. Their wealth and position were in themselves unquestioned as signs of merit earned in another incarnation.

178 The changes being introduced to Bang Chan were of two
564 kinds: first the prestigeful, and second, those giving no increment of esteem, i.e. idiosyncratic changes of taste or convenience; or those reflecting individual circumstances. The prestigeful innovations were oriented towards the use of market novelties, modern medical care, urban standards of cleanliness and beauty, and other ways termed "progressive" associated with the city of Bangkok, cynosure of the eyes of the rich. These values were leading certain families away from their original occupation of farming, into the fields of teaching, trading, carpentering, cottage-industry, etc. Since these new occupations brought in steady cash and large land holders, too, had a good income, an association was found of
372 wealth, prestige, urban interests, and innovation. Com-
846 ment on the hot ashes container (fai chut) indicated that
178 it was a strong symbol of prestige and progress. To use it was "to get away from ignorance and the old way of doing things." It was "cleaner, not hot or ugly, and more convenient." One teacher took it up after reading an advertisement in the newspapers that described glowingly its more efficient healing effect. On the other hand, one woman abandoned the fai chut because "it was not hot enough to rid her of stiff muscles," so she went back to the use of the fire. "It is all right for rich Bangkok ladies who want to avoid a scar, but it does not give
177 enough strength for a farmer." She had no urban preten-
178 sions. Also in this prestigeful aggregate, observed here
278 and there, were the market novelties mentioned above:
554 bed, mat, and mosquito net instead of the plank-bed; kits of medicine from the Chinese pharmacist instead of the old

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

*125 *128 281 [282] *125 *128 521 *156 181 [593] the part of older people.[12] Particularly obvious is the absence of any reference to accumulating Buddhist merit. Neither is there any reference to the pleasures derived from dealing happily or enjoyably with other people. The closest we get to this is with the responses of two informants who are concerned mainly with the welfare of their children, and who speak in terms of "inspiring respect" in their children or assuming the role of "doctor" who, either by his knowledge (in case the children are ill) or wealth, could take care of them. Given all the conceivable things that villagers might wish to be—fanciful, real, personal, social, of this world, and of any world—the dominant wish is to have status, wealth, and respectability within their prevailing peasant context.

*125 *128 181 • 556 The next item, "*Most of all he wants to . . .*" is essentially a confirmation of the above findings. However, perhaps because of the syntax of the Thai version of the item and the inclusion of the word, "most" ("*The thing which raw wants the most is* (*namely*) . . .") the responses assume a considerably more extreme and "unimodal" form. The overwhelming majority of the informants, 77 percent, want only one thing: money. A few of them say that they want what are essentially cultural variations of money: property, rice fields, land, cattle, and jewelry. Several of them almost wax purple about the significance of money in their lives: "*The thing which raw wants the most is* (*namely*) . . . have money and gold, because money can help us all the time. Whatever one wishes to have, one can use money to buy it all. Even when one wants a wife, if one has a lot of money one can have anyone's daughter"; ". . . have money. Money is better than anything else. It is only the moon and stars that money cannot buy"; ". . . to have money. She wants money very much because when she lacks other things she can find something to take their place, but when she lacks money she is most unhappy"; ". . . have wealth because everything else comes after that." These responses, of course, explicate the major function of money. They indicate that money is not an end in itself, but a means by which to achieve some of the other life goals appearing here.

*125 *128 181 593 556 The minority responses to this item are in no case held by more than four individuals. Four villagers do give religious responses, saying that what they want most is to accumulate merit (one mentions both merit and money); three refer to maintaining the welfare of their families (one of them merging money and succorance by saying that he wants enough money to provide for his family); and four say that they want happiness (again, two of them linking money and happiness together).

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[12] There is nothing in the grammatical-semantic structure of the Thai version of this item inhibiting a religiously oriented response. The Thai cognate for the verb "to be" here is "*pen*," which could easily result in a response such as ". . . *pen khon thii mii bun*," or ". . . a person who has merit." This would be the most obvious "religious" completion under the circumstances. [196] [193]

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Decisions to use all these innovations--with the possible exception of the use of fertilizer--seem to be more widespread among the upper economic levels of the population. (See Table 8.) One wonders whether the initial link between use of the motor and readiness to try the innovations may actually disguise a more basic relationship based simply on ability to afford the investment and the risk.

TABLE 8. FARMERS* ON HIGHER SES LEVELS ARE MORE LIKELY THAN OTHERS TO HAVE USED THE MOTOR, TO HAVE GROWN MUSHROOMS AND TO HAVE RAISED TILAPIA

	Ownership of Buffaloes	
	2 or less (99)	3 or more (111)
Used motor		
Own	6%	37%
Use	53	43
Neither	41	18
Grow mushrooms		
Yes	30%	60%
No	70	40
Raised tilapia		
Yes	36%	42%
No	74	58
Used fertilizer		
Yes	12%	17%
No	78	83

* Male farmers only

The following table presents again the initial relationships between use of motor and readiness to try out other innovations. But this time the link is examined separately for persons on the different economic levels.

Table 9 was made by first dividing the population into two groups, those from high and those from low economic levels. The resulting two groups were then further subdivided on the basis of whether they owned (or used) a motor or whether they did not. In each of the four resultant groups the percentage that raised tilapia was then calculated. Those among those of high economic level who own or use motors, 45 per cent raised tilapia, and we infer that 55 per cent did not raise tilapia. The same procedure was repeated to ascertain the percentage that has tried fertilizer and subsequently the percentage that has tried mushroom growing.

This table shows that in Tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertiliser holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic level	
	High*	Lower
Owns or used motor (Proportion who have raised tilapia)		
Yes	43% (89)	33% (57)
No	23 (21)	17 (40)
Owns or used motor (Proportion who have tried fertiliser)		
Yes	20% (89)	14% (57)
No	5 (21)	0 (40)
Owns or used motor (Proportion who have tried mushroom growing)		
Yes	40% (89)	38% (37)
No	17 (21)	23 (40)

* Three buffaloes or more
** Two buffaloes or fewer

[231]

Literacy

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

TABLE 11 LITERATE FARMERS* ARE MORE LIKELY TO HAVE USED THE MOTOR AND TO HAVE TRIED MUSHROOM GROWING

	Illiterate (Cannot write a letter) (92)	Literate (Can write a letter) (116)
Motor		
Own	10%	36%
Use	35	40
Neither	48	14
Mushrooms		
Have tried	30%	53%
Have not	62	47
Fertilizer		
Have used	12%	17%
Have not	88	83
Tilapia		
Have tried	29%	39%
Have not	71	61

* Male farmers only

If Long Chan were like certain areas of the United States and Europe, it might be objected that such a relationship between acceptance of innovations and literacy reflects a spurious link with economic level: that illiterates tend to come from the economically deprived strata of the population; hence an observed relationship with literacy may actually reflect the initial correlation with economic level. In Long Chan, however, this is not the case. A Long Chan farmer who is well-to-do is as likely to be illiterate as literate, as is illustrated by the table below.

TABLE 12. LITERACY AND ECONOMIC LEVELS ARE UNRELATED IN LONG CHAN*

	Literacy	
	Low (91)	High (119)
Economic Level		
Low	48%	36%
High	52	64

* Male farmers only

Hence the correlation between use of innovations and literacy may be taken at face value and does not reflect a spurious link with economic level.

TABLE 14. HIGH EXPOSURE TO COMMUNICATIONS MEDIA IS LINKED TO ACCEPTANCE OF THE MOTOR

	Exposure to Radio			
	High: Listens Daily (43)	Listens Occasionally (44)	Listens Seldom (146)	Low: Never Listens (80)
Small Engine Motor				
Used it	88%	78%	64%	46%
Didn't use it	12	22	36	54

	Exposure to Movies			
	High: Ten times or more (161)	4-9 times (60)	1-3 times (75)	Low: None (33)
Used it	76%	69%	59%	36%
Didn't use it	24	31	31	64

Of course it is important to check whether these relationships hold true when people on different economic levels are examined separately; for literates as well as for illiterates. We infer that the basic link between use of the motor and exposure to the media of communication holds for literate as well as illiterates; for poorer as well as for richer farmers. More specifically, the relationship between exposure to the communications media and decision to use the motor is even more marked for less well-to-do and for the illiterate farmers, in contrast to the better-off farmers and those who can read and write.

TABLE 15. EXPOSURE TO MOTION PICTURES IS LINKED TO ACCEPTANCE OF MOTOR ESPECIALLY FOR THE ILLITERATES AND FOR THE ECONOMICALLY LESS WELL-OFF*

	Exposure to Motion Pictures			
	High		Low	
	(Percentage Using Motor)			
Economic Level				
Low	76%	(47)	44%	(32)
High	83	(66)	75	(48)
Literacy				
Illiterate	63%	(36)	44%	(35)
Literate	88	(77)	82	(41)

* Male Farmers Only

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TABLE 17. VILLAGERS RESPONSIVE TO URBAN PATTERNS ARE MORE LIKELY THAN OTHERS TO USE AGRICULTURAL INNOVATIONS

Agricultural Innovations	Eat with fork and/or spoon	Eat with hands
Artificial fertilizer		
Tried it	21%	9%
Never did	79	91
Total cases*	(68)	(218)
Mushrooms		
Tried growing	57%	39%
Never did	43	61
Total cases	(84)	(242)
Small engine motor		
Own one or have used it	82%	61%
Never did	18	39
Total cases	(84)	(242)

* For farmers only; excludes all non-farmers

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TABLE 18. ACCEPTANCE OF URBAN PATTERNS IS LINKED TO ACCEPTANCE OF MOTOR AND MUSHROOM GROWING, IRRESPECTIVE OF ECONOMIC AND LITERACY LEVELS

	Economic Level				Literacy Level			
	Low		High		Illiterate		Literate	
Acceptance of urban patterns (Proportion who used motor)								
Eat with hands	53%	(77)	76%	(73)	47%	(73)	83%	(76)
Fork or spoon	75	(20)	89	(34)	69%	(16)	90	(38)
(Proportion who tried mushroom growing)								
Eat with hands	28%	(77)	58%	(73)	38%	(73)	47%	(76)
Fork or spoon	45	(20)	65	(34)	44	(16)	66	(40)
(Proportion who used fertilizer)								
Eat with hands	11%	(77)	13%	(73)	10%	(73)	14%	(76)
Fork or spoon	19	(20)	26	(34)	3	(16)	23	(40)

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125

[789] 22. Have you consulted with a medium frequently, occasionally, seldom, or never?

5. Frequently	7
6. Occasionally	4
7. Seldom	46
8. Never	898

[775] 23. Have you been disturbed by a ghost frequently, occasionally, seldom, or never?

5. Frequently	6
6. Occasionally	8
7. Seldom	58
8. Never	894

[641] 24.a. Excuse me, could you tell me, who is now the prime minister of Thailand? If you know, could you please tell me his name?

1. Correct answer	193
2. Incorrect answer	89
3. DK, cannot recall	111

b. Excuse me, could you tell me, who is now the chief of police of Thailand? If you know, could you please tell me his name?

4. Correct answer	167
5. Incorrect answer	84
6. DK, cannot recall	144

25.a. IF R LIVES IN BC CONSTR: Who is the district officer in Nimburi? If you know, could you please tell me his name?

1. DA, as from Bangkapi	196
2. Correct name of present DO	9
3. Correct name of past DO	—
4. Incorrect name	16
5. DK, cannot recall	111
— No Answer	3

b. IF R LIVES IN KT CONSTR: Who is the district officer in Bangkapi? If you know, could you please tell me his name?

6. DA, as from Nimburi	141
7. Correct name of DO	10
8. Incorrect name	—
9. DK, cannot recall	154
— No Answer	38

[494] [829] [556] 26.a. Throughout the world and here in Bang Chan-Khamo Tao too, it is common enough man that there must be some who are rich and some who are poor and some who are neither rich nor poor. How about you yourself? Are you rich, or poor or neither rich nor poor?

1. Rich	8
2. Poor	48
3. Neither	843

b. IF POOR: Here in BC-KT, do you think there are many or few people who are poorer than you?

5. Many	30
6. Few	31
7. Unascertainable	7

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

427 be relied upon in time of financial crises or other sudden needs. On the other, they were pictured as a Shylock type of relentless money lenders who never let an opportunity to make a capital gain out of the villagers slip away. Our records show several cases where Bangchan tenants took the sick first to allandlord's home in Bangkok before sending him to the hospital. It was assumed that the landlord would provide food and medical care while the patient was waiting to be admitted into the hospital, and it was assumed also that the hospital bills would be paid by advances from the 427 landlord. Only one case of an unscrupulous absentee land- • 556 lord was mentioned by Bangchan residents. This man is a nationalized Chinese who roamed around Bangchan some thirty years ago as a professional gambler. He enhanced his gains from gambling by lending money at high interest rates to the villagers on mortgage term and occasionally adding a zero to the amounts in the paper. Villagers said the he never hesitated to make good a foreclosure when the specified time expired, and as a result he is now in possession of about one thousand rai of land in the neighborhood of the Upper Bangchan Canal. Although he owns some land in our arbitrary Bangchan Village, the majority is out of our village limits, and thus the rent rate charged by him was not included in our rental investigation in the preliminary study. The villagers' account of this man's activities was confirmed by our Bangkok source of information who was a relative of the landlord. Surprisingly enough, it was the

427 author's father who gave this man an initial capital of 600
556 baht when he made his start in Bangchan some thirty years ago. He is now a millionaire and a father-in-law of a former top military officer.

427 Again it is the author's impression that, from the viewpoint of the villagers' best interests, the good side of absentee landism seems to outweigh the bad side.

427 Going back to the forces of demand for and supply of
494 rice land, it should be noticed that, as was so often the
435 case, free competition in the classical economist's sense did not exist in Bangchan where rents were often sticky. There was a wide range of different rent rates for fields of almost homogeneous nature as far as agronomic properties were concerned. Preference for prospective tenants was observed to have a personal rather than economic basis even on the part of the local landlords who were found to be most sensitive to rent rates. When a new higher rent rate was to be charged, it was observed that the most plausible excuse had to be found and presented to the tenants by the landlord. An example was the general raise of rent in 1953 when the new land tax was raised from 0.30 to 4.00 baht per rai, whereupon most local landlords immediately raised their rent from seven tang to eight tang per rai. One tang of
[851] paddy, however, was worth nine baht. It is seen, thus, that as a result of an increase of the government revenue of 3.70 baht per rai the local landlords also received an extra 5.30 baht per rai from their tenants who alone had to suffer an increase cost of nine baht per rai.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 426 432 Differentiation in paddy prices is limited to cases where farmers have received in advance the payment for paddy to be delivered at harvesting time. This is a common practice which is called in Thai "toq khao" (lit., fall rice). Usually, the advance price received by the farmer is about half or not more than three-fifths of what he would normally receive. Considering that cash is usually received about a month or two before the delivery of the paddy, it would seem that toq khao is a kind of loan with as high a rate of interest as from 25 to 50 per cent per month.

*243 426 465 A similar practice is adopted with respect to advanced payment for piecework, where pieceworkers are committed to uproot, transplant, or harvest at about half of the prevailing rates. This is called toq raeng (lit., fall labor).

*243 128 427 Tables 24 and 25, in the section on land tenure of Chapter III, show a wide range of rental rates of rice lands which have not demonstrated any marked difference in crop producing ability.

Rates of interest in Bangchan vary greatly from 0 to 10 per cent per month. This topic will be discussed more fully in later sections of this chapter.

*243 434 *556 The important point that should be observed in connection with these differentials in paddy prices, rates of interest, rentals, and wage is that it is the less affluent farmers who usually bear the burden of higher costs due to these practices. Thus, these differentiations serve only to widen the gap between poor and well-to-do farmers.

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[503] Besides the work in rice-fields, women dug and cleaned
[226] canals and ditches, mounded land, and fished in many ways, the most laborious of which was plunging a heavy basket into the mud to catch burrowing fish. In the household chores, in which men shared to some extent, they carried water, cut and fetched wood, tended livestock, cultivated kitchen gardens, pounded rice in mortars, and cleaned houses. Boats were rowed by paddling or sculled by standing and pushing a single large oar. Cooking was time consuming. The low stoves were on the
[501] ground or floor. Since there were no tables or chairs, one squatted two to four hours a day to cut or pound ingredients,
[354] stir the curry, or wash the dishes.
[352]
[516]

868 The training of boys and girls for farm and household
561 work was thorough and started early. By 18 years of age,
461 boys and girls with few exceptions were experienced in every step of farming. Janlekha's chart (1955:82) indicates the progression (parenthetical additions are the present author's):

Age	Method	Kinds of farm work
5 - 7	not forced, but allowed or induced to work if they want to	light hauling, removal of weeds which have been turned over by harrowing
8 - 12	mild pressure	light hauling, removal of weeds which have been turned over by harrowing; some household work and help in the kitchen - girls only - (sometimes boys)
13 - 14	moderate pressure	hauling, weeding, buffalo-tending, transplanting, chicken-feeding, fishing, household work (boys and girls)
15 - 16	high pressure	all kinds of farm work, harrowing, harvesting, and uprooting - boys only - are started at this age.

872 Children worked in the fields before and after school
461 which, compulsory for all children aged eight to fourteen, was held from 9 a.m. to 3 p.m. five and one-half days a week. Vacations coincided with peak work seasons so children could help in the fields or at home.

4:Phillips E-4,5 (1956-1957) 1966
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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[6] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

[6] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost a Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

4:Phillips E-4,5 (1956-1957) 1966
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relationships: within the family, usually in terms of the relative ages of people; elsewhere, in terms of age, wealth, power, knowledge, religious or governmental role. Secondly, they are based on the assumption that every individual, regardless of his position in the hierarchy, deserves respect. The first is a respect associated with the proper performance of one's role; the second, a recognition of the essential dignity of every human being.

The role of these respect patterns cannot be emphasized enough. Benedict, in her study (1946) of Thai culture at a distance, referred to the learning of the *wai*, or gesture of obeisance, as "the first teaching the child receives." Although the *wai* is perhaps not the very first social act the child learns, I have seen infants no more than two weeks old being guided by the mother in raising the palms of their little hands to the forehead in expression of deference to superiors. The older infant who can do this on his own almost always receives acknowledgments of approval and delight from the adults in attendance. An older sibling really means it when he says of his relationship with his younger brothers, "when I ask them to do some kind of work, they go and do it. They never disobey, and when there is no disobedience, there is no hatred. . . . Formerly, whenever there was entertainment somewhere I took them with me. My younger siblings love me a lot. . . ." His position in the authority structure assumes the respect of those younger than he, and they willingly grant it for, among other things, he plays his role well as the kindly superior who takes them with him whenever there is entertainment. All the polite little linguistic forms (honorifics, expletives suggesting status and, most important, ordinary kinship terminology with its specification of relative age) as well as kinesthetic forms (lowering the body while passing a seated older person, holding the younger between one's legs and with arms around him in a position of protection) also serve to emphasize the respect that people grant one another because of their differential status. Perhaps the most revealing illustration of the strength of these patterns, at least the authority pattern, was provided by a two-year-old toddler who pointed to the stomach of his pregnant mother and said with pride, "My younger sibling is in there. When he is born he will be *my* responsibility." Little doubt that when the child is born he will give his older brother his due.

With regard to the other respect form, recognizing the dignity of every human being, more than once I have heard parents say that they disliked giving their child a certain medicine "because it offends the baby; he does not like it. It is better not to give it to him than to hurt his feelings." Although I do not doubt that in some instances the parents were annoyed more by the screams of the child than anything else, I am also convinced that for the most part they were respecting his basic individuality and right

125 he could write, could only sign his name, or could do neither.*
212 Those who said they could write a letter are considered here to be literate. All others are grouped together as illiterates or on a low level of literacy.

212 The literacy rating was tested for validity as follows: in
872 Long Chan literacy is known to be related to age. Ever since
125 1925** there has been a school in the community. Since that date school attendance has been compulsory. Attendance has been fairly full for the last twenty years, but most older residents have never had the opportunity for formal schooling.

212 The survey data reflect this correlation between literacy and
*177 age. Among farmers under 40 years of age, only 16 per cent were
*178 rated as illiterate or barely literate by the survey criterion; while 39 per cent of those of 40 years or older are rated as illiterate. Thus one can have reasonable confidence in the survey
• 561 response as a rating of literacy.

TABLE 10. LITERACY OF FARMERS DECREASES WITH AGE

	Age	
	Under 40 yrs.	40 yrs. or more
Literacy		
Illiterate	16%	39%
Literate	84	61
Total cases	(79)	(131).

*177 Literacy is linked discernibly to acceptance of the water and
*178 mushroom growing. The proportion of literate farmers who have tried the water is twice as high as the corresponding proportion among those who are illiterate. It is less strongly linked to the 228 decision to grow mushrooms, and is, at best, weakly linked to the 241 decision to raise tilapia or to use fertilizer.

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212 * In addition, interviewers asked respondents who said they could write to demonstrate it by writing something on the ques-
402 tionnaire.

[125] ** See Siamese Rice Village, pp. 311.

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[125]

"Have you ever been to a clinic or a hospital? (If yes) For what various reasons?

No, never went	37%
Yes	63
For treatment or hospitalization	37*
To bring a patient there	23*
To visit relative(s) or friend(s)	14*
Other reasons	3*

* These responses should not be cumulated since some respondents reported more than one reason for going.

If, indeed, the responses to this question are to be considered a valid index, one would expect respondents who reported having used these facilities also to report a higher incidence of visits to Bangkok, where the available hospitals are located. This expectation is confirmed by the responses to the two relevant questions.

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TABLE 23. INCIDENCE OF TRIPS TO BANGKOK IS HIGHER AMONG RESPONDENTS WHO REPORT VISITS TO CLINIC OR HOSPITAL

"In the past year, how many times did you go to Bangkok...?"	Have you ever been to a clinic or a hospital?"		
	Yes, for treatment (133)	Yes, for other reasons (91)	No (118)
Ten or more times	32%	31%	17%
Two to nine times	40	37	29
Once	13	12	25
Never	15	20	30

The present study now asks what factors are associated with use of modern health facilities.

Demographic Characteristics of Hospital Users

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It is important to answer one question in advance of more detailed analysis. Does an affirmative reply to the question, "Have you ever been to a hospital or clinic" measure need for medical care rather than acceptance of modern health practices.

No direct measure is available of the actual state of health of the survey respondents. But, assuming that older people need medical care more than younger people, then we have an indirect index of whether or not hospital use is higher among people of advanced age. The data show no such relationship.

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• 561

TABLE 26. INCIDENCE OF HOSPITAL AND CLINIC VISITS IS SIMILAR FOR ALL AGE GROUPS

Have you ever been to a clinic or a hospital?	20-29 (41)	30-39 (80)	40-49 (85)	50-59 (64)	60 or over (37)
No, never	31%	31%	34%	37%	41%
Yes, for treatment	39	44	39	31	31
Yes, for other reasons	29	25	27	32	28

*178
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If the responses reflect primarily the need for medical care, women who bear children have a greater need for medical care than men, and one would therefore expect hospital use to be higher among women than men. But again, this hunch is not clearly borne out by the results.

TABLE 27. INCIDENCE OF HOSPITAL AND CLINIC USE IS SIMILAR FOR MEN AND WOMEN

Have you ever been to a clinic or a hospital?	Women (98)	Men (143)
No, never	41%	33%
Yes, for treatment	31	39
Yes, for other reasons	28	28

There is, thus, reasonable justification for inferring that reported use of clinics or hospitals reflects predisposition to use modern health facilities and not simply a need for medical care.

*178 Economic Level
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Although higher economic level was linked to the principal agricultural innovations, it is not related to use of hospital or clinic facilities.

Literacy

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On the other hand, just as literate persons were more disposed to use the major innovations (p. 19), in the same way those who can read and write report a greater incidence of hospital or clinic use.

592 464 a transient member of the family. This was rather unusual, however. The pattern was that a transient member was [561] accepted when he is rather young. If he was quite mature, he might also be accepted; but the expressed motive of the 592 465 464 accepting family would then be somewhat different. When approached by a mature prospective transient member, the family head would most probably say that he could not afford to keep a hired laborer but he would be glad to let the man or woman stay with him as a member of the family, and that they might as well "share in the food, and share in the work".

It has been observed that transient family workers received much less from the family than the standard wage [435] of hired laborers. While the latter received an annual wage of 1,000 baht or the crop from 5 rai, the former might be given only 50 or 100 baht a year. To farm operators of moderate or large rice farms, transient family workers were certainly an economic advantage. It was quite natural that these operators would try to keep them in the family as long as possible. Among the several methods observed were the following: (1) adoption; (2) promise to sponsor ordination of the young male transient member; and (3) giving a certain amount of <u>lengai</u>.

592 464 [597] [792] It was mentioned in the section on the family in Chapter II that adoption as practiced in Bangchan did not involve legal registration of the adopted child, and that maltreatment of adopted children was not infrequent. To sponsor an ordination was in fact not quite as expensive

family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

A soul desiring rebirth flew into the womb of a woman at conception. By care and imitative magical practices, both parents helped the fetus grow but the mother gave the baby its body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of several days was taken beside a hot fire, the purpose of which was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman. The comparable ceremony of maturation for men, when they too were changed from "raw" to mature, compassionate, and strong males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

The understanding of, and the attitudes toward, modern medicine are given along with findings accounting for acceptance or rejection of modern hospital care for parturients. Accepting the changes that were observed in the practices surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

For persons interested in introducing changes in the

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775 Man was higher on the scale than woman.[20] Progress toward
[562] Nippan was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phī) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good health and long life, a kindly personality, many fine children, wealth, high status, intelligence, and luck. Astrologically, he was born on a day
[775] of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death, deformities, unhappiness, poverty, and had a cruel nature.
[763] Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

75
784 The long-range protection against all illness was to
[577] live virtuously and make merit. However, to guard against temporary supernatural intrusions, everyone possessed and
[782] usually wore Buddha lockets and other amulets. Some
[304] underwent tatooing, men having Cambodian or other figures, women, 2 small dots tatooed on the torso under the arm.

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20. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

846 789 372 [753] [755]

Even after the child was out, the pile of wood was still a drying womb to be treated carefully. It was also the wood for a consecrated fire. To drop a piece of this wood carelessly both injured and desecrated. If this happened a disease of the eyes "ʔaang," came at once for which no male medical powers had any remedy. The only cure was in women's hands, that essence of maternity, "a drop of mother's milk--any mother's." The larger implications of this linking of fire and maternity are dealt with in the next section.

The Fire of Maturity

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In the events surrounding the birth of the child, the significant step for the woman personally was the post-partum rest period by the fire (yū fai). Far more was at stake than just drying the uterus. The fire rest was one of the series of rites of the life-cycle which marked the course of an individual from birth to death. The others were the cutting of the umbilical cord, first head shaving, top-knot tonsure, ordination (for men), marriage, and cremation. Through the consecrated fire a woman formally achieved full maturity: she became suk (cooked, ripe, mature). Maturity did not come just by bearing a child. The fire brought about the transformation.[46] [885]

562 • [774]

How was mature womanhood viewed? What was the essential female role and office? Bang Chan saw a woman as one who "feeds and lengthens lives." As the custodian of growth she was, first, the guardian of the vital, essential khwan soul, and especially of the immature, flighty khwan of growing persons.

[827]

Secondly, a woman was a donor of nourishment (liiang).[47] Her primary responsibility was to nurture children and other tender beings. She nourished the fetus with her blood. After

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46. "The fiery element digests what is eaten or drunk...and cooks the body and gives it its beauty of complexion. And the body thus cooked is kept free from decay" (Warren:157-158).

47. All the deities "concerned with the welfare of our bodies and our khwan" were maternal (Mae), e.g. Rice, Water, Earth, "Mother-Goddess" (Mae Sii), and several Mother-Princesses (Chao Mae). Fire, and maybe wind, were both female (mae) and male (phra) (Textor:485). To these deities, "higher" than ordinary spirits, Bang Chan "owed more." [776]

562 [827] [853] delivery, "her blood was purified to a white color to become the milk of the breast."[48] Nursing a child was the essence of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 462 252 264 In a wider context, not only all their household members but people anywhere were the objects of women's nurture: women were in charge of the cooking even if occasionally helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor household, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry any more." She construed this as proof that she had ample merit, but it also meant that she was a great donor who gave continuously and took little. Women usually offered the early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When age pushed women past their mature capacities, they returned to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

[182] [431] [796]

562 857 [291] [593] A desire to give tender care and nourishment was deemed inborn in all women. Although sex was not strongly differentiated in babyhood,[49] by age 3 a hard-to-handle skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phūm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[856] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

Only when the youngster was satiated did she gobble the remainder.[50] Parents often commented that girls in general were obedient and good, but boys were not. Everyone spoke, however, of exceptions. The capacity to play the female role grew with the child. It was not completed with the physiological maturity of first menstruation but only with ritual maturity.

The rituals to fit a woman for her office, described as "directly related to the welfare of the child," had 4 specific purposes. They perfected her as a compassionate being; restored and strengthened her body; improved her capacities as a nourisher; and strengthened her own khwan. The key to each of these aims was the holy fire.[51] Because actions taken by the fire were immediately and permanently effective, every effort was made to induce auspicious happenings. Words spoken by the fire had compelling effect so even ordinary speech became magical. Speaking of the fire's hotness so raised its heat that a mother was burned. For this reason, uninformed or careless visitors like children or foreigners were a danger.

According to Buddhist thinking, suffering developed compassion. Through the discomfort of pregnancy, followed by the anguish of childbirth and the heat of the fire, a woman became compassionate and so achieved the guide-line for moral behavior. Then a woman was sure to be touched with pity for the younger or less fortunate. One teacher despite the inconvenience went home twice a day from school to nurse her new baby because she "pitied" him too much to hire a wet-nurse. It was "pitiful" to see a child at another woman's breast for it implied that its mother was either unwilling or unable to nurse it. Thus, babies were rarely nursed by others than their own mothers.

The fire also strengthened a woman by ridding her of bad blood and foul fluids. Wind and Fire, the 2 spirit guardians of the elements necessary to the occasion, were invoked to assist in the drying of the uterus. In addition, strengthening

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50. Boys too fed their younger siblings but their purpose was a power-play: "to assure obedience in the future" (cf. Hanks and Phillips:648).

51. This fire was kept entirely separate from the one for cooking and boiling of water. It was ritually lit and ritually extinguished at the end of the fire-rest.

562 774

Thus she performed several rites involving the maintenance of the immature khwan of children and of rice.[54]

562 156

The acme of maternal virtues was manifested in the "good nourishers" (lĭang dī). These women had borne many children who "nursed and slept well, did not cry, and easily established good habits." They were lĭang dī not just because of the time spent by the fire, for that time could be matched by persons who had lost babies. They were special persons of more than usual capacities for success in nurture. Good to have around for their auspicious influence, they were called upon to inaugurate or help processes concerned with health and growth. They performed, or caught the child in the winnowing ceremony, or gave babies their first suck. They were the persons to whom a sickly child was brought so that his health might be improved by calling the soul and tying holy cord at wrist and ankle (ria khwan). [755] [774]

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562 774 789

54. If a child indicated by continuous crying that he had lost his khwan, a mature (suk) woman had to be asked to call it back ritually and re-tie it into the body with sacred cord at wrist and ankle. There was no special magic. Her words suffice. Khwan-ladling, a more elaborate and compelling form of the same ceremony, used magical formulae (Textor:401-402). One of Phillips' sentence-completion tests was, "If one is frightened, the best thing to do is..." Of the respondents, 7 women, including one Muslim, would set to work to "call back the khwan" (Phillips:267-268). No man suggested the latter.

562 243 789

In the agricultural rites, women handled the rice's khwan in basically the same way when it was immature: inviting the young Rice Goddess to stay and grow in the field, and transporting to the house the child-like seed that only next year would grow to maturity. For these rites a woman used an incantation if she knew one. That she could also handle the rice khwan by speaking "extemporaneously" (Textor:429), indicated that her mere words were enough. If no one else were available, a non-suk woman could call the khwan of a child or of the Rice Mother by reason of her in-born female potency, but could not "ladle" a khwan.

562 774 856 [243]

When the khwan was mature (after a person was about age 10) men took over its care. In the men's thaw khwan (khwan-strengthening) rite, here, too, women were the ones to carry off the cloth-and-leaf covering of the baisī (tiered offering) into which the khwan had flitted during the ceremony. The rice-ceremony at the threshing floor was a thaw khwan, so was performed by men.

562 156 (riak khwan). Theirs was an augmented personal potency[55] in nurture not unlike the mana so widespread in the Asian-Pacific area.[56] The best midwives were liang dī, though not all liang dī were midwives. This societal peak was not an unattainable ideal. In the community, certain women were pointed out as liang dī and some of them recognized in themselves the validity of this title. [159]

562 794 796 262 The association of rice, motherhood, and khwan now stands clear. Rice made auk by cooking over a fire, was the essential food not only for the body but for the khwan. Growth and life depended on the nourished khwan. Rice came from a maternal figure, the Rice Goddess, Mae Phosop (cf. J.R. Hanks, 1960). Human mothers, too, when made auk, gave auk nourishment: the milk of the breast was merely transformed rice. Whenever rice was eaten throughout human adulthood, the Rice Mother continued her nourishment, for in each grain was a bit of her khwan, nourishing to the human khwan. The rice-bowl and ladle, used in many a ceremony, stood for the maternal care given a human khwan, and by extension, personal care throughout life. Whenever the rice bowl with offerings (khwan khao: soul-[of]-rice) was presented by a parturient or by a sick person, loving care comparable to maternal care was being requested. [782]

182 885 846 562 372 The idea of re-birth, of a fresh start within the pure area encircled by the holy cord, with auspicious words and consecrated fire, was deep in every life-cycle rite. The particular circumstance of the fire of parturition was a forthright cooking to bring out and increase a woman's essential femaleness, to transform her from a youthful, partial giver into a complete, mature donor of nourishment. Such was the satisfaction of women in this female role that many said they would like to be reborn as women. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:375) for a quick run-down on a definition of mana.

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

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to be reborn as men. All women were eager to undergo the post-partum fire at least once. After that modifications might be entertained.[57] Whether the baby lived or died was not pertinent, for the benefits of the fire were for the mother.

Comparison of Male and Female Maturation Rites

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The parallel ritual that fitted men to perform their masculine role was ordination into the Buddhist priesthood. The well-documented Buddhist ends should not be permitted to eclipse this other personal goal. Just as the fire prepared a woman for motherhood, so ordination changed an immature youth into a man ready for marriage and fatherhood. He too was transformed from raw (dip) to ripe (suk). Men gained compassion through denial and suffering. Since their natures were seen as hard (khaeng), strong, bent on gain, influence, and power, possibly destructive and concupiscent, the severest deprivations were invoked: the renouncement of the gratifications of sex and food. Of the 2, the deprivation of food involved the greatest break with previous habits, for since babyhood, food had been a symbol of maternal care. Hence, a man was cast on his own. His only refuge and support was the Buddha, the law, and the Brotherhood. This self-denial induced the suffering that, coupled with knowledge gained from study of the scriptures, led to compassion. The suffering in no way

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57. The fire-rest though desirable was not obligatory. In 1865, Bradley said it could be "dispensed with in times of civil commotion, for fear of the enemy" and "no damages whatever were suffered whatever to mother or child" (p.79). Like other life cycle rites it was postponed if not convenient (saduak). Also in times of peace, "a few mothers here and there cannot lie by the fire," and a few say, "they will not" (ibid:p.79). Bang Chan would accept this viewpoint freely as reflecting an individual, constitutional set of elements, or as an autonomous decision of an individual. The woman would never feel herself as competent as a ritually mature person though.

885 deprived a man of his masculine strength but was expected to
793 change him into a kind and merciful being.[58] It took at least
562 a three month season (phansā) in the priesthood to make a man
785 mature, responsible, and effective. That this moral fitness
[778] was not obtained overnight was given vivid illustration: if a
789 Buddha Amulet, designed for invulnerability, failed to be effec-
885 tive when tested by having a gun fired at it, it was "sometimes jokingly dismissed as a monk (phra) who has just been ordained (buat mai)" (Textor:529). This interesting episode illuminates one other important result achieved by both men and women in their respective maturation rites: authorization to handle magic.

Magic and Maturity

In Bang Chan, magic was powerful. Whatever the purpose, whether beneficial or nefarious, it was effective if all conditions were met. Lest such power fall into unscrupulous hands, the community limited its availability and use to those who had gained the moral qualities and fitness to handle it wisely. Only the ritually mature could be counted on to be compassionate, strong, responsible adults, and so were permitted access to occult powers. Whether by ordination or the fire-rest, to be suk was an absolute prerequisite to magical knowledge. It did not give magical power, but qualified one to seek it out. Since no career in medicine was possible without magic, no man could be a mō who had not been previously ordained.

789 The uses of magic by men had entirely different objectives
562 from those of women. Their respective fields did not

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58. "A monk was changed...to be meek and mild." By seeking his morning alms he "show(s) mercy towards creatures" (prōt sat) (Anuman Rajadhon:76-77). Women's tenderness in their maternal function was not associated with shyness. A compassionate woman with a strong winyān soul (which projected the quality of the heart) was enterprising and effective (cf. J.R. Hanks, 1959). Where sexual characteristics were confused, instability in behavior appeared. The cultural expectation was that children and women were delicate (ōn), older people and men were hard (khaeng). "A male who is easily induced to convulse is one who had a 'soft' heart (čhai ōn). ...and also a 'soft' khwan (khwan ōn).....Such a young man is excitable rather than predictable and dependable, and hence is cause for parental anxiety" (Textor:405).

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overlap at all. Magic was wielded by men to gain power over spirits, persons, elements, and forces. It had either social or personal benefits. The role of highest social benefit, corresponding to the liang dī in women, was the khwan-specialist (mǭ khwan) who conducted the life-cycle, khwan-strengthening (thām khwan) (for persons and for the rice) and many other ceremonies for the mature khwan. This role demanded men of the highest qualifications in probity, erudition, and personal dedication. Men also had the formulae for curing, house- or boat-blessing, invoking guardian spirits (sān phrs phūm), etc. Men could make protective amulets to render the wearers safe from bullets, knives, spirits, and all sorts of hostile forces in the world. [791] [156]

On the other hand men's magical objectives could be aggressive and hostile. The gamut of amulets, missiles, love-oil, and incantations (Textor:passim) showed the potential for attack and why the converse need for invulnerability was so strong. Men had a nurturing (liāng) role, but only for non-human beings, e.g. buffalo, pet birds, and guardian spirits of house and land. Subverting this role for hostile ends, they obtained possession of the ghost of a recent corpse by gathering the drop of oil at the chin, and nourishing it (liang) for use in sorcery. For a man, nourishing something gave control. [754]

All of the powers of men's magic were available to women on request for any purpose, hostile or not, but the "owner" had to be the mediating agent. [424]

A woman's magical knowledge was linked exclusively to her female task. It did not give power over people. It could not be destructive. No female sorceress existed in Bang Chan. No woman feared the magic of another woman in childbirth nor at any time. A woman's magic was devoted solely to promoting the processes of growth and life. Thus it controlled the searing heat of the fire, invoked the Spirits of the 4 elements, and helped at various points in childbirth. It handled the soul of the Rice Goddess and of Mother Sū, guardian of children. It restored any frail and wandering khwan to its proper bodily abode. Such was a woman's magic. [754]

To insure separateness the respective provinces of magical activity were ringed with sanctions. Contact with a woman's skirt, undergarments, or menstrual blood completely negated any of a man's protective amulets (re tattooing, cf. Textor: 102). Though this reflected the traditional avoidance between sexual phenomena and Buddhism, it might also indicate a tacit moral evaluation of the magical powers of men and women: the powers for growth were ultimately ascendant over those for power, for men had nothing that undid a woman's powers. Though women were easily prey to men's magical control, as by [841] [834] [754]

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with men's magic, a severe sanction fell on her. She became the host of the phī krasŭ who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mō, she could do everything a mō could do. Men were never mediums. Bang Chan's only medium was possessed by a male mō.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

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[156] [688] [626] [593] 59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasŭ as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "auk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasŭ's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

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The medium's powers as a หมอ appeared to be entirely equivalent to a man's.

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To summarize, the fire-rest enabled a woman to acquire fruitful habits, new status, and the right to handle magic. The implications of the ritual clarified the role of women and the associated symbolism of rice, and by contrast the role of men. The nature of the magical resources available to each sex laid the groundwork for a career in midwifery for women, and for men, a career as a หมอ.

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Comparison of the respective rites of maturation points up certain contrasts and parallels between men and women. Women achieved compassion and maturity through their sexual role, while men achieved these qualities by denying their masculinity. Even a bounty of merit, which a man achieved directly by ordination, came to a woman through procreation, by the ordination of a son, or as a wife if her husband were ordained. Many activities were done by either sex, but each had certain exclusive proprietary areas. If women were donors of nourishment, men too had their donor roles, sexual, economic, religious, etc. Each paralleled the other in the formal steps to maturity, building the way for a complementary social and marital partnership for which both were ritually and psychologically well prepared.[62]

62. In contrast, note the psychological ill-preparedness, leading to severe tensions in Ceylon (Oberesekere, passim).

759 In these 2 qualifications of skill and success, some of the explicitly non-professional old ladies were recognized as easily matching the professionals. What then was the definition of a professional midwife?

759 789 What the professional midwives alone did was to deliver non-kin, for which they had to have magical formulae and reliable celestial knowledge. The incantations gave a midwife the right to be called a mɔ̄ tamyā, for he or she was using to a greater or lesser extent the sacred wisdom of occultism (saivasāt). Here midwifery was like any other craft or endeavor. One could cure, sing, and build a boat without magic, but with it, the chances of success and effectiveness were increased. The incantations could "ease delivery," "get a baby out that had died inside"(for this baby could no longer do his part), "prevent the poison of the fire from burning the mother," and give other special help. That this magic was the crucial difference between the professional and non-professional was illustrated by the old lady who had delivered 30 babies, but vehemently[67] denied being a midwife. "I am not a professional. I have no magic. I only pray to the Lord Buddha and think of sacred things each time."

759 787 A professional also had more detailed astrological knowledge of the orientations of relevant celestial beings so that delivery would be "helped and not obstructed." This knowledge was in no way a professional secret, but if complications during childbirth were evident, it was necessary to have accuracy, and convenient that the midwife had it.

759 • 562 212 191 778 To certain villagers the designation "professional" could not be applied to women because, never having been ordained, they had not learned to read, as men supposedly had, not only Thai but Pali and Cambodian, the languages of medical and magical lore. "A professional midwife has a book. No woman can become professional because she cannot read." The idea was that incantations were correct only if taken from the sacred texts at the temple, though in fact the formulae were taught orally. One male midwife had a sacred book in his private possession, which was proper, for

sacred books were inherited by males.

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67. Her vehemence may reflect either pride in being so successful without magic--a true liang dī--fear of being reported as unlicensed (see below, p. 145); or consternation lest she be accused of using magic to which she was not entitled.

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sacred books were inherited by males.

In the light of this definition, only the 2 or 3 males were true professional midwives. They gave elaborate annual ceremonies of homage to their teachers (wai khrū) attended by all the persons who had profited from the teacher's magic that year. However, all the male midwives were also fully qualified mō. Their ceremonies were large because they were dedicated to the teachers of their curing powers as well as midwifery.

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The male midwives, then, were in a somewhat different category than the females. They were mō who had, in addition, trained their hands for midwifery as an "extra specialty." Midwifery seems to have been one of the few areas where skilled hands were considered of greater importance than magic. "We have no magic for delivery," said one male midwife, knowing that nothing but merit could guarantee success. Because they had access to the incantations for element and spirit control, and could make holy water, the midwife-mō could spare the parturient the necessity of getting in an outside mō, if such were needed. However, one part of the midwife's job the men could not do. To protect their male powers of invulnerability they were forbidden to wash the woman's clothing. A woman or a female midwife always had to do this. Men also could not provide the female "mystique" particularly related to the khwan and to growth.

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However, the community did not adhere to this narrow definition of professionalism, for several of the experienced and competent women, Buddhist and Muslim, behaved as professionals and were accorded the title of mō tamyan. Their magical formulae, being congruent with their female office of promoters of growth and life, were especially effective. Like a mō they received the ritual gift of the khwan khao, hallmark of the possession of occult formulae, which the patient presented to assure the benefits of magical knowledge.[68]

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68. This ritual bowl of rice and offerings was never excused even between the closest kin. If forgotten or misused, the "teacher" punished the midwife with pains, and had to be mollified with a food offering. The magical benefits could not be withheld once the khwan khao had been accepted. It was not accepted if the patient were too near death to be assisted. If the patient died, the whole gift, cash, rice, and all, was given at once to the temple to make merit.

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759 [465] Although as to fees, they said, "It is as you please," these women received as a rule the higher honoraria of 10, 20, and 30 baht. They did not have a separate teacher-rite but paid their respects during regular temple events, such as offering a pig's head and the other items during someone's ordination, though the Muslim midwife had her modified teacher-rite in a separate home ceremony, not at the mosque (cf. [212] [214] Appendix:Muslim Customs). It was even said of the best female midwife that "she had a book." She was literate in Thai. Even if her book were a popular astrological guide, it carried the reverence accorded all books. Whatever it was, its possession increased her aura of reliability. [789] Though the women did not receive their magic at the temple but rather from a kinsman in the maternal line, their incantations, which appeared to be in the Pali-Thai tradition, were no less effective.

759 The professional midwives, both men and women, saw themselves as individual custodians of sacred knowledge and competent in a technique. They were not only interested and ready, but obligated to give expert care to anyone, anywhere it was needed.

The non-professional midwives always thought of themselves as voluntary helpers of kinsmen, acting "out of pity" and carrying on their female responsibility for new life as older women helping their younger relatives. [562] The idea of giving nurture and assistance was so deeply ingrained in the female office that the professional midwives saw themselves fundamentally as volunteers.

Learning Midwifery

The decision to deliver a daughter or a wife was not momentous. One did not have to be "suk" to deliver a baby. The same practical and compassionate motives that led a mother or husband to do this led some of these people to seek out professional techniques so that they might "help more." One woman, bearing her own child at 25 with intense suffering, became angry (chap chai) because "the midwife did nothing to help, but just sat and chewed betel while others did all the work." In desperation she called in her own mother to deliver her. She also "felt she had many relatives who would need her help." Another was asked by her mother's brother, a midwife, to accompany him as he was getting too old. He then gave her his magic. A man took up the specialty after his first child, a son, died at birth from ineptness, he thought, of the midwife. Another man, though, took it up as a "minor extra" to his career as a mo. All learned the skill by accompanying and helping an

the slight differences in ministrations. "The Muslim midwife massages more than the Buddhist." The women easily entered into reciprocal courtesies. The Muslim woman knew the steps in the Buddhist winnowing ceremony and performed them as desired. One Buddhist m[illegible] dispensed, however, with the winnowing "because the m[illegible]wife was Muslim." A Buddhist woman made up the khwan khăo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

Certain fundamental ideas of the Muslims led to reinterpretations of familiar Buddhist terms and activities. "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist, meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the poor. On the other hand, the Muslims had taken over many Buddhist practices for one, the acceptance of Buddhist holy water as a cure for spirit attack.

Completely Muslim was the stress on physical and moral purification as an objective of every rite, and conversely, the prevalence of the idea of defilement. "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate procedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

The events surrounding childbirth illustrated the differing viewpoints between Muslim and Buddhist. In the seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (fāk thong: to deposit gold). On returning home, she went as fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim midwife prescribed large doses of liquor before and during parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclosed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khăo contained "7

252 a woman's" (Sharp et al., 1953, p. 88). For instance, the
462 husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was
252 sick or resting after childbirth. The ability of boys as well
867 as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had
252 (Hauck, 1953). Responsibility for food preparation increased
383 with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a
597 daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 Certain men of eminence, e.g. headmen and elders, would
554 not be asked to cook at all, but as they aged, they might re-
881 turn to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for
252 2 months because his wife had back trouble. Some dishes were
562 cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 A premium was put on good cooking, and certain women
861 who were noted for their cooking were in great demand for large
868 scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 Food was commonly prepared twice a day, in the morning
264 and late afternoon. The meal pattern was the same for breakfast

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114 1. Suvarnakich (1950) described the Thai diet in a
262 general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

would not come willingly to work. When a family with a reputation for stinginess diluted the (3)khaaw (3)tom too much, the group refused to eat any, thereby reminding the host of his obligation for hospitality.

Guests to whom meals were served fell into four categories: 1) kin, 2) visiting dignitaries, 3) priests and 4) drinking companions. Kinfolk who came as guests were married children, or those who were away at school or work, or kinsmen from Bangkok or elsewhere. The older the relative or the greater the distance travelled, the greater the honor accorded him. Foods were exchanged. Two visiting ladies travelling in a large boat, made an annual round of all their relatives, bringing certain "city" foods and receiving substantial gifts of rice, fish and fruit. They stayed for several days as guests of one family, then moved on. Every person from Bang Chan who visited a relative in Bangkok carried big packages of food, usually rice or eggs, as gifts. With the inflated prices in Bangkok, it was advantageous to have a "country cousin" who might bring food. Visiting kinsmen always recognized the need for eventual reciprocity.

Visiting dignitaries were usually entertained by hamlet headmen. Meals served to visiting officials, policemen and others might be elaborate, involving cooperative help in preparation, but reciprocity, if any, rarely took the form of a return meal.

Regular visits of the priests, as well as the invitation of priests to the house for special events, have been mentioned. Priests might also come from afar, usually staying at the temple but receiving generous offerings of food from people of the community.

The custom of convivial get-togethers of either or both sexes was well established. Men traditionally enjoyed "stag" dinners of four up to twenty or more whenever the ingredients for a turtle, frog, cobra or other snake curry were available. Chicken curry might also be thus served, and once a catfish mash was prepared by a male visitor from the north. Those curries were cooked by men, and the host served liquor freely. The all-male character of the occasion reflected the old restrictions on women's partaking of flesh foods (see p. 42), but older women did not hesitate to join in the drinking. Women also got together in drinking parties, sometimes to play cards.

In addition to sharing food with people in these four categories, the general rules of hospitality required that anyone who came to the house at meal time, should be offered food, or at least a drink of liquor, tea, or plain water.

262 883 understood that her merit helped her not to be hungry. Once she asked an eminent layman about eating at night. He said, "If you are not hungry, do not eat. If you feel hungry, it is better to eat. If someone invites you to eat, it is sinful to refuse."

261 Even young adults had a strong revulsion against gluttony. One of the symptoms of a man who went mad and had to be committed to an institution was that "he ate too much." A woman was despised because "she ate in secret. She stole eggs from her husband, sold them in the market, and then spent the cash on food which she ate there, instead of bringing it home." Definitions of a glutton were: "A 'with-rice' eater," or simply as "one who eats alone." These comments highlight the counsels of eating in moderation and in company. On the other hand, a full stomach was valued for "home is where one eats one's fill."

262 562 262 220 At maturity, when farm and other tasks were shared as equals, men and women ate almost the same food. The old proscription against animal food for women was somewhat relaxed, but not entirely. To sustain farmers during the seasons of hard work, however, extra quantities of rice and rice alone, were considered essential. "With-rice" was pleasant but not so necessary. Any shift away from a diet of rice as ordinarily cooked in Bang Chan was construed as a shift either in occupation or in health. For example an eminent citizen who gave up farming took to eating (3)khaaw (3)tom often. This soupy [253] rice, a staple dish for infant feeding, had interesting socio-economic connotations. It was served as a light lunch to cooperative farm-workers to be followed at the day's end by a real meal. It was also "delicate" food, suitable for the sick, for city-people, for those who did not toil with their hands and backs. Consequently, when this man ate this "delicate food" more often, he was consciously or unconsciously serving notice on the community that he was not going to do farm work any more, for (3)khaaw (3)tom could not possibly have sustained a farmer's strength. Caustic villagers hinted that he was putting on airs.

262 843 846 Among conditions in which some change from the usual diet was found were pregnancy, post parturition and lactation. Relatively few foods were generally considered to be tabooed under any of these conditions, but many women preferred to limit intake to "safe" foods if there were any possibility that certain foods might cause harm.

[124] Information was obtained from 42 mothers about the food they ate during the post-partum rest period. Two said they ate as usual, but for the remainder, the diet was considerably

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[192] 1. Literally "beautiful rice." For method of cooking, see p. 33.

4:Phillips E-4,5 (1956-1957) 1966
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since there is always sufficient fish in the canal for an abandoned spouse to feed himself,[23] the departure of a wife or husband need not, from a functional point of view and the point of view of most villagers, work any great hardship on the individuals involved. This suggests that not all social systems are equally demanding in their functional requirements for people to conform. The importance of this point is taken up in the final chapter.

It is recognized, of course, that the sociological simplicity of Bang Chan represents a necessary, but not sufficient, condition for the nonconformity found in the community. There undoubtedly are many cultures which are functionally and sociologically less complex than Bang Chan but where culturally defined requirements for interpersonal conformity are considerably greater. I would suggest that the loosely structured nature of relationships in Bang Chan is due primarily to psychological and philosophical ("world view") factors and is *permitted* expression by the relatively undifferentiated social system. A more complex, highly differentiated social system, one whose functioning is completely dependent on the technical competencies of its members and on their meeting each other's expectations (a factory system, for example) obviously could not afford this luxury.

It might be noted that, in the example cited earlier regarding the movie-going field assistants, one of the reasons for my consternation (over and above my being an American) was the fact that these persons were highly trained individuals who could not be easily replaced. Their temporary departures were strain enough; had the departures been permanent, it would at that point have paralyzed the research. In this respect, their behavior was typically Thai, but the situation in which they found themselves was not.[24]

The ultimate psychological sources of the villagers' tendency toward loosely structured relationships are not easily determined. (The indeterminacy here is inevitable. It derives from the impossibility of ever being certain whether the loose relationships are actually consequences or causes of these other factors, or whether both are expressions of a single, under-

[23] This is just what one informant, a female, said when her husband left her. The sociological simplicity of Bang Chan is also supported by the slight differentiation that villagers make between the adult roles of the two sexes. In contrast to all other known cultures, in Thailand both men and women may serve as midwives and do plowing. They both own and operate farms, inherit property equally, share equally in the property brought to a marriage and divide it equally in case of divorce. It is not uncommon to find men tending babies while women are off on a business deal; nor is it unusual, as indicated earlier, to see women paddling right along with men as crew members in a boat race. (See Sharp *et al.* 1953 for an amplification of this point.)

[24] In fact, this event is a perfect illustration in microcosm of what was referred to in the introduction, following Inkeles and Levinson, as "personality-institutional noncongruence."

4:Phillips E-4,5 (1956-1957) 1966
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114 villagers of Bang Chan. Although in their eyes he probably never ceased being identified in some ways with the *farang*, he was defined primarily as "one of us." He helped reinforce this definition by referring to himself and the villagers as "we Thai" or "we Thai farmers," as contrasted with the *farang*. Often, not out of any enmity but simply because he had a ready foil, he would make fun of my *farang* ways for the benefit of the villagers. It was conduct like this, repeatedly expressed, that permitted him later to ask the villagers their opinions of the *farang* without raising any eyebrows. On the other hand, when the need arose, he readily assumed the role of the gentle, guiding, probing representative of the research who, in his efforts to get the villagers to participate, would appeal to everything from pride in country ("Don't you want the *farang* to know the true way we Thai people think") to the principle of reciprocity ("We do a favor for *Aacaan* Herb by helping him pass his examination, and he helps us by bringing us fame").

The two female graduate students who worked part-time were not as distinctive as their male counterpart, but in their own way, were equally as effective in the research. One was the daughter of a high-ranking Army Officer School teacher; the other was the daughter of a low-level bureaucrat. In their early twenties, they had been closest friends during college and graduate studies. To a certain extent, they were prototypes of the upper-middle-class, college educated Thai female.[3] Confident about their 114 • 562 579 professional abilities and aware of how much they are needed, they are caught in the conflict of whether to participate in "worldly affairs" and thus become independent and admired social leaders, or to become wives and mothers, and thus live in the shadows of their husbands. Their problem, unlike the case in the United States, is that both alternatives are equally valued and equally available and that because the social need is so great, they can actually become leaders with not too much effort. The conflict is further aggravated by the fact that they come from the social class that emphasizes a double sexual standard. At the same time as they are expected to be assertive and competent in their jobs, they are also expected to be sweet, docile, and compliant females. They resolve this conflict to a large

[159] [3] The daughter of the lower-level bureaucrat had this status by virtue of her own accomplishment, not her father's. In fact, one of the most touching scenes I ever observed in Thailand was when the girl's entire family assembled at Don Muang Airport to see her off to the United States where she had won a graduate fellowship. She had become the hope and pride of her family. Her mother, in the traditional cropped hair style of the Thai female and her mouth stained with betel juice, was trying to stand on the pair of oversized high heels that she had bought especially for the occasion. Tears were flowing down her eyes, both in pride over her daughter and because she could hardly walk on her first pair of "modern" shoes. My male assistant, in his inimitable way, turned to me and whispered: "Khun Maeae [the honored mother] wants to be just like her successful daughter."

4:Phillips E-4,5 (1956-1957) 1966
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extent by becoming succoring females—taking care of the less fortunate, seeking opportunities where they can help others, and the like.

The relevance of these remarks to the work of the assistants in Bang Chan is that they represent the attitudes the girls brought into play in their relationships with the villagers. In the eyes of Bang Chaners, they were well-educated, high status city girls who combined the finest qualities of the Thai woman. They were not only clever because they carried clipboards and spoke two languages but they were "good" girls who used "sweet words" and proper terms of address and "brought us medicine when we were ill. They knew how to help farmers." In contrast to my own practice—which was to give villagers aspirin only if they explicitly asked for help, or if the problem was more serious to plead incompetence—their actions were entirely spontaneous. In the same way, villagers would often wonder why after working all week at the university, these girls would spend their Sundays and holidays in Bang Chan. The answer was not hard for them to find: "These girls have much progress. They want to help the nation and themselves. So they come here and work for *Aacaan* Herb. This will help them go to America. And then they will have more progress." Although this motive may have entered into the assistants' decisions, a more important reason was the simple pleasure they derived from listening to villagers bare their problems and preoccupations. By giving of their time and interest they were fulfilling their own best image of themselves.

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A final word should be said about the various relationships existing among the assistants and myself. The relationships that developed among the assistants themselves was perhaps the ideal Thai adjustment to the unique situation in which these three young, unmarried people found themselves: they began to treat each other like brothers and sisters. Theirs was not a perfect sibling relationship—not even in the fictive sense, for they were keenly aware of their differences in background and of the desirability of keeping romantic considerations out of the relationship. However, their very differences in background helped form a bond of mutual respect.

Their attitudes toward the author were more complicated. Although in many ways they treated me too as a sibling, their attitudes were forever colored by the fact that I was a *farang*. On the positive side, this meant that they respected me for my technical training and knowledge, and for my obvious concern about learning as much as I could about the villagers. By the same token, however, they would frequently become annoyed by my inability to see things which in Thai terms were obvious, or by my insistence on probing matters that in their terms were either unanswerable or better left unexamined. Their attitudes toward me were not too different

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as apt to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	38%	(40)	86%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	50%	(67)	85%	(76)
One or more	57	(24)	88	(43)

*Male farmers only

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However, no such relationship was discerned between these culture contacts and trying out either fertiliser, tilapia, or mushrooms.

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Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out, is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

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Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

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The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertiliser or mushrooms.

admit in response to a direct question* that they have a debt. Confidence in the validity of these responses as an index of indebtedness is increased since the expected correlation between indebtedness and ownership of buffalo is reflected in the survey data.

TABLE 23. INCIDENCE OF REPORTED DEBT IS HIGHER AMONG VILLAGERS WHO REPORT OWNERSHIP OF MORE BUFFALOES

	Reported Ownership of Buffaloes		
	None (81)	One to three (153)	Four or more (97)
"...Do you now have a debt?			
Yes	49%	56%	69%
No	51	44	31

When the use of agricultural innovations is examined for those farmers who say they have a debt, compared with those who deny it, it becomes apparent that there is a relationship only between indebtedness and use of the motor but not with any of the other mentioned innovations. Seventy-nine per cent of the male farmers who said they have a debt own or use the motor; among those who claim they have no debt the proportion owning or using the motor is significantly less (60 per cent).

TABLE 24. INCIDENCE OF MOTOR USE IS HIGHER AMONG FARMERS WHO REPORT INDEBTEDNESS

	"...Do you now have a debt: "Yes (125)	"...Do you now have a debt: "No (105)
Motor		
Has used it	79%	60%
Never did	21	40
Tilapia		
Has tried it	37%	33%
Never did	63	67
Fertilizer		
Has used it	14%	16%
Never did	86	84
Mushrooms		
Has tried them	45%	48%
Never did	55	52

**Male farmers only

* The question: "...I'd like to ask about a problem common in rural places all over the world. Do you now have a debt or not?" Janlekha's M.S. thesis, ibid., reports a similar distribution of indebtedness for his sample of 96 farmers.

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TABLE 26. INCIDENCE OF HOSPITAL AND CLINIC VISITS IS SIMILAR FOR ALL AGE GROUPS

Have you ever been to a clinic or a hospital?	20-29 (41)	30-39 (80)	40-49 (85)	50-59 (60)	60 or over (57)
No, never	31%	31%	36%	37%	41%
Yes, for treatment	39	44	39	31	31
Yes, for other reasons	29	25	25	32	28

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If the responses reflect primarily the need for medical care, women who bear children have a greater need for medical care than men, and one would therefore expect hospital use to be higher among women than men. But again, this hunch is not clearly borne out by the results.

TABLE 27. INCIDENCE OF HOSPITAL AND CLINIC USE IS SIMILAR FOR MEN AND WOMEN

Have you ever been to a clinic or a hospital?	Women (90)	Men (243)
No, never	41%	35%
Yes, for treatment	31	39
Yes, for other reasons	28	26

There is, then, reasonable justification for inferring that reported use of clinics or hospitals reflects predisposition to use modern health facilities and not simply a need for medical care.

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Economic Level

Although higher economic level was linked to the principal agricultural innovations, it is not related to use of hospital or clinic facilities.

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Literacy

On the other hand, just as literate persons were more disposed to use the major innovations (p. 19), in the same way those who can read and write report a greater incidence of hospital or clinic use.

Chapter 1

THE COMMUNITY OF BANG CHAN

The Geographical Setting

In the populous flat central plain of Thailand where Bang Chan was located, fenceless geometric rice-fields, dotted by clumps of trees, stretch as far as the eye can see. Houses, clustering occasionally into hamlets, line the canals that serve for domestic use, drainage, irrigation, and communication. A few rounded-up roads lead out from Bangkok, the national capital on the Menam Chao Phraya, the great central river.

The monsoon divides the year into three seasons: a hot and wet (late May through November); a cool and dry (December to mid-February); and a hot and dry (late February to mid-May). The temperatures range annually from 59° to 89° F. (15° to 32° C.) with monthly means of 77° to 86° F. (25° to 30° C.) (de Young:5). A drop at night averages around 18° F. (10° C.) in April, and 22° F. (12° C.) in January, while the relative humidity varies between 65 per cent and 81 per cent (Hauck, et al.:12). Rainfall averages about 50 inches a year, 40 of which fall in the wet season (Janlekha:21). Because of the run-off from the mountains in the north, once a year the Menam Chao Phraya slowly rises, fills the canals and then overflows its banks, covering the plain for hundreds of miles to a depth of three feet or more. In Bang Chan, the water stood on the land from June until January, with its peak in October. From February to May the canals ran low, and the land dried and cracked from the intense heat.

The Community

In 1954, 1700 persons (336 families) lived in Bang Chan. Muslims, comprising 10 per cent of the population, lived as fully Thai citizens in all parts of the community in economic and social symbiosis with Buddhists. A few ethnic Chinese had married into Thai families and were accepted.

The community spread over an area of about 7000 rai (1000 hectares or 5 square miles). Bang Chan Canal bisected

278 [563] The Chinese druggists, many of whom stocked among their traditional pharmacopeia a few modern medications, gave out occasionally to their customers information derived from the manufacturer's instructions for use. People with minor indispositions sometimes sought a druggist's advice. He suggested traditional or modern remedies, depending on the wishes of the customer. Thus, the druggists also acted as a bridge to the use of modern remedies.

484 Facets of Social Life Pertinent to Childbearing:

Communication and Transportation

People went to Minburi, and less often to Bangkok, to buy, sell, work, or visit relatives. A few adults had never been outside Bang Chan.

494 [484] [206] [493] Along the road buses passed Bang Chan every two or three hours during the daytime only. Minburi was a ten minute ride, Bangkok, an hour. Minburi had no taxis, and no telephones existed to call a taxi from Bangkok. Two or three persons owned bicycles.

505 484 Within Bang Chan, transportation varied with the season. From June to February travel was entirely by boat, even to a neighbor. A message to a local midwife, for instance, could be carried quickly by a speedy paddler in his skiff. If an emergency trip to the Minburi Health Center appeared necessary, a person could be rowed fairly comfortably along the canal that bordered the road. Going by boat to Bangkok, a whole day's row away, or four hours by the motor boat from Minburi, was not considered convenient even for passenger traffic, much less for a sick person or a woman in labor.

484 844 [494] The inconvenient time of year was the three month dry season. Boats then could hardly go on the canal that ran through the middle of Bang Chan, while the smaller canals became muddy or even dry. Walking barefoot over sharp stubble in tropical sun was hard. To transport a woman in labor, assuming she could stand it, an improvised stretcher could be made, but to subject her to the jolting bus was usually foolhardy. It was not customary to flag down passing cars. If things went wrong for a woman in labor during the hot, dry season, there was practically no chance of getting her to a hospital, and none of getting modern help to her.

243 Work Habits in the Economy

433 Because of the annual flood the land was admirably suited to growing a single bounteous crop of rice. After all needs fo

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132 Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, 361 dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was 161 composed of seven neighboring hamlets. In 1954, the population 162 was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family [463] size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

243 The climate together with the overflowing Chao Phraya [13] river, provided natural conditions for raising a single crop [221] of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, [433] feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re- 621 ligious exercises, was also the center of social life in the [795] community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. [563] Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part [028] of the Thai-Buddhist community. Information to be presented on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

193 Although for six or more months of the year the fields 243 were covered with water, sometimes to a depth of a meter or 491 more, a year-round road, connecting Bangkok and Minburi, the 484 nearest market town, ran through one edge of the village. Bus 487 service was available along this road, to either Bangkok or [494] Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, [503] on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

443 Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at either seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

Attitudes Toward Food

262 To older Bang Chan residents, to lack rice was to starve
[26] even though fish or vegetable fare were at hand. Since rice
262 was the staff of life, many important customs clustered about
243 it. Ceremonies to the Rice Goddess accompanied the raising,
[187] selling, and storing of rice. When the unhusked rice was in the bin, it could not be withdrawn at any time as needed, but astrological charts had to be consulted to make sure the day was auspicious. Paddy could never be withdrawn on Friday, a [189] day sacred to the Rice Goddess. After cooking, the best rice was said to be at the mouth of the pot, so this was offered on ceremonial occasions. Important rules were that when cooking rice, the cover of the pot must never be laid in a mortar and it must be inverted, never laid down flat; otherwise one would be short of rice. One must never scrape the top of the rice with the cover, or the "soul" of the rice would be scraped [184] out of the pot. Moslem residents murmured an Arabic prayer [543] every time the rice was put into the pot, and every time the pot was put onto the fire, as well as before eating.

261 Rice has been generally regarded as the strength-giving
262 food par excellence. A portion of Chutima's (1939) description of the "old system" follows:

> Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal. Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply.

The quotation indicates first that in the past, rice was considered much more important as food than the "with-rice" [650] dishes. Since the Food and Drug Division of the Ministry of Public Health has been attempting to encourage the eating of more "with-rice," the attitudes found in Bang Chan are of interest. One informant stated that only rice can make children fat, and that the "hot taste" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish, and was weak; he refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk (evaporated or dried milk, diluted with boiled water) expressed the opinion that the ancient belief was based on thrift. He said that thrifty

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 441 Before War II, the problem in rice marketing had been one of alleged usurpation by the Chinese middlemen -- the rice dealers and the millers. Expert organizational ability, it has been observed, has put the Chinese in control over the internal rice trade of the country. Even now, all the five rice dealers operating in Bangchan are Chinese, and the three largest rice mills in the market town of Minburi are owned and operated by the Chinese. The other rice mill -- the smallest of the four in operation in Minburi -- is owned by a Moslem.

243 441 435 563 Ingram observes that the postwar system has had the effect of increasing the number of Thai middlemen and exporters. The fixed buying price of the Rice Office introduced a degree of stability into the paddy market and enabled Thai middlemen to compete with the Chinese. Formerly, the price of paddy fluctuated wildly from place to place and from month to month because of the variety of measures used in buying it, because of seasonal variations, and because of the many transactions involving merchandise or loans. Thai middlemen did not have the working capital, the experience, or the trading ability to compete with the Chinese under those conditions. But when the millers' buying prices became fixed within narrow limits for long periods, the middleman function was greatly simplified. No doubt other factors were involved, but people in the rice trade consider the greater stability of prices to be of major importance in the rise of Thai middlemen.[7]

7. Ibid., p. 92.

243 441 663

Relative to the enormous problem created by export and exchange control, the internal marketing problem now appears to be small at least in its relative effect on rice growers. It is true that the Chinese combines in the forms of Rice Dealers' Association and Rice Mills' Association have consolidated economic influence in favor of the Chinese middlemen in Bangkok. But it is equally true that competition among the Chinese rice dealers and millers in the countryside also has worked to the advantage of growers.

It has been observed that the Chinese dealers in Bangchan offer prices to farmers that scarcely differ from prices that the farmers could get from the millers if they were to break the existing pattern and deal directly with the millers themselves. This would often be possible because most of the local farmers possess the large chala boats needed to convey paddy to the mills which are only a few miles away. Actually, the Chinese rice dealers and Bangchan farmers have been observed to be in a rather efficient state of economic symbiosis that compares favorably [186] with most inter-ethnic divisions of labor. Further attestation is found in that there appears to be extremely little anti-Chinese sentiment among the villagers, and this is despite the fact that the national government has from time to time taken somewhat spirited measures against the [426] Chinese. The favors, non-interest bearing loans, and good will gestures accorded the Thai farmers by local Chinese dealers should also be taken into consideration.

4:Phillips E-4,5 (1956-1957) 1966
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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[6] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

[6] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost a Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

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SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

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4:Phillips E-4,5 (1956-1957) 1966
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858 828 child is clearly a social inferior, and is due all the prerogatives of his position: he is to be dealt with gently, kindly, and benevolently, with sympathetic regard for his incompetence; correlatively, he must be taught to express deference and obedience to superiors. Rather, the equality awarded the child results from the recognition that in the workings of the cosmic scale it is impossible to ascertain what the child could once have been or eventually will become, and he, like any soul, is always *potentially* of the same value as any other person. It is precisely for this reason that most Bang Chaners, if they mention it at all, are only mildly pleased rather than particularly proud that one of their own grew up to become an admiral in the Thai Navy. It comes as no great surprise that such a thing can happen. To them, it is no more unusual than that the prime minister himself should be a person who was born and reared in a village. (By the same token, the peasant background of these two individuals creates no special sense of personal identification with them on the part of the villagers. They are perceived simply as two unique *individuals*, their peasant roots being viewed as only one of the literally countless factors that made them what they are today.)[27] To a large extent, the equality of the child derives from the premise that he is not so much a child as he is a human being who happens to be at a particular stage in his ontological

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time). When probed further and asked if their parents' training may have had any influence on these individuals, they replied "yes" and "maybe" in the case of the admiral, but disavowed all parental influence in the case of the *nagkleeng*. A few said that the *nagkleeng* became that way because of bad friends.

One villager, phrasing his comment as a personal conjecture, volunteered that [115] the notion of parents being the major influence on a child's character is a "modern" idea. Another informant, the wife of a school teacher and well versed in her husband's teaching training manual (prepared in Bangkok by Western-trained educators) argued that a person's character is dependent "mostly on the influence of the home and school." However, since on other occasions she complained to me that one of her sons "does not have an *ʔupanidsaj* for studying, and there is nothing a parent can do but let the child have his own way," it would suggest that her commitment to the pronouncements of her husband's mentors was not too well internalized.

To avoid confusion, it might be added that from a historical point of view only one of the above cosmological forces (*kam*) is strictly Buddhistic in origin. The others are either Brahmanic (*khwaan* and *phroomlíʔkhíd*) or traditionally Thai (*ʔupanidsaj*, *winjaan*, and *caj*). Of all the terms, *kam* and *ʔupanidsaj* are the ones most frequently referred to when discussing an individual's character.

[27] It is precisely for this reason, as I indicated in an earlier writing on Thai social [565] structure (see Sharp *et al.* 1956: 163) that Thai society "cannot be said to have a [571] class system in the classical European sense of the term." People identify with others [554] as individuals, not as representatives of social classes.

The very fact that individual peasant boys can climb the social ladder to attain some of the highest social positions of the land, without it even being considered particularly noteworthy, attests to the fundamental equalitarian nature of the ideas underlying the Thai social system despite the obvious emphasis given to status and hierarchy in individual face-to-face relationships.

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521 innovative impulses are recreative or aesthetic, either in content or form.
522 Simply stated, the reason Bang Chaners may spend more time than West-
182 erners in telling amusing stories to each other is because they feel they are gaining something new and worthwhile from the experience.

Politeness: A Social Cosmetic

57 It has been previously noted that the villagers' ubiquitous politeness appears in several different forms: sometimes it is associated with a genial interest in others or a concern over their welfare and comfort; at other times it is used as a means of handling one's anxiety over the intentions of others or one's uncertainty over the nature and purpose of the relationship; and at other times, it is used as a means of impressing others or getting in their good graces. The term "social cosmetic" is used here because it embraces at one time all these varying usages. A cosmetic not only makes one appear more attractive and conceals one's blemishes, real or imagined, but permits one to deal with others more easily and comfortably. The last consideration is in part a direct consequence of the first two, that is, a person who feels he is attractive to others will in all likelihood be more relaxed in his relationships with them. However, it is probably also a product of the conventionalized, relatively explicit interactional "frame" [12] that the very wearing of the cosmetic creates. The cosmetic indicates that regardless of his basic intentions, the person will conduct himself properly and agreeably; it defines the presence of and prompts conformity to certain behavioral rituals which simplify for the participants the kinds of behavior they may express. In a sense, the cosmetic of politeness represents one of the most "civilized" modes of social interaction: it is based on a fundamental concern with structuring one's behavior (again, irrespective of intentions) so as least to disturb others and thus permit them to act in socially easy, uncomplicated ways. Further, it stresses respect for the dignity and psychological integrity of others. The actual topic of conversation or non-verbal ritual that links the participating individuals together may be either meaningful or inconsequential, but that is essentially irrelevant when compared to the fact that the respect the participants feel for each other is being communicated. In

[12] This term is somewhat akin to what Goffman (1959: 22–24), in his attempt to analyze behavior in a dramaturgical framework, calls the "setting" or the "scenic aspects" of the interactional situation. However, Goffman's terms refer explicitly to the physical layout—the furniture, decor, and the like—of the behavioral situation rather than to the psychological "setting" that is created by the behavior of the participating individuals. On the other hand, his term, "personal front," refers exclusively to the attributes of individuals, rather than to the situational definitions that they create. The term "frame" used here refers to the psychological setting which is created by the behavior of individuals and which defines for all participants the nature of the situation.

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essence, much of the villagers' interaction is based on certain formal, rather than substantive, considerations,[14] the net effect of which is to minimize the impact that they might have upon each other but to maximize each person's sense of psychic independence and integrity.

Our phrasing here is principally in analytic not evaluative terms. However, it should be clear that from an evaluative point of view, there are both "positive" and "negative" consequences to the continuing use of this interactive mode. On the positive side, the villagers' politeness contributes to their extraordinary tolerance for nonconformity, personal deviance, failure, or the inability of individuals to live up to standards. In effect, the villagers seem to be saying that if another person is poor, weak, stupid, or naïve, that is essentially his own business (or problem), not cause for ridicule or even amelioration. People are publicly accepted and respected for what they are, despite their shortcomings. The sense of psychological security that such treatment affords is clear: it means that no matter what an individual's status or personal qualities may be, he can generally expect to be treated well by others. The canons of courtesy require this. On the other hand, to have to be continually sensitive to one's effect on others is, from ego's point of view, not without its psychic costs. Thus, although politeness is aimed at keeping social relationships smooth and uncomplicated, it frequently results in a lack of spontaneity and in the inhibition of genuine feelings. A cosmetic is supposed to enhance one's natural qualities, but inevitably it also conceals them.

To what extent this concealment "troubles" the villagers is most difficult to determine. There clearly are circumstances in which certain negative consequences follow directly from such concealment. But whether villagers are generally unhappy because they cannot express what they feel is problematic. Their admiration for individuals who "speak their feelings from their hearts" is occasionally unmitigated; but far more frequently, they speak of the "kindness" and "good hearts" of those who hide their feelings "so as not to hurt others."[15]

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[14] All interaction is of course based on *both* formal and substantive considerations. The issue here is the relative emphasis given to one over the other, and how one may even be used as a substitute for the other when presenting the self.

[15] The case of Dang (Hanks and Phillips 1961) referred to earlier is an excellent example of the kinds of difficulty that may follow from the concealment of one's real sentiments. Dang's story is a somewhat plaintive tale: how, because of his anxiety about revealing his true feelings to his father, uncle, and aunt (his social superiors) he lost a house, some land, and married a girl he "did not quite want to." Yet at all times he maintained courteous relationships with all concerned. What is most significant about Dang's case, however, is the position of psychic isolation to which politeness brought him. Basically, Dang substituted in his relationships with his relatives the *form* of politeness for the more enduring *substance* of love, loyalty, and obligation. Rather than trust to the strength of such sentiments to help resolve his

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are social peers, the Bang Chaners would easily turn the conversation to a discussion of the technical aspects of rice farming or even gambling. The latter would likely be discussed with a social superior only after some acquaintance. On the other hand, if one were clearly the other's superior, the superior would probably talk not about the methods of rice farming but, more generally and benignly, inquire, "Is all going well with you? Is there any way I might help you?" He might even proffer some unsolicited advice or aid. The tone and theme of the conversation would be expressive largely of the superior's concern with the welfare of his new-found friend, which the latter would typically accept.

All this is usually accompanied by gentle laughter and careful attention to appropriate pronominal forms. The good host will also serve his guest rain water, and if possible, scented rain water. If opportunity and finances permit, he may even offer him a warm Coca-Cola. The youngster who will actually serve the refreshment will make sure that it is on a coaster and that his hands are in the proper ritual position when he offers the drink to the guest. Such are the ingredients from which potential friendships are made.

Although the particulars of the kind of politeness found among family and friends are different from the above, the forms are essentially the same. Villagers do not talk about the funny accents of the people who live next door to them, nor do they rush to serve scented water when a brother comes to call. But they do take pains to express respect for each other by using proper honorific and pronominal forms, by looking to the oldest competent family member for advice, by talking of subjects that are pleasant and amusing, but never threatening or embarrassing.

The avoidance of embarrassing topics—even when the airing of such topics may be crucially important or beneficial to one of the parties concerned—is one of the most pronounced facets of village social life. To a Westerner accustomed to outspokenness, the types of situations that villagers define as embarrassing and the lengths to which they will go to avoid them sometimes appear to border on the sado-masochistic. Detailed interviews with two women whose husbands had taken second wives, for example, indicate that although at the time they were deeply disturbed by their husbands' actions (primarily for economic reasons; secondarily for emotional-sexual ones) they never once even brought the subject up with their husbands. They explained that they were too *?aaj* (embarrassed) to do so. In neither case was this embarrassment expressive of any feeling of inadequacy on their parts (the fear of hearing their husbands say, "I took a second wife because you are not adequate"). It was prompted rather by the desire to avoid an awkward and potentially rancorous confrontation. They did not want to put anybody on the spot. (Whether such a confrontation would *actually* lead to overt rancor is almost impossible to ascertain because

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181 it in fact so rarely takes place. In fact, the "hypotheses" of these women are
152 perfect manifestations of what, in the technical sense, is *anxiety* rather than
•57 *fear* about what might occur.) The marital situations of both these women
*156 have since been routinized so that they have come to accept the second wives as part of their normal domestic lives. However, the vehemence with which they report these incidents indicates that at the time they paid for their wish to avoid embarrassment with considerable psychic distress. In terms of the basic attitudes involved, these situations were not too unlike that which obtained for Dang: to avoid a potentially sticky social situation, politeness and complete silence were maintained.

Somewhat different order from the above are the numerous instances where "good friends" will avoid reporting to each other unhappy or distressing information although it is clearly to the other's advantage to have such information in order better to cope with the difficulty. In one case, a villager had been working for weeks on a land sale deal which would have netted him a brokerage fee of two thousand *baht* (approximately one hundred dollars, a considerable sum in a community where the average annual family income is, before expenses, only eighty-five hundred *baht*). A friend had meanwhile learned that another villager, with whom he was not at all close, had sweet-talked the customer into permitting him to handle the sale, much to the detriment of his own friend, the original broker. However, rather than warn the friend of what was happening, he simply said nothing. When asked to explain why he kept his silence, he said that he was just too *ʔaaj* to speak up. Although the consequences of "ʔaaj-ness" were in this case more extreme than usual, the situation itself was not. In another, less dramatic instance a villager mentioned to us that in coming across the rice fields that afternoon he had noticed that his neighbor's windmill had broken down. The belt connecting the windmill to the irrigating machine used in raising water into the fields had slipped from the drive shaft. However, despite the obvious importance of this fact to his neighbor—the planting of his rice seedlings was completely dependent on the noria raising a sufficient amount of water into the field at the right time—the friend failed to tell his neighbor what had happened. When asked why, he said that he was *ʔaaj* about making his friend unhappy.

181 What is important about the above illustrations is not so much their
152 typicality—one can cite instances where friends are considerably more
*156 realistic and helpful—but rather the legitimacy of the rationalizations of the
[578] inactive friends. All Bang Chaners can understand and accept the reluctance of a villager to be the person who actually triggers off another individual's discomfort. There is a genuine (albeit misplaced) sense of responsibility about not making another unhappy. What is important is the immediate, face-to-face situation. If a person must ultimately suffer, that is his own problem; but at least the friend can say, "I did not 'cause' it."

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Villagers also recognize the reluctance of an individual to become involved in another person's problems on the grounds of avoiding the accusation of *actually* having caused them. They say (but again, empirical instances of this type are very hard to find) that frequently the person with good intentions is turned on by the very friend he is trying to help, for example, "Since you know so much about the broken windmill perhaps you were the one who broke it!" Both these attitudes result from a rather overinflated view of one's importance to the friend, as if the friend would be more concerned with the agent of information than with the information itself. This is not so much a confusion of means and ends as a re-identification of them. Finally, some of the villagers' reluctance is probably also due to simple indifference or laziness regarding the plight of the friend.

Other expressions of the "ʔaaj-ness" complex are more clearly altruistic than the above. Villagers explain, for example, that the reason there is never any more than one candidate for the post of hamlet or commune headman, on the rare occasions when such elections are held, is to avoid embarrassing the individuals involved. The eventual headman would be embarrassed because the presence of a competitor would suggest doubt about his competence; the candidate who lost would be embarrassed by the very fact that he lost. To avoid hurt feelings, only one candidate is presented, voted on, and elected.

We have been talking above about politeness primarily in a negative sense, that is, about the lengths to which villagers will go to *avoid* discomforting others or upsetting peaceful relationships. This aspect was stressed because its expressions represent a somewhat unique form of patterned social interaction. However, the many positive forms of the villagers' politeness to friends and kin should not be minimized: their concern with choosing topics of conversation they think will interest or entertain others; their search for opportunities to flatter them, sometimes in pseudo-mocking fashion, but more often to make them feel good; their attention to providing others with a pleasing audience—being silent, attentive, and eager when others are declaiming on a favorite subject. Of course, many times the villagers are not listening, but they try to behave as if they were. The aim here is to make others feel that what they are saying is worthwhile. An important part of this is that one almost never directly challenges the veracity or logic of the speaker's statements. If disbelief is the only appropriate response, it should be done silently. Nothing except personal pain and interpersonal tension would be gained from a direct challenge. If one feels strongly enough about the issue, which is very rare,[16] the presentation of an *alternative* view would not be inappropriate. But one

[16] The rarity of strong feelings is due to the fact that so often the very purpose of such conversations is to convey politeness and nothing more. The actual topic of conversation is simply a medium of contact, not a matter to be seriously discussed.

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• 57 must be extremely careful not to phrase it as a direct refutation of the speaker. Again, there is present in this approach the Thai assumption that the most important aspect of a social relationship is the psychic comfort and welfare of the persons involved, not the truth or validity of the matter under discussion. The overriding ethic is that each person not only has a right to be heard, but should be made to feel comfortable as well.

57 152 *156 Related to the above, but distinctive enough to require a category of its own, is the form of politeness expressed in the villagers' nervous laughter and in their preoccupation with inconsequential topics of conversation. Laughter and smiling is such a universal attribute of Thai demeanor (an early volume on Siam by W. A. R. Wood was in fact entitled *Land of Smiles*) that it is not always easy to distinguish precisely between this particular form and other more relaxed expressions of lightheartedness. From the point of view of social intention—to be appealing and inoffensive to others—they are probably not distinguishable. What sets this form apart is mainly the situation in which it is found: a villager is apt to laugh nervously when talking about unhappy or unfortunate experiences. Likewise he will laugh or resort to inconsequential topics when trying to get something from another person or knowing that someone is trying to get something from him, in either case being unsure of how the other person will react; when meeting a person, often of higher status, for the first time and feeling compelled to relate to him, but not knowing quite how. Again, this mode of interaction is clearly not unique to Bang Chan. However, villagers resort to it so frequently, or define so many situations as the kind necessitating its use, that it emerges as one of the most salient modalities of Thai interaction. In a sense, the nervousness that is betrayed indicates some of the internal strain that villagers undergo in maintaining a constant front of politeness.

152 *156 828 It should be noted, however, that they are well aware of their uneasiness: they will often admit it to you in more relaxed moments. Also, other villagers in attendance can immediately spot it, and will tell you that the person was nervous. What is so characteristically nice about the villagers, however, is that they will almost never take advantage of a person's nervousness to score a point for themselves. Uneasiness is defined simply as a neutral personality trait, part of the way in which an individual presents himself and not a symptom of psychic weakness. In fact, from the point of view of influencing the purpose or direction of an interaction, it is usually ignored. What is *socially* important is that a person act nicely, not how he feels about the way he acts; the latter is his own business. It might further be noted that the recognition of one's own uneasiness, without at the same time feeling threatened by its exposure, is symptomatic of the villager's relatively strong ego structure. A Bang Chaner can maintain a certain

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to be somewhat nervous. Like the conversational topics mentioned above, its purpose is to maintain social contact, but at a minimal substantive level.

Other uses of giggling are less consciously purposeful than the above. Perhaps the most frequent instance of this is when villagers are talking about or responding directly to an unfortunate situation: a flood destroying the rice crop, a friend or relative dying or being beaten up, a person committing suicide. Giggling under these circumstances seems to represent several related sentiments. On the one hand, it indicates a slight feeling of embarrassment over having discovered something or talked about something which would have been better left undiscovered and undiscussed. At the same time, it is an attempt to make light of the misfortune by suggesting that the speaker and those present should not be overly pained by what they are encountering. Giggling here serves very much the same kind of function as the phrase *maj pen raj* ("it is nothing") referred to earlier; it is a means of shrugging off and denying a feeling of distress. Finally, giggling often is also a kind of ironic commentary on the human situation—not in any abstract philosophical way, but in the sense that a tragedy is so often actually felt to be a comic exposure of human hopes and intentions. A little exchange between the writer and an elderly villager perhaps best illustrates this. During one of the two rainy seasons I spent in Thailand, the rains were especially heavy in the Central Plain and destroyed the rice crop of many Bang Chan farms. As might be expected, it was a topic of considerable discussion. Paddling down the canal one morning, we met a villager who was returning from inspecting his fields, and we stopped to chat. The discussion inevitably turned to the flood, and he told us, in a completely matter-of-fact way, that he had already lost about 50 percent of his crop. He then giggled nervously over what he had said, and followed it up with, "But that person over there has lost everything." His giggles then turned into laughter as he nodded his head in an attitude of pain. Months later, when things were considerably more comfortable for the villager (as it turned out, he had lost only about 5 percent of his crop) I recalled our meeting and asked him what he thought was so funny about the flood. He did not remember, but volunteered in a nice, didactic way: "When something like a flood happens, all you can do is laugh."

Giggling is also a favored mode of dealing with the countless situations that arise in daily life that are perceived by the villagers as potentially, or imminently, embarrassing. Here giggling is a substitute for an explanation of one's actions, particularly those that are considered annoying to others. Villagers who have missed an *important* appointment (lesser ones are missed with few qualms) will tend to giggle when they finally meet the person and there is the slightest indication of the latter's displeasure.

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Giggling is very often used in the marketplace when an item must be bargained over. Similarly, a villager who wants to quit working for another will usually preface his request with some giggling, although equally often he will just leave—saying absolutely nothing—and will later send a middleman to collect his wages and make the severance official. The latter alternative is prompted by the desire to avoid *all* awkwardness.

The third major form of the villagers' politeness—that associated with making a good impression on others—has to a certain extent been covered by the materials already presented. Thus, in terms of the actual manifestations, there is really little difference between flattering another person, for example, because it will make him feel good, because it will make getting something out of him much easier, or because it will make one appear much more attractive in his eyes. However, it is clear that the motivations in these three cases are all quite different. It is for this reason that this last category has been introduced. When villagers meet another person whom they regard as significant (and this by no means includes all their contacts) they do put forth considerable effort to make a good impression on him. And being polite—courteous, helpful, flattering—is one of the most suitable means for achieving this effect.

Discussion of this interactive mode would perhaps not be necessary were villagers themselves not so keenly aware of it. Village children are continually and consciously taught, by word and deed, the necessity always to put their best foot forward (cf. the earlier illustrations in *Characteristics of a Good Person*). Bang Chaners assess themselves and others in terms of their capacity to make themselves appealing: both the "good" and the "competent" person is one who can make himself attractive by speaking softly, gently, and if possible, beautifully and cleverly. Often villagers take offense at an individual who refuses to do this because his very refusal suggests that he does not feel respect for others. Again, it should be emphasized that we are talking here about the form of behavior, not the substance or commitment behind it.

What the ultimate psychological roots of this behavior are is unclear. It is apparent—largely because of the great attention given to formal considerations such as manners, proper speech, and the like—that this concern is not prompted primarily by the desire to be loved by others. Love would require a more substantial medium. Gaining the respect and approval of others is clearly an important component of the attitude, but one wonders why a people otherwise so self-loving and self-accepting should need their self-esteem repeatedly validated by others. Perhaps the most important reason behind the villagers' concern with impressing others really has little to do with the others themselves, although obviously at the behavioral level it implicates them—that is, I would suggest that the major factor behind the

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An ill individual made a preliminary self-diagnosis to ascertain which was the pertinent specialist to consult. A quick cure occurred if the diagnosis were correct, because the specialist then had the exact curing agent and magic for that disorder. If the first mɔ̄ were unsuccessful, the patient moved on without embarrassment to another. In fact, a person might be a-curing with 2 or 3 mɔ̄ at once, and a modern doctor besides (cf. Hauck, 1956:37):

> "She goes to Mɔ̄ Suk who is good for spirits, and to Mɔ̄ Plung at Lam Pakachet who is good for headaches and vomiting. Two years ago her child was sick with saan chak and was cured by Mɔ̄ Suk. First she took the child to Suk but a few days later went to Sawad at Lolae because she was afraid the child would die. Sawad gave tablets. She did not revisit either mɔ̄ because the child recovered. Mɔ̄ Suk helped most because he had experience in magic" (SS.).

[571] For reasons of convenience, however, people also developed lasting relationships with particular mɔ̄, usually the nearest, or a kinsman, to whom they turned first for medical help.

75. 826 Medicines cured either by direct rectification of deficiencies or excesses or on a principle of counter balance. Their effectiveness was increased by incantations. A rhinoceros in massive presence caused earth excess in the form of cholera (Bangkok Calendar, 1869:73), but a bit of its bone restored earth deficiency. Cobra was a direct ingredient for heat, but only sour tastes gave water element. A mɔ̄ described the medical theory behind curing techniques for the heat-rash, boils, and fever sometimes suffered after childbirth:

> "If the body is hot, fire is in excess, by which the other elements are heated. Thus the blood cannot move freely, and cells are deprived of their normal blood supply. The cells die, thus creating a boil or abcess. If the fire element is higher, the water of the body is lowered to a deficiency. Drinking water alone will not restore the water level. Sour tastes must be given. If the patient is thirsty, the lung is hot."

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qualities of foods. Chili peppers were avoided because they "burned the baby's skin." The cooling kluai namwa banana ensured a cool-tempered child. The fact that one woman ate cobra curry and suffered heat, while another took it comfortably, indicated, however, that what was bad for one might not be bad for another. Individuality of constitutional make-up explains why views varied considerably on proper diet in pregnancy and lactation (cf. Hauck 1959:2,16). Those who were eying urban ways added to the variety by occasionally following modern medical advice. A schoolteacher, for instance, ate eggs regularly and during pregnancy----not the "old way."

Women were urged to eat a great deal for they were eating for 2.[29] Cravings were not compelling, but to increase food intake, preferences were indulged, even when involving out-of-season fruits, expensive, or "dangerous" items (Hauck, 1959:14).[30] "A pregnant woman can eat any kind of food because she is sailing on a tremendous ocean [a traditional phrasing, cf. Anuman Rajadhon:108)] No one can predict whether she will live or die. One wants to eat chicken and kills it herself. Another has dreams and nightmares about craving certain food." She who flouted the Buddhist prohibition on taking life and killed a chicken to eat was not criticised. She was shouldering

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29. "To increase the appetite" was of frequent concern (cf. Hauck, 1959:27, and Sharp et al., 1953:256-260). Food in quantity and the appetite to consume it was one of the main props of social relationships and of personal security (L.M. Hanks, 1963). [571]

30. Some of the likes and dislikes mentioned turned out to be a recitation of the traditional food injunctions set down in the old "textbook," Promcindas, quoted by Phya Anuman Rajadhon (116). That fresh fish tastes and odors were the most frequent dislikes (Hauck, 1959:14) should be seen alongside the following "symptom of pregnancy sickness: if the mother desires to eat meat and fish and raw things----a creature of hell has come to be born" (ibid:116). Such an idea might well discourage the eating of fresh fish and underlie Yong Chutima's statement that "women were supposed to eat less meat than men" (quoted in Hauck, et al.,1958:42), and found as a prevalent attitude in Cha Chung Sao (H.M.H.). The out-of-season fruits, Chinese noodles (an expensive or party fare) and hot foods (dangerous) fit certain craving-categories of Obeyesekere (pp. 338-339).

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Chapter V

BIRTH CUSTOMS: THEIR SIGNIFICANCE

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Physiological ideas clarify only part of DŪan's tale. To illuminate other underlying tenets, we begin with the idea of help.

Help

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In "Influences on Health" (p.27) it was pointed out that Bang Chan conceived of individuals as unique beings, each with his fate in his own hands, with no bonds nor responsibilities to any other being. In an earthly existence, though, it would be difficult to obtain satisfaction or even life itself under such separatist terms. What relationship was possible between such autonomous beings? How in fact was rebirth brought about? Help (chūai) was the fundamental principle for organizing social interaction. Without help, the villagers saw existence not only as lonely and ineffective but even unrealizable. With it, personal and mutual goals were achieved, and life was enriched. People were "independent agents serving each other because it is mutually beneficial" (Phillips:63).

Responsibility for initiating help lay formally with persons of greater age or higher status. Elders assisted juniors, government officials assisted peasants. They received in return gratitude, obedience, and respect. Parents received care in their old age from the children they had nurtured. In the ordinary walk of life, particularly in a household, though, aid took the form of a continuous give and take with associates. The view of help as the mainspring of social action cut through many a problem of initiating aid or waiting on another to act, for fundamentally, on the cosmic scene, all beings were equally old. The child who helped most by giving over his earnings was loved most by his parents (Phillips:89); when married, children helped their parents less than before marriage, still less if they cooked in separate kitchens in the same house, and much less when they moved to a separate house, for their time and cash went increasingly to maximize their own interests.

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The genetic connections of those who did not help in cash, or labor at, say, cremations or cooperative work-parties were forgotten. Degree of help was a measure of kinship solidarity, and even marked the outer boundaries of kinship.

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The word "help" turned up over and over again in the context of childbirth. Birth came about because a married couple, already steeped in the knowledge that they had been so helped by their parents, "helped another individual to new life" through the mingling of semen and blood. The midwife's role was merely to "help." When a woman engaged a midwife, her words were, "Will you come to help me?" A baby having trouble breathing right after delivery "had to be helped for half an hour." Most important, only through the reciprocal help of mother and child was rebirth to earthly life implemented at all. Parturition was an active, cooperative venture between 2 autonomous beings. The child set the time for labor to start by "deciding to be born" when his 32 parts were "complete,"[38] and he had worked off sufficient sin in purgatory to permit rebirth. The mother by her labor "helped the child to be born," but she could not succeed unless he actively "helped," too. Though other assistance to her was desirable, such as persons to support her back and press out the infant, only his help was essential. Without it she had a hard or unsuccessful labor. A woman who gave birth successfully without outside help created no stir because it was evident that the baby had been helpful.

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38. Informants were not uniform in opinion here. Some said the khwan (or winyan) was the first "part" to establish itself--arriving at the moment of conception--others that it was the last (Textor:262). In either case it was highly volatile during pregnancy, and the trapping by winnowing at birth was the major means of rooting it in the person. During pregnancy, medicine for wind in the fetus was given "which was not effective if there were no khwan," but whether the khwan was the mother's or the child's was not certain.

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greater, for relatives were at hand. Some of these ordinary persons developed skills of considerable consequence.

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If difficulties developed, then a more experienced person, perferably a midwife, was needed. But many a midwife assisted at normal births. Because difficulties might arise from a deficiency of merit either in the mother or the child (one could never know which), many women preferred to have in attendance, for peace of mind, either a midwife or an experienced person to insure the presence of expert help. Sometimes they were engaged in advance, more often just sent for "as pain is increasing," it being not always certain whether the case was normal or not.

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A few women were delivered at the Mīnburī Health Center. These were rarely normal cases. The Center was turned to as a last resort in dire circumstances, with the result that sometimes the woman died in the boat on the way. A few persons of rather more modern outlook, such as wealthy farmers, teachers, and traders, had been delivered there and recognized its usefulness.

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The midwives lived in all parts of the community, with 3 in the populous central temple area. No one was more than a half-hour's paddle, or an hour's walk from the home of some midwife. What was desired, however, was a particular person, even though he might not be the most accessible one.

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Since midwives were all heads of large families their clientele was mostly their kinsmen. They also took care of non-kin who lived in their locality. A daughter or other close relative who had married out would be attended wherever she was, if she did not return home for confinement.

In choosing a midwife, a parturient sought out not only skill but favored a kinsman over a non-kinsman, a close relative over a distant one, a near person over a far.[63] Occasionally, to sustain an image of progressiveness, social superiority or of wealth display, a midwife from outside Bang Chan was imported. Sometimes proximity, convenience, and

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63. A male and 2 female kinsmen-midwives were called by the man's sister to deliver her, and all came. He did not deliver her because she was "too close a relative," but he said a brother "could deliver a sister."

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affection overrode kinship.[64] Thus affinal relatives and non-kin neighbors were also requested to assist. Buddhists attended Muslims and vice-versa, (though Muslim women preferred female assistance).

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In emergencies the professional midwives' area was the whole community. They travelled long distances to attend women who were not close kin. No parturient, however, even in an emergency, was ever attended by a complete stranger. In all likelihood, every adult in the community knew the midwives at least by sight.

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As to the size of the practices, reported activities ranged from the Muslim midwife's estimate of 10 per year, down to 2 or 3 per year.[65] The 2 men and the most competent female midwife reported about 4 per year, a figure probably weighted on the side of the difficult cases per year. It is noteworthy that the men, in spite of being as we shall see both mǒ and midwife, did not have larger practices than the women. It was considered basically a woman's skill.

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None of the midwives derived much income from their practices, nor did they expect it to be significant. Their main income came from rice-growing from which, however, the women and one of the males had largely retired because of age. The other male midwife was exceptionally busy as a labor contractor, builder of houses, land-owner. and headman as well. The midwives found the 5 to 30 baht offered

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64. Two teachers who were in the kinship category of granddaughter (lān) to the 3 best midwives, and lived only a few hundred yards from them, were delivered by a woman who was mother-in-law to one and husband's older sister to the other and who was "not a midwife but knows how." Since labor was quick and normal, no higher help was necessary. On the other hand, all 3 of these midwives turned up to help at the confinement of another cherished "granddaughter." Only one of them actually delivered the infant but other functions were diplomatically divided up by the young mother.

65. Hauck studied 46 babies, aged up to 3 and so not all born in one year. Thirty-one were delivered by 4 of the professional female midwives (12,9,7,3 respectively); a male midwife and an "experienced" person had done 2 each; 11 women, one each (Hauck, 1959:61). A few of the latter 11 were ordinary kin, not midwives.

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in the khwan khāo "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mō or to the Minburī Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

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Though living like other elder citizens of the community, in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mō was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (tham ăchīp [Mc.F. 990]) when others who had equal or more experience were not so considered?

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established midwife who was a "close relative."

Sometimes the interest arose in young people. A girl started at 15 to accompany her mother, a midwife, as helper and delivered her first case alone (an emergency) at 20. A boy of 15 also helped his mother's sister, who was a midwife. Later, when married, he delivered some of his own children, but denied that he ever intended to take up the calling. One young man in his 30's, was seen going "as a team" with a well known old mɔ̄ who directed him in the manual operations but who did not ever touch the woman himself. He also assisted one of the female midwives, but had not yet delivered a baby alone.

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The first child delivered by anyone was always the child of a close kin. Only with success at this first delivery would a person even consider doing it again. The second case, and the next few were confined to the potential midwife's close relatives, children (lūk), grandchildren, and the children of siblings (lān). Thus, the skills were validated within the kin circle before a midwife felt ready to practice outside.[69]

With success, a person of developing skill might be willing to include non-kin in his clientele, i.e. become a professional. One resolved only to help relatives but her "fame spread." As another said, "seeing it was safe, I was encouraged to go on." By this time, magical formulae had been

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69. Daughters-in-law were within the validating circle if circumstances were "convenient"--i.e. if their own mothers did not deliver them and if they lived with their husband's people. No witchcraft was feared between women. A mɔ̄ in his specialty also had to validate his skills within his close kindred before non-kin would call on him. A reputation began at home.

[606] [764] [756]

759 sought, ritually requested of some relative who was a mid-
• 571 wife.[70] Some persons though continued to limit themselves
602 to delivering their relatives, and never sought magic at all.

Two Worlds: The Natural and the Supernatural

759 To deliver a baby as a midwife or even as an unskill-
772 ed kinsman, embraced 2 aspects: a manual or technical, and a magical. These aspects corresponded to Bang Chan's 2 great worlds of knowledge and experience: the natural and the supernatural.

Midwifery was not alone in embracing both of these categories. Every activity, bus-driving, dancing, printing, or other, had its incorporated magical means to augment the probability of success. Though with the manual or technical skills of the natural world alone one could come through all right with even a modicum of supernatural help, success was greater. No one wanted to take the responsibility and risks of "going it alone" especially when the resources of the supernatural world were so freely and easily accessible to everyone. At the very least, one could start an enterprise on Friday (Wan Suk: Happy Day). The closer an enterprise was to the margin of life and death, however, the larger the supernatural element. In farming, curing, and midwifery, for instance, the ritual component was strong.

[874] Since these 2 worlds were qualitatively different, each required a different method of learning. The supernatural world, immaterial, royal and sacred, was learned

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[769] 70. Three women had recieved theirs from their mother, mother's mother, and mother's older brother, respectively. A retired midwife planned to give hers "to the daughter or grandchild ("lan":sex not specified) who was interested enough to ask for it." One man had received his from his father's father. Childbirth magic would hardly be a suitable topic of conversation between priests, but it might have been passed down there, too. The midwife whom one accompanied while learning probably was the source of one's magic. Women's magic was passed down the maternal line only, whereas men could get theirs both from kinsmen and at the temple.

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are less eaten today because they are too expensive."

A slight trend towards depersonalization might be part of the aping of urban behavior, or idiosyncratic, or of more general significance.[76] The Minburi Health Center may have been used to avoid certain face-to-face situations. A woman whose labor was prolonged was taken there by her (male) midwife who had to get to a meeting. He preferred the impartiality of the Center to turning her over to another midwife. A woman took up the hot ashes container so "others would not have to wait on her." Another appeared to have obtained a midwife from outside the community rather than seek out someone inside and closer at hand. A very poor woman used no boiled water because of inadequate help in the household to prepare it. Whatever the circumstances of her social isolation, ordinarily kin or neighbors would have seen to it that this job was done. This episode too was watched by neighbors who commented that since her health remained good, boiling might be unnecessary. Finally, to advertise certain medicines, a firm handed out yan, the magically inscribed cloth, to suspend on the holy cord that surrounded the mother. This was a long way from the personally inscribed "yan" of old.

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A final reason for the acceptance of change was the larger number of choices of behavior because of a broader horizon. Bang Chan had never been an isolated community, for pilgrimages and visiting through easy boat-travel had been for decades part of its life. Yet the growing number of literates, the establishment of bus and other transportation services to the city, the experience, for a few, of work in Bangkok or of military service in Korea, the continuous association with non-Thai, (Chinese, Muslims, a Cambodian, and now the Americans), and the now somewhat diversified economy of the community all led to the increased familiarity with other ways of doing things. Patterns of childbirth were already reflecting this awareness.

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Unchanging in the scene at childbirth was the necessity of supernatural assistance, and heat to ripen and restore the mother.

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76. I feel this evidence is slight, and set it down merely as a point for future observation.

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mɔ̄, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mɔ̄ gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mɔ̄. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the thaan khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
• 57 the steps in the Buddhist winnowing ceremony and performed
[852 them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khăo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
[774 "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist,
[782 meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the
[177 poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 Completely Muslim was the stress on physical and
[783 moral purification as an objective of every rite, and
[304 conversely, the prevalence of the idea of defilement.
[764 "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate procedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before
[831 burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and
[834 contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality
[562 much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (fāk
[273 thong: to deposit gold). On returning home, she went as fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim mid-
795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclosed room, if there were one, while in the Buddhist house-
[562 hold "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khăo contained "7

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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[6] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

[6] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Jankkha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost a Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

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As the reader might by now suspect, it is not easy to determine the basis of the unity of the family. However, of all the factors that keep people living together in amity and affection, two come to the fore: a sense of love, obligation, and respect that is derived from the simple fact of kinship, but which must be continuously confirmed by mutual benefits; and economic considerations.

The economic foundation of the family is significant not only because the family is in fact the sole economic and occupational unit in the community (with the exception of the monkhood and school) but because the villagers themselves think of the family in terms of its economic functions. People say that they marry for wealth or because of the productive capacities of their spouses;[13] spouses stay together because the economic costs of a split are too great; most important of all, people are keenly *aware* of their economic interdependence. Fathers say that they need children to work in the fields and care for the buffalos, that a family needs a mother so that its members will be fed, that siblings are useful because it is easy to borrow from them (although, as noted earlier, some are unhappy about the intrusion of the kinship tie into what they regard to be a commercial transaction). Many villagers extend this economic, transactional type of thinking to other aspects of the kinship relationship. Thus they say that "the purpose of marriage is to have a companion who will take care of you when you get sick," or very frequently that "my parents went to the trouble of bringing me up so they would have a person to make merit for them when they die." The emphasis here is on independent agents serving each other because it is mutually beneficial.

The love and affection that people feel for each other is of course grounded in the close associations that one finds in most nuclear families. However, the attitudes of respect that one sees are perhaps more distinctively Thai. Almost all the literature on Thailand refers, at one point or another, to the patterns of respect (*khwaamnabthyy*) existing between people, both within and without the family. These patterns are based, in the first instance, on the status inequalities that exist in almost all social

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[13] In responding to the unstructured Sentence Completion Test item, "*He* (she) *wants to get a wife* (*husband*) *who. . . .*," for example, thirty-one of sixty informants indicated that they wanted a mate who "was a good worker," "earned a living," "was rich," or otherwise had high socio-economic status. Only two persons said that they wanted a spouse for reasons that could be reasonably defined as sentimental: one woman wanted a husband who "would be a good friend with whom she could discuss things," and a man said he wanted a wife whom "he loved." Other informants gave completions distributed among a variety of categories: "polite, well-mannered, handsome, kind, strong, and good" spouses; and six women wanted husbands who would be faithful.

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relationships: within the family, usually in terms of the relative ages of people; elsewhere, in terms of age, wealth, power, knowledge, religious or governmental role. Secondly, they are based on the assumption that every individual, regardless of his position in the hierarchy, deserves respect. The first is a respect associated with the proper performance of one's role; the second, a recognition of the essential dignity of every human being.

The role of these respect patterns cannot be emphasized enough. Benedict, in her study (1946) of Thai culture at a distance, referred to the learning of the *waj*, or gesture of obeisance, as "the first teaching the child receives." Although the *waj* is perhaps not the very first social act the child learns, I have seen infants no more than two weeks old being guided by the mother in raising the palms of their little hands to the forehead in expression of deference to superiors. The older infant who can do this on his own almost always receives acknowledgments of approval and delight from the adults in attendance. An older sibling really means it when he says of his relationship with his younger brothers, "when I ask them to do some kind of work, they go and do it. They never disobey, and when there is no disobedience, there is no hatred. . . . Formerly, whenever there was entertainment somewhere I took them with me. My younger siblings love me a lot. . . ." His position in the authority structure assumes the respect of those younger than he, and they willingly grant it for, among other things, he plays his role well as the kindly superior who takes them with him whenever there is entertainment. All the polite little linguistic forms (honorifics, expletives suggesting status and, most important, ordinary kinship terminology with its specification of relative age) as well as kinesthetic forms (lowering the body while passing a seated older person, holding the younger between one's legs and with arms around him in a position of protection) also serve to emphasize the respect that people grant one another because of their differential status. Perhaps the most revealing illustration of the strength of these patterns, at least the authority pattern, was provided by a two-year-old toddler who pointed to the stomach of his pregnant mother and said with pride, "My younger sibling is in there. When he is born he will be *my* responsibility." Little doubt that when the child is born he will give his older brother his due.

With regard to the other respect form, recognizing the dignity of every human being, more than once I have heard parents say that they disliked giving their child a certain medicine "because it offends the baby; he does not like it. It is better not to give it to him than to hurt his feelings." Although I do not doubt that in some instances the parents were annoyed more by the screams of the child than anything else, I am also convinced that for the most part they were respecting his basic individuality and right

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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[16] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[16] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

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114 as do rejected lovers who fear suffering again. Without strong bonds,
*157 they develop no sense of guilt for those they injure and stand ultimately
156 responsible only to themselves, individuals among individuals who differ mainly in the amount of influence they wield. Thus Dang [the informant] can make demands of others but feels little obligation toward them. As he left his father and uncle with scarcely a second thought, so others can leave him. Of course, as was indicated by Dang's projective test data, this form of individualism is not entirely without its psychic toll. But on the level of action and conscious decision, the moral for a Thai runs: invest not thy love in a shadow.

114 The piece by this writer (Phillips, 1959) is essentially an amplification
*156 of some of the findings of the above paper and a confirmation, in the life
155 histories of two other informants, of their typicality. The paper was con-
866 fined to an examination of the development and expression of the needs for dependence and independence in the lives of these villagers. Three major points emerged from the analysis. First, the most common expression of dependence was in the area of subsistence and economics, in the individual's desire to attach himself to others who would give him sustenance in return for services rendered. Over and over again, the informants viewed their relationships with other people, particularly kin, in terms of the others' economic value to themselves. However, this mode of dependence was not so much an overriding compulsion as it was a basic postulate about human relationships: the measure of another person's love was explicitly
[581] the degree to which in material terms he served the self. The second point, in contrast to the above, was that marriage was seen as the means by which a person could free himself from the obligations of economic dependence. This freedom has two aspects: freedom from the frustrations caused by others; and freedom to set oneself up as master of one's own household, thus reaping the psychological satisfactions—status, power, and prestige—of having others dependent on oneself. The third and perhaps most striking point concerned the fact that all these informants spent their childhoods being shuttled from one family to another. Although this experience may not have been culturally modal, it occurred with sufficient frequency to be a possibility for every Bang Chan child. It was further suggested that in
[571] part such experiences taught villagers at a very early age that they had to fend for themselves, and that the experiences served as psychological prototypes for the sense of fragility of social relationships that is so characteristic of village life.

114 In contrast to most of the literature cited above, the last two articles are
124 based on data which are products of interviews heavily weighted toward the psychologically expressive. Two of the informants admitted that they told us things that they had never shared with anyone, and the agitation (a

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achievement, and dependency, or by discussing those traits which are significant in the daily round of life, irrespective of the analytic categories to which they refer. In this section we will emphasize the latter, more naturalistic approach. Its advantage is that it permits us to identify and develop certain issues which play a crucial role in the interactive world of the villagers, but which might otherwise go unnoticed should they not be represented by, or not quite fit, any of the predetermined categories. The Thai attitudes toward the body referred to earlier, for example, is an issue of extreme importance in their interpersonal relationships, but one that is actually given little explicit attention in most personality studies. This section is designed in part to deal with such problems, although inevitably there may be some overlap between the materials covered here and those discussed in later sections.

The Pleasures of Social Contact

Of all the personality traits that come to the attention of the foreign observer there is perhaps none more compelling than the affability, gentleness, and good humor of the villagers. It is difficult to think of a people more consistently ready, *once contact has been made,* to treat others amicably and convivially than the peasants of Bang Chan. (The italics are necessary simply because the villagers are equally primed to ignore others.) However, this jovial cordiality is not an easy thing to conceptualize. In the earlier paper by Hanks and Phillips (1961) we spoke of these happy characteristics as "not so much the expressions of any basic lightheartedness as they are techniques for implementing the main precept of social interaction: 'Avoid face-to-face conflict!'" Although the villagers' good humor does serve this purpose, I would now suggest that it involves several additional dimensions and motives.

First, there is a whole complex of responses represented here. The tendency to keep situations and conversations jocular, amusing, and at times gently ribald, is perhaps the most relaxed expression of this attitude. It is most obvious in the behavior of village gossip groups and in the relationships between individuals who consider themselves acquaintances but not quite close friends. The essential ingredient of this mode of affability is that interaction should be a great deal of fun but of little social consequence. Of a different order, and more common, is the villagers' ubiquitous politeness. This takes a host of forms: the genial hospitality that is expressed toward a newcomer, usually in the form of "personal" questions serving both to identify the person and to make him feel that others are interested in him ("How old are you? Any children? How much did you pay for your shirt or your land? Why don't you have any children?"); the numerous linguistic

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and postural forms expressive of respect cited earlier; the repeated hesitation to place others in embarrassing situations; the hesitation to tell others bad news so that "they will not feel sad" or will not have to dissemble (although more often the less delicate reason is the person's fear of embarrassing himself). Of a still different order is the uneasy affability that is expressed in the nervous giggling accompanying many face-to-face relationships and in the compulsive preoccupation with inconsequential or inoffensive topics while conversing with others. These responses appear to be either attempts to maintain minimal contact with others while jockeying to find out what they are really up to, or, in the negative sense, efforts to fulfill the minimum requirements of interaction while waiting (and hoping) for the contact to come to an end. And still different from all these is the affability associated with trying to make a good impression on others expressed in the constant concern with displaying good manners, with using pleasing or flattering words, with being a good host, and the like. Although this category is in many respects behaviorally similar to the "politeness" referred to above, it seems to differ from the latter motivationally in that it is concerned not with the state and comfort of others *per se*, but with ego's effect on others.

As described above in simple summary terms, these responses might appear quite ordinary and at certain times applicable to any group of human beings. However, what impresses the observer in Bang Chan is the insistence and constancy of their use. These are precisely the forms that the villagers choose in the vast majority of situations for expressing the degree and quality of contact that they feel toward others. That they are in fact social forms—stylized, often ritualized, modes of behaving—should not be overlooked. It is just this characteristic that engenders the theme underlying all the responses and which indeed sets the tone of most Thai interaction: that the relations between people should be friendly, genial, and correct, but need have little personal commitment or involvement. As will be seen below, it is this readiness to phrase most face-to-face contact in terms of social rituals while at the same time feeling little commitment to others that actually lies at the root of what has so often been called Thailand's "loosely structured social system."

Social Play

The first response mentioned above, the tendency to turn social situations into occasions for play, is probably one of the most common of all human tendencies (it is certainly one of the earliest), but one that strangely has received little attention in the psychological literature. The few writers who have expressed any interest in social play have tended to view it simply

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571 as a release mechanism from boredom or tension (Riesman and Bloomberg
154 1957, Roy 1959–1960), as a "healthy" escape from reality (Flugel 1954,
52 Bateson 1954), or as a normal and desirable regression to childhood pleasures (Freud 1905 and 1928). Running through all these observations is the obvious Western bias that play somehow is divorced from, or a reaction to, the harsh facts of social reality.[8] On reflection, however, it is clear there is no theoretical necessity, either maturational or social psychological, for play to be limited to cathartic functions, or for regarding it as a less realistic or less mature psychological state than that which causes boredom, tension, escape, or regression. In fact, one might logically argue that the conditions which create the latter states are less realistic and immature because they represent retreats to forms of infantile masochism. Such questions of course belong to the realm of interpretive debate. The essential point is that in the process of learning to adapt to the social psychological realities of one's culture there is no inherent, ontogenetic requirement (other than that imposed by the peculiarities of one's culture) for human beings to renounce their motivations for play. Simply stated, having fun need not be so much a retreat from or defense against adult reality and responsibility as it is something to be sought after for its own sake.

121 The fundamental analytic issue here may well be whether play is a
154 psychobiological "given" of the human animal, on the same order as
52 hunger, sex, and other precultural needs, or a learned, secondary cultural

[8] Of these various interpretations, the most broadly conceived and carefully argued is Freud's, where play activities are linked theoretically to the interrelationships of the id, ego, and superego and the aims of the "pleasure principle." However, even here Freud was caught up in the Western cultural bias that only children, those who have not yet had to come fully to terms with social reality, could easily "afford" the luxury of play. This same cultural bias often appears at a totally different interpretive level in the rather crass pronouncements of journalists and travelers who, in writing about the Thai, refer to the "child-like" behavior of these people who spend so much time, energy, and money in having fun.

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Radcliffe-Brown's famous essay on the "joking relationship" (1952) is of course a special sociological case of the "tension release" function of play. In a brief paper, Keesing (1960) lists some seven overlapping functions of play, but here too play is seen largely as divorced from "everyday 'reality' activities." Callois (1958) brings together valuable cross-cultural data in what is otherwise a classification of organized games.

Probably the most comprehensive study of play ever written is *Homo Ludens: A Study of the Play Element in Culture* (1938; English translation 1950) by the late cultural historian, Johan Huizinga. Although Huizinga is concerned mainly with structured play activities (games of skill, chance, guessing games) and with the relationships between play and ceremonials, one of his observations is worth noting: "Nature, so our reasoning mind tells us, could just as easily given her children all those useful functions of discharging superabundant energy, of relaxing after exertion, of training for the demands of life, of compensating for unfulfilled longings, etc., in the form of purely mechanical exercises and reactions. But no, she gave us play, with its tension, its mirth, and its fun. Now this last element, the *fun* of playing, resists all analysis, all logical interpretation. As a concept, it cannot be reduced to any other mental category. . . ."

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need. The problem is that we really do not know, although comparative data from primatology (Yerkes 1943, Kroeber 1948: 27–29 and 60–61) clearly suggest that play belongs to the former category. If this is indeed the case it would imply that play is subject to the same degree of cultural influence, channeling, and socialization as are hunger, sex, and aggression, but can no more be fully obliterated than can these needs. Assuming, for the sake of argument, that this reasoning is correct, then the compensatory "escape" and "regressive" functions attributed to play by the authors noted above would not be at all unreasonable: play might well come to serve as an escape from adult reality in the same way that food sometimes serves as an escape from sexual anxiety or sex from food anxiety (Holmberg 1950). However, the point is that these are not the primary or typical functions of these needs, but secondary and defensive ones; although significant, they hardly comprise the necessary conditions for their being. If this approach is valid, we would be considerably wiser in our present state of knowledge (the Protestant Ethic and its intellectual extensions notwithstanding) to direct our attention to identifying the varying forms of play from culture to culture rather than to dwell on its secondary, compensatory functions.

Whatever its ultimate motivational basis, there is no doubting either the spontaneity or ingenuousness with which Bang Chaners turn social situations into occasions for play. For the most part they seem prompted in these situations by the simple desire to have a good time rather than to affect others in a socially pointed way, that is, their humor is not typically aimed at being sarcastic, didactic, or even exhibitionistic, although the person who excels at being funny is quickly recognized as such and is to an extent admired.[7] There is, in the negative sense noted earlier, an element of interpersonal effect operating here: comedy is a technique which almost by definition reduces the potentiality for face-to-face conflict. However, the villagers' play seems aimed primarily at satisfying personalistic function: their *individual* needs for pleasure and amusement.

The forms that these play activities take are numerous.[8] Perhaps their

[7] In the more explicitly institutionalized forms of comedy—*likee* (folk dramatic shows) or newspaper and magazine cartoons—these aims do come into play and often assume extreme, sometimes even biting, proportions. However, this is the comparatively safe world of theatre and "literature." Among themselves, in the world of face-to-face contact, villagers are considerably more gentle (or less sophisticated) and do not focus explicitly on such purposes.

[8] We will be concerned primarily with the forms of play, not its content. For whatever reason, humor and comedy seem to be the last refuge of what is genuinely private in a culture. Intercultural translations may succeed in communicating the manifest content of another people's humor, but they so frequently miss its intent that the result is either perplexity or disappointment ("Yes, and what happens then?").

The dangers of trying to share humor interculturally were perhaps never brought home better than when I tried to get the villagers' reaction to a story that received

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571 522 524 most subtle expression is in the marvelous word games that the villagers play. What is striking about these games from an analytic viewpoint is not so much that they are funny, but that villagers are continually attentive to opportunities for playing them, and actively try to structure situations along such lines. In a sense, they are not "games" at all but verbal asides that emerge spontaneously from the discourse of everyday contact, and which serve to make such contacts enjoyable. One form of word play is particularly popular. For the lack of a better term, it could be called "silent stinky pinky."[9] Here two persons are chatting, and person A works into the conversation a statement that sounds completely innocuous. (A man, for example, says to a woman, *hen mii*, meaning "see the bear.") Person B, forever attentive, knows that words are deceptive: although A *said* one thing, he was really *thinking* of, and expects B to be *thinking* of, its rhymed phonemic inversion, which is vulgar or insulting. (Although the man said to her, *hen mii*, he was really thinking of *men hii*, meaning "your vulva smells.") Person B picks up the cue and responds with a statement that sounds equally innocuous but which when mentally inverted is just as scatological. The game continues until one of the parties gives up, whereupon the conversation returns with laughter to its original concerns. It must be emphasized that although this game is phrased in terms of a verbal contest, its purpose is not to best the other person but to work out with him or her a dialogue entertaining to both.

524 522 123 Sometimes these games arise and die out so quickly that it is difficult even for other, nonparticipating Siamese to spot them. The particular example cited here is one that has become almost part of the folklore of conversational gambits. However, what delights many of the villagers is the unpredictability of these patterns. On one occasion, I unwittingly juxtaposed a few English phonemes that had two informants and my assistant literally rolling on the floor with laughter. We were talking about the

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[123] [571] [522] wide currency in Bangkok newspapers during 1956. It seemed that a husband was waiting outside a brothel to escort his wife, one of the prostitutes, home. She was busy with a customer. The husband called to her, telling her to hurry. She called back, saying that she would be through shortly. A few minutes later, he called again, and once more she said that she would be coming along. Finally, the husband went in and shot both his wife and her customer "because I lost my patience." When I told this story to several villagers, I was the only one who chortled. Most of them either commented on the sadness of the story or said the husband was stupid for killing the family breadwinner.

[9] In American stinky-pinky, people try to guess the rhymed equivalents of abstract definitions. Thus, if person A says, "I am thinking of a 'cadaverous Marxist,'" person B might say, "a dead red." The Thai version differs from its American cousin in that it is not only unspoken but is not really a parlor game. The tonal, monosyllabic nature of the Thai language probably is an important preconditioning factor here. (See also Haas 1951 and 1957 for illustrations of other kinds of verbal play.)

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salient: the free food, drink, and chitchat at the end of a hard day's work; the fun of working together with several other individuals. Notice that in this kind of situation there is no overseer demanding the person's effort. His labor is freely given and may be freely withdrawn.

In describing *sanug* as a measure of how much villagers wish to commit themselves to a particular activity, I mean to communicate a point and not merely to turn a phrase. The word "commit," which appears often in this book, is used to convey the idea that coöperative, mutually expectable interaction as we know it in the West does not "simply take place" in Bang Chan. Rather, there is always the intervening factor of whether individuals want it to take place. Siamese are, first and foremost, free and independent souls. Much of the time they fulfill each other's expectations, but this is only because they want to, not because others expect it of them or because the situation demands it. It is the individual that is primary, not the social relationship. The strength of this principle is demonstrated by the fact that one is almost never surprised when one's expectations about another are not fulfilled. The assumption is: "If he did not do it, he must have had his own good reason."

The potentialities for interpersonal frustration that are inherent in such a system are minimized largely by the hesitation on the part of individuals to build up strong expectations about people or events. In general, the Thai are a people who do not live at, and rarely reach, a high emotional pitch. Witness, for example, the specifications of "sanug-ful activities," those which afford the greatest pleasure: they are novel, diverting, comfortable, and frivolous, but there is no Faustian intensity about these joys. They are all rather muted emotional experiences. The point here is simply that in this kind of psychological environment, people rarely permit themselves to become *so* committed to an activity or to another person that the frustration of that commitment will be overly disturbing to them. They proceed from a premise which says in effect: "Well, it is really not that important that he did not do what I expected of him. I will simply have to make do."

There are a few aspects of the villagers' concern with *sanug* that warrant underscoring. First, from an analytic point of view, *sanug* seems to reflect an attempt on the part of the villagers to lead a psychologically integrated life, wherein the time and energy one gives to an activity is rewarded immediately and directly with pleasure. This low-keyed pleasure should be an inextricable part of the total situation in which one finds oneself (or more accurately, into which one places oneself), not something to be deferred until a later, "more appropriate" time when it becomes an isolated segment of experience. Essentially, *sanug* should be—it not always is—a concurrent aspect of almost everything that one does. At the same time, however, these conditions are also the source of an inevitable paradox. Since "sanug-ful" activities are, by definition, novel and diverting, and

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front, know that it actually elicits and betrays his anxiety, but have such implicit trust in his own resources that he feels no need to alter his behavior. Simply stated: uneasiness when it occurs is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality.

The actual expressions of nervousness and inconsequential conversation vary considerably. Perhaps their most obvious (and justifiable) expression is when a villager, who wants to get something from another person, for example, a job, a loan, higher rent on land, is uncertain about the other's reaction and approaches him by hedging around the issue with giggles and light, irrelevant comments. This mode of behavior typically occurs when there is no history of reciprocal benefits between the parties or when a middleman cannot be used.[17] Although villagers themselves do not consider such comments "irrelevant" (probably because from a ritualistic point of view they are not), it is hard to define a detailed discussion of a person's buttons or belt buckle as anything but a kind of phatic communion. Sometimes conversations of this type will go on for twenty and thirty minutes, often branching off to include more topical interests such as the size of eggs or the calls of birds, before reaching the point. Frequently they never reach the point, since somewhere along the line the individual recognizes from the tone of the conversation that the other person is not in the proper mood to entertain his request; in this case, the individual will explain that he came simply "to chat." Sometimes the friend will begin to giggle uneasily (particularly if the protagonist's references to him contain an excess of flattery) as he becomes aware of the purpose of the conversation and wishes to evade facing the ultimate issue. Very often, even when the final request comes out, he can avoid it simply by giggling. Under such circumstances a giggle is crucially communicative: it is the person's polite substitute for "No," or "Let us bring this particular topic of conversation to an end." Giggling is a wonderfully effective way of carrying on a "conversation" (for those who can read its "vocabulary") because one can so readily convey his refusal, wariness, and even hostility while at all times maintaining the illusion of friendliness. It is precisely because the villagers' giggling frequently rests on such devious attitudes that it appears

[17] The *quid pro quo* basis of the former would permit a considerably more direct approach. It is not difficult to be frank with a person when both you and he realize that you are asking for an earlier obligation to be repaid or that you are creating a new one which may be called upon later when needed. Villagers are highly responsive to such obligations, often going to considerable effort and personal discomfort to meet them. A middleman, on the other hand, is used precisely to avoid the kind of delicate encounter described here. As a disinterested third party, he can be completely candid in his requests. However, for reasons of secrecy (usually when the request involves some potential competition or envy of other villagers, or perhaps some sharp-dealing) the use of a middleman may be inappropriate.

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to be somewhat nervous. Like the conversational topics mentioned above, its purpose is to maintain social contact, but at a minimal substantive level.

Other uses of giggling are less consciously purposeful than the above. Perhaps the most frequent instance of this is when villagers are talking about or responding directly to an unfortunate situation: a flood destroying the rice crop, a friend or relative dying or being beaten up, a person committing suicide. Giggling under these circumstances seems to represent several related sentiments. On the one hand, it indicates a slight feeling of embarrassment over having discovered something or talked about something which would have been better left undiscovered and undiscussed. At the same time, it is an attempt to make light of the misfortune by suggesting that the speaker and those present should not be overly pained by what they are encountering. Giggling here serves very much the same kind of function as the phrase *maj pen raj* ("it is nothing") referred to earlier; it is a means of shrugging off and denying a feeling of distress. Finally, giggling often is also a kind of ironic commentary on the human situation—not in any abstract philosophical way, but in the sense that a tragedy is so often actually felt to be a comic exposure of human hopes and intentions. A little exchange between the writer and an elderly villager perhaps best illustrates this. During one of the two rainy seasons I spent in Thailand, the rains were especially heavy in the Central Plain and destroyed the rice crop of many Bang Chan farms. As might be expected, it was a topic of considerable discussion. Paddling down the canal one morning, we met a villager who was returning from inspecting his fields, and we stopped to chat. The discussion inevitably turned to the flood, and he told us, in a completely matter-of-fact way, that he had already lost about 50 percent of his crop. He then giggled nervously over what he had said, and followed it up with, "But that person over there has lost everything." His giggles then turned into laughter as he nodded his head in an attitude of pain. Months later, when things were considerably more comfortable for the villager (as it turned out, he had lost only about 5 percent of his crop) I recalled our meeting and asked him what he thought was so funny about the flood. He did not remember, but volunteered in a nice, didactic way: "When something like a flood happens, all you can do is laugh."

Giggling is also a favored mode of dealing with the countless situations that arise in daily life that are perceived by the villagers as potentially, or imminently, embarrassing. Here giggling is a substitute for an explanation of one's actions, particularly those that are considered annoying to others. Villagers who have missed an *important* appointment (lesser ones are missed with few qualms) will tend to giggle when they finally meet the person and there is the slightest indication of the latter's displeasure.

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*156 villagers' concern is essentially self-referring in nature: it is both a manifestation and validation *to the self* that one is a fine, proper, and upstanding person; that to treat others well is to perform one's role as a civilized, meritorious person. This last term, "meritorious," was intentionally selected. It is meant to suggest that much of the villagers' politeness is consciously (although perhaps not explicitly) related to the notion of accumulating Buddhist merit, and that in being nice to others Bang Chaners are managing to fulfill, a little bit, what is to most of them the *raison d'être* of the human experience.

The Dynamics of Loose Structure

• 571 The foregoing discussion was concerned with the nature of some of the most frequently occurring forms of face-to-face contact in Bang Chan. It focused on manifestations of, and motives for, behavior when people *actually meet* and interact. However, human relationships involve considerably more than the forms and rituals of face-to-face interaction. They also include feelings, attitudes and behavior toward others once the interactive situation has been left behind; a readiness to become involved with others in the first instance; and a sense of social linkage, functional or sentimental, that ties people to one another over time. This last has reference to the system of rights, obligations, and responsibilities that form the substance of enduring relationships.

These latter considerations are perhaps the most difficult to talk about in Bang Chan because their most conspicuous expressions tend to be negative in nature; that is, empirically it often is considerably easier to point to cases where there are no enduring ties between individuals or where there is hesitation to become closely involved with others than it is to identify what links them together. There are a few relatively explicit means of linkage: the "dyadic contract" (to be discussed below); kinship ties, in many respects a special case of the dyadic contract; and on some occasions, certain cosmological considerations ("I owe him this because we were friends in earlier lives," "We love each other because we were born on the same day"). However, even these modes of linkage require continuous behavioral validation and are recognized as ultimately unreliable. A Bang Chaner who fails to fulfill his "contract" by refusing to return a favor would at very worst be considered selfish. Most villagers would not even bother to assess his actions, assuming that he must have had a good reason for them.

To a large extent, the descriptive problem encountered here is the result of certain methodological conventions. An investigator concerned with how human beings relate to each other inevitably, and not unreasonably,

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tries to identify the bases of their contact. Having once identified these, he then tends to assume that not only the bases but the relationships themselves are relatively constant and reliable.[18] The relationship between Bang Chan employer and employee is an excellent example of the problem. An investigator concerned with specifying the bases of their relationship could readily point to two factors; contractual (in the strict meaning of the term) and sentimental. The former involves the exchange of a sum of money for labor fulfilled. The latter involves an array of behaviors expressive of the employer's concern for his retainer: feeding him well, not making him work too hard, treating him like a younger sibling or "adopted" child, recognizing his birthday, or buying him small gifts if possible. Interestingly, the subordinate's obligations to his superior are considerably less explicit and social psychologically less demanding: he must simply respect and obey him. However, as accurate as these specifications are, they say nothing about the reliability of the relationship. It may be broken off over matters that have nothing to do with how well each is fulfilling his interactive responsibilities. The employee may become bored; he may have a sudden desire to take a trip or go to Bangkok; if he is from a distant village, he may suddenly become homesick and just as suddenly leave. As indicated earlier, he will frequently do this without saying a word to the employer; his absence is sufficient to indicate the termination of the relationship.

Very often the breakdown of the relationship is short-lived. I recall my exasperation during the early stages of field work when right in the middle of an important interview, my field assistant would tell me—with absolutely no forewarning—that he had to be in Bangkok in an hour and a half, and would have to leave now. When I suggested that the interview first be completed, the reply, the first time this happened, was "No, I promised a friend I would meet him at the movies, and I have to go now." When asked why he made a movie date during working hours, he answered: "Well, this was the only time my friend could go." The straightforwardness of his response indicated that it was both futile and dangerous (he might never return from the movies) to ask why the friend could not go alone, what the real reason was for his sudden departure, or why he did not tell me beforehand so I could have made different plans. Pursuing such queries would have served only to annoy my assistant, rather than hold him; and from his own point of view, they were really not my business. This kind of behavior was neither idiosyncratic to this individual nor limited to movies. Later on, when other assistants asked for intermissions, the explanations

[18] Certain relationships are of course explicitly recognized as inconstant and unreliable. The relationship between appliance owner and repairman in our society, for example, has come to have these special attributes—not without strain and exasperation, but as part of the reality of the relationship.

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given were equally oblique. Although I never really overcame my feeling of helplessness in dealing with such situations, I did manage over a period of time to communicate to those in my employ the appropriateness (at least regarding our own particular relationship) of giving me fair warning, *e.g.*, "Europeans are different in this way."

Again, there is nothing extraordinary or unique about personal desires and inclinations intruding on the stability of an interpersonal relationship. However, what is unique to Bang Chan and Thai culture in general is the frequency of such intrusions, the extent to which they take precedence over the responsibilities of the established relationship, and perhaps most important, their general expectability. No Bang Chaner is ever taken aback when another does not fulfill his assumptions about how that other will behave. Note that these intrusions may have little effect on the face-to-face contacts existing between people. My assistant's declaration that he was going to the movies was presented in a most affable way and in the other examples cited, where people were left in the lurch, there need not have been any contact whatsoever between the parties involved.

Reference was made to these modes of relationship in the section on Bang Chan social organization and kinship. However, they received their first formal, and perhaps most elegant, formulation in a now famous article entitled "Thailand—A Loosely Structured Social System," by the late John F. Embree (1950). Embree's application of the notion of "loose structure" was mainly descriptive rather than analytic; it was used to summarize a wide variety of empirical materials. Thus (182): "The first characteristic of Thai culture to strike an observer from the West, or from Japan or Vietnam is the individualistic behavior of the people. The longer one resides in Thailand the more one is struck by the almost determined lack of regularity, discipline, and regimentation in Thai life. In contrast to Japan, Thailand lacks neatness and discipline; in contrast to Americans, the Thai lack respect for administrative regularity and have no industrial time sense." After providing an extensive series of examples—on the lack of binding filial piety, on the tendency to permit a thief to steal from a neighbor's house without raising an alarm or attempting to stop him, on the capacity to delay and double-talk those with whom one has business dealings, Embree concludes (184): "The point here once more is that . . . while obligations are recognized, they are not allowed to burden one unduly. Such as are sanctioned are observed freely by the individual—he acts of his own will, not as a result of social pressure."

While Embree's formulation is by definition phrased in social structural terms, it inevitably directs our attention to an underlying motivational issue: the nature of the villagers' dispositions to conformity. Conformity to the expectations of others—whether such expectations are shared, comple-

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mentary, or emergent—is of course a basic requisite of all effective[19] social action. It is perfectly clear, as was demonstrated in the earlier discussion, that Bang Chaners are highly motivated to conform while in the direct presence of others. Often there is over-conformity when in such situations villagers become overly solicitous to what they think are the needs of others. However, the hallmark of Thai social relations is that there never is any certainty that such face-to-face contacts will take place, or if they do take place, that the conformity which exists during the direct encounter will be sustained once the contact has ended. The overriding inclination of the Bang Chaner is to separate the encounter itself from that which precedes or follows it; psychologically, they are independent and unrelated experiences. The typical Bang Chaner excels at the art of indicating agreement with people—responsiveness, coöperativeness, and compliance with their verbal requests and orders—and then once the situation has been concluded, doing precisely what he wants, often the exact opposite of that to which he had agreed.[20]

Ordinarily, this is not intended as a form of duplicity. Villagers are quite sincere (and probably correct) when they say: "People are much happier when you agree with them and tell them what they want to hear." Too, the behavior is explained in part by the fact that most villagers feel they can change their plans and intentions with impunity at the slightest provocation. Unfortunately, the other persons involved may not be informed of the change until it actually occurs. A Bang Chan employee who

[19] The term "effective" is inserted here to acknowledge that social action is just as likely to be characterized by ambiguity, confusion, and misunderstanding—the absence of clear expectations—and that in some cases (for example, greeting rituals) it is oriented mainly to *discovering* patterns of expectations. Further, insofar as such action occurs through time, it is never completely free of a minimum of both ambiguity and certainty: the ambiguity of not being able to anticipate what might next occur; the certainty of knowing that what does emerge has *some* relationship to what has gone before.

[20] Bang Chan and Thai culture in general evidently are not the only places in Southeast Asia where one finds these modes of response. Addressing himself to a rather different issue, Geertz (1956: 155), writing about the social attitudes of Javanese peasants, notes: "Now, as in the past, the central government and the *prijaji* [aristocratic, learned, upper class] outlook which justifies it sits uneasily in the general social context of Javanese peasant society, with much less actual control over the behavior of the villager than it would seem at first glance to have. Without the intricate ties between the rural and urban gentry one finds, for example, in China, or without the deeply rooted clearly defined, land-rights-linked social code of reciprocal obligations of feudal Europe, the *prijaji* has always found outward submission, exaggerated respect, and placating excuses easier to obtain from the *abangan* [traditionally oriented peasants] than actual obedience." This passage, of course, was concerned with the nature of the Javanese authority system rather then with more generalized patterns of interpersonal response. Whether Javanese respond in the same way to fellow villagers and to other social equals is unclear. However, the stylistic similarities between Thai and Javanese peasants are striking.

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A Bang Chan employee who walks out on his superior because he does not like the food he is served or a villager who agrees to lend a person money and then is not at home when the person calls for the loan can easily account for his actions by saying that circumstances had changed.

It must be noted, and this is crucial, that there is generally no animosity felt toward the employer with the unpalatable food, toward the fleeing[21] employee, or toward the unreliable creditor. Villagers are thoroughly conditioned to the possibility of such events and accept them simply as part of the inauspicious nature of life. That they are in fact considered inauspicious rather than results of the willful or malevolent intentions of others is not accidental. Bang Chaners faced with a breakdown in the fulfillment of commitments can of course point to the individual who directly caused it. But there is no satisfaction to be gained from this. The person who broke his obligation must have had his own good reason, and beyond this, there were probably other factors, unknown to both parties, that caused the breakdown. For most Bang Chaners, all human intentions are forever set within a framework of cosmic, and particularly moral, unpredictabilities.[22] If things do not work out the way one expects, it is most likely due to the inauspiciousness of the time, place, and persons involved. The proper time is particularly important. It is precisely for these reasons that the more important events in a person's life—marriage, trying to win a lottery or a maiden's heart, taking an important trip—are so often preceded by ceremonial attempts to decide the cosmologically auspicious conditions for effecting the event. These involve consultations with monks, shamans, and other religious practitioners, and highly ritualized forms are followed to select the appropriate conditions. (See Textor 1960 and 1962 for systematic discussions of the various kinds of problems and practices associated with this complex.) The kind of occurrences discussed above are not of this order of significance, but they do partake of the same cognitive assumptions that lead to such highly institutionalized practices. Thus, whereas most Occidentals would point exclusively to the actions of the other person as being both the necessary and sufficient cause of the interactional breakdown, Bang Chaners, who have considerably less confidence in human capacities, would really not be sure. To them, human volition represents only one of several indeterminate and uncontrollable factors giving rise to events. Who knows what accident, change of heart, sudden windfall—particularly one occasioned by something done by one of the parties several lives earlier—might intervene to alter what had originally been planned and agreed upon?

[21] This is just the term that villagers, with their wonderful sense of hyperbole, apply to such cases. The original Thai word is *nii*.

[22] I am indebted to L. M. Hanks, Jr., for suggesting this line of thought.

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These assumptions about the indeterminate nature of the universe and human actions are so integral to the villagers' cognitive orientations that Bang Chaners often hesitate to make even the most elementary kinds of prediction. Thus, in asking a village lad how he felt about his older brother's forthcoming ordination, I was told, "I don't know." The tone of his reply indicated that he was not evading the question, so I pursued the matter further: "Well, do you feel happy about it? Do you wish you were being ordained together with him?" He answered: "The ordination is not for another three days. I do not know how I will feel at that time. But when that time comes I will know." In another case, I was going up the canal with a villager to attend a "Kathin" being held at the monastery. (A "Kathin" is a fiesta-like merit making ceremony sponsored by a person or group of persons from outside the village at which new robes are presented to the monastery monks. It involves the sponsors, their local hosts, and all villagers who wish to attend.) Although not necessarily an annual event, "Kathins" are held often enough at Monastery Bang Chan so that this villager, who was also a member of the monastery lay committee, was thoroughly familiar with every aspect of them. Simply to make conversation, I asked him: "What is the 'Kathin' going to be like today?" to which he replied, "I do not know. I have not been to the monastery yet today." Assuming that his past experience with "Kathins" provided him with some knowledge of the goings-on, I went on: "Well, do you think there will be many people?" His answer: "I do not know. You never know what a situation is like until you meet it. I have not met this one yet today."

The point of these various illustrations is that they represent a psychological universe of uncertainty and unpredictability. And in this kind of universe—where one hesitates to build up sharply defined expectations and where one is forever aware of the mutability and frailty of the environment—it is not unusual that there should also be a high tolerance for interpersonal nonconformity. What the actual limits are, theoretical or empirical, to this tendency to nonconformity are uncertain. Much of the nonconformity is undoubtedly made possible, in the first instance, by the sociologically simple and relatively undifferentiated nature of Bang Chan society; that is, the actual number of functionally specific tasks and roles—those that require special competencies—are few, and any number of different individuals can perform them. Thus, when a Bang Chan employee walks out on his boss or when a wife walks out on her husband, their actions do not from a functional point of view disable the system. Since the requirements of the role of house servant or farmhand are characteristically simple and understood by all, the departing employee can usually be replaced by another individual. Similarly, since any adult—aunt, grandparents, older sibling—can and often does rear another's children, and

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• 571 *156 since there is always sufficient fish in the canal for an abandoned spouse to feed himself,[23] the departure of a wife or husband need not, from a functional point of view and the point of view of most villagers, work any great hardship on the individuals involved. This suggests that not all social systems are equally demanding in their functional requirements for people to conform. The importance of this point is taken up in the final chapter.

It is recognized, of course, that the sociological simplicity of Bang Chan represents a necessary, but not sufficient, condition for the nonconformity found in the community. There undoubtedly are many cultures which are functionally and sociologically less complex than Bang Chan but where culturally defined requirements for interpersonal conformity are considerably greater. I would suggest that the loosely structured nature of relationships in Bang Chan is due primarily to psychological and philosophical ("world view") factors and is *permitted* expression by the relatively undifferentiated social system. A more complex, highly differentiated social system, one whose functioning is completely dependent on the technical competencies of its members and on their meeting each other's expectations (a factory system, for example) obviously could not afford this luxury.

It might be noted that, in the example cited earlier regarding the movie-going field assistants, one of the reasons for my consternation (over and above my being an American) was the fact that these persons were highly trained individuals who could not be easily replaced. Their temporary departures were strain enough; had the departures been permanent, it would at that point have paralyzed the research. In this respect, their behavior was typically Thai, but the situation in which they found themselves was not.[24]

The ultimate psychological sources of the villagers' tendency toward loosely structured relationships are not easily determined. (The indeterminacy here is inevitable. It derives from the impossibility of ever being certain whether the loose relationships are actually consequences or causes of these other factors, or whether both are expressions of a single, under-

[562] [23] This is just what one informant, a female, said when her husband left her. The sociological simplicity of Bang Chan is also supported by the slight differentiation that villagers make between the adult roles of the two sexes. In contrast to all other known cultures, in Thailand both men and women may serve as midwives and do plowing. They both own and operate farms, inherit property equally, share equally in the property brought to a marriage and divide it equally in case of divorce. It is not uncommon to find men tending babies while women are off on a business deal; nor is it unusual, as indicated earlier, to see women paddling right along with men as crew members in a boat race. (See Sharp *et al.* 1953 for an amplification of this point.)

[24] In fact, this event is a perfect illustration in microcosm of what was referred to in the introduction, following Inkeles and Levinson, as "personality-institutional noncongruence."

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lying configuration.) However, from the point of view of their etiology in the individual, it is clear that the villagers' tendencies toward loose relationships are related to early childhood experiences. A second source is their philosophical notions concerning the nature of the individual. These notions are largely cultural derivatives of Buddhist doctrine, although at the behavioral level they function simply as unstated premises which guide and tacitly define behavior.[28]

Reference was made earlier to the basic assumptions governing the socialization of the Bang Chan child. When the child enters the world of human beings, he is already a partially formed and psychologically independent individual, with his own *ʔupanidsaj* (ingrained character) and *khwaan* (soul-stuff), not to mention his stock of accumulated merit and demerit from countless previous lives which predetermines his character. The effect of these definitions is not only to award to the child a sense of psychic individuality that is partially[29] independent of any social environment to which he is exposed, but to assign to him a fundamental sense of psychological equality. We are not speaking here of *social* equality. The

[28] From a strict analytic point of view, it would probably be best to consider Buddhist doctrine as an abstract, codified representation of these premises rather than consider the premises as explicit, logically coherent deductions from Buddhist doctrine. To be sure, many Bang Chaners often explain and justify their actions by pointing directly to Buddhist doctrine, sometimes applying its tenets correctly, and sometimes not. But for most, Buddhism is a diffuse, ubiquitous *Weltanschauung*, the precise effects and applications of which the villagers are typically unconscious. It would probably not be incorrect to think of most religious "traditions," particularly the "Great" codified ones, as functioning in this way.

[29] The term "partially" is inserted here to indicate that despite these ontological notions, few villagers, as J. R. Hanks (1959) points out, ever consider "any human child so marvelously endowed . . . from previous existences that training is unnecessary." The child's *ʔupanidsaj*, *khwaan*, merit and demerit, as well as his *winjaan* (psychological motive power), *caj* (heart), and *phrooměʔkhìd* ("the lines of his destiny as established by Brahma") are all crucial predeterminants of his character. But few Bang Chaners ever think of a person's character as due solely to the uncontrolled emergence of these pre-natal forces. Rather, they represent the basic psychological raw material with which parents and other socializing agents must work, and set the limits of these agents' enculturating efforts. What is important is that the limits—the "degrees of freedom" permitted the parents—tend to be narrowly defined. Intensive probing of informants indicates that there is no general agreement on whether these cosmological forces are more or less influential than parental training in shaping a child, although they tend to be invoked more frequently as explanations of negative characteristics and of unusual happenings, positive as well as negative, in the lives of individuals. Also, villagers are inclined to think of them as the reasons behind *particular* characteristics and events, assigning to parental training a more diffuse influence in the development of the child. Thus, when asked why a particular individual grew up to be a *nagklaeng* (an aggressive, daring, sometimes bullying type of person) and how one of their fellow Bang Chaners had grown up to become an admiral in the Thai Navy, informants attributed the character and success of these individuals respectively to their *ʔupanidsaj* and *kam*. (*Kam*, the Thai derivative of *karma*, is the proportion of merit to demerit that a person may have at any particular moment in

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858 828 child is clearly a social inferior, and is due all the prerogatives of his position: he is to be dealt with gently, kindly, and benevolently, with sympathetic regard for his incompetence; correlatively, he must be taught to express deference and obedience to superiors. Rather, the equality awarded the child results from the recognition that in the workings of the cosmic scale it is impossible to ascertain what the child could once have been or eventually will become, and he, like any soul, is always *potentially* of the same value as any other person. It is precisely for this reason that most Bang Chaners, if they mention it at all, are only mildly pleased rather than particularly proud that one of their own grew up to become an admiral in the Thai Navy. It comes as no great surprise that such a thing can happen. To them, it is no more unusual than that the prime minister himself should be a person who was born and reared in a village. (By the same token, the peasant background of these two individuals creates no special sense of personal identification with them on the part of the villagers. They are perceived simply as two unique *individuals*, their peasant roots being viewed as only one of the literally countless factors that made them what they are today.)[11] To a large extent, the equality of the child derives from the premise that he is not so much a child as he is a human being who happens to be at a particular stage in his ontological

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time). When probed further and asked if their parents' training may have had any influence on these individuals, they replied "yes" and "maybe" in the case of the admiral, but disavowed all parental influence in the case of the *nagkleeng*. A few said that the *nagkleeng* became that way because of bad friends.

[115] One villager, phrasing his comment as a personal conjecture, volunteered that the notion of parents being the major influence on a child's character is a "modern" idea. Another informant, the wife of a school teacher and well versed in her husband's teaching training manual (prepared in Bangkok by Western-trained educators) argued that a person's character is dependent "mostly on the influence of the home and school." However, since on other occasions she complained to me that one of her sons "does not have an *?upanidsaj* for studying, and there is nothing a parent can do but let the child have his own way," it would suggest that her commitment to the pronouncements of her husband's mentors was not too well internalized.

To avoid confusion, it might be added that from a historical point of view only one of the above cosmological forces (*kam*) is strictly Buddhistic in origin. The others are either Brahmanic (*khwaan* and *phroomlʔkhid*) or traditionally Thai (*?upanidsaj*, *wisjaan*, and *caj*). Of all the terms, *kam* and *?upanidsaj* are the ones most frequently referred to when discussing an individual's character.

[11] [565] [571] [554] It is precisely for this reason, as I indicated in an earlier writing on Thai social structure (see Sharp *et al.* 1956: 163) that Thai society "cannot be said to have a class system in the classical European sense of the term." People identify with others as individuals, not as representatives of social classes.

The very fact that individual peasant boys can climb the social ladder to attain some of the highest social positions of the land, without it even being considered particularly noteworthy, attests to the fundamental equalitarian nature of the ideas underlying the Thai social system despite the obvious emphasis given to status and hierarchy in individual face-to-face relationships.

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593 155 *156 [125] None of the above is meant to imply that 79 percent of the adults of Bang Chan would in fact give away their children. But the relatively high frequency of agreement they exhibited in admitting to such a possibility and the fact that as many as 65 percent agreed that it was either good or justifiable reveals something of the psychological environment within which the Bang Chan child is reared and where he learns his basic orientations toward other persons. The responses to this single stimulus must of course be seen in the context of the more naturalistic, behavioral materials presented earlier. The point of all these illustrations, however, is that they indicate there is nothing sacrosanct about any human tie in Bang Chan, even that which exists between parent and child. If necessity or personal predilection requires, then this tie too may be broken. What is perhaps most significant here, from a developmental point of view, is that the breaking of the tie always exists as a realistic potentiality in the life of the child. Reared in an environment where he learns that no human tie need be permanent or sustaining, the developing child inevitably takes on some of these same patterns of expectation in his own dealings with others. Thus the villager who abandons his spouse or the employee who with little warning leaves his employer are acting in terms of patterns the prototypes of which they either actually experienced as children or came to expect as part of the realities of interpersonal relations in Bang Chan.

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779 *156 The second major source of the villagers' loose relationships lacks the developmental reference of the above. To a certain extent it is not even social relational in nature, although our concern with it stems from its having crucial consequences to the social orientations of individuals. I am referring here to the Buddhist emphasis on the primacy of individual action and individual responsibility. Without going into a lengthy discussion of the subtleties of Buddhist doctrine, it is imperative to point out that the principal tenet of Hinayana Buddhism is the complete psychological freedom, isolation, and responsibility of every person. This is not the Occidental idea of "free will," but rather the notion that every person is a free agent, responsible only to and for himself, and that he inevitably reaps the fruits of his own conduct. Buddhist canonical literature is replete with references stressing the centrality of this doctrine. The last words of the Lord Buddha before he left this world to achieve the sublime state of *nibphaan* (nirvana) are said to have been: "Work out your own salvation with diligence." A frequently quoted passage of the *Dhamapada* reads: "By oneself is evil done; By oneself one suffers; By oneself evil is left undone; By oneself one is purified." The whole complex cosmology relating to the accumulation of merit and demerit is phrased in terms of the individual's lonely journey through cycles of interminable existences working out his own moral destiny. Who his progenitors were, what kind of environment he was born

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primitive categories into which people code their experience. From a psychodynamic point of view, the predicates do not *require* codification; people think and act in terms of "primitive" (tacit, axiomatic) categories many of which are never explicated in the propositions of their formal religious, ethnophilosophical, or mythological systems. Why certain categories are selected for codification and others are not is beyond the scope of this book. However, it is clear that a major function of Buddhist thought—like that of any articulate symbolic or ideological system—is to *objectify* and *clarify* some of the more important experiential assumptions of its adherents. This is the cognitive essence of all belief systems. As a belief system, Buddhist doctrine also takes on a special value of its own. This is in fact its second major function; that is, the tenets of Buddhism not only serve to objectify through philosophical elaboration that which is already accepted but also to act as standards in assessing the value, propriety, and significance of human actions. In this sense, Buddhism (again like any coherent ideological system) provides a corpus of knowledge for rationalizing and *sanctioning* certain types of behavior and for disapproving of others. The very belief system that codifies aspects of reality for its adherents assumes the normative function of reinforcing and promoting those activities that are in conformity with it. This is the motivational essence of all belief systems. Needless to say, we are speaking here of activities that are subjectively felt to be valuable and proper, irrespective of the social psychological dysfunctions that may follow from them. Thus, returning to our major theme, most villagers would agree that the Bang Chaner who without saying a word leaves his spouse in order to avoid an embarrassing or rancorous confrontation over some difficulty is behaving in a manner thoroughly consonant with "doing evil by himself; suffering by himself; leaving evil undone by himself; and becoming purified by himself." How the wife responds to his actions is her problem. Her *kam* may well have been the reason for this happening to her. (Note that I say ". . . for this happening to her," *not* ". . . for his doing this to her." This is the typical village way of perceiving such events. Again, the interactional dimension is secondary: it is what happens *to* individuals, not what happens *between* them, that counts.) How *explicitly* villagers would apply Buddhist doctrine to this particular situation is problematic. Applications of Buddhist thought usually emerge only after villagers have been asked to think actively about and articulate justifications for the actions of people. Their comments are typically *post hoc* explanations that appear only when there is a necessity either to understand or ethically evaluate an individual's actions.

The above discussion was concerned with detailing some of the sources and supports of the loosely structured relationships that are found in Bang

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Chan. However, there remains the crucial question of how villagers manage to develop the long-term relationships that they do have, for despite the inevitable unpredictability of all human contacts, most Bang Chaners do live together in family units for more or less sustained periods of time, fathers do save for years in order to give their sons respectable ordinations into the monkhood, relatives and friends who have not seen each other since childhood do assemble for the cremation of a late kinsman or mutual friend, and mature adults do continue to feel a profound sense of respect and obligation to individuals who were their teachers when they were youngsters. What are the bases and rewards for these enduring interpersonal commitments?

The immediate rewards for these commitments are, on the one hand, quite apparent. They involve such things as the simple, unrationalized kind of love found among any group of kin or close friends. In the case of the ordination and cremation, there is the reward of making merit, not only for the son and the departed soul, but for all those who sponsor and participate in the ceremonials. The satisfactions gained from increasing one's social prestige by putting on an ostentatious ceremonial are not to be overlooked either. At a more subtle level in the case of the respectful student, the reward is gained from knowing that one is behaving in a proper and courteous way toward one's *aacaan* (in its social psychological connotations, similar to the Indian term *guru*) and is thus upholding established normative patterns. The rewards of maintaining the rituals of the moral order are not to be glossed over for Bang Chaners, like most Siamese, are a deeply ethical people. This is not meant as an evaluation of their behavior or as a statement of their capacity to conform to their ethical prescriptions, but simply as a statement of their preoccupation with ethical concerns. The rewards of *feeling* (genuinely or self-deceptively) that one has behaved in an ethically and ritualistically prescribed way are among the most satisfying of sentiments, although as indicated in the discussion of "social cosmetics," villagers often use the rituals of ethical behavior as substitutes for more demanding interpersonal involvements. Indeed, the great emphasis given to the performance of ethical rituals (speaking in soft and gentle words, honoring one's mentors) helps perpetuate the loosely structured relationships found in the community in that conformity to these rituals is perceived by many as comprising the fulfillment of their interpersonal obligations. Beyond this they are free to pursue their own interests. To a large extent the ritualistic forms serve as a comforting psychological justification for the pursuit of individualistic concerns, *i.e.*, "But I otherwise treat others so nicely." [20] This is not the result of conscious

[20] In one of his more recent and typically penetrating works, Goffman (1963) coins the terms "Involvement Shields," "Main Involvements," and "Subordinate

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1923–1924], translated by Cunnison) and Homans (1961) have argued, that human relationships everywhere are based on just such a consideration, usually concealed by ethically palatable amenities (such as in American culture, from which most of Homans' empirical materials come). However, what is so intriguing about the Thai case is that *quid pro quo* factors are forever in mind as justifications and explanations of why people relate to one another. Although villagers, because they are such polite people, rarely say to others, "I am helping you because I know the day will come when I need your help," or "Do this for me because you owe me a favor," they do use such arguments *to explain* the basis of their ties: "Of all my friends I love Lek the most because she has done me the most favors (*bunkhuns*)"; "The purpose of marriage is to have a companion who will take care of you when you get sick"; "Of all my daughters, the one who gives me the greatest pleasure is the one who sells things. . . . When she gets money she gives it to me"; "Friends are very useful because it means that you have people who will do you favors. And when they need help, you will take care of them. This is love." [21]

One of the finest discussions of the nature of reciprocal obligations appears in a recent paper by George M. Foster (1961) that deals not with a Thai community, but with the Mexican village of Tzintzuntzan. Foster outlines in his paper the notion of the "dyadic contract" which he presents as a model for the social structure of Tzintzuntzan. Or, more precisely: "Specifically, I suggest a model . . . to reconcile the institutionalized roles which can be recognized and described in the community with the underlying principle which gives the social system coherence." Foster's focus thus differs somewhat from our psychological emphasis. However, his abstract statement of the "dyadic contract" provides such an excellent summation of the major factor making for enduring social relationships in Bang Chan that it merits quoting in detail here. There are of course inevitable differences in cultural content between the two communities and the fact that

[21] Such explanations are not unique to Bang Chan. In his description of the Thai-Lue village of Ban Phaed in Northern Thailand, Moerman (1962) observes: "The society of Ban Phaed operates in terms of something got for every something given. This is not merely an analytic device which permits a predictive, if crass, view of any human society. It is the way in which villagers explain and evaluate their own behavior. Favor for favor, visit for visit, meal for meal, one should return what he receives. 'We help our kinsmen because they help us. If a kinsman however close didn't help me, I wouldn't help him.' 'We care for our children when they are young; they will care for us when we are old.' Actions which we would justify in terms of compassion, generosity, public-spirit, patriotism, pride in a job well done, the Lue villager speaks of in terms of reciprocal, short-term self-interest. Their actions are no more selfish than ours. Far from it. But the moral rhetoric of a Lue villager is different from our own. In politics, economics, family life, and religion it focuses on something got for something given."

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114 status differences and the looseness of social ties loom considerably in Bang
* 156 Chan probably makes for some other structural variations.[22] However, as
171 stated below, Foster's formulation applies almost perfectly to Bang Chan
• 571 (1173-1176):

> The model appears to account for the nature of interaction between people of the same socio-economic status, between people of different statuses, between fellow villagers, between villagers and outsiders, and perhaps between man and supernatural beings as well. Although my analysis deals only with Tzintzuntzan, I think the model will prove useful for other societies with similar structural features . . .
>
> Briefly it is hypothesized that every adult organizes his social contacts . . . by means of a special form of contractual relationship. These contracts are informal, or implicit, since they lack ritual or legal basis. [This is not completely true for Bang Chan. There is, for example, a special "Teachers' Day," sanctioned by the national government, set aside for honoring teachers, and thus providing ritualistic reinforcement to the contract.] They are not based on any idea of law, and they are unenforceable through authority; *they exist only at the pleasure of the contractants.* The contracts are dyadic in that they occur only between two people; three or more individuals are not brought together. The contracts are noncorporate, since social units such as villages, *barrios,* or extended families cannot truly be said to enter contractual relations with other families, although spouses often honor the obligations inherent in each other's contracts.
>
> The implicit dyadic contract is made between members of a family as close as siblings [and in Bang Chan, as close as husband and wife, and parents and children] . . . ; and it unites neighbors and friends. Contracts are found between social and economic equals within Tzintzuntzan or with similar people in other communities. And they are found between people (or beings) of different status and category, as on those few occasions when outside political leaders or economic patrons have ties with villagers and when a villager invokes the aid of the
[776] Virgin Mary or a saint. [In Bang Chan, a functional equivalent of the
[782] latter would be when villagers propitiate the *caw,* or Spirit Lord,
[778] who resides in the *San Phra Phuum,* or house of the Guardian Spirit of the home. This is a replica of a house, about the size of a bird cage,
[782] located in every house lot in Bang Chan. The offering of rice and flowers to the *caw* is explicitly a form of payment to him for the use

[22] A second paper on Tzintzuntzan (Foster 1963) indicates that there are some crucial motivational differences as well, viz., Bang Chaners enter into dyadic contracts with a much greater sense of freedom than do Tzintzuntzeños. Their attitude is both more cavalier and cold-blooded than the Mexican peasant who feels that if he is to exist, he has no choice but to enter into these contracts. The Bang Chaner is animated by a sense of personal advantage; the Tzintzuntzeño by a sense of passive participation in a system he cannot change.

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of the land upon which the human home is built. In effect, humans have temporarily "rented" the land from him.]

. . . [The] contract implies and is validated by reciprocal obligations . . . [In] its totality the system of complementary reciprocity validates, maintains, and gives substance to the implicit contractual networks. The symbolic meaning of exchanges (as contrasted to economic and other functions) is accepted without question by all villagers: as long as a person continues to give to and receive from a partner, he is assured that the particular relationship is in good order. *When an exchange pattern between two people terminates, it is overt evidence to both that the contract is dead,* regardless of the formal institutional ties or the religious validation which may, in theory, continue to bind the participants. [Italics added.]

In anthropological analysis it is customary first to seek and attempt to identify the factors which link human beings together rather than those which keep them apart. This is so much a part of our professional tradition—in effect, one of our "primitive predicates"—that we tend to gloss over the question of the extent to which people must have enduring interpersonal commitments. This question has not been pursued in precise detail in our discussion. However, the realities of Bang Chan social behavior are so weighted in the direction of atomistic and essentially non-relational considerations that any coherent discussion of them should be organized in approximately equivalent terms. It is for this reason that the bulk of our presentation has focused on the individualistic nature of the villagers and that the factors accounting for interpersonal linkage were left to the end. It is hoped that such an organization has accurately reflected the tone and quality of Bang Chan social life as it is encountered and felt by an outside observer trying to understand its meaning to those who experience it.

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*125 *128 152 *156 fundamental security about their own *psychological* worth. This is undoubtedly abetted by the fact that the modes of social interaction in Bang Chan do not demand too much from the individual, as well as the fact that the individual, with his profound sense of free choice, often ignores or isolates himself from the impingements of others. (That a stance of psychic isolation is not necessarily maladaptive will be discussed in the final chapter.) When asked how they would react to frightening or worrisome situations, most villagers respond in terms of maintaining their inner psychic stability and in terms of accepting and tolerating these familiar psychic pressures. Their responses are non-constructive, but are highly congruent with their passive and secure orientations to the world. Their responses to "anxiety" tend toward psychological "unimodality" at an interpretive level, although in the last two cases the descriptive similarity of the responses first suggest a bi-modal distribution.

Aggression: Causes and Reactions

121 152 Analyzing "aggression" in Bang Chan is very much like analyzing "sex" in contemporary American culture. The category represents at one and the same time one of the most obvious and one of the most convoluted areas of the villagers' psychological lives.

152 *156 571 The most obvious fact about aggression in Bang Chan is that villagers cannot tolerate its spontaneous, direct expression in face-to-face relationships. This is demonstrated not only by the general absence of overt aggression in such relationships but by the elaborate array of devices that villagers use to control its expression: giggling when making or receiving an untoward request, using a go-between to soften the demand of an interpersonal lien, leaving the field at the slightest hint of provocation (whether the provocation is intended or not), as well as the more general use of flattery, comedy, and self-effacement (*kreeŋcaj*). The repeated use of these devices as well as the villagers' evaluations of "people who never show their feelings" (see tables 16 and 17) reveal their sensitivity to aggression as a latent, but intrinsic, attribute of most social encounters. In fact, their evaluations of people who inhibit their feelings—or their *assumptions* about the inherently hostile nature of such feelings—suggest that their recognition of the potentiality of aggression (whether in themselves or others) is quite conscious.

The net result of these orientations is to give face-to-face contacts an aura of surface pleasantness, but at the same time a high degree of brittleness. Over and over again, villagers indicate that they prefer not to have any relationship at all than to have one that is even tinged with hostility.

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Thus, in explaining why he loves one of his closest friends, a villager says:

> We love each other because we never contradict each other or disagree. That is why we love each other. If we disagreed, there would be no love. [Investigator: "It is normal sometimes even for close friends to disagree. About what kind of things do you and your close friend disagree?"] We never disagree. Only people who are drunkards and take opium disagree. That is why our friendship has lasted so long. [Investigator: "What would happen if you disagreed?"] We would not love each other, and maybe he would take revenge on me.

In another place, this same informant says of his relationship with his wife: "My wife and I never quarrel. If we quarreled, we would have to separate. There would be nothing to divide—except the children." As indicated earlier, many villagers, fearing the volatility of a quarrel, actually do separate, often even before the dispute gets going. Similarly, individuals, particularly if they are in subordinate positions, hesitate even to approach others lest they stimulate, let alone elicit, anger. Villagers will hesitate to approach others even if they are not the object, but simply a possible catalyst, of another's potential aggression: witness the cases of the land sale deal and the broken noria cited earlier. Note that in these cases it is not manifest aggression but merely the anticipation of it that inhibits villagers from initiating or maintaining interpersonal involvements.

Although villagers decline to express or to be exposed to direct aggression, they do have several indirect, if somewhat more complicated, ways of venting these feelings. Of these, the simplest is to gossip nastily *about* people. The frequency of this characteristic peasant activity is considerable in the village: in fact, an uncharitable observer might, on the basis of Bang Chan, just as readily entitle a book about Thailand *Land of Gossip* as *Land of Smiles*. However, the very frequency of gossip seems to mitigate its intensity or effect. Villagers are so accustomed to it that it is almost a *way* of talking, a style of speech. And as is the case with much village speech, villagers listen to, but do not necessarily believe, the nasty things one person might say about another. Also, excepting those cases where a person's complaints are either realistic or justifiable, people are just as likely to listen to an individual's gossip for what it says about him as for what it says about the person whom he is criticizing. None of this is to suggest that the person gossiping does not attain release, or that the person about whom he is gossiping, *if* he found out, would not be hurt or peeved. Rather, it is the situation in which the hostility is expressed that mitigates its effect.

Less frequent and more painful than the above are the formal, almost

4:Phillips E-4,5 (1956-1957) 1966
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152 571 ritualized, ways of expressing hostility. What is significant about these particular procedures is that their very formalism serves to keep the aggression controlled and within bounds. Thus, everybody knows precisely how to behave when a buffalo disappears in the middle of the night and an intermediary arrives the next day to arrange the price for its return. Similarly, the aggressor, his victim, and everyone else present knows what is meant when someone calls a dog by the name of a person who is within hearing range and claims it was simply a slip of the tongue. The victim might respond by stealing his antagonist's boat and returning it a few weeks later, after his adversary has suffered sufficient anxiety. Note that in all these cases a face-to-face confrontation is either avoided or concealed.

152 571 754 Related to the above is the use of magical aggression. Textor (1960) points out that magical aggression—from one *person* to another *person*—is on the wane in Bang Chan. Also, it is clear from his exhaustive inventory of the magical practices in the village that interpersonal aggression has a very minor part in what is otherwise an extremely elaborate belief and ritual system: there are no more than three or four supernatural "objects," out of more than one hundred and seventy, that even suggest witchcraft, and although these objects are considered highly potent, they are rarely used. Even in the most extreme case—a young man using the oil from the chin of a corpse to induce hysteria in a maiden who has rebuffed his advances[9]—the victim is held partially responsible for having succumbed to the magic, a consideration that diminishes the "magical" implications of the ritual.[10]

152 762 Finally, a word should be said about the most convoluted way of expressing aggression. This is suicide, a procedure which, obviously, is applicable to only a small number of people. Nevertheless, during the relatively brief period that I was in the field, three Bang Chaners (out of a population of 1,771) attempted to do away with themselves by hanging. They always selected a conspicuous place (a tree on the Minburi highway or over the main canal) and were always unsuccessful. The aggression here is convoluted not only because it is turned inward, but also because it is

[9] This blending of sex and aggression does not have the same meaning in Bang Chan as it has in the West. Although the young man is concerned with punishing the girl for not responding to him, he is more concerned with breaking down her defenses and equilibrium, the very factors which denied him access. In English terminology, he wants to "unhinge" her, with all the duality that such symbolism might imply.

[10] While magical aggression between people is relatively minor, magical means of averting aggression by non-human forces is not. In fact, the largest number of magical practices in Bang Chan relate to protecting the health and welfare of the organism from malevolent spirits, accidents, and dangerous animals. These data, of course, are quite consistent with the SCT data on "anxiety," presented in the preceding section. [789]

4:Phillips E-4,5 (1956-1957) 1966
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the part of older people.[12] Particularly obvious is the absence of any reference to accumulating Buddhist merit. Neither is there any reference to the pleasures derived from dealing happily or enjoyably with other people. The closest we get to this is with the responses of two informants who are concerned mainly with the welfare of their children, and who speak in terms of "inspiring respect" in their children or assuming the role of "doctor" who, either by his knowledge (in case the children are ill) or wealth, could take care of them. Given all the conceivable things that villagers might wish to be—fanciful, real, personal, social, of this world, and of any world—the dominant wish is to have status, wealth, and respectability within their prevailing peasant context.

The next item, *"Most of all he wants to . . ."* is essentially a confirmation of the above findings. However, perhaps because of the syntax of the Thai version of the item and the inclusion of the word, "most" (*"The thing which raw wants the most is* (*namely*) . . .") the responses assume a considerably more extreme and "unimodal" form. The overwhelming majority of the informants, 77 percent, want only one thing: money. A few of them say that they want what are essentially cultural variations of money: property, rice fields, land, cattle, and jewelry. Several of them almost wax purple about the significance of money in their lives: *"The thing which raw wants the most is* (*namely*) . . . have money and gold, because money can help us all the time. Whatever one wishes to have, one can use money to buy it all. Even when one wants a wife, if one has a lot of money one can have anyone's daughter"; ". . . have money. Money is better than anything else. It is only the moon and stars that money cannot buy"; ". . . to have money. She wants money very much because when she lacks other things she can find something to take their place, but when she lacks money she is most unhappy"; ". . . have wealth because everything else comes after that." These responses, of course, explicate the major function of money. They indicate that money is not an end in itself, but a means by which to achieve some of the other life goals appearing here.

The minority responses to this item are in no case held by more than four individuals. Four villagers do give religious responses, saying that what they want most is to accumulate merit (one mentions both merit and money); three refer to maintaining the welfare of their families (one of them merging money and succorance by saying that he wants enough money to provide for his family); and four say that they want happiness (again, two of them linking money and happiness together).

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[12] There is nothing in the grammatical-semantic structure of the Thai version of this item inhibiting a religiously oriented response. The Thai cognate for the verb "to be" here is *"pen,"* which could easily result in a response such as ". . . *pen khon thii mii bun,"* or ". . . a person who has merit." This would be the most obvious "religious" completion under the circumstances.

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in the khwan khăo "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mŏ or to the Minburi Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

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Though living like other elder citizens of the community, in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mŏ was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (tham ăchīp [Mc.F. 990]) when others who had equal or more experience were not so considered?

4:Phillips E-4,5 (1956-1957) 1966
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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

4:Phillips E-4,5 (1956-1957) 1966
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596 602 *156 [609] and not only in the abstract, symbolic sense. Non-kin are approached in the hope that they eventually may be treated as kin; good government officials are unabashedly described as being like "good fathers"; the basic patterns of respect that are learned and practiced in the family are extended to relationships outside of it, although inevitably in more formal ways. There is no *rigid* psychological cleavage between the sentiments of kinship and the sentiments about individuals outside of the family. Conversely the mere fact of kinship does not assure that individuals will be given special emotional treatment: often the love between friends is greater than the love between kin (see the case of "Dang," his father, and father's friends in Hanks and Phillips 1961, or the case cited earlier of the man who left his wife because of his fondness for an employer). Kinship represents to the villager relationships of warmth, familiarity, and conviviality, but also unpredictability and undependability. Such is the nature of most human contact in Bang Chan.

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621 596 [662] *[156] In this type of cultural situation, one does *not* find arising the type of community power struggles or schisms apparently characteristic of many peasant communities (see Foster 1960–61). Bang Chan is indeed a placid community because no family has the organizational means or the quality of familial cohesiveness necessary to assume a dominant social, political, or economic position. Individuals assume important positions and individuals disagree and squabble, but rarely families. In surveying the cultural landscape of Bang Chan, I often wondered whether the basic unit of anthropological and sociological, as well as psychological, analyses was perhaps not the individual rather than the family, monastery, school, or village itself.

4:Phillips E-4,5 (1956-1957) 1966
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4. The good person is one who tries to behave in an honest way.
5. Do not shove anything at anybody or throw anything at anybody.
6. Do not make loud noises when people are working.
7. Do not spit or clear your phlegm or yawn in public.
8. Do not gobble your food or scatter things on your plate or chew loudly.
9. Do not sit or walk carelessly or abruptly against other people.
10. Do not touch or horse-play with people who are your close friends.
11. If you are a superior, wherever you go, you should look after the comfort of your inferior.

Again, although the list is almost self-explanatory, note should be taken of some cultural emphases that run through several of the items: the stress on behaving properly toward superordinates and subordinates; the emphasis upon motoric and emotional self-discipline, and conversely, the implicit fear of losing control over one's impulses (as indicated in the dictum against horseplay, even with one's friends); the general stress of respecting the inviolability of every person; and finally, the great emphasis on the importance of the body in human behavior and social relationships. Although this last point may not seem unusual, in that the dicta are addressed to children—with whom one would expect much concern over the body—it in fact represents an area about which all Thai regardless of age are sensitive. In general Siamese, considerably more than Occidentals, tend to be aware of physical bearing, beauty, and ugliness, as well as the use of the body as a communicative device. A person's physical appearance is an indication of his character, particularly his moral nature, and kinesthetic modes are explicitly used for conveying love, regard, and as suggested above, disrespect.[2]

It is worth reëmphasizing that the above items are standards for, not descriptions of, behavior. The attention given to controlling body movements is simply to emphasize for the child that people will decide whether he is good or bad on the basis of the way he handles his body, and he must therefore exercise extreme care in its use. Items one, nine, and ten are not meant to imply anything fundamentally wrong with touching another. Most Thai, particularly members of the same sex, thoroughly enjoy expressing their mutual affection through bodily contact: by holding hands, grasping the leg or arm of the other, and in Bang Chan, sometimes by sleeping with one another. In the last instance, there is absolutely no sexual contact; often during the cold season the practice serves not only friendship ——— but the additional purpose of keeping the participants warm.

[2] Although it belongs to a different area of behavior, it is not insignificant that in classical Thai dance every body movement—the configuration of the hands, the position of the legs, eye movements—has a specific, conventionalized meaning. In the oldest, or *Kon*, version of the dance, the only means of communication other than that provided by masks are body movements.

4:Phillips E-4,5 (1956-1957) 1966
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it in fact so rarely takes place. In fact, the "hypotheses" of these women are perfect manifestations of what, in the technical sense, is *anxiety* rather than *fear* about what might occur.) The marital situations of both these women have since been routinized so that they have come to accept the second wives as part of their normal domestic lives. However, the vehemence with which they report these incidents indicates that at the time they paid for their wish to avoid embarrassment with considerable psychic distress. In terms of the basic attitudes involved, these situations were not too unlike that which obtained for Dang: to avoid a potentially sticky social situation, politeness and complete silence were maintained.

Somewhat different order from the above are the numerous instances where "good friends" will avoid reporting to each other unhappy or distressing information although it is clearly to the other's advantage to have such information in order better to cope with the difficulty. In one case, a villager had been working for weeks on a land sale deal which would have netted him a brokerage fee of two thousand *baht* (approximately one hundred dollars, a considerable sum in a community where the average annual family income is, before expenses, only eighty-five hundred *baht*). A friend had meanwhile learned that another villager, with whom he was not at all close, had sweet-talked the customer into permitting him to handle the sale, much to the detriment of his own friend, the original broker. However, rather than warn the friend of what was happening, he simply said nothing. When asked to explain why he kept his silence, he said that he was just too *ʔaaj* to speak up. Although the consequences of "ʔaaj-ness" were in this case more extreme than usual, the situation itself was not. In another, less dramatic instance a villager mentioned to us that in coming across the rice fields that afternoon he had noticed that his neighbor's windmill had broken down. The belt connecting the windmill to the irrigating machine used in raising water into the fields had slipped from the drive shaft. However, despite the obvious importance of this fact to his neighbor—the planting of his rice seedlings was completely dependent on the noria raising a sufficient amount of water into the field at the right time—the friend failed to tell his neighbor what had happened. When asked why, he said that he was *ʔaaj* about making his friend unhappy.

What is important about the above illustrations is not so much their typicality—one can cite instances where friends are considerably more realistic and helpful—but rather the legitimacy of the rationalizations of the inactive friends. All Bang Chaners can understand and accept the reluctance of a villager to be the person who actually triggers off another individual's discomfort. There is a genuine (albeit misplaced) sense of responsibility about not making another unhappy. What is important is the immediate, face-to-face situation. If a person must ultimately suffer, that is his own problem; but at least the friend can say, "I did not 'cause' it."

4:Phillips E-4,5 (1956-1957) 1966
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1923–1924], translated by Cunnison) and Homans (1961) have argued, that human relationships everywhere are based on just such a consideration, usually concealed by ethically palatable amenities (such as in American culture, from which most of Homans' empirical materials come). However, what is so intriguing about the Thai case is that *quid pro quo* factors are forever in mind as justifications and explanations of why people relate to one another. Although villagers, because they are such polite people, rarely say to others, "I am helping you because I know the day will come when I need your help," or "Do this for me because you owe me a favor," they do use such arguments *to explain* the basis of their ties: "Of all my friends I love Lek the most because she has done me the most favors (*bunkhuns*)"; "The purpose of marriage is to have a companion who will take care of you when you get sick"; "Of all my daughters, the one who gives me the greatest pleasure is the one who sells things. . . . When she gets money she gives it to me"; "Friends are very useful because it means that you have people who will do you favors. And when they need help, you will take care of them. This is love." [21]

One of the finest discussions of the nature of reciprocal obligations appears in a recent paper by George M. Foster (1961) that deals not with a Thai community, but with the Mexican village of Tzintzuntzan. Foster outlines in his paper the notion of the "dyadic contract" which he presents as a model for the social structure of Tzintzuntzan. Or, more precisely: "Specifically, I suggest a model . . . to reconcile the institutionalized roles which can be recognized and described in the community with the underlying principle which gives the social system coherence." Foster's focus thus differs somewhat from our psychological emphasis. However, his abstract statement of the "dyadic contract" provides such an excellent summation of the major factor making for enduring social relationships in Bang Chan that it merits quoting in detail here. There are of course inevitable differences in cultural content between the two communities and the fact that

[21] Such explanations are not unique to Bang Chan. In his description of the Thai-Lue village of Ban Phaed in Northern Thailand, Moerman (1962) observes: "The society of Ban Phaed operates in terms of something got for every something given. This is not merely an analytic device which permits a predictive, if crass, view of any human society. It is the way in which villagers explain and evaluate their own behavior. Favor for favor, visit for visit, meal for meal, one should return what he receives. 'We help our kinsmen because they help us. If a kinsman however close didn't help me, I wouldn't help him.' 'We care for our children when they are young; they will care for us when we are old.' Actions which we would justify in terms of compassion, generosity, public-spirit, patriotism, pride in a job well done, the Lue villager speaks of in terms of reciprocal, short-term self-interest. Their actions are no more selfish than ours. Far from it. But the moral rhetoric of a Lue villager is different from our own. In politics, economics, family life, and religion it focuses on something got for something given."

4:Phillips E-4,5 (1956-1957) 1966
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goodness when he is old and can no longer work"; "if you are a male, you must get ordained to redeem the sins of the parents. Just like sending them money." Many of the responses included in this category do not refer explicitly to the reciprocity of the child, but are phrased in terms of the *bunkhuns* that the parent has done for the child. Because the term *bunkhun* assumes reciprocity as part of its root meaning—good deeds which are reciprocated—references to the *bunkhuns* of the parents are included here. All told, 43 percent of the sample fall into this obligation category on the "mother" item and 50 percent on the "father" item.

The entire discussion above leads to the proposition that if the premise of reciprocity did not play such a major role in the villagers' assumptive world, there would be a few more informants who would be willing to perceive their parents as living an existence independent of themselves, and fewer informants so concerned with repaying their parents for fulfilling what is, after all, the parents' primary psychosocial role. Such a concern is likely to arise only when there is an underlying awareness that the parents have an option of fulfilling or not fulfilling their role, and that this has been impressed on the individual so dependent upon their choice.

The next item, in its manifest purpose and in its diversity of response, is less emotionally loaded than the above. In fact, perhaps the major function of the item, *"A real close friend is one who . . ."* (and its companion piece, *"The thing I want most in my closest friend is . . . ,"* which is so similar in response it will not be presented), is to indicate that there are no widely shared notions of a "real close friend" in Bang Chan. Whether this suggests that the figure of the "close friend" is unimportant to the villagers is uncertain. However, the diversity of the villagers' responses permits us to say relatively little about the typicality of the socially equal, yet dependent, figure in the village.[4]

Examination of the responses indicates that they fall into six different categories. Listed in the order of their frequency, "a real close friend is one who" has such qualities as faithfulness, loyalty, the willingness to die for his friend, and keeps his word (27 percent). Almost as many people (24 percent) agree that he is an individual who helps you, especially if you are poor or are in need of reminders to behave in a moral way. One informant in this category voices a definition of a "close friend" that I have heard on several occasions when villagers were discussing their relationships with kinsmen or neighbors: ". . . one who helps you when you are in trouble and goes away when you are happy." A third group (18 percent) perceives

[4] An earlier point by Hanks and Phillips (1961: 642) might not be insignificant in this regard. We noted that it "is difficult for an equal to give anything of value to an equal or to command his 'respect.' Indeed, he stands as a potential competitor for favors."

4:Phillips E-4,5 (1956-1957) 1966
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TABLE 10

*125 *A real close friend is one who . . .*
*128 *A real close friend is (namely) one who . . .*
*156
• 592

IS LOYAL	27%	is such that we love each other truly and would die for each other. is dependable, stays with you in suffering and in happiness, gives you useful advice about things, and loves you as you love him. is loyal.
IS HELPFUL:	24%	tells beneficial, helpful things to us. always helps *raw*. has sympathy; helps his friend when he is in trouble.
DOES NOT HARM SPEAKER:	18%	does not slander or blame *raw*. does not accuse *raw* falsely.
IS LIKE SPEAKER:	15%	loves me as I love him, has same thoughts, and speaks the same things.
LOVES SPEAKER:	10%	loves us very much. loves us, may risk his life for us, shares his food with us, does not take advantage of us, and tells his secrets to us.

a close friend as an individual who, from a positive point of view, does not slander, blame, quarrel with you, or accuse you falsely. This attention to the lack of negative qualities—as if negative qualities were people's given attributes—is repeated below in several items. A fourth group (15 percent) defines the close friend as an individual who is essentially the same as oneself, who enjoys doing the same things as oneself, or who enjoys sharing things with oneself. A fifth group (10 percent) considers the close friend to be simply a person who loves you, and a sixth group (only 2 percent) identifies the close friend as a member of his own family. Two of the idiosyncratic responses are interesting in their own right: one villager says, "I have never had any one like that at all. I have only ordinary friends"; and another says that only a person who is innocuous enough to "not bother anybody" could be considered a real close friend.

Despite their lack of consensus about the nature of a close friend, Bang Chaners do tend to agree about how they would respond *"when they found out that their best friend had spoken against them."* This item asks the villagers to state how they would behave in a situation that has *direct* relevance to them, in contrast to the above, which aims mainly at a definition of another party, albeit a party who would be expected to have some relevance to the self. However, the difference in the tone of response to the two items is striking. Here 66 percent of the sample responds with

4:Phillips E-4,5 (1956-1957) 1966
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immediate anger, declares that he will have nothing to do with the friend, or accepts the premise of the item as *prima facie* evidence of the friend's undesirability.

Only one of all the informants raises the possibility of there being some validity to the friend's remarks, and thus indicates some concern with the friend's *evaluation* of himself, as if his friend's opinion mattered to him. He says that he ". . . tried to find out whether there was any truth in what he said. If it was my fault, I would try to make it better and look for ways to come to an understanding." Four other villagers will go so far as to talk the matter over with the friend, but their phrasing indicates that they are concerned with finding out whether the friend did indeed say what he was reputed to say, rather than discussing the value of his remarks. Five other

TABLE 11

When he found out that his best friend spoke against him, he . . .
When finding out that raw *best friend speaks against* raw, raw . . .

ANGER:	66%	had to tell him off. A friend ought not to do that.
		felt angry with his friend and disliked him.
		was angry that his friend was a bad, bad person.
		was very angry and stopped going with him immediately.
		was angry.
TALK IT OVER:	10%	talked it over with him; talked about why he spoke against him.
		had to find out why his friend slandered him; if he was not a good man, he would stop being friends with him.
COUNSEL HIM:	13%	ought to advise him not to do it again.
		had to tell the friend to act correctly.
DISTRESS:	10%	felt *siacaj* (sorry, unhappy).

villagers also indicate a willingness to discuss the matter with the friend, but only to counsel him in the error of his ways: they are doing him the favor. It is probably not coincidental that four of these five counseling individuals are village monks. This is one of the few SCT items to which Buddhist monks, as a group, tend to give responses that are distinctively different from other informants. Finally, four villagers say that they are unhappy or distressed about the situation. A check of the translation of their responses indicates that although the reason for their distress is not absolutely certain, it can from the Thai point of view mean only that they are either unhappy about being slandered, or, like the preceding informants, unhappy *for* the friend; but it does not mean that they are unhappy

4:Phillips E-4,5 (1956-1957) 1966
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*125 *128 *156 • 572 about having lost a friend, or about the fact that it was a "friend" who had such an opinion. In this latter respect, their meaning would be similar to the response of one informant who said that he "felt very angry because it is quite common for others to slander him, but it is very low thing for friends to slander." In both cases, the premise of being spoken against is accepted and is given priority over the strength of the friendly relationship.

In fact, perhaps the most impressive thing about this entire distribution is the overwhelming acceptance of the premise and a concomitant indifference to the source of information or the nature of the evidence, whether it be against the friend or themselves. Only six villagers suggest that they are thinking along these lines, and only one addresses herself explicitly to the reliability of her informants, when she says that she ". . . paid no attention to what they said about her best friend (or what they said her best friend said)." It is as if hearing such things about friends, or discovering such things being said by friends, were indeed, as I originally suggested to the villagers, one of those "things that happen every day in life; just plain, ordinary things."

In any event, no villager except one ever entertains the possibility of there being any value in what the friend said. Any merit in the comment or any positive motive that the friend, in his role of friend, might have had, is assumed by the villagers to be inconsequential to the act performed. The fact of his being a "best friend" does not give him any special prerogatives. In fact, the villagers give such little attention to the fact of friendship in this situation that the experience emerges largely as one of insult, rather than rejection.

*125 *128 *156 The next two items differ from the preceding one in that the stakes in

TABLE 12

When he saw that they did not like him, he . . .
When seeing (realizing) that other khon *do not like* raw, raw . . .

WITHDRAWAL OR INDIFFERENCE:	60%	did not see them again. Oh! I don't feel anything. I never worry. did not go to have trouble with them. did not go to them; did not keep company with them. let them do as they pleased. He lived his own life. Who would say anything against him?
SELF-IMPROVEMENT:	15%	had to behave better. would try to improve himself, so that they would like him.
DISPLEASURE:	8%	was displeased, and did not like them either.
REGRET:	8%	felt sorry.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

averages out to 40 percent.) There are no widely shared notions about the nature of a "close friend," an individual who, although a social equal, might be expected to be a source of dependence. When the quality of the friend's fellowship is challenged or placed in serious doubt, the majority of informants accept this as a reasonable possibility and exhibit little effort to reintegrate the social rupture that is thus created. In situations where the reasons for, and parties of, rejection are unknown, villagers respond with genuine self-confidence and equanimity. Excepting the "conception of friendship" item, predispositions in this area tend toward "unimodality," although not to the degree that we encountered in the area of authority.

Orienting Toward Others

The materials to be covered in this section aim mainly at the villagers' perceptions of the way human relations should be conducted and their notions of desirable and undesirable human qualities. To a certain extent, my purpose is to check how typical and representative many of the statements on interpersonal contact are that were made earlier in the text. However, two important points about the nature of this "check" are in order. First, it must be remembered that we are dealing here with the villagers' perceptions of desirable human qualities, not those that an outside observer identifies. Inevitably, there are certain areas that an outsider may consider primary, but which the villagers may simply take for granted, or vice versa. The complete absence of references to the desirability of *sanug* or being an "amusing talker" in the responses below is a case in point. Villagers, of course, are aware of the desirability of *sanug* and probably could not get along well without it. But the capacity to be "sanug-ful" is, in their environment, such a familiar and undistinguished human attribute that to them it does not merit being singled out for special regard. As a "check," therefore, these data serve mainly to identify any inconsistencies that may appear between our own perceptions and those of the villagers, rather than to provide full confirmation of the earlier observations. Likewise, it is possible that this material may reveal concerns not previously noted. Second, it should be clear that when there is confirmation, it will obviously be expressed in the villagers' idiom, not our own. Few informants below explicitly say that what they most like about others is their cordiality and affability. However, several (irrespective of sex) do say that they like the fact that others "talk sweetly," "are not coarse," or have "a soft and gentle way." This is their way of communicating the desirability of being polite and nonimposing toward others. Similarly, their indication that *"In their relations with people, the thing they are most careful of is . . .* talking to them correctly and properly"; ". . . manners and etiquette"; or

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

Thus, in explaining why he loves one of his closest friends, a villager says:

> We love each other because we never contradict each other or disagree. That is why we love each other. If we disagreed, there would be no love. [Investigator: "It is normal sometimes even for close friends to disagree. About what kind of things do you and your close friend disagree?"] We never disagree. Only people who are drunkards and take opium disagree. That is why our friendship has lasted so long. [Investigator: "What would happen if you disagreed?"] We would not love each other, and maybe he would take revenge on me.

In another place, this same informant says of his relationship with his wife: "My wife and I never quarrel. If we quarreled, we would have to separate. There would be nothing to divide—except the children." As indicated earlier, many villagers, fearing the volatility of a quarrel, actually do separate, often even before the dispute gets going. Similarly, individuals, particularly if they are in subordinate positions, hesitate even to approach others lest they stimulate, let alone elicit, anger. Villagers will hesitate to approach others even if they are not the object, but simply a possible catalyst, of another's potential aggression: witness the cases of the land sale deal and the broken noria cited earlier. Note that in these cases it is not manifest aggression but merely the anticipation of it that inhibits villagers from initiating or maintaining interpersonal involvements.

Although villagers decline to express or to be exposed to direct aggression, they do have several indirect, if somewhat more complicated, ways of venting these feelings. Of these, the simplest is to gossip nastily *about* people. The frequency of this characteristic peasant activity is considerable in the village: in fact, an uncharitable observer might, on the basis of Bang Chan, just as readily entitle a book about Thailand *Land of Gossip* as *Land of Smiles*. However, the very frequency of gossip seems to mitigate its intensity or effect. Villagers are so accustomed to it that it is almost a way of talking, a style of speech. And as is the case with much village speech, villagers listen to, but do not necessarily believe, the nasty things one person might say about another. Also, excepting those cases where a person's complaints are either realistic or justifiable, people are just as likely to listen to an individual's gossip for what it says about him as for what it says about the person whom he is criticizing. None of this is to suggest that the person gossiping does not attain release, or that the person about whom he is gossiping, *if* he found out, would not be hurt or peeved. Rather, it is the situation in which the hostility is expressed that mitigates its effect.

Less frequent and more painful than the above are the formal, almost

*178
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as apt to adopt the motor irrespective of whether he has been in contact with urban culture.

TABLE 20. ILLITERATE FARMERS* WITH WIDER CULTURE CONTACTS ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

	Illiterate (Proportion using the motor)		Literate (Proportion using the motor)	
Trips to the airport				
None	38%	(40)	86%	(35)
One or more	63	(49)	86	(83)
Visits to the agricultural fair				
None	50%	(67)	85%	(76)
One or more	57	(24)	88	(43)

[562]
[241]
[228]
[244]

*Male farmers only

However, no such relationship was discerned between these culture contacts and trying out either fertilizer, tilapia, or mushrooms.

*178
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Here again, is evidence to support the hypothesis that contacts with urban culture may act as a substitute for literacy in making the farmer more sophisticated about improving his standard of living and level of production. But the data show that such exposure need not result from direct physical contact with urban centers; it can, instead, be a result of indirect contact. Direct physical contact with urban culture, it turns out is effective in increasing the incidence of acceptance of the more complex innovations only for the illiterate farmers of Bang Chan.

*178
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Friendships

The same reasoning which would lead one to expect a higher incidence of acceptance of innovations among those directly exposed to urban contacts would lead to the companion hypothesis: that inhabitants who have a greater degree of internal contacts with their friends and neighbors might tend to try out innovations to a greater extent than those who remain relatively aloof from such social contacts.

[402]
[228]
[241]
[244]

The data show that such contacts have a limited connection with acceptance of innovations. The incidence of motor use and tilapia raising is higher, it is true, among persons who report a wider sphere of social circulation; but there is little relation between social contacts and willingness to try out fertilizer or mushrooms.

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TABLE 21. INCIDENCE OF MOTOR USE IS HIGHER AMONG VILLAGERS WHO REPORT WIDER SOCIAL CONTACTS

	Social Contacts ("...Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?")	
	"More" or "the same" (143)	"Fewer" (55)
Motor		
Has used it	77%	55%
Never did	23	45
Tilapia		
Has tried it	39%	21%
Never did	61	79
Fertiliser		
Has used it	16%	11%
Never did	84	89
Mushrooms		
Has tried them	49%	40%
Never did	51	60

Once again, however, when this link between breadth of social contacts and use of the innovations is examined separately for the literate, compared with the illiterate farmers, we find further substantiation of the previous finding that under certain circumstances contact may act as a substitute for literacy in acceptance of complex innovations. For, although the link between social contacts and use of tilapia remains constant for literate as well as illiterate farmers, it is mainly for those who are illiterate that exposure to wider local social contacts is associated with greater incidence of motor use.

[212]

6: Goldsen and Ralis Z-4.3 (1955) 1957
AO7 Central Thai AO7

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• 572
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TABLE 22. AMONG ILLITERATE FARMERS USE OF MOTOR IS LINKED TO WIDER SOCIAL CONTACTS

	Exposure to Influence of Others	
	Have more friends or about the same	Have fewer friends
	(Proportion who tried small motor)	
Literacy		
Illiterate	64% (56)	26% (27)
Literate	87 (86)	86 (78)
	(Proportion who tried tilapia)	
Illiterate	34% (56)	15% (28)
Literate	43% (86)	26 (27)

[369] This finding corroborates and expands the previous discussion of the culture contact and acceptance of innovations. Exposure to influence of others from outside the community (through contact with the city, with the airport, with the agricultural fair, for example), as well as exposure to the influence of others from within (through friends and associates) clearly relates to the decision to use an innovation such as the motor. Its effectiveness is not felt equally by the whole population, mainly instead, by those who are illiterate.

The significance of these internal and external contacts to illiterates may be that through such contacts they are likely to gain needed information and motivation which, if one can read and write, is available through other sources. If one cannot read and write, however, it is the outside world which provides this kind of needed information.

Capital Investment and Debt

426 Bang Chan s economy is largely a money economy and many farmers avail themselves of credit facilities through professional money lenders. Most loans are sought for the purpose of replacing capital equipment and purchasing land and buffalo.*

The present survey secures a rough measure of the extent of such borrowing in Bang Chan. The majority of farmers (39 per cent)

[113] * See Janlekha, Kamol O. A Preliminary Study of the Economic Conditions of Siamese Rice Farmers in Bang Chan, Thailand. M.S. Thesis Cornell University, 1951, p. 73.

* 178

743 Use of Health Facilities and Other Factors Associated With
241 Agricultural Innovations

• 572 Although use of the basic agricultural innovations was shown
426 to be linked to breadth of contacts within the community, on the one hand, and to indebtedness, on the other hand, the association between these factors and use of modern health facilities, although showing the same tendency, is not statistically significant. For the sake of completeness, the figures are reported below:

TABLE 34. NO RELATIONSHIP BETWEEN INDEBTEDNESS OR INTERNAL SOCIAL CONTACTS AND USE OF HOSPITALS AND CLINICS

	"Have you ever been to a clinic or a hospital?"			
	No, Never	Yes, for treatment	Yes, for other reasons	Total 100%
Social Contacts				
"More friends"	31%	35%	34%	(62)
"The same"	40	35	25	(154)
"Fewer friends"	32	41	27	(94)
Do you now have a debt?				
No	40%	32%	28%	(140)
Yes	33	41	26	(192)

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SUMMARY

1. In the community of Bang Chan in Central Thailand, various factors are studied statistically in order better to determine the conditions of acceptance of selected agricultural innovations and conditions for using the facilities of modern medicine in clinics and hospitals. Four agricultural innovations were selected, viz. gasoline motor, raising of fish (tilapia), use of fertiliser, and mushroom culture.

2. The present study was concerned with the initial adoption or trial of innovations, rather than the continuing use of these innovations or the merging of the new with the old features of the culture.

3. While adoption of the gasoline motor was associated with all other agricultural innovations, no generalised acceptance of the new was found because: a) adoption of the gasoline motor bore little or no relation to use of non-agricultural innovations such as hospital and clinic facilities; and b) adoption of gasoline motors was only weakly associated with raising of mushrooms.

4. A cluster of traits including high motivation and sizable capital outlay was associated with the use of the gasoline motor.

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and acceptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike accepters of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

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125 29.d. IF R HAS SONS 20 AND UP: Of your sons over twenty, how many have been ordained as Buddhist priests, or not?

[793]	7.	DA 212
	8.	None 22
[593]	9.	One 58
	X.	Two 85
[792]	Y.	Three or more 16
[162]		

e. Do you have any sons under twenty?

	9.	Yes 188
	X.	No 108
	—	No Answer 37

[793] f. IF YES: In future, do you want your sons under twenty to be ordained as priests, or not?

[782]	Y.	Yes 186
	O.	No —
	—	No Answer 2

g. IF YES: But aside from your admirable desire to have them ordained, in your true heart how sure is your expectation? Are you very sure or not very sure, or fairly sure that they will be ordained?

	1.	Very sure 140
	2.	Not sure 26
	3.	Fairly sure 12
	4.	Unascertainable 9
		NA 1

h. All over Thailand there are some Thai men who are over 50 but have never been ordained as priests. For what various reasons might this happen?
(See code at end)

[461] 30. Suppose there was some work you could do individually, or that could be done in a small group of two or three, or that could be done in a large group. Which way would you prefer to do the work--as an individual, or in a group of two or three, or in a large group?

	8.	Individually 60
	9.	Small group 55
	X.	Large group 202
	Y.	Undecided, depends 4
	0.	Unascertainable 12

[572] 31. Around here in EC-KY there are some people who have many close friends and there are other people who have few close friends. And how about yourself? Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?

	5.	More than most 62
	6.	Fewer than most 94
	7.	About the same 154
	8.	Unascertainable 23

846 [514]

the fire for her during the first day or so, lest in her straining, Dūan's womb "move to a new place," but Duan did it herself thereafter. The smoke was harder on others than for her for she was on the floor. She could leave the plank to bathe and to relieve herself through a crack in the floor. As soon as Chāi got over being frightened of her turmeric-yellow stomach, he often came and lay beside her on the plank, though it was a squeeze! She took her medicine and often sipped hot water, feeling very modern with her brand-new thermos bottle. Constantly turning her back or front to the fire, she poked or dripped water on the flames to make coals. Once she tossed on a dry palm leaf, and as it flared up, put a cloth over her head to trap the smoke and heat. Though a rash developed on her body, she was complimented by Lek on the care she was taking of the heating and drying process. Unfortunately, a neighbor who wanted to help brought in some of the wood one day. Not remembering that to make noise with the wood caused diseased red eyes in the baby, she dropped the bundle with a crash! Alas, "sang" disease, of course, came at once. So the near-by mō who always cared for them had to be called, but he used no medicine. "For eyes red from 'sang'," he said, "never use any eye-medicine as drops, or they will be permanently damaged or blind. Such eyes have not enough resistance to win over the strength of the medicine. A drop of mother's milk, any mother's, in the eyes is the cure."

[753]

[757]

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Uterus pain was said to last one day for the first child, 2 days for the second, and so forth, increasingly. As Dūan seemed to be in considerable pain, Lek resorted to an old cure: she secretly took the bamboo knife and the phlai from the baby's tray and put them under Duan's plank bed without telling her. Slowly the pain diminished.

846 789

If anyone spoke of uterus pain to her during the fire period, Dūan would suffer still more. If a visitor spoke of the hotness of the fire, little boils would appear on her body. The fire, being thus made too hot, would have to be put out, and Duan "would be weak for a long time." This was because actions or even words occurring beside the holy fire set a new and permanent pattern. Neighbor's children were kept away lest they inadvertently exclaim about the heat.

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A few relatives with gifts of banana, turmeric, and face powder dropped in, but visitors mostly stayed away. "It is an ugly sight," said Dūan, "lying here with only a cloth over me, half naked and yellow, and I fear there might be an unpleasant smell."

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The winnowing tray, with the baby on a pillow now covered with a plastic cloth, rested on a low table, the legs of which stood in bowls of water to keep away ants. At first an old dome-shaped fish trap had been set over it to prevent draft and

264 would not come willingly to work. When a family with a repu-
476 tation for stinginess diluted the (3)khaaw (3)tom too much,
[574] the group refused to eat any, thereby reminding the host of his obligation for hospitality.

574 Guests to whom meals were served fell into four categories: 1) kin, 2) visiting dignitaries, 3) priests and 4) drinking companions. Kinfolk who came as guests were married children, or those who were away at school or work, or kinsmen from Bangkok or elsewhere. The older the relative or the greater the distance travelled, the greater the honor accorded him. Foods were exchanged. Two visiting ladies travelling in a large boat, made an annual round of all their relatives, bringing certain "city" foods and receiving substantial gifts of rice, fish and fruit. They stayed for several days as guests of one family, then moved on. Every person from Bang
[431] Chan who visited a relative in Bangkok carried big packages of food, usually rice or eggs, as gifts. With the inflated prices in Bangkok, it was advantageous to have a "country cousin' who might bring food. Visiting kinsmen always recognized the need for eventual reciprocity.

Visiting dignitaries were usually entertained by hamlet headmen. Meals served to visiting officials, policemen and others might be elaborate, involving cooperative help in preparation, but reciprocity, if any, rarely took the form of a return meal.

[792] Regular visits of the priests, as well as the invitation of priests to the house for special events, have been mentioned. Priests might also come from afar, usually staying at the temple but receiving generous offerings of food from people of the community.

[562] The custom of convivial get-togethers of either or both sexes was well established. Men traditionally enjoyed "stag" dinners of four up to twenty or more whenever the ingredients for a turtle, frog, cobra or other snake curry were available. Chicken curry might also be thus served, and once a catfish mash was prepared by a male visitor from the north. These curries were cooked by men, and the host served liquor freely.
[784] The all-male character of the occasion reflected the old re-
[788] strictions on women's partaking of flesh foods (see p. 42),
[213] but older women did not hesitate to join in the drinking.
[524] Women also got together in drinking parties, sometimes to play cards.

In addition to sharing food with people in these four categories, the general rules of hospitality required that anyone who came to the house at meal time, should be offered food, or at least a drink of liquor, tea, or plain water.

756 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the
[676] time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives
[782] and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A
764 big cremation might require planning in detail for years ahead:
796 invitations to priests and relatives in distant parts of the
574 country; hiring an orchestra and obtaining ceremonial gear.
533 For the largest events, when the guest lists ranged upward to
[426] 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person,
[252] usually one of the "professional" cooks of the village. The
[476] day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

[262] The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an
262 annual homage-to-the-teacher rite. It is the nearest approxi-
796 mation to a quantitative record of food for a ceremony that
895 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either
796 at 7 a.m. or 11 a.m., or both, always at least in part by the
792 host, who sat and chatted with them. No one else ate until

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)daeaeng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chauaun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

435 Some information as to the cost in baht of the larger
796 ceremonies held in 1954, and their scale, was obtained from
[126] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[714] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000. Guests gave 2300.
[583] B: Rite of forgiveness after elopement: a meal, with 5 bottles of liquor.
[184] C: Moslem: 2 buffalo slaughtered. 400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
[583] sugar cane, fruits, sweetmeats and other things. At more modest weddings and the rite of forgiveness for a couple who had eloped, food might differ from the usual fare only by including the three essentials of a wedding: pork, chicken and alcohol.

273 Increased consumption of alcoholic beverages during the
796 ceremonial season was indicated by the sales of one local
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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[574] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

443 storekeeper: about 800-900 liter bottles per month during
273 the 3 months dry season as compared to about 350 bottles per
796 month during the 9 months of the rice season.

184 Moslems never served liquor at their weddings, crema-
[273] tions, and other auspicious events. Moslem residents occa-
sionally attended Buddhist (l)ngaan in spite of dietary pro-
[262] scriptions that Buddhists did not observe.[1] A medium (spiritualist) commented however that because pig's head was essential for her homage-to-the-teacher rites, some Moslem sick persons preferred to go to the Buddhist temple for treatment. There the priest-practitioner could afford to set up a separate kitchen for his Moslem patients, and so spare them the distress of confronting pork. To one big ordination Moslem guests brought their own food. Buddhists came somewhat more often to Moslem ceremonies.

262 We do not have enough information to appraise the nutri-
574 tional significance of food eaten at ceremonies. Some indi-
476 viduals got a great deal of it, others very little. One must
264 remember that the (l)ngaan was not a public but a private event at home, to which guests came on invitation. Although cremations and the teacher-rites of priest-practitioners were held at the temple, and so had a semi-public character, no one who was not invited presented himself for food. Of the participants, the working group undoubtedly received the most food; they were there the longest time, had regular meals, tastings and snacks throughout the (l)ngaan meal itself. This group comprised the host, co-sponsors and their immediate kin; other relatives and friends who were asked or who volunteered to help. The feeling was, if one were "very fond" of the host, one volunteered to cook. If less close, one was invited as a guest, but made the usual cash donation. Sociable persons combining skill and energy were invited often and volun-
[881] teered often, hence spent many days at ceremonies. Young unmarried men and women were asked and liked to be asked to work, for such occasions offered a great chance for fun and flirting.

114 Different degrees of participation may be estimated
476 from Janlekha's (1955) figures for reported contributions
796 ranging from 30 to 1000 baht in a year. Since a contribution of 5 to 10 baht per (l)ngaan was customary, the villager with the lowest reported contribution probably attended from 3 to 6 ceremonial occasions. Attendance at 100 or more (l)ngaan is unlikely, hence the villager who gave as much as 1000 baht probably made larger contributions per (l)ngaan.

574 What sort of persons or groups in the village were in-
796 vited as guests? Every host's list included his older

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[702] 1. Moslems were said to resist army service because they were afraid they would have to eat pork.

196 relatives, his other kin and friends according to bonds of
574 affection and respect. Certain priests of pleasing personalities, wide acquaintance or kinship in the community, or of valued skills, were invited more often than others, as were prominent elders and hamlet headmen. An invitation usually went only to the elder couple in a family. It did not automatically include the children. If married sons or daughters were invited, they were asked separately. Poor individuals were included only in the festivities of their close kinfolk, their immediate neighbors, maybe their own hamlet headman, or persons to whom they were obligated. Unless they were aged, their presence was validated only by hard work. Reciprocity was a factor, for one who could not reciprocate presumably would not be asked, nor would he volunteer. The few who were "anti-social" for whatever personal reason rarely attended.

268 Most members of the working group and guests left at
574 home their children of such age as to require watching.
196 Nursing babies might be there, hung in a hammock. Though
858 the children who ran excitedly about seemed numerous, most of them were the children, grandchildren, nieces and nephews of host, co-sponsors and relatives, so could not be excluded.

To sum up, those who shared least in the diet of the ceremonial season were the dependent children, i.e. up to the age of 6 or so, the less gregarious, and the poor who had no way to reciprocate. Children from 7 to adolescence shared in a limited way, attending (l)ngaan of their own close kin or of a geographically close neighbor. Parents sometimes took snacks from the feast home to the children. On the other hand, persons of prestige and popularity, especially if aged, were asked frequently.

262 Doubtless for those who attended many (l)ngaan, the
796 food eaten during the ceremonial season differed considerably from the usual family fare. We have no way of knowing whether it was better than usual because of a larger intake, for instance, of pork and meat in general, or whether the total nutritive value was less satisfactory because of increased consumption of "empty calories" in the form of sugar and alcohol.

262 During the (l)ngaan season the home meal schedule was
264 frequently disrupted in the families of the participants.
796 The main cook might be absent, too tired, or too full to feel like cooking a big meal at home. In anticipation of a feast, preparation of the usual breakfast or dinner or both might be abandoned, with reliance on a few snacks for the stay-at-homes to add to their rice. Thus the food intake of family members who did not attend the ceremonials might be adversely affected.

000 One other aspect of (l)ngaan which should be mentioned

4:Phillips E-4,5 (1956-1957) 1966
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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[18] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[18] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

4:Phillips E-4,5 (1956-1957) 1966
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achievement, and dependency, or by discussing those traits which are significant in the daily round of life, irrespective of the analytic categories to which they refer. In this section we will emphasize the latter, more naturalistic approach. Its advantage is that it permits us to identify and develop certain issues which play a crucial role in the interactive world of the villagers, but which might otherwise go unnoticed should they not be represented by, or not quite fit, any of the predetermined categories. The Thai attitudes toward the body referred to earlier, for example, is an issue of extreme importance in their interpersonal relationships, but one that is actually given little explicit attention in most personality studies. This section is designed in part to deal with such problems, although inevitably there may be some overlap between the materials covered here and those discussed in later sections.

The Pleasures of Social Contact

Of all the personality traits that come to the attention of the foreign observer there is perhaps none more compelling than the affability, gentleness, and good humor of the villagers. It is difficult to think of a people more consistently ready, *once contact has been made*, to treat others amicably and convivially than the peasants of Bang Chan. (The italics are necessary simply because the villagers are equally primed to ignore others.) However, this jovial cordiality is not an easy thing to conceptualize. In the earlier paper by Hanks and Phillips (1961) we spoke of these happy characteristics as "not so much the expressions of any basic lightheartedness as they are techniques for implementing the main precept of social interaction: 'Avoid face-to-face conflict!'" Although the villagers' good humor does serve this purpose, I would now suggest that it involves several additional dimensions and motives.

First, there is a whole complex of responses represented here. The tendency to keep situations and conversations jocular, amusing, and at times gently ribald, is perhaps the most relaxed expression of this attitude. It is most obvious in the behavior of village gossip groups and in the relationships between individuals who consider themselves acquaintances but not quite close friends. The essential ingredient of this mode of affability is that interaction should be a great deal of fun but of little social consequence. Of a different order, and more common, is the villagers' ubiquitous politeness. This takes a host of forms: the genial hospitality that is expressed toward a newcomer, usually in the form of "personal" questions serving both to identify the person and to make him feel that others are interested in him ("How old are you? Any children? How much did you pay for your shirt or your land? Why don't you have any children?"); the numerous linguistic

4:Phillips E-4,5 (1956-1957) 1966
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and postural forms expressive of respect cited earlier; the repeated hesitation to place others in embarrassing situations; the hesitation to tell others bad news so that "they will not feel sad" or will not have to dissemble (although more often the less delicate reason is the person's fear of embarrassing himself). Of a still different order is the uneasy affability that is expressed in the nervous giggling accompanying many face-to-face relationships and in the compulsive preoccupation with inconsequential or inoffensive topics while conversing with others. These responses appear to be either attempts to maintain minimal contact with others while jockeying to find out what they are really up to, or, in the negative sense, efforts to fulfill the minimum requirements of interaction while waiting (and hoping) for the contact to come to an end. And still different from all these is the affability associated with trying to make a good impression on others expressed in the constant concern with displaying good manners, with using pleasing or flattering words, with being a good host, and the like. Although this category is in many respects behaviorally similar to the "politeness" referred to above, it seems to differ from the latter motivationally in that it is concerned not with the state and comfort of others *per se*, but with ego's effect on others.

As described above in simple summary terms, these responses might appear quite ordinary and at certain times applicable to any group of human beings. However, what impresses the observer in Bang Chan is the insistence and constancy of their use. These are precisely the forms that the villagers choose in the vast majority of situations for expressing the degree and quality of contact that they feel toward others. That they are in fact social forms—stylized, often ritualized, modes of behaving—should not be overlooked. It is just this characteristic that engenders the theme underlying all the responses and which indeed sets the tone of most Thai interaction: that the relations between people should be friendly, genial, and correct, but need have little personal commitment or involvement. As will be seen below, it is this readiness to phrase most face-to-face contact in terms of social rituals while at the same time feeling little commitment to others that actually lies at the root of what has so often been called Thailand's "loosely structured social system."

Social Play

The first response mentioned above, the tendency to turn social situations into occasions for play, is probably one of the most common of all human tendencies (it is certainly one of the earliest), but one that strangely has received little attention in the psychological literature. The few writers who have expressed any interest in social play have tended to view it simply

4:Phillips E-4,5 (1956-1957) 1966
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609 Of the various forms politeness takes, its most relaxed, least contrived
• 574 form in the cordiality that villagers extend to newcomers. Strangers to Bang Chan are hardly swept off their feet, but once contact has been established, they are welcomed with a degree of attention far exceeding simple tolerance of their presence. People express a curious interest in them as individuals, as if somehow their presence were adding a new dimension to the lives of their hosts. In the case of many Bang Chaners, this is probably true: the lives of these villagers are sufficiently routine and insular that the appearance of a new face is identified also with the advent of a significant and new experience. Still other villagers approach the newcomer with an attitude that says in effect: "One should try to meet and know as many persons as possible. Who knows what good may come of it?" The implied meaning here is that the cursory contact may in time develop into a firm relationship of reciprocal rights and obligations, whereby person A could turn to B to borrow money, ask his help in finding a job, help sponsor his son's ordination, and vice versa. There is in this attitude a sense of gentle optimism combined with opportunism. And still other villagers, probably the majority, approach the newcomer with no self reference at all, but with the simple intention of trying to make him feel comfortable. Whatever the intention in each case, however, the dominant behavior exhibited to the newcomer is openness, amiability, and curiosity.

576 The actual expressions of conviviality are at all times simple and
574 straightforward. They involve asking the person such questions as his age,
521 place of birth, whether he is married, or whether he has yet served in the
609 monkhood. (Notice the phrasing of this last question. The polite Thai form is never whether a person has been a monk or not, but rather whether he has already been a monk or not *yet* become one. The syntax of the interrogative form assumes the good intentions of the other person.) If the individual is identified as coming from a locale with special or distinguishing characteristics, the conversation will often involve humorous allusions to the place. For example, if he is from the North, there will most likely be joking references to the beautiful women of Chiengmai; if he is from the Northeast, to the funny accent of the people of that area. If the relative statuses of visitor and host can be quickly identified (based upon age, clothes, speech patterns, and occasionally surname), the conversation may turn to topics whose very purpose is to emphasize status considerations and thus make the participants more comfortable with one another. If they

*156 difficulties (ask his father to save the family land for him; tell the aunt he did not
159 want to marry the girl she had chosen—which he could have done had he felt secure about his relatives' love for him), he politely said nothing. The net result of all of this, as indicated in the text, was a deep sense of personal inadequacy and resentment that loved ones cannot be depended on. Further, Dang had begun to treat others as he felt others had treated him.

4:Phillips E-4,5 (1956-1957) 1966
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are social peers, the Bang Chaners would easily turn the conversation to a discussion of the technical aspects of rice farming or even gambling. The latter would likely be discussed with a social superior only after some acquaintance. On the other hand, if one were clearly the other's superior, the superior would probably talk not about the methods of rice farming but, more generally and benignly, inquire, "Is all going well with you? Is there any way I might help you?" He might even proffer some unsolicited advice or aid. The tone and theme of the conversation would be expressive largely of the superior's concern with the welfare of his new-found friend, which the latter would typically accept.

All this is usually accompanied by gentle laughter and careful attention to appropriate pronominal forms. The good host will also serve his guest rain water, and if possible, scented rain water. If opportunity and finances permit, he may even offer him a warm Coca-Cola. The youngster who will actually serve the refreshment will make sure that it is on a coaster and that his hands are in the proper ritual position when he offers the drink to the guest. Such are the ingredients from which potential friendships are made.

Although the particulars of the kind of politeness found among family and friends are different from the above, the forms are essentially the same. Villagers do not talk about the funny accents of the people who live next door to them, nor do they rush to serve scented water when a brother comes to call. But they do take pains to express respect for each other by using proper honorific and pronominal forms, by looking to the oldest competent family member for advice, by talking of subjects that are pleasant and amusing, but never threatening or embarrassing.

The avoidance of embarrassing topics—even when the airing of such topics may be crucially important or beneficial to one of the parties concerned—is one of the most pronounced facets of village social life. To a Westerner accustomed to outspokenness, the types of situations that villagers define as embarrassing and the lengths to which they will go to avoid them sometimes appear to border on the sado-masochistic. Detailed interviews with two women whose husbands had taken second wives, for example, indicate that although at the time they were deeply disturbed by their husbands' actions (primarily for economic reasons; secondarily for emotional-sexual ones) they never once even brought the subject up with their husbands. They explained that they were too *ʔaaj* (embarrassed) to do so. In neither case was this embarrassment expressive of any feeling of inadequacy on their parts (the fear of hearing their husbands say, "I took a second wife because you are not adequate"). It was prompted rather by the desire to avoid an awkward and potentially rancorous confrontation. They did not want to put anybody on the spot. (Whether such a confrontation would *actually* lead to overt rancor is almost impossible to ascertain because

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243
*128 This was one of the easiest jobs of the whole study.
433 There were few cases where we did find anybody at home
434 and there were many more where only young children
[574] were seen. Since a Thai farm home is considered an open house to fellow villagers, we simply took liberty of walking right through and made an inspection by ourselves. Thus in a period of less than a week we were able to secure the figures of paddy stock on hand of every single operator in the sample.

The amount of paddy stock alone simply indicates but not represents sale in the second period, for a certain portion must be saved for seeds, consumption and feed. It is rather simple, however, to calculate the amount saved, for we were already in possession of work areas from which the amount of seeds may be estimated and we knew the size of the family (in terms of both actual number and consuming units) from which consumption may be figured.

*243 In this second period, sale was made when the
432 farmer thought the price was high enough. Usually,
434 the prices of paddy were about 15 - 30 per cent higher during this period than in the first period when supply was high. The rate of shrinkage should be taken into consideration, however, for prices are expressed in volume. It is rather unfortunate that we do not have any official record for this vital rate of shrinkage. In our daily log, however, the following testimony appears:

24

862 expenditures by food groups is shown for the 11 families that
511 participated in the dietary study.

Consumption of canned foods was negligible. Some canned fish and fruits were on sale at stores in the village, in 1952-54, but were seldom seen in homes.

262 Sweetened condensed milk, which was served in coffee
272 sold at the stores, was occasionally bought for the children.
854 On one occasion, a woman was seen buying milk diluted with
855 hot water as a beverage. Among 526 records of food eaten by school children during 24 hour periods, milk appeared twice only, once with coffee. Dried milk, for infant feeding, was used occasionally. During 1952-54, several instances were noted in which dried milk, mixed with water, was used to feed an infant while the mother was at work in the field or engaged in vending, but we encountered one case only of an infant who was not breast fed. This was an infant whose mother died when he was five days old, and who was reared by grandparents.

262 Relatively few items of food were available at the vil-
443 lage stores. In the inventory of the largest of the three
[277] stores in the village in 1948-49 (Sharp et al., 1953, pp. 211-212) the following items of food were listed: big dried chilies, shrimp paste, onion, garlic, fish sauce (fishsoy), salted fish, fresh chilies, limes, coconut, coconut oil[1], brown (palm)sugar, tea, coffee, condensed milk, orangeade and lemonade (carbonated), sweets, liquor, ingredients (including a lime paste) used together in betel chewing.[2]

New stock received in December by a local vender who kept a few items for sale at her house included mature green beans, black beans, peanuts, sweet potatoes, salted turnip, pickled garlic and tomato sauce.

272 Larger stores served as informal men's clubs where tea,
443 coffee with condensed milk, and carbonated beverages were
• 515 sold primarily for consumption on the premises. The proprietor of a new store, built in December 1952, sold no liquor.

273 We have no estimate of the amount of liquor sold in Bang
443 Chan, although for those who drank it, its caloric value might
[445] be of significance.[3] About 9% of the householders interviewed

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[354] 1. Listed by Sharp et al. with non-food items, as much of it was burned in lamps.

2. Included here as food since some calcium may be obtained from this source.

3. One observer estimated the intake of certain village men who drank regularly as at least 2 oz. of rice liquor (28-35% alcohol) per day, representing about 100 calories. The estimated intake of women who drank regularly was about 1 oz. per day.

4:Phillips E-4,5 (1956-1957) 1966
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relationships: within the family, usually in terms of the relative ages of people; elsewhere, in terms of age, wealth, power, knowledge, religious or governmental role. Secondly, they are based on the assumption that every individual, regardless of his position in the hierarchy, deserves respect. The first is a respect associated with the proper performance of one's role; the second, a recognition of the essential dignity of every human being.

The role of these respect patterns cannot be emphasized enough. Benedict, in her study (1946) of Thai culture at a distance, referred to the learning of the *waj*, or gesture of obeisance, as "the first teaching the child receives." Although the *waj* is perhaps not the very first social act the child learns, I have seen infants no more than two weeks old being guided by the mother in raising the palms of their little hands to the forehead in expression of deference to superiors. The older infant who can do this on his own almost always receives acknowledgments of approval and delight from the adults in attendance. An older sibling really means it when he says of his relationship with his younger brothers, "when I ask them to do some kind of work, they go and do it. They never disobey, and when there is no disobedience, there is no hatred. . . . Formerly, whenever there was entertainment somewhere I took them with me. My younger siblings love me a lot. . . ." His position in the authority structure assumes the respect of those younger than he, and they willingly grant it for, among other things, he plays his role well as the kindly superior who takes them with him whenever there is entertainment. All the polite little linguistic forms (honorifics, expletives suggesting status and, most important, ordinary kinship terminology with its specification of relative age) as well as kinesthetic forms (lowering the body while passing a seated older person, holding the younger between one's legs and with arms around him in a position of protection) also serve to emphasize the respect that people grant one another because of their differential status. Perhaps the most revealing illustration of the strength of these patterns, at least the authority pattern, was provided by a two-year-old toddler who pointed to the stomach of his pregnant mother and said with pride, "My younger sibling is in there. When he is born he will be *my* responsibility." Little doubt that when the child is born he will give his older brother his due.

With regard to the other respect form, recognizing the dignity of every human being, more than once I have heard parents say that they disliked giving their child a certain medicine "because it offends the baby; he does not like it. It is better not to give it to him than to hurt his feelings." Although I do not doubt that in some instances the parents were annoyed more by the screams of the child than anything else, I am also convinced that for the most part they were respecting his basic individuality and right

4:Phillips E-4,5 (1956-1957) 1966
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4. The good person is one who tries to behave in an honest way.
5. Do not shove anything at anybody or throw anything at anybody.
6. Do not make loud noises when people are working.
7. Do not spit or clear your phlegm or yawn in public.
8. Do not gobble your food or scatter things on your plate or chew loudly.
9. Do not sit or walk carelessly or abruptly against other people.
10. Do not touch or horse-play with people who are your close friends.
11. If you are a superior, wherever you go, you should look after the comfort of your inferior.

Again, although the list is almost self-explanatory, note should be taken of some cultural emphases that run through several of the items: the stress on behaving properly toward superordinates and subordinates; the emphasis upon motoric and emotional self-discipline, and conversely, the implicit fear of losing control over one's impulses (as indicated in the dictum against horseplay, even with one's friends); the general stress of respecting the inviolability of every person; and finally, the great emphasis on the importance of the body in human behavior and social relationships. Although this last point may not seem unusual, in that the dicta are addressed to children—with whom one would expect much concern over the body—it in fact represents an area about which all Thai regardless of age are sensitive. In general Siamese, considerably more than Occidentals, tend to be aware of physical bearing, beauty, and ugliness, as well as the use of the body as a communicative device. A person's physical appearance is an indication of his character, particularly his moral nature, and kinesthetic modes are explicitly used for conveying love, regard, and as suggested above, disrespect.[9]

It is worth reëmphasizing that the above items are standards for, not descriptions of, behavior. The attention given to controlling body movements is simply to emphasize for the child that people will decide whether he is good or bad on the basis of the way he handles his body, and he must therefore exercise extreme care in its use. Items one, nine, and ten are not meant to imply anything fundamentally wrong with touching another. Most Thai, particularly members of the same sex, thoroughly enjoy expressing their mutual affection through bodily contact: by holding hands, grasping the leg or arm of the other, and in Bang Chan, sometimes by sleeping with one another. In the last instance, there is absolutely no sexual contact; often during the cold season the practice serves not only friendship but the additional purpose of keeping the participants warm.

[9] Although it belongs to a different area of behavior, it is not insignificant that in classical Thai dance every body movement—the configuration of the hands, the position of the legs, eye movements—has a specific, conventionalized meaning. In the oldest, or Khon, version of the dance, the only means of communication other than that provided by masks are body movements.

4:Phillips E-4,5 (1956-1957) 1966
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Social Play

The first response mentioned above, the tendency to turn social situations into occasions for play, is probably one of the most common of all human tendencies (it is certainly one of the earliest), but one that strangely has received little attention in the psychological literature. The few writers who have expressed any interest in social play have tended to view it simply

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are social peers, the Bang Chaners would easily turn the conversation to a discussion of the technical aspects of rice farming or even gambling. The latter would likely be discussed with a social superior only after some acquaintance. On the other hand, if one were clearly the other's superior, the superior would probably talk not about the methods of rice farming but, more generally and benignly, inquire, "Is all going well with you? Is there any way I might help you?" He might even proffer some unsolicited advice or aid. The tone and theme of the conversation would be expressive largely of the superior's concern with the welfare of his new-found friend, which the latter would typically accept.

All this is usually accompanied by gentle laughter and careful attention to appropriate pronominal forms. The good host will also serve his guest rain water, and if possible, scented rain water. If opportunity and finances permit, he may even offer him a warm Coca-Cola. The youngster who will actually serve the refreshment will make sure that it is on a coaster and that his hands are in the proper ritual position when he offers the drink to the guest. Such are the ingredients from which potential friendships are made.

Although the particulars of the kind of politeness found among family and friends are different from the above, the forms are essentially the same. Villagers do not talk about the funny accents of the people who live next door to them, nor do they rush to serve scented water when a brother comes to call. But they do take pains to express respect for each other by using proper honorific and pronominal forms, by looking to the oldest competent family member for advice, by talking of subjects that are pleasant and amusing, but never threatening or embarrassing.

The avoidance of embarrassing topics—even when the airing of such topics may be crucially important or beneficial to one of the parties concerned—is one of the most pronounced facets of village social life. To a Westerner accustomed to outspokenness, the types of situations that villagers define as embarrassing and the lengths to which they will go to avoid them sometimes appear to border on the sado-masochistic. Detailed interviews with two women whose husbands had taken second wives, for example, indicate that although at the time they were deeply disturbed by their husbands' actions (primarily for economic reasons; secondarily for emotional-sexual ones) they never once even brought the subject up with their husbands. They explained that they were too *ʔaaj* (embarrassed) to do so. In neither case was this embarrassment expressive of any feeling of inadequacy on their parts (the fear of hearing their husbands say, "I took a second wife because you are not adequate"). It was prompted rather by the desire to avoid an awkward and potentially rancorous confrontation. They did not want to put anybody on the spot. (Whether such a confrontation would *actually* lead to overt rancor is almost impossible to ascertain because

771
775 Man was higher on the scale than woman.[20] Progress toward
[562] Nipphan was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phĭ) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good health and long life, a kindly personality, many fine children, wealth, high status, intelligence, and luck. Astrologically, he was born on a day
[775] of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death, deformities, unhappiness, poverty, and had a cruel nature.
[753] Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

75
786 The long-range protection against all illness was to
[577] live virtuously and make merit. However, to guard against temporary supernatural intrusions, everyone possessed and usually wore Buddha lockets and other amulets. Some
[782] underwent tatooing, men having Cambodian or other figures,
[304] women, 2 small dots tatooed on the torso under the arm.

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20. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

4:Phillips E-4,5 (1956-1957) 1966
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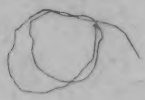

fundamentals of that structure or of the ultimate values upon which it is based. In a very real sense, the educated group is a class with a vested interest. Consequently it is conservative and pragmatic rather than radical and speculative . . .

The closest approximation to a psychological literature resulting from these fundamental intellectual orientations are religious and secular didactic essays, public school texts on morality, self-help or "peace of mind" tracts, and satirical or didactic fiction and poetry. (Mosel 1961 provides an excellent discussion of contemporary Thai poetry.)

Addressed to the reading public at large, these writings do not purport to be concerned with any particular group or class of Thai society: peasants, Bangkokians, Northeasterners, or others. Since they are for the most part written by the educated elite, however, they tend to reflect their authors' interests and standards. To what extent their standards differ from those held by peasants is difficult to determine with precision, although impressionistically it would seem that in psychological questions the educated elite give considerably more attention to the importance of social forms, the desirability of pleasing others, and also reveal a greater sense of compulsiveness, achievement, and social uneasiness than do peasants. Villagers simply seem more relaxed and self-accepting. However, these differences are very much a matter of degree. A Bang Chan child who learns about proper modes of behavior from *Sombad Khoon Phuu Dii*, discussed below, may not have the same compulsion nor experience the same pressures to implement his studies as does the child of the Ministry of Education official who wrote the text. However, he thoroughly understands the teachings, their relevance and importance; knowing them is part of being Thai. A few illustrations will provide some of the flavor of these writings.

One of Thailand's most famous men of letters is M. R. Khukrit Pramoj, a publisher, editor, author, lecturer, and recently, movie actor. Educated in England and a member of the royalty, he is known to most Westerners as a kind of Siamese equivalent of Henry R. Luce, but to most Thai (although to no more than a handful of Bang Chaners, the majority having never even heard his name) he is known for his all-around knowledge of human affairs. His most popular work is *Panhaa Pracamwan*, or *Problems of Everyday Life*, a multi-volumed set of dialogues based on a column he wrote for his own newspaper in which he answers questions from hypothetical individuals who have "written" for advice on problems of ordinary living. These problems concern such matters as how to handle one's jealousy, how to treat those below and above one in the hierarchy, and how to control one's feelings of spleen and anger.

The following excerpt from volume iv of these essays (1952: 337–339) is not only representative of Khukrit's thinking, but bespeaks a

4:Phillips E-4,5 (1956-1957) 1966
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114 villagers of Bang Chan. Although in their eyes he probably never ceased being identified in some ways with the *farang*, he was defined primarily as "one of us." He helped reinforce this definition by referring to himself and the villagers as "we Thai" or "we Thai farmers," as contrasted with the *farang*. Often, not out of any enmity but simply because he had a ready foil, he would make fun of my *farang* ways for the benefit of the villagers. It was conduct like this, repeatedly expressed, that permitted him later to ask the villagers their opinions of the *farang* without raising any eyebrows. On the other hand, when the need arose, he readily assumed the role of the gentle, guiding, probing representative of the research who, in his efforts to get the villagers to participate, would appeal to everything from pride in country ("Don't you want the *farang* to know the true way we Thai people think") to the principle of reciprocity ("We do a favor for *Aacaan* Herb by helping him pass his examination, and he helps us by bringing us fame").

The two female graduate students who worked part-time were not as distinctive as their male counterpart, but in their own way, were equally as effective in the research. One was the daughter of a high-ranking Army Officer School teacher; the other was the daughter of a low-level bureaucrat. In their early twenties, they had been closest friends during college and graduate studies. To a certain extent, they were prototypes of the upper-middle-class, college educated Thai female.[2] Confident about their 114 562 professional abilities and aware of how much they are needed, they are caught in the conflict of whether to participate in "worldly affairs" and thus • 577 become independent and admired social leaders, or to become wives and mothers, and thus live in the shadows of their husbands. Their problem, unlike the case in the United States, is that both alternatives are equally valued and equally available and that because the social need is so great, they can actually become leaders with not too much effort. The conflict is further aggravated by the fact that they come from the social class that emphasizes a double sexual standard. At the same time as they are expected to be assertive and competent in their jobs, they are also expected to be sweet, docile, and compliant females. They resolve this conflict to a large

[159] [2] The daughter of the lower-level bureaucrat had this status by virtue of her own accomplishment, not her father's. In fact, one of the most touching scenes I ever observed in Thailand was when the girl's entire family assembled at Don Muang Airport to see her off to the United States where she had won a graduate fellowship. She had become the hope and pride of her family. Her mother, in the traditional cropped hair style of the Thai female and her mouth stained with betel juice, was trying to stand on the pair of oversized high heels that she had bought especially for the occasion. Tears were flowing down her eyes, both in pride over her daughter and because she could hardly walk on her first pair of "modern" shoes. My male assistant, in his inimitable way, turned to me and whispered: "Khun Maeae [the honored mother] wants to be just like her successful daughter."

4:Phillips E-4,5 (1956-1957) 1966
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extent by becoming succoring females—taking care of the less fortunate, seeking opportunities where they can help others, and the like.

The relevance of these remarks to the work of the assistants in Bang Chan is that they represent the attitudes the girls brought into play in their relationships with the villagers. In the eyes of Bang Chaners, they were well-educated, high status city girls who combined the finest qualities of the Thai woman. They were not only clever because they carried clipboards and spoke two languages but they were "good" girls who used "sweet words" and proper terms of address and "brought us medicine when we were ill. They knew how to help farmers." In contrast to my own practice—which was to give villagers aspirin only if they explicitly asked for help, or if the problem was more serious to plead incompetence—their actions were entirely spontaneous. In the same way, villagers would often wonder why after working all week at the university, these girls would spend their Sundays and holidays in Bang Chan. The answer was not hard for them to find: "These girls have much progress. They want to help the nation and themselves. So they come here and work for *Aacaan* Herb. This will help them go to America. And then they will have more progress." Although this motive may have entered into the assistants' decisions, a more important reason was the simple pleasure they derived from listening to villagers bare their problems and preoccupations. By giving of their time and interest they were fulfilling their own best image of themselves.

A final word should be said about the various relationships existing among the assistants and myself. The relationships that developed among the assistants themselves was perhaps the ideal Thai adjustment to the unique situation in which these three young, unmarried people found themselves: they began to treat each other like brothers and sisters. Theirs was not a perfect sibling relationship—not even in the fictive sense, for they were keenly aware of their differences in background and of the desirability of keeping romantic considerations out of the relationship. However, their very differences in background helped form a bond of mutual respect.

Their attitudes toward the author were more complicated. Although in many ways they treated me too as a sibling, their attitudes were forever colored by the fact that I was a *farang*. On the positive side, this meant that they respected me for my technical training and knowledge, and for my obvious concern about learning as much as I could about the villagers. By the same token, however, they would frequently become annoyed by my inability to see things which in Thai terms were obvious, or by my insistence on probing matters that in their terms were either unanswerable or better left unexamined. Their attitudes toward me were not too different

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53. Which of the following six qualities do you feel is the best thing for man: Virile, friendly, educated, rich, religious, lazy? [577]

5.	To be virile	2
6.	To be friendly	31
7.	To be educated	56
8.	To be rich	43
9.	To be religious	126
X.	Not to be lazy	57
Y.	Unascertainable	15
—	No Answer	3

54. Do you drink tea frequently, occasionally, seldom, or never? [272]

1.	Often	22
2.	Occasionally	68
3.	Seldom	158
4.	Never	85

55. Do you drink whiskey frequently, occasionally, seldom, or never? [273]

5.	Often	29
6.	Occasionally	73
7.	Seldom	157
8.	Never	74
9.	Unascertainable	—

56.a. In Thailand are many people who smoke opium. Excuse me, during your life have you ever smoked opium, or not? [276]

1.	Yes	45
2.	No	287
3.	Unascertainable	1

b. IF NO: Excuse me, do you think there is anything wrong with smoking opium, or not?

4.	Yes, it is wrong	261
5.	No, it is not wrong	5
6.	Unascertainable	1

c. IF SOMETHING WRONG: What are the various reasons why you think it is wrong?

7.	Bad for health	43
8.	Habit forming	62
9.	Waste of money	220
X.		
Y.	Other reasons, specify_____	40
0.	Unascertainable	

57.a. In the last month, how many times did you go to Nikhori or didn't you go at all? [484]

0.	Did not go at all	67
1.	Once	55
2.	2 to 4 times	130
3.	5 to 9 times	70
4.	10 to 19 times	30
5.	20 times or more	20
6.	Unascertainable	8

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 427 464 423 thus could freely choose the proper size of their farms.

To be sure, some of the other 205 operators in the land scarce group could rent in enough additional parcels to make an efficient-sized farm. The preliminary study in 1948-49, however, reveals that of 104 farms under study 87 were under-sized. The point we want to make in this section is that there are considerations other than economic interest which preclude the attainment of a most favorable farm size by some of these land scarce operators. In the study of labor utilization on Chom Farm, it was seen that preparation of the fields was finished long before the deadline, indicating that the land input could be increased or labor input could be decreased. If Chom wanted to rent in an additional parcel of five rai, the problem presented would not be simple. In the first place, all rice land in the village had been filled up, so Chom's additional parcel had to be one that had been operated by a neighbor of his. [587] Unless this neighbor had expressed an intention to quit this parcel, conscience alone would prevent Chom from outbidding the other person for the parcel. Second, although lease of land was on a one-year basis, in practice the landlord usually rented his lands continuously to the same tenants. If the landlord wanted to operate a certain parcel himself, the former tenant might think that it was reasonable enough to abandon the parcel. But it was inconceivable that he should leave the parcel so that another tenant could operate it. Third, the additional parcel should not be too far away

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in the khwan khǎo "gift" handy cash. The income was about 40 to 2[illegible] baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mɔ̄ or to the Minburi Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

[056]
[845]
[743]
[578]

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Though living like other elder citizens of the community, in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mɔ̄ was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (thaem chîp [Mc.F. 990]) when others who had equal or more experience were not so considered?

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mo, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mo gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mo. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the thaa khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

4:Phillips E-4,5 (1956-1957) 1966
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the village to find dependent relatives—siblings, cousins, nephews, nieces— 596
who, unable to make a go of it elsewhere, are accepted into a relative's family, sometimes to the extent of eventually taking over the headship of the family. Sometimes, on the initiative and invitation of an elderly or lonely relative, an entire nuclear family will be asked to take over or share a household. Children of poor or "inconvenienced" families (where a new 596
child is born before the first is weaned, where there are too many children 597
for the mother to handle comfortably, where a youngster is simply being "troublesome") are adopted or "borrowed" by other villagers for varying periods of time. This is done preferably by relatives, sometimes by neighbors, and often, in the case of boys, by the monastery, where the children become hand-servants to the monks and are supposed to absorb, by a kind of osmotic process, righteous ways of behaving. (Of my three male life history informants, two were given over to relatives at the ages of two, the third at the age of eight; one spent his childhood with four different families, another with five families; one describes his adolescence as "wandering from place to place." The psychological implications of such displacement should not be underestimated.) On occasion, two independent 596
nuclear families—almost always connected by some kinship tie—will join [594]
together for convenience to share cooking facilities, in which case they effectively become a single extended family. And in some cases, although rare, one will encounter adult children living in independent households but handing over their income to a parent, living in still another home, who disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a 596
husband to be away for four or five months at a time earning money in 591
Bangkok, or during the dry season on a vegetable farm, returning home to [464]
visit his wife and children whenever opportunity permits, with or without funds. The wife may still maintain their household, but often returns to 596
live with her own parents.[1] In a similar vein, although obviously more 586
extreme, it is not unusual to find families in Bang Chan which have simply 182
"disintegrated," as the villagers say. Much depends here on the circumstances of family members. Bang Chaners usually reserve the term "disintegrated" for families that no longer have the economic wherewithal or justification for staying together as functioning units. In these instances, family members simply go their separate ways, if possible back to their families of orientation or to other relatives, husbands perhaps into the monkhood, and the children to whomever will take them. Most frequently, [578]
"disintegration" is characteristic of very poor families, and in the minds of

[1] This pattern may be related to the old *corvée* labor pattern when able-bodied village men were away from their families for extended periods of time. [466] [651] [174]

4:Phillips E-4,5 (1956-1957) 1966
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596 182 586 [578] [576] the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

586 595 Precise figures on the divorce or separation rate in Bang Chan are unknown, primarily because many marriages as well as divorces are never registered on the government rolls; also, many separations seem to follow an on-again-off-again pattern; the sanctioned occurrence of polygyny (only eight known cases out of the 296 families) and even polyandry (two known cases) complicates the problem even further. However, the fact that *four* [581] months after I had designated a sample of thirty families from which to select informants, six of those families, or 20 percent of the sample population, had dissolved would strongly suggest that Bang Chan families are not particularly stable.

593 586 183 The causes of family fission in these specific cases are unknown, but what is impressive is the apparent ease with which it takes place and the equanimity with which people seem to accept it. Other informants, reporting their own experiences or observations, discuss family breakups as if they were among the more normal events of the workaday world and completely understandable. They seem to be of no greater emotional import—in the sense of eliciting recognizable feelings of distress—than losing a good price on the sale of a piece of land or on the sale of some rice. In fact, the latter kinds of situations are considerably more likely to evoke expressions of hurt or exasperation. One repeatedly encounters in Bang Chan instances on the following order: a family breaks up simply because the husband has an inclination to work for a particular person whom he likes; a wife ("she is a touchy woman") runs away every time she has a minor disagreement with her husband (minor even by village standards, for example, "Should I buy my lottery tickets from Mr. X or Mr. Y?"; "Should we invite seven monks or ten monks to officiate at this ceremony?"). The point here is that these explanations—and the low tolerance for discord, the importance to a person of a boss or job over a spouse, the desire to be footloose, which they imply—are to the villagers completely reasonable justifications for the dissolution of family units.

174 594 596 Many of the family relationships referred to above as "centripetal" in nature are clearly related to or derived from patterns of social organization characteristic of an earlier Bang Chan. Although most evidence indicates that even in the years immediately following the settlement of the village in

4:Phillips E-4,5 (1956-1957) 1966
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village; for how long his wife or child did not know: "maybe he will be back next week or next month; it is not certain." In a similar vein, we would encounter a youngster serving at the monastery, a week later working as a chore boy in someone's home, and a few months later living in still another home. And most fascinating of all are those seemingly amicable and placid families—and it should be remembered that Bang Chan is small enough, and in the daily round of life open and quiet enough, so that the slightest manifestation of family tension may easily become public knowledge—which suddenly split apart after a disagreement about something as inconsequential as a missing shirt. Here, the cause of fission is of course not the intrinsic importance of the missing item (although a white "city" shirt is expensive and does have symbolic significance), but rather the villagers' extraordinarily low tolerance for interpersonal conflict and the challenge to their pride: rather than permit the disagreement to mushroom into an emotionally expressive conflict, it is much easier to leave the field. Because the volatility of a dispute is what is often most feared, one rarely hears of any actual argument accompanying the disagreement; instead villagers say, "We had a few words and he left. That's all." [10]

None of the above is meant to imply that family fissions are typical, in a statistical sense, of Bang Chan or even less that discord is what causes them. (Our concern with discord was simply to illustrate that villagers feel so strongly about it that when it occurs, they will take the most extreme measure to avoid it.) However, together with the separations that result from economic opportunities, "arrangements of convenience," and the desire to be footloose, they do occur frequently enough to exist as potentialities in the life of every family; when they happen they are not completely unexpected.

These points have been raised primarily because Bang Chan is in fact a rather placid community, and in discussing kinship it is easy to mistake placidity for inertia, especially when our typical categories of description almost assume the latter state to be the case. However, accompanying this placidity is a kind of quiet dynamic resulting from 1,771 individualists—polite, gentle, non-aggressive, but nevertheless individualists—pursuing their own purposes. These pursuits do not preclude family obligations, loyalties, and love—Bang Chaners repeatedly speak and act in terms of repaying the love that their parents have given them; of repaying them for

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[10] The desire to avoid emotional climax here seems very similar to what Bateson (1949: 40) found among the Balinese where, when individuals quarrel, there is an attempt at a "formal recognition of the state of their mutual relationship, and possibly, in some sort, a pegging of their relationship at that state . . . this method of dealing with quarrels would correspond to the substitution of a plateau for a climax." In Bang Chan, the "plateau" is achieved by having nothing to do with one's antagonist.

4:Phillips E-4,5 (1956-1957) 1966
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*125 *128 *156 This last may be a reflection of the dissatisfaction a few villagers may feel over the continuous emphasis given to sweet and appealing words.

*125 *128 *156 • 578 The next item, *"The thing they most dislike about him is . . . ,"* is in its stimulus value essentially the obverse of the above. Thus, the negative counterparts of some of the characteristics noted above also appear here: 4 percent of the sample dislikes the lack of orderliness and a pleasing disposition in others; 13 percent dislikes haughtiness, conceit, or arrogance: and one villager dislikes a person who "does not know what work is." However, the dominant definitions of undesirable characteristics are not simply negative phrasings of the desirable. Although two villagers do dislike

TABLE 15

The thing they most dislike about him is . . .
The thing that makes* khon *not like him is (namely) . . .

TROUBLING OTHERS (64%)		
HURTFUL SPEECH:	30%	that he does not speak well and lies.
		her lies. No one likes those whose words cannot be trusted.
		that she damns others. Some people gossip about others.
ANNOYING OTHERS:	24%	that she is a troublemaker and does not speak nicely.
		that she likes to look for trouble.
THIEVERY:	10%	that he is a person who likes to steal.
BAD QUALITIES (17%)		
HAUGHTINESS:	13%	that he is conceited and lofty.
OTHERS:	4%	his bad manners; he is not *rîaberɔɔj* (he lacks neatness, good order, finesse, etc.); his coarse way of speaking.

people who are ungrateful for the help they have received or who do not help others, most accept these sins of omission as realistic possibilities. (Although *bunkhuns* assume reciprocation, one always has the option of terminating the relationship.) Rather, most villagers perceive undesirable qualities in terms of the trouble that individuals actively cause others.

This trouble takes at least three forms. The first, representing the responses of 30 percent of the sample, is the deceptive or otherwise painful use of language: lying, gossiping, using rude and insulting forms to deal with others. This last, of course, means the expression of aggression: indifference to the feelings and dignity of other people. Lying and gossiping, however, reflect the sensitivity that some villagers have about the untrustworthiness of others: that beneath the gloss of smiles and amicable face-to-face contacts, people often do hurt one another. This suggests, of course, some of the ambivalence that villagers feel about "nice words" and

4:Phillips E-4,5 (1956-1957) 1966
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"sweet speech." The second major response, representing 24 percent of the sample, is more generic in nature: it encompasses the trait of inciting other people to have arguments; the capacity to annoy people, in a manner akin to what is connoted by the American slang term, "to bug" a person; and the capacity actually to threaten others. The emphasis here is on intruding on the peace, stability, and self-concerns of other people. The last response, representing 10 percent of the sample, is interesting because of its rather non-psychological, highly practical, nature: people are disliked because they steal. Theft is something that one *hears* about in Bang Chan very frequently, but actual cases are almost never encountered. What its symbolic significance may be is unknown, unless it is simply a more concrete expression of the concern about the untrustworthiness of others.

The most striking characteristic of the above responses is that despite their diversity they almost all emphasize qualities that are directly interpersonal, rather than intrapersonal, in nature. There are no responses here which say that the most dislikable thing about a person is "his stupidity"; "his weakness"; "his incompetence." It is only when unattractiveness takes on a manifestly social dimension, when a person's activities can actually harm others, that most villagers become exercised. Otherwise, Bang Chaners seem to assume (and it is the assumption that is important) that a person can be any way he wants. To a large extent, this same assumption was implicit in the villagers' structuring of the previous item on "likable" qualities, and may help to explain why they often define positive qualities as the absence of negative ones. In that item, if a person could not be of direct help to the self or love the self (the major response), villagers desired that he deal with others in a "soft spoken" and gentle way (the second most frequent response) or at least lack offensive qualities (the third most frequent response). They seem to assume that it is better not to have a relationship at all than to have one that admits unpleasantness. Or, phrased in another way, they seem to assume that if a relationship is even to occur, it must be useful, pleasant, or harmless. What the person is otherwise like, outside of the relationship, is irrelevant to one's assessment of him.

This attention to the manifest nature of social relationships and to the necessity of keeping the relationships smooth and uncomplicated is revealed most sharply in the next two items, *"People who never show their feelings are . . ."* and *"It is sometimes good to hide your true feelings about a person because. . . ."* The latter item is clearly biased in the direction of sanctioning the social pose, and is valuable mainly for the kinds of justifications it reveals. The former item, however, has no evaluative connotations and permits villagers to respond in any direction. Examination of the responses indicates overwhelming agreement on the part of villagers about the desirability of hiding one's feelings. Eighty percent of

This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

Marriage

As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Minburi to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their green children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.[4] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:62) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

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581 589 It was not felt necessary to marry. Because of the strong economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married. [593] One group of grown siblings of both sexes stated they were "too happy together to marry."

836 848 Pre-marital chastity was more or less observed. If a girl became pregnant before marriage, her parents brought pressure, usually successful, on the boy to marry her. The occasional illegitimate child was raised without stigma in the girl's family, though problems arose during pregnancy and delivery (cf. "cone of wood" below). The mother later found a husband. One father was angered because he felt his daughter's pregnancy wrecked her chance for a marriage of prestige. He was conspicuous for his social aspirations towards city ways.

864 831 Information on human sexual matters was gathered by the young sometimes by accidental observation of parents and others, through hints from [illegible]aring cursing, and by conversations with grandparents, older siblings, and friends of the same sex. Men joked on sex matters at the all-male rice-uprooting parties. Being antithetic to the ascetic prescriptions of Buddhism, sex talk was highly charged. Sex was never discussed in mixed company.

Residence

592 The nuclear family of husband, wife, and unmarried children was the primary social and productive unit, but other resident kinship units larger and smaller also occurred. After marriage, [591] the couple usually lived for a time in the house of the parents of one spouse or the other; then, as soon as they could afford it, set up housekeeping in their own house. Of a sample of 98 families in Bang Chan, 30 set up independent households at once after marriage, 16 after one year, and the rest, a few per year, on throughout 10 years; 15 of the families never had a house of their own but lived with other relatives (Janlekha:37). Of 298 families, 59.4 per cent lived independently as a nuclear family, while 34.9 per cent lived with other relatives in the house. (The remaining were single persons living alone, or priests at the temple in the "ecclesiastical family.") The average size of the households (not necessarily the nuclear families) was 5.7 persons, with a range of 1 to 14, the median being 6 (ibid. 28-29). 361 The house of a new couple was usually built adjacent to parents or relatives, and certainly within calling distance or sight of some other household. Social 621 patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

4:Phillips E-4,5 (1956-1957) 1966
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the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

Precise figures on the divorce or separation rate in Bang Chan are unknown, primarily because many marriages as well as divorces are never registered on the government rolls; also, many separations seem to follow an on-again-off-again pattern; the sanctioned occurrence of polygyny (only eight known cases out of the 296 families) and even polyandry (two known cases) complicates the problem even further. However, the fact that *four months* after I had designated a sample of thirty families from which to select informants, six of those families, or 20 percent of the sample population, had dissolved would strongly suggest that Bang Chan families are not particularly stable.

The causes of family fission in these specific cases are unknown, but what is impressive is the apparent ease with which it takes place and the equanimity with which people seem to accept it. Other informants, reporting their own experiences or observations, discuss family breakups as if they were among the more normal events of the workaday world and completely understandable. They seem to be of no greater emotional import—in the sense of eliciting recognizable feelings of distress—than losing a good price on the sale of a piece of land or on the sale of some rice. In fact, the latter kinds of situations are considerably more likely to evoke expressions of hurt or exasperation. One repeatedly encounters in Bang Chan instances on the following order: a family breaks up simply because the husband has an inclination to work for a particular person whom he likes; a wife ("she is a touchy woman") runs away every time she has a minor disagreement with her husband (minor even by village standards, for example, "Should I buy my lottery tickets from Mr. X or Mr. Y?"; "Should we invite seven monks or ten monks to officiate at this ceremony?"). The point here is that these explanations—and the low tolerance for discord, the importance to a person of a boss or job over a spouse, the desire to be footloose, which they imply—are to the villagers completely reasonable justifications for the dissolution of family units.

Many of the family relationships referred to above as "centripetal" in nature are clearly related to or derived from patterns of social organization characteristic of an earlier Bang Chan. Although most evidence indicates that even in the years immediately following the settlement of the village in

4:Phillips E-4,5 (1956-1957) 1966
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596 *156 As the reader might by now suspect, it is not easy to determine the basis of the unity of the family. However, of all the factors that keep people living together in amity and affection, two come to the fore: a sense of love, obligation, and respect that is derived from the simple fact of kinship, but which must be continuously confirmed by mutual benefits; and economic considerations.

596 476 The economic foundation of the family is significant not only because the family is in fact the sole economic and occupational unit in the community (with the exception of the monkhood and school) but because the villagers themselves think of the family in terms of its economic functions. People say that they marry for wealth or because of the productive capacities of their spouses;[18] spouses stay together because the economic costs of a split are too great; most important of all, people are keenly *aware* of their economic interdependence. Fathers say that they need children to work in the fields and care for the buffalos, that a family needs a mother so that its members will be fed, that siblings are useful because it is easy to borrow from them (although, as noted earlier, some are unhappy about the intrusion of the kinship tie into what they regard to be a commercial transaction). Many villagers extend this economic, transactional type of thinking to other aspects of the kinship relationship. Thus they say that "the purpose of marriage is to have a companion who will take care of you when you get sick," or very frequently that "my parents went to the trouble of bringing me up so they would have a person to make merit for them when they die." The emphasis here is on independent agents serving each other because it is mutually beneficial.

[581] [593] [581] [593]

*156 181 171 591 The love and affection that people feel for each other is of course grounded in the close associations that one finds in most nuclear families. However, the attitudes of respect that one sees are perhaps more distinctively Thai. Almost all the literature on Thailand refers, at one point or another, to the patterns of respect (*khwaamnabthyy*) existing between people, both within and without the family. These patterns are based, in the first instance, on the status inequalities that exist in almost all social

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[125] [18] In responding to the unstructured Sentence Completion Test item, "*He* (*she*) *wants to get a wife* (*husband*) *who. . . .*" for example, thirty-one of sixty informants indicated that they wanted a mate who "was a good worker," "earned a living," "was rich," or otherwise had high socio-economic status. Only two persons said that they wanted a spouse for reasons that could be reasonably defined as sentimental: one woman wanted a husband who "would be a good friend with whom she could discuss things," and a man said he wanted a wife whom "he loved." Other informants gave completions distributed among a variety of categories: "polite, well-mannered, handsome, kind, strong, and good" spouses; and six women wanted husbands who would be faithful.

4:Phillips E-4,5 (1956-1957) 1966
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114 157 156 as do rejected lovers who fear suffering again. Without strong bonds, they develop no sense of guilt for those they injure and stand ultimately responsible only to themselves, individuals among individuals who differ mainly in the amount of influence they wield. Thus Dang [the informant] can make demands of others but feels little obligation toward them. As he left his father and uncle with scarcely a second thought, so others can leave him. Of course, as was indicated by Dang's projective test data, this form of individualism is not entirely without its psychic toll. But on the level of action and conscious decision, the moral for a Thai runs: invest not thy love in a shadow.

114 156 155 866 The piece by this writer (Phillips, 1959) is essentially an amplification of some of the findings of the above paper and a confirmation, in the life histories of two other informants, of their typicality. The paper was confined to an examination of the development and expression of the needs for dependence and independence in the lives of these villagers. Three major points emerged from the analysis. First, the most common expression of dependence was in the area of subsistence and economics, in the individual's desire to attach himself to others who would give him sustenance in return for services rendered. Over and over again, the informants viewed their relationships with other people, particularly kin, in terms of the others' economic value to themselves. However, this mode of dependence was not so much an overriding compulsion as it was a basic postulate about human relationships: the measure of another person's love was explicitly the degree to which in material terms he served the self. The second point, [581] in contrast to the above, was that marriage was seen as the means by which a person could free himself from the obligations of economic dependence. This freedom has two aspects: freedom from the frustrations caused by others; and freedom to set oneself up as master of one's own household, thus reaping the psychological satisfactions—status, power, and prestige—of having others dependent on oneself. The third and perhaps most striking point concerned the fact that all these informants spent their childhoods being shuttled from one family to another. Although this experience may not have been culturally modal, it occurred with sufficient frequency to be a possibility for every Bang Chan child. It was further suggested that in [571] part such experiences taught villagers at a very early age that they had to fend for themselves, and that the experiences served as psychological prototypes for the sense of fragility of social relationships that is so characteristic of village life.

114 124 In contrast to most of the literature cited above, the last two articles are based on data which are products of interviews heavily weighted toward the psychologically expressive. Two of the informants admitted that they told us things that they had never shared with anyone, and the agitation (a

4:Phillips E-4,5 (1956-1957) 1966
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1923–1924], translated by Cunnison) and Homans (1961) have argued, that human relationships everywhere are based on just such a consideration, usually concealed by ethically palatable amenities (such as in American culture, from which most of Homans' empirical materials come). However, what is so intriguing about the Thai case is that *quid pro quo* factors are forever in mind as justifications and explanations of why people relate to one another. Although villagers, because they are such polite people, rarely say to others, "I am helping you because I know the day will come when I need your help," or "Do this for me because you owe me a favor," they do use such arguments *to explain* the basis of their ties: "Of all my friends I love Lek the most because she has done me the most favors (*bunkhuun*)"; "The purpose of marriage is to have a companion who will take care of you when you get sick"; "Of all my daughters, the one who gives me the greatest pleasure is the one who sells things. . . . When she gets money she gives it to me"; "Friends are very useful because it means that you have people who will do you favors. And when they need help, you will take care of them. This is love." [21]

One of the finest discussions of the nature of reciprocal obligations appears in a recent paper by George M. Foster (1961) that deals not with a Thai community, but with the Mexican village of Tzintzuntzan. Foster outlines in his paper the notion of the "dyadic contract" which he presents as a model for the social structure of Tzintzuntzan. Or, more precisely: "Specifically, I suggest a model . . . to reconcile the institutionalized roles which can be recognized and described in the community with the underlying principle which gives the social system coherence." Foster's focus thus differs somewhat from our psychological emphasis. However, his abstract statement of the "dyadic contract" provides such an excellent summation of the major factor making for enduring social relationships in Bang Chan that it merits quoting in detail here. There are of course inevitable differences in cultural content between the two communities and the fact that

[21] Such explanations are not unique to Bang Chan. In his description of the Thai–Lue village of Ban Phaed in Northern Thailand, Moerman (1962) observes: "The society of Ban Phaed operates in terms of something got for every something given. This is not merely an analytic device which permits a predictive, if crass, view of any human society. It is the way in which villagers explain and evaluate their own behavior. Favor for favor, visit for visit, meal for meal, one should return what he receives. 'We help our kinsmen because they help us. If a kinsman however close didn't help me, I wouldn't help him.' 'We care for our children when they are young; they will care for us when we are old.' Actions which we would justify in terms of compassion, generosity, public-spirit, patriotism, pride in a job well done, the Lue villager speaks of in terms of reciprocal, short-term self-interest. Their actions are no more selfish than ours. Far from it. But the moral rhetoric of a Lue villager is different from our own. In politics, economics, family life, and religion it focuses on something got for something given."

178 These five cases may be grouped as follows: two
592 cases of relatives of family heads separating from 'extended'
621 families, two cases of one spouse leaving the other, and one case of a family head deserting his wife and children.

Pattern of Establishment of New Families

593 Bangchan offspring customarily continued to live with
592 their parents as long as they were not married regardless of how old they might be. In the eyes of the parents, an offspring is always their child, immature and needing parental supervision, as long as he has not been able to acquire a spouse; and until then the parents-offspring mutual obligations, necessitating living together, must continue to exist. Thus, it was not uncommon to see several unmarried adults crowding in one family providing too large a labor force relative to a small parcel of land on which the family worked. In this context, marriage serves an important economic function of giving impetus to the start of new producing units in the village. There is no corresponding service in areas where the extended family system predominates such as in China and India.

583 Two distinct kinds of marriage were conceived of in Bangchan: the conventional marriage with the sanction of parents or guardians of both parties which was usually preceded by formal arrangement and accompanied by marriage rites sponsored by the bride's family; and the popular marriage by mutual understanding between the man and wife without

[p. i]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kan (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

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This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

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Marriage

As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Minburi to sell vegetables or take a load of paddy to the mill. To temple faire and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

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Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes now to a stranger.[4] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:82) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

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4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mo, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mo gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mo. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the thaa khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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125 it would deny any benefit that would arise out of continuous observation of each farm and farm operator through a series of years. With a view to retaining this benefit of continuity, we decided to adopt the first method -- that,is, we included in the sample the ten new families branching out from the original sample-families. Thus, in our subsequent study in 1952 the size of our sample became 106 farm operating families.

There were, however, some types of data which involved records in the past four or five years, such as harvested crop during 1948-52, accumulation of wealth, major receipts and expenses during the same period. In these cases we naturally used the continuing sample of 96 families.

243 162 592 Composition of Farm Operating Families

Table 31 shows that the size of the farm operating family decreased from 6.3 in 1948 to 5.7 in 1952. It also shows that, while the number of adults remained more or less constant, the decrease in the size of the family was due almost entirely to the decrease in the number of the young from 2.5 in 1948 to 2.0 in 1952.

243 162 592 132 178 [582] A possible explanation for this lies in the economic consequence of the war. Strict government control of the price of rice and of the internal movement of paddy during the war and also in the immediate postwar period has so adversely effected the economic condition of rice farmers that marriage has often been postponed. In cases where

[TEXT CONTINUED ON PAGE 182]

marriage did take place, the couple were usually obliged to stay with the parents of either the husband or the wife. It is reasonable to believe that the nascent period was prolonged during this period of hard times. Thus, the family size tended to be larger than it normally is. This is especially true for rice farming families where there always is some work for members able to work. It is not surprising, then, that the average size of farm operating families in Bangchan was 6.3 in 1948 while the average size of all families was 5.7 according to the 1949 census. A steady rise in the price of paddy after the war has improved the economic condition of rice farmers. The increased income, however, had to be spent first on replacement of equipment and housing facilities which had been long overdue. Finally, the bumper crop of 1948 with an ever-increasing price put an end to farm misery, and the following dry season saw a record number of newly ordained priests and merit making activities. From then on proportionately more marriages took place and there were fewer economic obstacles to keep newly wed couples from starting out independently. The combined effect of termination of prolonged nascent period and freer establishment of new families was that the size of the farm operating family was considerably reduced.

It may seem strange that more marriages should bring about a drop in the number of the young from 2.5 per family in 1948 to 2.0 in 1952. By the young is meant, however,

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Marriage

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[702] [793]

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4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

[832] [715]

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 50 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygynous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap. V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

435 Some information as to the cost in baht of the larger
796 ceremonies held in 1954, and their scale, was obtained from
[124] the school teacher's diary. Examples follow:

[742] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[714] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000. Guests gave 2300.
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[184] C: Moslem: 2 buffalo slaughtered. 400 guests.

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four "pairs" of specified foods, i.e. two bearers each of
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273 Increased consumption of alcoholic beverages during the
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3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[374] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

178 These five cases may be grouped as follows: two
592 cases of relatives of family heads separating from 'extended'
621 families, two cases of one spouse leaving the other, and one case of a family head deserting his wife and children.

Pattern of Establishment of New Families

593 Bangchan offspring customarily continued to live with
592 their parents as long as they were not married regardless of how old they might be. In the eyes of the parents, an offspring is always their child, immature and needing parental supervision, as long as he has not been able to acquire a spouse; and until then the parents-offspring mutual obligations, necessitating living together, must continue to exist. Thus, it was not uncommon to see several unmarried adults crowding in one family providing too large a labor force relative to a small parcel of land on which the family [581] worked. In this context, marriage serves an important economic function of giving impetus to the start of new producing units in the village. There is no corresponding service in areas where the extended family system predominates such as in China and India.

• 583 Two distinct kinds of marriage were conceived of in Bangchan: the conventional marriage with the sanction of parents or guardians of both parties which was usually preceded by formal arrangement and accompanied by marriage rites sponsored by the bride's family; and the popular marriage by mutual understanding between the man and wife without

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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587 ward. Another intermediate type of marriage was common among independent family heads, usually widows and widowers, in which case the man and woman simply came to live with each other. Marriage between widows and widowers who had been living in their respective families as dependent mem-
583 bers also took this simplified form. Finally there was also marriage by capture, one case of which was reported during 1949-53 when a daughter of a laboring family in BC4 was kidnapped by a group of men who were allegedly helping a friend of theirs take the woman as his wife. Although this dramatic kind of marriage by capture was often spoken of, actually it rarely happened in the village. Even in the single case just mentioned, there was doubt on the part of fellow villagers that the victim was really ignorant of the plan.

583 In our records of major expenses of 96 families of
585 farm operators[8] during the period from 1949 to 1953, three
435 families reported expenses for conventional marriages. These expenses were for 1700, 6200, 7500 and 7500 baht for four sons which were dowries, in gold and cash. They were handed over to the brides' parents on the wedding day. Another family reported an expense of 5,300 baht for the marriage

8. See Chapter 6 as to how sampling for these 96 families was done.

583 of their adopted daughter, of which some 300 baht went to
575 bedding materials and 5,000 baht to the wedding feast which
435 the bride's parents alone were supposed to give. It should be noted, however, that in this last case the bride's parents received as dowry from the bridegroom's parents 4,000 baht in cash and two baht[9] weight of gold worth about a thousand baht, and they also received from the guests an aggregate customary contribution of 2,360 baht. Thus, the bride's parents came out with a net gain of 1,080 baht plus the gold which was to be given to the bride.

593 While the conventional marriage was somewhat costly especially for the bridegroom's party, the popular marriage by elopement was much less expensive. Our records show that in addition to nominal ceremonial materials of white cloth, candles and incense, the bridegroom had to pay a fine of only a few hundred baht to his wife's parents when the couple came to receive formal forgiveness from them.

We do not have comparative figures for the occurrence of conventional marriage and elopement, but the latter appeared very frequently in our daily field notes as against very few cases of the former.

591 There are two types of establishment of new families
184 after marriage: (a) immediately after marriage, and (b) some years after staying with parents of either party.

It was observed that immediate establishment of new families after marriage was common among couples originating from farm laboring families and families of poor farm operators.

[804] 9. One baht weight is equivalent to fifteen grams.

[P. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

462 147 843 846

Marriage

883

As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Mīnburī to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

582

Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.[4] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:62) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

[702] [793] 584 583 581

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4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

[832] [775]

435 Some information as to the cost in baht of the larger
796 ceremonies held in 1954, and their scale, was obtained from
[124] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

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4:Phillips E-4,5 (1956-1957) 1966
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593 relationship (*disinterested* appreciation or admiration of the other individual; loving the child or parent in his own right, rather than in terms of his effect on the self) [29] it has a strong undercurrent of unreliability. Since the maintenance of the relationship is always dependent on what the participants can gain from it, *i.e.*, from the other person, and since the participants are essentially free to break the relationship once they feel that such rewards are not forthcoming, it is inevitable that there will be many instances when just that will happen. The crucial point is that there is nothing over and above the instrumental nature of the relationship to keep the individuals tied to one another. The only possible exception, an important one, is that which goes with the realization that by treating one's child or parent nicely, one is behaving in a moral way and is thus accumulating Buddhist merit; but even this purpose is avowedly self-referring in nature. In this regard, it might be noted that other than the [585] marriage ceremony, which is ignored by half of Bang Chan newlyweds, there are no institutionalized attempts to sanctify the solidarity of the family, or for that matter the solidarity of almost any social group. That is, unlike China and the West, there is nothing in traditional Thai folk belief and ritual, or in the literature of the indigenous "Great Tradition," that alludes to the sacredness of the family as a social unit. All moral aphorisms concerning family relationships are phrased in terms of the dyadic relations between individuals, not in terms of affiliation with the family unit as such.

593 The looseness of the ties that result from the instrumental nature of the *125 parent-child relationship are perhaps best revealed in the villagers' responses to the Sentence Completion stimuli, *"We want to give our child to him because . . .* (This is the English translation of the best Thai translation of the original English item, *"He wanted to give his child away because . . ."*). The reasons behind the use of this somewhat uniquely worded item are important. (The reader might imagine American responses to such a query.) The item was selected for inclusion in the SCT battery only after it became apparent that there might be a pattern to what

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[593] services of a younger, poorer, or weaker. This includes parent and child, sibling and sibling, or husband and wife, and all kinship relations are reducible to these terms."

*[125] [29] The responses to the Sentence Completion stimuli, *"When I think of my mother, I think of . . ."* and *"When I think of my father, I think of . . ."* are particularly revealing on this point. The vast majority of the responses on both these stimuli are in terms of the parents' effect on the self rather than in terms of what the parents are in their own right. Careful checking of the cues indicates that there is nothing in their grammatical or semantic structure that would predispose informants to produce such completions, *i.e.*, it is just as easy and feasible for informants to say ". . . how beautiful she is" or ". . . how clever she is" as it is for them to say ". . . the good things she has done for me." See chapter v for the actual responses.

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511 needs at least two work suits in each rice season, one during the field preparation and another during the harvesting season.

372
226
511 Kerosine is used every day for lighting purposes. We do not include in this category kerosine which is used in the farm work; but that used with the pressure lamp in fishing by spearing during the night is included in the ordinary household expenses, for we do not consider fishing as a farm enterprise but as a routine activity participated in by all Bangchan residents, farmers and non-farmers alike.

431
476
796
511
[792]
[764]
[525] Contributions to neighbors is a necessary item of expense in the village. These are cash gifts made by invited guests to the sponsor of such rituals as ordination, cremation, marriage, topnotch-cutting, and teacher worship. These rituals usually take place during the dry season following harvesting when cash is abundant in the village and are always followed by feasts, not uncommonly in a series of two or three days. Since all these rituals necessitate the participation of the priests, they have to be arranged in consultation with the temple to avoid conflicting schedules. Although few rituals have been noted to be in conflict with one another, usually they are spread throughout the dry season and most people are able to attend rituals to which they are invited. In cases where they cannot attend in person, they are obliged by conventional requirement to send in their cash contributions. The standard cash contribution is 5 - 10 baht. Usually, a

4:Phillips E-4,5 (1956-1957) 1966
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the village to find dependent relatives—siblings, cousins, nephews, nieces— 596
who, unable to make a go of it elsewhere, are accepted into a relative's family, sometimes to the extent of eventually taking over the headship of the family. Sometimes, on the initiative and invitation of an elderly or lonely relative, an entire nuclear family will be asked to take over or share a household. Children of poor or "inconvenienced" families (where a new 596
child is born before the first is weaned, where there are too many children 597
for the mother to handle comfortably, where a youngster is simply being "troublesome") are adopted or "borrowed" by other villagers for varying periods of time. This is done preferably by relatives, sometimes by neighbors, and often, in the case of boys, by the monastery, where the children become hand-servants to the monks and are supposed to absorb, by a kind of osmotic process, righteous ways of behaving. (Of my three male life history informants, two were given over to relatives at the ages of two, the third at the age of eight; one spent his childhood with four different families, another with five families; one describes his adolescence as "wandering from place to place." The psychological implications of such displacement should not be underestimated.) On occasion, two independent 596
nuclear families—almost always connected by some kinship tie—will join [594]
together for convenience to share cooking facilities, in which case they effectively become a single extended family. And in some cases, although rare, one will encounter adult children living in independent households but handing over their income to a parent, living in still another home, who disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a 596
husband to be away for four or five months at a time earning money in 591
Bangkok, or during the dry season on a vegetable farm, returning home to [464]
visit his wife and children whenever opportunity permits, with or without funds. The wife may still maintain their household, but often returns to 596
live with her own parents.[1] In a similar vein, although obviously more 586
extreme, it is not unusual to find families in Bang Chan which have simply 182
"disintegrated," as the villagers say. Much depends here on the circumstances of family members. Bang Chaners usually reserve the term "disintegrated" for families that no longer have the economic wherewithal or justification for staying together as functioning units. In these instances, family members simply go their separate ways, if possible back to their families of orientation or to other relatives, husbands perhaps into the monkhood, and the children to whomever will take them. Most frequently, [578]
"disintegration" is characteristic of very poor families, and in the minds of

[1] This pattern may be related to the old *corvée* labor pattern when able-bodied village men were away from their families for extended periods of time. [466] [651] [174]

4:Phillips E-4,5 (1956-1957) 1966
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Bang Chan

the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

Precise figures on the divorce or separation rate in Bang Chan are unknown, primarily because many marriages as well as divorces are never registered on the government rolls; also, many separations seem to follow an on-again-off-again pattern; the sanctioned occurrence of polygyny (only eight known cases out of the 296 families) and even polyandry (two known cases) complicates the problem even further. However, the fact that *four months* after I had designated a sample of thirty families from which to select informants, six of those families, or 20 percent of the sample population, had dissolved would strongly suggest that Bang Chan families are not particularly stable.

The causes of family fission in these specific cases are unknown, but what is impressive is the apparent ease with which it takes place and the equanimity with which people seem to accept it. Other informants, reporting their own experiences or observations, discuss family breakups as if they were among the more normal events of the workaday world and completely understandable. They seem to be of no greater emotional import—in the sense of eliciting recognizable feelings of distress—than losing a good price on the sale of a piece of land or on the sale of some rice. In fact, the latter kinds of situations are considerably more likely to evoke expressions of hurt or exasperation. One repeatedly encounters in Bang Chan instances on the following order: a family breaks up simply because the husband has an inclination to work for a particular person whom he likes; a wife ("she is a touchy woman") runs away every time she has a minor disagreement with her husband (minor even by village standards, for example, "Should I buy my lottery tickets from Mr. X or Mr. Y?"; "Should we invite seven monks or ten monks to officiate at this ceremony?"). The point here is that these explanations—and the low tolerance for discord, the importance to a person of a boss or job over a spouse, the desire to be footloose, which they imply—are to the villagers completely reasonable justifications for the dissolution of family units.

Many of the family relationships referred to above as "centripetal" in nature are clearly related to or derived from patterns of social organization characteristic of an earlier Bang Chan. Although most evidence indicates that even in the years immediately following the settlement of the village in

27.a. Excuse me, but at present do you have a (wife/husband) who lives and eats with you, or not? [125] [592]

1. Yes	455
2. Yes, qualified _____	6
3. No	72

b. IF NO: Excuse me, but is this because you are widowed, separated, divorced, or is there some other reason? [589] [586]

4. Widowed	45
5. Separated	9
6. Divorced	1
7. Other, specify	10
— No Answer	7

28.a. Your own children, all of them that have ever been born, how many are there? [592] [162]

8. None	24
9. One	32
X. 2 to 3	70
Y. 4 to 5	74
0. 6 or more	133

b. How many of your children are still living?

0. None	29
1. One	50
2. 2 to 3	83
3. 4 to 5	82
4. 6 or more	97
— No Answer	2

c. How many of your children have died? [165]

0. None	198
1. One	15
2. 2 to 3	56
3. 4 to 5	17
4. 6 or more	9
— No Answer	9

29.a. Have you ever been ordained as a priest, or not? [193] [192]

1. Yes	187
2. No	31
— No Answer	2

[Male Buddhist (220)]

b. IF NO: In the future, do you want to be ordained as a priest, or not?

3. Yes	20
4. No	11

c. ASK ALL: How many sons do you have twenty years old or over? [592] [162]

5. None	176
6. One	56
7. Two	39
8. Three or more	39
— Unascertainable	63

178 592 621 [593] because four members of her family had just left her to establish families of their own. The son-in-law accepted this invitation and had since taken over the management of his mother-in-law's large 60-rai rice farm.

Case 10: In 1949, an old woman was living with two boys, one distantly related to her, the other without any [427] [792] [431] blood relationship. She was operating a small rented rice farm. Some time in the past she had made a generous offer of her own house to the temple which was not acted upon by the receiving party. In 1953, the headpriest contemplated an expansion of one of the temple buildings and approached the woman for the gift. The woman complied with the request, had her house dismantled, saving only the kitchen, and sent all the building materials to the temple. Meanwhile, the two boys had left her; one went to live with his mother in [593] [437] the village, the other went to Bangkok. Later, the woman joined the household of her younger brother, who lived next door, with the understanding that the brother had free use of her buffalo in exchange for her room and board.

Case 11: In 1949, a woman was living in KYB with her aged mother and her baby born of her separated husband [586] [587] who was a policeman. Two years later, the woman married a widower, who lived in the same hamlet, and brought along her mother and son to live with her new husband.

With the exception of Case 6, a lone aged woman who was survived by none after her death, these cases may be grouped according to the nature of acceptance of the families

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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178 692 621 that these two women were happier living by themselves than with their junior relatives.

[586] Case 3: A married couple were living in 1949 with the wife's parents. They were later separated, the husband leaving his former wife with her parents. In the 1953 census the man appeared in KY7 list as head of a one-person household.

Case 4: In 1949, a woman appeared in the census as wife of a family head in KY6. In that same year she left him and lived as wife with another man in KY8. A few years after, she left this second man again. She then appeared in the 1953 census as family head of a family of six including her three children and her aged parents.

[464] [586] Case 5: In 1949, a man of 47 was head of a laboring family of nine in KY, including his wife, three adult offspring and four young children. Later in that year he left the family and hired himself out as a regular laborer to a farm operator with whom he worked for two years. He then left the village for a year after which he returned to work as regular hired laborer for another operator for almost a year and a half. In the 1953 census he appeared as head of a one-person household in KY6. Our records show that he was a diligent worker, excellent fisherman, averse to sweet cookies, but very fond of liquor. When asked why he did not go back to his family in KY8, he replied "The larger the family you have, the more trouble you get. I have more fun living alone."

178 the family members we were informed that A's daughter and
592 her four children had moved out of the village separately
621 to different places which could not be traced, while B's brother and sister went to live with a relative in Lam-loogga, also a rice growing village some fifteen miles to the north. The two chief bread winners of the family, A's husband and B's father, managed successfully to get themselves ordained and are now residing in the village temple. Early in 1953 B went to live with her relatives in Lam-loogga, leaving the sick old grandmother alone in Bangchan. [792] [828] The arrangement was that the old woman was to quit the old shack and take refuge in the secular part of the temple where it would be possible for her ex-husband, now a priest, to have two meals delivered to her every day. Just before the 1953 census was taken, however, she was taken to Lam-loogga. The last member of the disintegrating family was thus left out of the 1953 census.

178 Case 2: After the death of his first wife, an old
592 man in BC4 gave his two sons equal shares of his property.
587 He then acquired a second wife and built a separate quarter
736 apart from the main building, thus creating a new family of
621 two. In 1952 he was fatally hit by a truck on the Minburi road. After a few months of unhappy stay with one of her step sons, the widow acquired a new husband and moved out to a neighboring village.

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621
[166]

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Case 10: In 1949, an old woman was living with two boys, one distantly related to her, the other without any [427] [792] [431] blood relationship. She was operating a small rented rice farm. Some time in the past she had made a generous offer of her own house to the temple which was not acted upon by the receiving party. In 1953, the headpriest contemplated an expansion of one of the temple buildings and approached the woman for the gift. The woman complied with the request, had her house dismantled, saving only the kitchen, and sent all the building materials to the temple. Meanwhile, the two boys had left her; one went to live with his mother in [593] [431] the village, the other went to Bangkok. Later, the woman joined the household of her younger brother, who lived next door, with the understanding that the brother had free use of her buffalo in exchange for her room and board.

Case 11: In 1949, a woman was living in KY8 with her aged mother and her baby born of her separated husband [586] [587] who was a policeman. Two years later, the woman married a widower, who lived in the same hamlet, and brought along her mother and son to live with her new husband.

With the exception of Case 6, a lone aged woman who was survived by none after her death, these cases may be grouped according to the nature of acceptance of the families

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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178 different types of separation which will be described individually as follows:
532
621

Case 1: This involved the two sons who inherited landed property from his father described in Case 2 for the disintegration of the family, and in fact this was the first Bangchan family we met in 1948. At that time the elder brother, then age 37, was a widower and was courting a woman in another village along the Minburi Road. His work in road construction and maintenance (the Minburi Road) gave him a good excuse for continued absence from home, leaving his two daughters and three sons under the care of his younger brother who was the family head. Just before the 1949 census was made, he married the woman and once again became settled down. Meanwhile the younger brother got a job in road construction. With regular monthly cash income, he took to drinking and established himself as one among the few notorious dipsomaniacs in the village. This was intolerable to the elder brother who finally moved his nuclear family out to their new home just across the road.

• [587] [464]

Case 2: In 1949, an unmarried woman was living in an 'extended' family headed by a son of her elder sister. The combined landed property of the family was 67 rai of rice land, 40 rai of which was a share of the woman and her aged mother who was also living in the family. Some time before the 1953 census was made the woman and her mother moved out to form a separate household. The reason for the separation was not quite clear. It was assumed, however,

583 the sanction of parents or guardians of either party. The latter case took the form of elopement -- the man taking the woman away from her family usually during the night and returning for pardon (normally granted) a few days after-
587 ward. Another intermediate type of marriage was common among independent family heads, usually widows and widowers, in which case the man and woman simply came to live with each other. Marriage between widows and widowers who had been living in their respective families as dependent mem-
583 bers also took this simplified form. Finally there was also marriage by capture, one case of which was reported during 1949-53 when a daughter of a laboring family in BC4 was kidnapped by a group of men who were allegedly helping a friend of theirs take the woman as his wife. Although this dramatic kind of marriage by capture was often spoken of, actually it rarely happened in the village. Even in the single case just mentioned, there was doubt on the part of fellow villagers that the victim was really ignorant of the plan.

583 In our records of major expenses of 96 families of
585 farm operators[8] during the period from 1949 to 1953, three
435 families reported expenses for conventional marriages. These expenses were for 1700, 6200, 7500 and 7500 baht for four sons which were dowries, in gold and cash. They were handed over to the brides' parents on the wedding day. Another family reported an expense of 5,300 baht for the marriage

8. See Chapter 6 as to how sampling for these 96 families was done.

591 proportion for immediate establishment was 20 out of 54 or
184 37 per cent for those married before 1932, and 10 out of
178 37 or only 27 per cent for those married after 1932. A declining trend was thus observed of the ability to establish a new family immediately after marriage.

591 Table 7 also shows that the 'nascent' period of 50
592 families (that had ones) ranged from one to twenty years,
184 averaging four years, the mode being one year, and the median
178 two years. Among the fifteen non-separating families, eight headships were taken over by offspring while one or both of the parents were still alive (we shall call this 'type A'), four headships were taken over by offspring through the death of parents (we shall call this 'type B'), and three headships were taken over by spouses ('type C'). The last mentioned changing over of family headship (type C) occurred in three ways: through marriage of a man to a female head of a family whereby the husband automatically became the family head, death of the husband, and desertion of the husband.

591 The changing over of the family headship of the type
592 B in Table 7 was a natural process of inheritance. In type
184 A, it was found that senility accounted for seven out of
428 eight cases of the changing over, the one exception being
587 the case of a widower who wanted to have a second wife and who thought that the family assets originally belonged to his first wife's biological family and therefore an outside woman should not lay a hand on the 300,000 baht property.

581 It was not felt necessary to marry. Because of the strong
589 economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married.
[593] One group of grown siblings of both sexes stated they were "too happy together to marry."

836 Pre-marital chastity was more or less observed. If a girl became pregnant before marriage, her parents brought pressure,
848 usually successful, on the boy to marry her. The occasional illegitimate child was raised without stigma in the girl's family, though problems arose during pregnancy and delivery (cf. "cone of wood" below). The mother later found a husband. One father was angered because he felt his daughter's pregnancy wrecked her chances for a marriage of prestige. He was conspicuous for his social aspirations towards city ways.

864 Information on human sexual matters was gathered by the
831 young sometimes by accidental observation of parents and others, through hints from hearing cursing, and by conversations with grandparents, older siblings, and friends of the same sex. Men joked on sex matters at the all-male rice-uprooting parties. Being antithetic to the ascetic prescriptions of Buddhism, sex talk was highly charged. Sex was never discussed in mixed company.

Residence

592 The nuclear family of husband, wife, and unmarried children was the primary social and productive unit, but other resident kinship units larger and smaller also occurred. After marriage,
[591] the couple usually lived for a time in the house of the parents of one spouse or the other; then, as soon as they could afford it, set up housekeeping in their own house. Of a sample of 96 families in Bang Chan, 30 set up independent households at once after marriage, 16 after one year, and the rest, a few per year, on throughout 10 years; 15 of the families never had a house of their own but lived with other relatives (Janlekha:37). Of 298 families, 59.4 per cent lived independently as a nuclear family, while 34.9 per cent lived with other relatives in the house. (The remaining were single persons living alone, or priests at the temple in the "ecclesiastical family.") The average size of the households (not necessarily the nuclear families) was 5.7 persons, with a range of 1 to 14, the median
361 being 6 (ibid. 28-29). The house of a new couple was usually built adjacent to parents or relatives, and certainly within calling distance or sight of some other household. Social
621 patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

37.a. Excuse me, but at present do you have a (wife/husband) who lives and eats with you, or not? [125] [592]

1. Yes	295
2. Yes, qualified _____	6
3. No	72

b. IF NO: Excuse me, but is this because you are widowed, separated, divorced, or is there some other reason? [589] [586]

4. Widowed	45
5. Separated	9
6. Divorced	1
7. Other, specify	10
— No Answer	7

38.a. Your own children, all of them that have ever been born, how many are there? [592] [162]

8. None	24
9. One	32
X. 2 to 3	70
Y. 4 to 5	74
0. 6 or more	133

b. How many of your children are still living?

0. None	29
1. One	40
2. 2 to 3	83
3. 4 to 5	82
4. 6 or more	97
— No Answer	2

c. How many of your children have died? [165]

0. None	198
1. One	44
2. 2 to 3	56
3. 4 to 5	17
4. 6 or more	9
— No Answer	9

39.a. Have you ever been ordained as a priest, or not? [793]

1. Yes	187
2. No	11
— No Answer	2

[792]

[Male Buddhist (190)]

b. IF NO: In the future, do you want to be ordained as a priest, or not?

3. Yes	80
4. No	11

c. ASK ALL: How many sons do you have twenty years old or over? [592] [162]

5. None	176
6. One	56
7. Two	29
8. Three or more	29
— Unascertainable	53

4:Phillips E-4,5 (1956-1957) 1966
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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

592 do not share the same arrangements for preparing and consuming food.

621 The 298 families living in Bangchan on May 23, 1953
59 may be grouped into five categories: (1) "One-person house-
[792] hold" consisting of a lone man or woman /for ease in typological manipulation we arbitrarily consider this as a family, although strictly speaking a one-person household is not a family/; (2) "Nuclear family" consisting of a man and wife and their unmarried children; (3) "Limited extended family" consisting of a man and wife, either or both their sets of parents, and their unmarried children; (4) "Extended family" consisting of those included in "limited extended family" plus married children and children of the latter, plus any collateral relatives of any generation; and (5) "Ecclesiastical family" consisting of Buddhist priests, novices, and temple boys, all males, living together in the temple under the Headpriest's supervision. The distribution of these different types of families so defined is shown in Table 3.

592 Further explanation is perhaps necessary with respect
596 to the "extended families" in Table 3. It must be pointed
621 out that the term 'extended' is here used for the sole purpose of defining types of families which include dependent married couples as differentiated from the ordinary independent nuclear family. It will be seen in the next section, however, that there is no permanency in this inclusion of married couples whose intention is always to establish an independent family of their own. The so-called 'extended' family in

[TEXT CONTINUED ON PAGE 63]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 3

DISTRIBUTION OF TYPES OF FAMILY
Bangchan, Thailand, 1953

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621
[792]

Family Types	Frequency	Per Cent
One-person household	16	5.4
Nuclear family	177	59.4
Limited extended family	24	8.1
Extended family	80	26.8
Ecclesiastical family	1	0.3
Total	298	100.0

591 A factor that should also be taken into account was that he
592 had a regular income of 450 baht a month from his job in the
434 Highways Department, which by the village standard was more than enough for him to live comfortably with his second wife.

591 Historical records of the 96 farm operating families do not contain information as to how the 50 families passing through nascent period were divided into those staying with wives' families and those staying with husbands' families. The 1953 census, however, reveals that of 48 married couples then living in 42 families of parents of either side (four such families included two couples and one family three couples), 23 were with husbands' parents and 25 with wives' parents. The proportion may thus be estimated at about one to one.

59 During the nascent period, the couple ordinarily
434 received from the parents they were staying with a kind of
[431] annual bonus locally called lampai which varied according to the economic status as well as generosity of the parents. Lampai took several different forms. Thus, a couple might receive all the paddy harvested from a specified area of the field of three, five, or ten rai; they might be given a fixed quantity of the crop -- say 50 or 100 tang; they might receive cash -- say 500 baht or any other varying amount. In some cases, the couple were expected to earn their lampai outside the family farm after obligation to family work had been fulfilled. This took the form of piece-working or trivial trade.

59 If no lampai was given, the parents might give some gold in
[431]

59 [431] the form of a necklace as a token of appreciation. During this time, no matter how old they were, the couple should ask permission before going out or at least let the parents know where and why they wanted to go, and they were expected to help without having to be asked to in the family's field and in general housework.

Opinions of the villagers themselves on the advantages and disadvantages of the nascent period varied. On the one hand, staying with parents was viewed as a prolongation of a morally compulsory service to the old family which was economically disadvantageous to the newly wed couple. This was implicit in the following statement made by one villager concerning the length of the nascent period.

> There are many factors which determine the length of the nascent period:
>
> 1. Availability of family labor. If younger siblings are old enough to help the parents, the couple will spend only a short time with the old family.
>
> 2. Greed on the part of the couple. They want to have a share of the product of their labor. If they stay with parents, they are not supposed to get any unless the parents are willing to give it to them. They think, 'If we have a child, what would we have for him?' So they try to move out as soon as possible.
>
> 3. Lack of self-confidence on the part of the couple. This leads to a prolonged stay. Even when younger siblings are old enough to help the parents, the couple still may feel more secure to stay with the parents, for they do not want to take care of themselves.
>
> 4. Pride. Nang A married Nai B and continued to live with her parents. One day A was criticized for being sharp (she was accused of keeping part of the crop for her own). So A and B got together and planned to move outwith the intention of building

59 themselves up ; financially to compete with A's parents.

The same informant said further, however, that usually it was up to the couple themselves to decide when to leave the old family. Parents, in his words, "rarely drive the offspring out. They also rarely resist the couple's decision to leave. The most they can do in case labor is badly needed is to ask the couple to stay a year or two longer."

591 494 On the other hand, a second informant, a headman as was the first, indicated that the five-year period he and his wife spent with his wife's parents immediately after their marriage in 1922 was their most prosperous time. As [431] lampai the couple were given the harvest from a 5-rai parcel each year. When he married, he already had five baht weight [426] of gold. With surplus income, he was engaged in lending for interest. Accumulation during their five years' stay with the parents included timber enough to construct the new home when they moved out, one hundred tang of paddy, and forty baht weight of gold.

As a matter of fact, there are several factors that should be taken into consideration in evaluating the advantages and disadvantages of a newly wed couple undergoing the nascent period. These are the lampai arrangement, willingness of the parents to let the couple earn extra income from sources outside the family, current wage rate and job opportunity, and, most important, the current profitability of the farming business which is assumed to be the alternative

591 if the couple do not choose to stay with the parents. In
434 any event, the fact that the couple are more or less free to leave the old family provides an opportunity for the couple to escape all the disadvantages that might be imposed upon them, leaving all the advantages to be acquired.[10] As for those who apparently discounted the merit of the nascent period, the author suspects that they neglected to consider the expected net income from farming and that they were unrealistic in thinking only of wage rate and in underestimating the more crucial problem of job opportunity.

• 59 In addition to their own wealth accumulated during
431 the nascent period, gifts in the form of farm equipment,
434 paddy and land were usually given to the couple by their parents at the time they left them to establish an independent family. Of 80 separating families (Table 7), however, 17 reported that they received nothing whatsoever from their parents. Among the remaining 63 families that received something, there was a wide variation in the kind and the amount of the gift, ranging from a single buffalo with an incomplete set of farm equipment to 228 rai of rice land with a complete set of farm equipment as well as a stock of paddy to last the new family until the coming harvest. Parental gifts to newly established families are shown in Table 8.

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10. At least two cases were known where the couples, not ready to start a family of their own, left the old families and moved into families of the other spouses.

[TEXT CONTINUED ON PAGE 91]

593 There was one item of parental gifts which is not
431 shown in Table 8 -- the household equipment. Two of the
415 63 families reported that they received a complete set of kitchen utensils, and two included jars in their gift lists. After checking the result of this survey with some informants, however, many admitted that they did not include these kitchen utensils in the list because they were obvious items. Nevertheless, there was no basis on which it could be inferred that every newly established family received a set of the kitchen utensils. It was therefore decided to omit the household equipment from the table.

593 Another form of parental gifts was the practice,
427 if the parents had enough land to spare, of letting the
423 couple work on some ten or twenty rai free of charge for the first two years. Rent might be charged after that, but there were also cases in which the couples continue to work on the parcel without paying any rent to their parents and finally took it for granted that the parcels belonged to them.

Economic Significance of the Family

• 59 Much space has been devoted to discussion of the family because of its significant role as the only organized producing unit in the village economy. Another important function of the family was mentioned in previous sections -- through privileges extended to the majority of newly wed couples during the nascent period, the old family facilitated

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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59 the establishment of a new family, virtually a new farm. It must be noted in this connection, however, that not all new families started out with financial resources. There are circumstances like incongenial relationship between the dependent couple and their parents or other members of the family, tight financial situation of the old family, or extreme optimism on the part of the young couple themselves that brought about premature fission.

243 433 59 [423] The role of the family becomes more outstanding when the following features of rice farming are considered:

1. In Bangchan, as elsewhere in the rice producing areas of Thailand, a farm means rice land available for the family to till because farm income depends more on rice acreage than anything else.

2. An operator is generally not in a position to reallocate his resources in order to obtain higher income. Usually he does not, for example, put in more labor to get a better crop, for crop under existing technology would not increase with more labor than normally used. He does not put in fertilizer, for it is not certain, in his thinking, that profit is assured in so doing. He does try to improve his rice strains for greater yield, however.

[464] 3. The only way to increase income from rice with no change in technology (other than improving strains), then, is to increase acreage utilizing the same amount of family labor. This is the case, as we shall see in a later chapter on farm organization and management, because of the existing under-employment of family labor.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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4. The operator may increase his acreage by renting in more rice land. It is highly improbable that the extra parcel would be one adjacent to the old parcels. This involves extra cost of irrigation and drainage and a buffalo shed. Yet the most important problem is how to lay a hand on the extra parcel, since the practice of most landowners is to rent their land out to their former tenants. When all cultivated land in the village has been tilled, an extra parcel to one naturally means a reduction of the same to another.

5. With limited land which has no prospect of intensification as far as rice production is concerned, the size of the family becomes the limiting factor of the level of living. This is rendered more acute by the customary practice of offspring continuing to live with their parents regardless of their age. When they get married, either spouse's parents are likely to suffer another mouth to feed, and in many cases the babies that will eventually arrive.

It is seen, then, that discussion of rice farming which is the core of the village economy cannot be separated from the context of the family.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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Family workers are members of farm operating families other than the farm operators themselves who regularly participate in the farm work of the families. These do not include children of school age who occasionally help in the farm work especially during the busiest period.

Hired laborers are farm laborers who are hired for all or part of the work season for more or less fixed wages in kind or in cash. These hired laborers have in addition to their yearly wage a privilege to board and lodge freely at their employers' home, and thus become part of their employers' household. The contract, usually verbal, is on a one year basis.

Piece-workers are farm laborers who receive wages on a piece-work basis for such short-term tasks as uprooting the seedlings, transplanting, and harvesting. Payment for piece-work is made at the end of the day at going rates. It has been observed that most of the extra work in Bangchan is done by piece-workers, and that very few farms engage hired laborers. Piece-workers may be called independent workers, for they have no obligation other than finishing the day's task agreed upon. They may work whenever they please and may stop working altogether if they have enough money. The disadvantage of piece-workers is that they do not have, as hired laborers do, the guarantee of a job. This is quite crucial especially if under-employment of farm labor exists.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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There are reasons to believe that newly established indigenous families had tended to take up farming. First, rice growing is probably the only profession that these newly wed couples had been properly trained for.[5] Second, during their nascent period their financial preparation had been oriented toward starting a rice farm. This is best illustrated by a remark of a Bangchan operator whose daughter and her husband were about to start an independent family:

> A (informant's son-in-law) is now (1954) 24 years old. I have known him since 1948 when he was a transient family member of 5. A married my daughter C in 1952 and has since been living with me. He is a very diligent man who works even in the dry season -- digging earth and that sort of thing (for his own lampai).
>
> I gave the couple 200 tang of paddy for their lampai for last year's work. I am going to give them the product from 10 rai for this year's work.
>
> Already the couple have accumulated from their lampai the following: two baht weight of gold, lumber enough to construct a farm house, and 100 tang of paddy. I told them not to keep their money in cash. When they receive a certain amount of money, I instruct them to buy durable goods like lumber or buffaloes. But if they want to lend out money, it's all right with me. Any way, they are not to keep cash. By the way, they have loaned out the 100 tang of paddy, so they will have more paddy when that amount is returned with interest.
>
> The couple will leave me next year. They have most of the things they need for starting a family now. In fact they wanted to start out this year, but I asked them to stay on another year.
>
> When they leave me next year, I will give them the customary parental gifts -- one buffalo, one plow, one harrow, one clothing container, and paddy for seed and for consumption.

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5. See the section on training for farm work.

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581 It was not felt necessary to marry. Because of the strong
589 economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married.
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621 patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

4:Phillips E-4,5 (1956-1957) 1966
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been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad, national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.[4] As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

[4] It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

4:Phillips E-4,5 (1956-1957) 1966
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121 remotely extended families, or with what L. M. Hanks [1959c] calls the 594 multi-local extended family, about which there is more below.)

591 The variations of the nuclear family, obviously excepting the monkhood, 594 arise primarily out of the large proportion of recently married couples who find it more expedient to continue living with one set of parents while accumulating funds for setting up their own independent households. In the case of one-person families, the variation arises when individuals are unable to live with their kin, are deserted by them, or have none. All the one-person families tend to be poor and are comprised largely of elderly people. In arrangements of the former type, there is a slight (five to three) tendency to matrilocality over patrilocality, and despite the intention of all concerned that the arrangements remain impermanent, there is considerable variability as to how long they are maintained. Analyzing a sample of 96 Bang Chan families, Janlekha found that although 30 percent came into being as nuclear families immediately after marriage, the balance underwent a period of residence with parents ranging from one to twenty years, the average being four years, with 16 percent never moving from the parents' home at all. Most cases of what Janlekha calls "limited extended families" result from a stem family inheritance pattern, although some entail elderly parents breaking up their households and moving in with the family of one of their mature children.

In addition to these basic variations, more accurately labeled "alternatives," there are several other variations of the nuclear family that occur with sufficient frequency to be noticed and at the same time are considered not at all unusual by the villagers themselves. Their significance for us is that they reveal what appears to be an almost nonchalant willingness or acquiescence on the part of the villagers to make modifications and adjustments in their living arrangements whenever necessary. Underlying this seems to be a fundamental assumption that the question of who lives with whom simply is not one of overriding importance: as long as individuals can live together without discord, act in terms of the household's established patterns of superordination and subordination, contribute labor or money to the family larder commensurate with their ages, and not inconvenience each other, they will be welcomed into the household; if unable or unwilling to fulfill such elementary obligations, they may take their leave, even if they are in fact full-fledged members of the nuclear family.

This rather flexible, or what the late John Embree would have called (1950) "loosely structured," approach to family organization is expressed in both centripetal and centrifugal ways.

596 Consonant with the fact that in all but the poorest Bang Chan families there is almost always enough rice to feed another mouth, it is common in

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

the village to find dependent relatives—siblings, cousins, nephews, nieces— 596
who, unable to make a go of it elsewhere, are accepted into a relative's family, sometimes to the extent of eventually taking over the headship of the family. Sometimes, on the initiative and invitation of an elderly or lonely relative, an entire nuclear family will be asked to take over or share a household. Children of poor or "inconvenienced" families (where a new 596
child is born before the first is weaned, where there are too many children 597
for the mother to handle comfortably, where a youngster is simply being "troublesome") are adopted or "borrowed" by other villagers for varying periods of time. This is done preferably by relatives, sometimes by neighbors, and often, in the case of boys, by the monastery, where the children become hand-servants to the monks and are supposed to absorb, by a kind of osmotic process, righteous ways of behaving. (Of my three male life history informants, two were given over to relatives at the ages of two, the third at the age of eight; one spent his childhood with four different families, another with five families; one describes his adolescence as "wandering from place to place." The psychological implications of such displacement should not be underestimated.) On occasion, two independent 596
nuclear families—almost always connected by some kinship tie—will join [594]
together for convenience to share cooking facilities, in which case they effectively become a single extended family. And in some cases, although rare, one will encounter adult children living in independent households but handing over their income to a parent, living in still another home, who disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a 596
husband to be away for four or five months at a time earning money in 591 e
Bangkok, or during the dry season on a vegetable farm, returning home to [464]
visit his wife and children whenever opportunity permits, with or without funds. The wife may still maintain their household, but often returns to 596
live with her own parents.[7] In a similar vein, although obviously more 586
extreme, it is not unusual to find families in Bang Chan which have simply 182
"disintegrated," as the villagers say. Much depends here on the circumstances of family members. Bang Chaners usually reserve the term "disintegrated" for families that no longer have the economic wherewithal or justification for staying together as functioning units. In these instances, family members simply go their separate ways, if possible back to their families of orientation or to other relatives, husbands perhaps into the monkhood, and the children to whomever will take them. Most frequently, [578]
"disintegration" is characteristic of very poor families, and in the minds of

[7] This pattern may be related to the old *corvée* labor pattern when able-bodied [466]
village men were away from their families for extended periods of time. [651]
[174]

178 appearance in the village that the case has been closed.
592 One reason he chose to take up residence in Bangchan after
621 business failure in Bangkok was that his wife owned through
166 inheritance a 17-rai parcel of rice land in the village. Another equally important reason was the relatively low cost of living in the village as compared to the city, which could not be overlooked especially when he had a large family of ten.

162 Of the 21 families evolving or separating from
178 existing families in Bangchan during the period from 1949
592 to 1953, sixteen were young married couples seeking inde-
591 pendent families of their own. Eight of these were married
621 before 1949, and the rest after that year. These sixteen young couples altogether contributed, in the 1953 census, 21 children of age-group 0-4 years or about ten percent of all children of that age-group in the whole village.

This process of separation of young married couples from the old families is normal, in fact a characteristic feature, in areas where the nuclear family system predominates. Although some newly wed couples were able to establish independent families immediately, the pattern was that they remained for a year or more with family of either side, during which time they accumulated capital necessary for future establishment. A separate section will be devoted to this important feature of the village economy.

178 In contrast to the above normal separation from old
592 families, the remaining five of the 21 families underwent
621

583 of their adopted daughter, of which some 300 baht went to
585 bedding materials and 5,000 baht to the wedding feast which
435 the bride's parents alone were supposed to give. It should be noted, however, that in this last case the bride's parents received as dowry from the bridegroom's parents 4,000 baht in cash and two baht[9] weight of gold worth about a thousand baht, and they also received from the guests an aggregate customary contribution of 2,360 baht. Thus, the bride's parents came out with a net gain of 1,080 baht plus the gold which was to be given to the bride.

593 While the conventional marriage was somewhat costly especially for the bridegroom's party, the popular marriage by elopement was much less expensive. Our records show that in addition to nominal ceremonial materials of white cloth, candles and incense, the bridegroom had to pay a fine of only a few hundred baht to his wife's parents when the couple came to receive formal forgiveness from them.

We do not have comparative figures for the occurrence of conventional marriage and elopement, but the latter appeared very frequently in our daily field notes as against very few cases of the former.

591 There are two types of establishment of new families
184 after marriage: (a) immediately after marriage, and (b) some years after staying with parents of either party.

It was observed that immediate establishment of new families after marriage was common among couples originating from farm laboring families and families of poor farm operators.

[804] 9. One baht weight is equivalent to fifteen grams.

591 184 A probable explanation was that the poor had nothing to gain from staying for a few years with parents after marriage. More important still was that with limited working land, presumably rented, the parents also did not get any economic benefit from the couple, whose stay with the family meant extra mouths to feed rather than extra hands to work.

Immediate establishment of new families was also observed in some couples originating from well-to-do families. This was nevertheless rare, because in the present economic condition it was rather difficult to find families rich enough to provide for the immediate establishment of a new family. The general pattern, then, was to let the couple accumulate for themselves while getting the benefit of free board and lodging from the parents. This period of stay with the parents with the intention for accumulation for future establishment may be called the 'nascent period'.

591 178 184 Table 7 shows that 30 out of 96 families of farm operators covered by the study were able to establish their nuclear families immediately after marriage. When these 96 farm operators were grouped according to their dates of marriage to the present spouses or last spouses in cases of widowers and widows, the distribution was as follows: those married during the absolute monarchy regime (up to 1932), 54; those married during the democratic regime (after 1932), 37; never married, 4; date of marriage not available, 1. Since 20 out of the 30 families which were able to establish themselves immediately were in the first group, the

[TEXT CONTINUED ON PAGE 85]

TABLE 7

FREQUENCY DISTRIBUTION OF LENGTH OF NASCENT PERIOD OF 96 SAMPLE-FAMILIES
Bangchan, Thailand, 1953

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184
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Length in Years	Frequency
0	30
1	16
2	9
3	4
4	4
5	5
6	2
7	0
8	1
9	3
10	2
11-15	3
16-20	1
Not separate*	15
No information	1
Total	96

* These 15 families existed earlier as minor components of the old families. Headship of each family was later assumed by the present family head.

591 proportion for immediate establishment was 20 out of 54 or
184 37 per cent for those married before 1932, and 10 out of
178 37 or only 27 per cent for those married after 1932. A declining trend was thus observed of the ability to establish a new family immediately after marriage.

591 Table 7 also shows that the 'nascent' period of 50
592 families (that had ones) ranged from one to twenty years,
184 averaging four years, the mode being one year, and the median
178 two years. Among the fifteen non-separating families, eight headships were taken over by offspring while one or both of the parents were still alive (we shall call this 'type A'), four headships were taken over by offspring through the death of parents (we shall call this 'type B'), and three headships were taken over by spouses ('type C'). The last mentioned changing over of family headship (type C) occurred in three ways: through marriage of a man to a female head of a family whereby the husband automatically became the family head, death of the husband, and desertion of the husband.

591 The changing over of the family headship of the type
592 B in Table 7 was a natural process of inheritance. In type
184 A, it was found that senility accounted for seven out of
428 eight cases of the changing over, the one exception being
587 the case of a widower who wanted to have a second wife and who thought that the family assets originally belonged to his first wife's biological family and therefore an outside woman should not lay a hand on the 300,000 baht property.

591 A factor that should also be taken into account was that he
592 had a regular income of 450 baht a month from his job in the
434 Highways Department, which by the village standard was more than enough for him to live comfortably with his second wife.

591 Historical records of the 96 farm operating families do not contain information as to how the 50 families passing through nascent period were divided into those staying with wives' families and those staying with husbands' families. The 1953 census, however, reveals that of 48 married couples then living in 42 families of parents of either side (four such families included two couples and one family three couples), 23 were with husbands' parents and 25 with wives' parents. The proportion may thus be estimated at about one to one.

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434 During the nascent period, the couple ordinarily received from the parents they were staying with a kind of
[431] annual bonus locally called lampai which varied according to the economic status as well as generosity of the parents. Lampai took several different forms. Thus, a couple might receive all the paddy harvested from a specified area of the field of three, five, or ten rai; they might be given a fixed quantity of the crop -- say 50 or 100 tang; they might receive cash -- say 500 baht or any other varying amount. In some cases, the couple were expected to earn their lampai outside the family farm after obligation to family work had been fulfilled. This took the form of piece-working or trivial trade.

59
[431] If no lampai was given, the parents might give some gold in

59 themselves up ; financiall, to compete with A's parents.

The same informant said further, however, that usually it was up to the couple themselves to decide when to leave the old family. Parents, in his words, "rarely drive the offspring out. They also rarely resist the couple's decision to leave. The most they can do in case labor is badly needed is to ask the couple to stay a year or two longer."

• 591 434 On the other hand, a second informant, a headman as was the first, indicated that the five-year period he and his wife spent with his wife's parents immediately after their marriage in 1922 was their most prosperous time. As [431] lampai the couple were given the harvest from a 5-rai parcel each year. When he married, he already had five baht weight [426] of gold. With surplus income, he was engaged in lending for interest. Accumulation during their five years' stay with the parents included timber enough to construct the new home when they moved out, one hundred tang of paddy, and forty baht weight of gold.

As a matter of fact, there are several factors that should be taken into consideration in evaluating the advantages and disadvantages of a newly wed couple undergoing the nascent period. These are the lampai arrangement, willingness of the parents to let the couple earn extra income from sources outside the family, current wage rate and job opportunity, and, most important, the current profitability of the farming business which is assumed to be the alternative

591 434 if the couple do not choose to stay with the parents. In any event, the fact that the couple are more or less free to leave the old family provides an opportunity for the couple to escape all the disadvantages that might be imposed upon them, leaving all the advantages to be acquired.[10] As for those who apparently discounted the merit of the nascent period, the author suspects that they neglected to consider the expected net income from farming and that they were unrealistic in thinking only of wage rate and in underestimating the more crucial problem of job opportunity.

59 431 434 In addition to their own wealth accumulated during the nascent period, gifts in the form of farm equipment, paddy and land were usually given to the couple by their parents at the time they left them to establish an independent family. Of 80 separating families (Table 7), however, 17 reported that they received nothing whatsoever from their parents. Among the remaining 63 families that received something, there was a wide variation in the kind and the amount of the gift, ranging from a single buffalo with an incomplete set of farm equipment to 228 rai of rice land with a complete set of farm equipment as well as a stock of paddy to last the new family until the coming harvest. Parental gifts to newly established families are shown in Table 8.

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10. At least two cases were known where the couples, not ready to start a family of their own, left the old families and moved into families of the other spouses.

[TEXT CONTINUED ON PAGE 91]

243 marriage did take place, the couple were usually obliged
162 to stay with the parents of either the husband or the wife.
178 It is reasonable to believe that the nascent period was
592 prolonged during this period of hard times. Thus, the
182
[582] family size tended to be larger than it normally is. This is especially true for rice farming families where there always is some work for members able to work. It is not surprising, then, that the average size of farm operating families in Bangchan was 6.3 in 1948 while the average size of all families was 5.7 according to the 1949 census. A steady rise in the price of paddy after the war has improved the economic condition of rice farmers. The increased income, however, had to be spent first on replacement of equipment and housing facilities which had been long overdue.
[792] Finally, the bumper crop of 1948 with an ever-increasing price put an end to farm misery, and the following dry season saw a record number of newly ordained priests and
• [591] merit making activities. From then on proportionately more marriages took place and there were fewer economic obstacles to keep newly wed couples from starting out independently. The combined effect of termination of prolonged nascent period and freer establishment of new families was that the size of the farm operating family was considerably reduced.

16 It may seem strange that more marriages should bring about a drop in the number of the young from 2.5 per family in 1948 to 2.0 in 1952. By the young is meant, however,

581 It was not felt necessary to marry. Because of the strong
589 economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married.
[593] One group of grown siblings of both sexes stated they were "too happy together to marry."

836 Pre-marital chastity was more or less observed. If a girl became pregnant before marriage, her parents brought pressure,
848 usually successful, on the boy to marry her. The occasional illegitimate child was raised without stigma in the girl's family, though problems arose during pregnancy and delivery (cf. "cone of wood" below). The mother later found a husband. One father was angered because he felt his daughter's pregnancy wrecked her chances for a marriage of prestige. He was conspicuous for his social aspirations towards city ways.

864 Information on human sexual matters was gathered by the
831 young sometimes by accidental observation of parents and others, through hints from hearing cursing, and by conversations with grandparents, older siblings, and friends of the same sex. Men joked on sex matters at the all-male rice-uprooting parties. Being antithetic to the ascetic prescriptions of Buddhism, sex talk was highly charged. Sex was never discussed in mixed company.

Residence

592 The nuclear family of husband, wife, and unmarried children
[591] was the primary social and productive unit, but other resident kinship units larger and smaller also occurred. After marriage, the couple usually lived for a time in the house of the parents of one spouse or the other; then, as soon as they could afford it, set up housekeeping in their own house. Of a sample of 96 families in Bang Chan, 30 set up independent households at once after marriage, 16 after one year, and the rest, a few per year, on throughout 10 years; 15 of the families never had a house of their own but lived with other relatives (Janlekha:37). Of 298 families, 59.4 per cent lived independently as a nuclear family, while 34.9 per cent lived with other relatives in the house. (The remaining were single persons living alone, or priests at the temple in the "ecclesiastical family.") The
361 average size of the households (not necessarily the nuclear families) was 5.7 persons, with a range of 1 to 14, the median being 6 (ibid. 28-29). The house of a new couple was usually
621 built adjacent to parents or relatives, and certainly within calling distance or sight of some other household. Social patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

close touch with each other's activities and needs.

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time.

Wealth Differences:

Way of Life

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable.

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the MInburi Health Center managed to pay the 60 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygynous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap.V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

Chapter IV

THE BIRTH OF A CHILD

Dûan and her husband, Song, had a 2 year old son, Chai.[32] They lived and worked with her widowed mother, Lek, and her unmarried sister, Mi. The comfortable house stood high on piles, surrounded by rice fields. On a nearby mound lived Sek, 60 years old and full of energy, the youngest sister of her grandmother.

843 [592] [342]

Now Dûan noticed that again her menses had stopped. Her mother had described before her marriage what this meant. With happiness in her eyes, as the first time, she told her husband, then her mother, and at the first opportunity, her husband's parents. There was no reason to keep her pregnancy secret. Since she and Song would be happy to have either a boy or a girl, she did not seek out the ritual means which existed to induce a child of a particular sex.

During the months of anticipation, Dûan worked along as usual in farming and house-keeping. Lek reminded her of prudent behavior. "Women are easily upset when pregnant. It is up to you to put yourself in a cheerful mood. Everything you do will affect the infant in your womb. If you see a scarred person, your child will be scarred. Be calm, look only at pleasant things and avoid jerky motions. Do not overeat, lest the child be a glutton. If you sleep during the day and are inactive, you will also have a lazy child. Some girls are trying to be like Bangkok people, pleading that they cannot do heavy work in the last few weeks of pregnancy, but that will cause a difficult labor."

To increase her appetite, early in her pregnancy Dûan visited a Chinese pharmacist to get medicine. He had so [278]

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32. This account puts together data from several informants. Particularly illuminating phrasings are quoted exactly, over and above the conversations, which, though fictionalized, are also direct transcriptions.

What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the families, living in tiny separate cottages.[1] Usually with inadequate or no land, they earned an irregular income by hiring themselves out for farm or other work. At the other extreme, in a hamlet-like cluster of dwellings, lived a closely affiliated group of kin. A senior couple more or less headed the married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying home from school to do so. Where the adult cooperative group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

Plowing could be done by a man and wife, but for both transplanting and harvesting which had to be done within a few days, large groups were necessary. Two patterns of auxiliary group labor prevailed: reciprocal cooperative work, and hiring of labor.

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1. Janlekha, 1955, categorized families as 5% "one-person," 59% nuclear, 8% limited extended (including one or more parents of a spouse), 27% extended (including dependent married couples or other collateral relatives), and the temple residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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1. In some large houses, two related family groups lived together but maintained separate kitchens.

per day were calculated for Groups A and B by Round and for all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

Although our sample was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

From the viewpoint of parents, the "peak of life" was the time when children were no longer dependent, but productive, unmarried workers whose earnings stayed within the family. Household 16 was such a family, forward looking, progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analyst]

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Table 8. Summary of Economic Conditions of the Two Groups of Households Participating in Dietary Studies

Household Group and Code No.	Members	Land: Rai Worked	Land: Rai Owned	Buffalo[1]	Food Cost[2]: Total	Food Cost[2]: Per Cap.	No. of Priests Fed	Sources of Income
Group A								
222	5	0	0	0	2.96	0.59	0	Labor contractor; hired out as labor; boat repair; fishing; vegetables sold; canal digging.
12	3	12	0	1	2.70	0.90	0	Rice production; occasional work in Bangkok.
215	5	14	0	1	1.59	0.32	0	Rice production; wife, a medium.
67	5	16	6	1-0	2.52	0.50	0	Rice production; eggs sold; road jobs.
2	6[3]	20	0	2	3.97	0.66	3	Rice production; "professional cook".
103	8	47	12	5	2.04	0.26	2[4]	Rice production; eggs, fish, mushrooms sold; buffaloes raised.
Mean		18.2	3.0	1.6	2.37	0.49	0.7	
Group B								
23	8[3]	6	0	1	1.56	0.19	0	Rice production; selling fish and vegetables; masseur.
21	4	25	25	3	1.92	0.48	3	Rice production; headman
16	8	47	47	5	2.70	0.34	2	Rice production; vegetables, fruit sold; road jobs.
25	8	50	50	3	7.97	1.00	2	Rice production; eggs, mushrooms sold.
20	9	66	51	1[1]	2.17	0.27	2	Rice production; ceremonialist; doctor; carpentry; trading; eggs collected and sold.
Mean		33.8	34.7	2.6[1]	3.32	0.45	1.8	

1. The buffalo belonging to Household 67 died during the year. In Household 20, the brother who moved in owned several buffalo, thus the total for Group B was more than the number shown.

2. Average cash expenditure per day, in baht. (One baht equalled about 5 cents) Household 222 received rice as part of wages.

3. Babies born during Round IV were not included. In Household 23, a 12-year old son served as temple boy and was away from home much of the time.

4. Rainy season only, when priests could come by boat; counted as 1 in computing average.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

000 First steps toward a better diet are suggested by the best dietary practices observed. Although the calculated intake of no family on any survey day approximated or exceeded the estimated allowances for all nutrients, sharp contrasts were evident in individual records. Two sample calculations in Appendix C (pp. 121-122) represent one of the better and one of the poorer records obtained. The food for Household 12, on Jan. 14, 1954 consisted chiefly of polished rice, fish, and non-leafy vegetable, with seasonings. In contrast, on July 23, 1953, Household 16 used home-milled rice, and about 60 gm. per person of swamp cabbage, with other vegetables and fish. These choices enhanced the potential nutritive value of the diet markedly without increasing its cash cost. Family labor was involved, however, in gathering greens and milling rice.

000 Since rice is the chief solid food for all ages, improving this major item will be considered first. An important step would be to teach the people to cook rice with just enough water so that all would be absorbed. The Thai government has sought to encourage this. So long as the practice of cooking rice in excess water persists, much of its vitamin and mineral content will be discarded, and efforts to improve the nutrient content of rice will be largely nullified. Some rice water could be used as a beverage, and for cooking certain vegetables which are commonly served with a thickened sauce. This would be preferable to discarding the rice water, but encouraging its use must be considered as an alternative to cooking rice without excess water, since the two practices are mutually exclusive.

Use of under-milled and processed rice, and of the rice polishings, has the advantage that a large part of the original B-complex content is conserved, whereas vitamins for enrichment are at present imported, and are apt to be for years to come. Since home milling persisted to some extent in Bang Chan, it might be encouraged, in some families. One highly respected headman continued to mill rice at home, hence the "prestige value" of white rice may not be so important in Bang Chan as it is among city Thai, who sometimes regard undermilled rice as "prisoner's food." The time and effort involved in home milling, however, may deter those who have given it up from returning to it; and since deepening the main canal has made the mill accessible to more families the year round, a program based on the assumption that commercial milling of rice will increase is probably more realistic than an attempt to encourage the return to home milling where it has been abandoned.

256 At present, no processed rice is made in Thailand. A plan to buy and install a Malekizing plant to process rice for the Royal Thai Navy was announced in 1953, but the plan has not materialized. Enriched rice has been sold by the Thai Rice Company for some years, but the best grades only,

BANG CHAN

FOREWORD

The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, Minburi. A century-old canal and to the north of it a post-war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

In 1954, when data for the present study were still being gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the households were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupation of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple food of the people. During the wet season and into the cooler dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

The Thai countryside is divided into hamlets, each with a headman in charge of the thirty to sixty households of the hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

12 total of 336 households in Bang Chan (Ralis, 1955).[1] Appropriate portions of schedules used are included in Appendix A.

Women in the random sample of village households, and women whose young children were included in the child feeding study, were asked about survival of all children born to them (See Appendix A, schedule 3, item 36). With the exception of a few old women, those who reported that one or more children had died, were asked to describe the child's symptoms and the circumstances surrounding the death. When the description was clear enough to permit diagnosis, the physician recorded cause of death, as well as the informant's description.

Sanitation

Information concerning toilet practices was obtained from adult members in 30 of the 31 families included in the random sample of households. Additional information on toilet care of infants and toilet behavior of preschool children was recorded in field notes.

In connection with a weighed dietary survey, the observers noted practices relating to care of food, disposal of garbage, and source and treatment of drinking water, in 11 households on 4 days each throughout a year.

Schedules or portions of schedules used in recording the information on sanitation are included in Appendix A.

Results

Physical Measurements

141 145 Heights and Weights. - Mean values and ranges for heights, cristal heights and bicristal diameters, and both mean and median values and ranges for weights of boys and girls in the Bang Chan primary school are classified by age,

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1. In Ralis' survey, each "kitchen-unit" was considered [592] as a household. As generally used in this data paper, "household" includes all persons living under one roof. A number of such households in Bang Chan include more than one kitchen-unit.

[see pp. 51-52--Analyst]

b9

27.a. Excuse me, but at present do you have a (wife/husband) who lives and eats with you, or not? [125] [592]

1. Yes	255
2. Yes, qualified _____	6
3. No	72

b. IF NO: Excuse me, but is this because you are widowed, separated, divorced, or is there some other reason? [589] [586]

4. Widowed	45
5. Separated	9
6. Divorced	1
7. Other, specify	10
— No Answer	7

28.a. Your own children, all of them that have ever been born, how many are there? [592] [162]

8. None	24
9. One	32
X. 2 to 3	70
Y. 4 to 5	74
0. 6 or more	133

b. How many of your children are still living?

0. None	29
1. One	40
2. 2 to 3	83
3. 4 to 5	82
4. 6 or more	97
— No Answer	2

c. How many of your children have died? [165]

0. None	198
1. One	44
2. 2 to 3	56
3. 4 to 5	17
4. 6 or more	9
— No Answer	9

29.a. Have you ever been ordained as a priest, or not? [793] [792]

1. Yes	187
2. No	31
— No Answer	2

[Male Buddhist (220)]

b. IF NO: In the future, do you want to be ordained as a priest, or not?

3. Yes	20
4. No	11

c. ASK ALL: How many sons do you have twenty years old or over? [592] [162]

5. None	176
6. One	56
7. Two	29
8. Three or more	29
— Unascertainable	43

62.a. IF YES: What is the total number of months that you lived in Bangkok? 125 [166]

5. One year or less	31
6. 13 to 24 months	30
7. 25 to 60 months (5 yr)	21
8. More than 5 years	35
9. Unascertainable	

63.a. Is there anyone now eating and living in your house who once lived in Bangkok, or not? [592] [166]

9. Yes	36
X. No	296
Y. Unascertainable	1

b. IF YES: What is your relationship to this person(s)?

1. Son	9
2. Daughter	6
3. Father	2
4. Mother	-
5. Brother	2
6. Sister	13
7. Other relative	14
8. Unascertainable	-

c. IF YES: At what age did he leave BC?

1. Below 15 years	5
2. 15 to 19	8
3. 20 to 29	15
4. 30 years or more	4
5. Unascertainable	4

d. IF YES: How long did he (she, they) live in Bangkok?

6. Less than one year	5
7. 1 to 4 years	19
8. 5 to 9	6
9. 10 years or more	5
X. Unascertainable	1

64.a. Is there anyone who has previously eaten and lived in your house and who is now working in Bangkok, or not?

1. Yes	92
2. No	241
3. Unascertainable	

b. IF YES: What is your relationship to this person(s)?

4. Son	35
5. Daughter	21
6. Brother	16
7. Sister	8
8. Other relative	18
9. Unascertainable	—
— No Answer	8

125 64.e. IF YES: At what age did he leave BC?
[166]
[592]

1.	Below 15 years	8
2.	15 to 19 years	28
3.	20 to 29 years	50
4.	30 years or more	5
5.	Unascertainable	8

d. IF YES: For how long has he (she, they) been gone from BC?

6.	Less than one year	12
7.	1 to 4	42
8.	5 to 9	19
9.	10 years or more	19
X.	Unascertainable	

[464]
[463]
e. IF YES: What various duties or jobs does he (she, they) do in Bangkok?

1.	Housewife	17
2.	Unskilled laborer	19
3.	Skilled laborer	33
	Armed forces	17
	Service	9
	Employee	5
4.	Other (retired, selling things)	2
5.	Unascertainable	4

[166]
[593]
[602]
f. IF YES: During the last year, have you seen this person(s) several times, once, or not at all?

9.	Several times	65
X.	Once	16
Y.	Not at all	8
O.	Unascertainable	3

g. IF YES: Does he (she, they) make regular remittances to this house?

X.	Yes	31
Y.	No	56
O.	Unascertainable	5

[207] 65. Do you listen to the radio regularly, daily, occasionally, seldom, or never?

6.	Regularly-daily	45
7.	Occasionally	66
8.	Seldom	148
9.	Never	60
—	Unascertainable	14

[525] 66.a. Do you play the lottery regularly, occasionally, seldom, or never?

1.	Regularly	20
2.	Occasionally	54
3.	Seldom	220
4.	Never	38
5.	Unascertainable	—
—	No Answer	1

b. IF REGULARLY, OCCASIONALLY, OR SELDOM: Suppose you were to win the second prize of 40,000 baht. What various things would you do with this money?
(See code)

II. DEFINITIONS

Definitions are here provided only for a few basic terms within the context of this survey. An attempt will be made to discuss the many concepts contained in the questionnaire before the beginning of the actual field work, as the desirability to keep this guide short makes it unadvisable to go into lengthy details at the present time.

A household is a single person or a group of persons making one economic unit and distinguished as one kitchen unit. It is likely that members of the same household sleep under one roof (or roofs) belonging to one person, but the main criterion of the definition is the kitchen unit. With each kitchen goes one household. There is occasionally more than one household under one roof; this is found when more than one kitchen is encountered in one dwelling unit.

The head of the household, shortly referred to as HH, is the person whom other members of the household consider to be the head and who lives in this household - we exclude absentee heads of households.

Relationship to the HH is to be designated as whatever applies among the following categories: husband, wife, son, daughter, father, mother, mother-in-law, or "other relative."

Respondent, shortly referred to as R., is the person being interviewed. The R. should preferably be the HH, or, in the absence or nonavailability of the HH, an articulate adult member of the household.

Articulate member of the household is a person in a given household who could be considered eligible to substitute as R. for the HH. An articulate member of the household is another member of the same household as the HH. Such an articulate member should be an adult in the position to express himself without unusual difficulties and he is expected to have a scope of views not much less limited than those of the HH.

III. PROCEDURE

Our survey will be conducted in Bang Chan, shortly referred to as BC. This is a rice village about 20 miles from Bangkok. The Cornell Research Center has been working in this village for many years and friendly relations have been established all over. Senior members of the Cornell Research Center have taken great pain in maintaining good rapport with the villagers and are, naturally, anxious that nothing should occur to damage the established fine relations. Each interviewer is expected to keep this in mind all the time while in BC.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

The Family

592 Although the family is the smallest of social institutions, it occupies first rank in importance. For the purpose of this study family is defined as a group of persons who form a household under one head including parents, children, servants and other dependents. It is a social unit for both consumption and production. In Bangchan, members of the same family, with the possible exception of piece-workers who have the privilege of eating with their employers only during periods of certain kinds of work, usually share the same meal although not necessarily at the same time. Physically able members are expected to contribute to family work although some may also do extra jobs for their own pocket money. In all cases family work has priority over the extra job, and in most cases members turn over all or part of the earning thus realized to the family head. Although most families have separate dwellings, there are instances of two families sharing the same dwelling but having separate cooking arrangement. Such cases are rare, however. According to our operational definition, then, a member of a biological family who has hired himself out as regularly hired laborer ceases to be a member of his own biological family and becomes a member of his employer's family. Piece workers, on the other hand, although they may occasionally eat with their employers, still retain membership of their biological family if they still live with them. Finally, people who live in the same dwelling may not belong to the same family if they

592 do not share the same arrangements for preparing and consuming food.

621 59 [792] The 298 families living in Bangchan on May 23, 1953 may be grouped into five categories: (1) "One-person household" consisting of a lone man or woman /for ease in typological manipulation we arbitrarily consider this as a family, although strictly speaking a one-person household is not a family/; (2) "Nuclear family" consisting of a man and wife and their unmarried children; (3) "Limited extended family" consisting of a man and wife, either or both their sets of parents, and their unmarried children; (4) "Extended family" consisting of those included in "limited extended family" plus married children and children of the latter, plus any collateral relatives of any generation; and (5) "Ecclesiastical family" consisting of Buddhist priests, novices, and temple boys, all males, living together in the temple under the Headpriest's supervision. The distribution of these different types of families so defined is shown in Table 3.

592 596 621 Further explanation is perhaps necessary with respect to the "extended families" in Table 3. It must be pointed out that the term 'extended' is here used for the sole purpose of defining types of families which include dependent married couples as differentiated from the ordinary independent nuclear family. It will be seen in the next section, however, that there is no permanency in this inclusion of married couples whose intention is always to establish an independent family of their own. The so-called 'extended' family in

[TEXT CONTINUED ON PAGE 63]

592 Bangchan is thus not a counterpart of the Indian or Chinese
596 extended family and should not be conceived as such. Its
621 outlook is definitely that of the nuclear family. Its assumption of an extended family structure does not indicate an intended role of the conventional extended family but does rather demonstrate the inability, temporarily at least, to provide for an establishment of a new family for the newly
[511] wed members. Most of the 80 'extended' families existing in Bangchan at the time of the second census in 1953 cannot be regarded as well to do, and some are extremely poor, being families of the laboring group without any assured regular income.

592 All of the sixteen one-man families were poor, rang-
621 ing from destitute old people who had been deserted by their kin to small farm operators who had to make the most out of their under-sized farms.

592 There were some 53 dependent relatives staying with
602 twenty-five families. These relatives do not include parents
621 of family heads and family heads' direct descendants and
[597] their spouses. They also do not include 'adopted' children of family heads, who automatically become members of the family. Records show that most dependent relatives remained in the family only for a brief period of time. Seven relatives, however, were able during the period from 1949 to 1953 to assume the headship of the families of which they had been dependent members.[7]

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7. See section on change of family heads, Chapter II.

597 621 593 As of 1953 seven adopted children were reported to be living in Bangchan. Since only those mentioned by family heads as their adopted children were so recorded and since some of the information on family members were not given directly by the family heads, it is possible that there might be some more adopted children who appeared in the 1953 census as nephews or nieces. The authenticity of the term 'adopted child' as used in the village is nevertheless rather questionable. There has never been such a practice like legal registration of adopted children in the village, although this is provided by law. Moreover, maltreatment of an adopted child was not unheard of. In 1952 one family head reported that his adopted daughter had "run away" to Bangkok. In 1953 a young widow, an adopted daughter of an operator of a coffee shop in the village, also "ran away". When her whereabouts became known, no effort was made by the foster parents to return to the woman her golden necklace valued at one thousand baht. Later she was forced back home, being beaten all the way in spite of her complaint that she was pregnant. It was also not infrequent that an adopted child left his foster parents and took residence as a dependent relative in another family in the neighborhood. Such incidents points toward the possibility of 'adopted child' being used as a nom de grace for a prospective free family laborer.

162 592 621 Table 4 shows that with the exception of the ecclesiastical family the size of families in Bangchan ranges from one to fourteen, averaging 5.7 persons per family. This

[TEXT CONTINUED ON PAGE 66]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 4

DISTRIBUTION OF FAMILY SIZE
Bangchan, Thailand, 1953

Family Size	Frequency	Per Cent
One-person family	16	5.4
Two-man family	18	6.0
Three-man family	34	11.4
Four-man family	35	11.7
Five-man family	43	14.4
Six-man family	48	16.1
Seven-man family	38	12.8
Eight-man family	26	8.7
Nine-man family	23	7.7
Ten-man family	10	3.4
Eleven-man family	1	0.3
Twelve-man family	2	0.7
Thirteen-man family	2	0.7
Fourteen-man family	1	0.3
Forty-one-man family*	1	0.3
Total	298	100.0
Mean	5.7	
Median	6	

* Ecclesiastical family.

162 average size of family in 1953 is slightly larger than that
592 calculated from the 1949 census.
621

Disappearance of Some Families from Bangchan

162 When the 1949 and 1953 censuses are paired hamlet by
178 hamlet, appearance of new families and disappearance of some
592 of the old families may be detected. Table 5 shows that
621 during the four years between 1949 and 1953 forty-three families had disappeared from the lists of the seven hamlets constituting Bangchan. This loss was compensated by fifty-three new families, giving a net gain of ten families. In other words, of 288 families existing in 1949, 245 families remained throughout the period. When 53 new families were added to the continuing 245 families, a new total of 298 families was arrived at for 1953. A closer examination, however, will reveal that there were five families which disappeared from one hamlet only to appear in another hamlet of the same Bangchan village. If the seven hamlets are to be considered as one geographical unit, these five families should be deducted from both the disappeared and new families, giving a net disappearance of 38 families and a net appearance of 48 new families, while the number of continuing families becomes 250.

[166] Of 38 families which disappeared from Bangchan, 27 moved out to other villages nearby or afar, while 11 were disintegrated or simply annexed by other families in Bangchan itself.

[TEXT CONTINUED ON PAGE 68]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

162
178
• 592
621
166

TABLE 5

CHANGES IN NUMBER OF BANGCHAN FAMILIES FROM 1949 TO 1953

Hamlet	Number 1949	Number 1953	Continuing			Disappeared				New			
			Total	(1)	(2)	Total	(1)	(2)	(3)	Total	(1)	(2)	(3)
BC4	43	40	32	32	0	11	6	0	5	8	3	1	4
BC5	27	28	24	18	6	3	2	1	0	4	1	0	3
BC6	44	47	38	36	2	6	4	0	2	9	4	1	4
KY5	54	63	45	40	5	9	6	1	2	18	13	2	3
KY6	28	31	27	26	1	1	0	1	0	4	0	1	3
KY7	43	42	37	33	4	6	5	1	0	5	3	0	2
KY8	49	47	42	36	6	7	4	1	2	5	3	0	2
Total	288	298	245	221	24	43	27	5	11	53	27	5	21

Explanation

Continuing (1) . . same family head
Continuing (2) . . different family head

Disappeared (1). . moved out of the village
Disappeared (2). . moved to other hamlet in the village
Disappeared (3). . disintegrated or annexed by other family

New (1). . . . . moved into the village from other village
New (2). . . . . moved in from other hamlet of the village
New (3). . . . . separated from other family in the village.

592 178 621 Although disintegration and annexation of families have a common feature in that in either case the family loses its entity, they have different connotations as to how the family passes out of existence. In order to have a clear picture of the village economy it is necessary to make a distinction between these two dynamic processes. The best way, perhaps, is to study the eleven families individually.

592 178 621 511 Case 1: A poor laboring family of eleven lived in BC4. The family head was in 1949 an old man of 59, his wife an old woman of 64. The family also included a son, age 29, son's daughters, 16 and 10, son's son, 9, daughter, 35, daughter's son, 18, daughter's daughters, 11, 4 and 1. This was the situation when we were first acquainted with them. When we re-visited the village in 1952, however, we found that only two members remained -- A, the old woman now sick with malnutrition and almost immovable, and B, her granddaughter then age 14 and still in the primary school. Presumably the girl was taking care of her grandmother. Except for the clothes they were wearing and a small old shack which was about to collapse, they did not own anything. B said she worked on a three-fourth-rai parcel and did some fishing or vegetable gathering before and after school time. Actually, she did not get much out of that effort; for the rice crop, 30 tang of paddy or roughly 15 tang of clean rice, was barely enough for a few months' consumption, and fishing would not be productive unless she had several long uninterrupted hours. In tracing what had happened to the rest of

178 592 621

178 the family members we were informed that A's daughter and
592 her four children had moved out of the village separately
621 to different places which could not be traced, while B's brother and sister went to live with a relative in Lam-loogga, also a rice growing village some fifteen miles to the north. The two chief bread winners of the family, A's husband and B's father, managed successfully to get themselves ordained and are now residing in the village temple. Early in 1953 B went to live with her relatives in Lam-loogga, leaving the sick old grandmother alone in Bangchan.
[792] The arrangement was that the old woman was to quit the old
[288] shack and take refuge in the secular part of the temple where it would be possible for her ex-husband, now a priest, to have two meals delivered to her every day. Just before the 1953 census was taken, however, she was taken to Lam-loogga. The last member of the disintegrating family was thus left out of the 1953 census.

178 Case 2: After the death of his first wife, an old
592 man in BC4 gave his two sons equal shares of his property.
587 He then acquired a second wife and built a separate quarter,
736 apart from the main building, thus creating a new family of
621 two. In 1952 he was fatally hit by a truck on the Minburi road. After a few months of unhappy stay with one of her step sons, the widow acquired a new husband and moved out to a neighboring village.

178 Case 3: There was in BC4 a laboring family of three
592 consisting of an old man, his daughter, and her son. After
621
[166]

178 the death of her father, it was reported that the woman
• 592 and her son moved to Bangplee, another rice growing village
621 some fifteen miles to the south. After checking with some
[166] of the former Bangchan residents who are now living in that village, the first report was found to be inaccurate. In fact no one in Bangchan seemed to know where they were. The only hint available to us concerning the mother and son was "Family disintegrated. Mother went one direction, son another direction."

Case 4: A woman and her adopted son were operating
[702] a 22-rai rice farm in BC6. After the death of the mother, the man remained in the village alone for a short time and then was conscripted into the army.

Case 5: After the death of the head of a laboring family in BC6, the wife and their four grownup children left the village separately. In the eyes of villagers this was
[164] another case of "family disintegration." The wife's birth place was in KY8, but she could not go back to her old family because there was not enough land to work.

Case 6: An old woman, age 76, was reported in the
[787] 1949 census to be living alone in KY5. Later she moved
[792] into the secular compartment of the temple (she was an aunt of the headpriest) where she died before the 1953 census was made.

Case 7: A man, age 50, was living in KY8 with his older sister, age 60, and their nephew's son, age 6. When the man died, the older sister pursued her brother's farm

178 laboring profession, limiting the work to transplanting only.
• 592 Apparently she did not earn enough. During this hard period
621 the young boy left her. The woman continued to live alone for two years. After the collapse of her shack in 1953 she went to live with a young couple in KY5 who are not related to her. In exchange for room and board and a nominal allowance, the old woman agreed to take care of the couple's baby.

178 Case 8: In 1949, a couple, both teachers in the Bang-
592 chan Primary School, were sharing the same dwelling with the
845 wife's mother's family, but having a separate food arrange-
434 ment for themselves and their two young daughters. Thus,
621 they appeared in the 1949 census as a separate family. In local standard, the combined income of these two teachers
[416] was quite high. The family lived well and was the only family in Bangchan that owned a camera. In the 1953 census this family became a part of the wife's mother's family because they had arranged to share the same food. The reason that was given for this new arrangement was that some time earlier the wife's brother, who had been living with his mother, got married and moved out to start an independent family, whereupon the old lady suggested that her daughter move in to fill the vacancy.

178 Case 9: In 1949, a family of three, consisting of
592 a young couple and their six years old daughter, worked as
621 farm hands for the wife's mother for fixed pay on which they
[593] were able to live independently. Two or three years later, the wife's mother asked this family to move into her household

178 because four members of her family had just left her to
592 establish families of their own. The son-in-law accepted
621 this invitation and had since taken over the management of
[593] his mother-in-law's large 60-rai rice farm.

Case 10: In 1949, an old woman was living with two boys, one distantly related to her, the other without any
[427] blood relationship. She was operating a small rented rice
[792] farm. Some time in the past she had made a generous offer
[431] of her own house to the temple which was not acted upon by the receiving party. In 1953, the headpriest contemplated an expansion of one of the temple buildings and approached the woman for the gift. The woman complied with the request, had her house dismantled, saving only the kitchen, and sent all the building materials to the temple. Meanwhile, the two boys had left her; one went to live with his mother in
[593] the village, the other went to Bangkok. Later, the woman
[437] joined the household of her younger brother, who lived next door, with the understanding that the brother had free use of her buffalo in exchange for her room and board.

Case 11: In 1949, a woman was living in KY8 with her aged mother and her baby born of her separated husband
[586] who was a policeman. Two years later, the woman married a
[587] widower, who lived in the same hamlet, and brought along her mother and son to live with her new husband.

With the exception of Case 6, a lone aged woman who was survived by none after her death, these cases may be grouped according to the nature of acceptance of the families

178 to which surviving elements of the disappearing families
• 592 were subsequently attached. It was noticed that in the
621 last four cases -- Cases 8, 9, 10, and 11 -- merging with new families was arranged on the basis of mutual convenience, and the disappearing families moved en masse into the new ones (with the exception of Case 10 -- a lone woman when arrangement for merging was being made). It may even be said that the initiative came from the receiving families, although the new members may have been more anxious for the union. In the remaining six cases -- Cases 1, 2, 3, 4, 5, and 7 -- there was no element of mutual convenience, and the surviving elements of the disappearing families did not move into new families as a body but as an individual. It seemed in these latter cases that the force of circumstances -- death or extreme poverty -- had prompted either party, usually the disintegrating elements, to seek the union as a quick way out. Because of the purposive nature of the arrangement in the former cases, the process may be called 'annexation'; while for want of a proper term, the process seen among the latter cases will be called 'disintegration'.

[162] None of the eleven cases undergoing disintegration
[423] or annexation owned landed property. Table 6 shows that
[464] six of these were farm laboring families. The five others were distributed among the following occupational groups: farm operator, public servant, and no occupation.

[166] Among the 27 families that moved out of Bangchan, eleven families were known to be living in the bordering

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TABLE 6

DISINTEGRATION AND ANNEXATION OF FAMILIES
Bangchan, Thailand, 1949-53

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Case	Occupation	Landed Property	Immediate Cause	Number of Surviving Elements	Number of Attached Families
Disintegration:					
1.	F. laborer	no	poverty	11	4
2.	Public servant	no	death	1	1
3.	F. laborer	no	death	2	2
4.	F. operator	no	death	1	1
5.	F. laborer	no	death	5	3
6.	no occupation	no	death	0	0
7.	F. laborer	no	death	2	2
Annexation:					
8.	Public servant	no	convenience	4	1
9.	F. laborer	no	convenience	3	1
10.	F. operator	no	convenience	1	1
11.	F. laborer	no	marriage	3	1

178 villages, and six in villages within a distance of from four
592 to fifteen miles from Bangchan. These seventeen families,
621 whose locations were known, were engaged at the time of the
166 study in the same occupations they had been when they were in Bangchan -- either farm operating or farm laboring. Our investigation, however, covered only the whole family as a unit -- that is, we cannot say that every single individual constituting these seventeen families when they moved out of
(464) Bangchan was doing farm work in his new location. Only one case was known in which the family head got a permanent job as a janitor in Wat Makasan Primary School in Bangkok. This man was nevertheless commuting regularly between his farm home in Bangplee and his office in the suburb of Bangkok. His taking up a new job was thus a question of an individual member, not of the family as a whole.

It is not likely that the ten families whose locations were not known to us would take up new occupations in Bangkok. If they did work in Bangkok, they should pay some visits to Bangchan at least during festival time or family re-union occasioned by ordination or cremation, and their presence in the village would certainly be known to us. Besides, we were in constant contact with the core of a group of young men who went to work in Bangkok and who knew one another's whereabouts fairly well, and no information about these ten families was available from this source either. Our impression was that they were doing farm work in some villages not too close to Bangchan.

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Appearance of New Families in Bangchan

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In the pairing of the 1949 and 1953 censuses against each other the appearance of new families was detected as was the disappearance of some of the old families which has just been discussed. Table 5 shows that there were 53 new families, but five of these were merely cases of reappearance of existing families from other hamlets of the same village. Actually, therefore, there were only 48 families that were really new in Bangchan.

Of these 48 new families, 27 moved into the village from the outside and 21 evolved from existing families in Bangchan. Of the 27 immigrating families, 18 came from the bordering villages and 9 from distant villages in all directions ranging from Lardprao and Samsen, some ten miles to the southwest, to Prachin, over a hundred miles to the east. [463] While the eighteen families from the bordering were accustomed, as expected, to rice growing, not all of the nine families from distant villages had been farmers. A family head of one of these nine families came from a family of fruit growers, while another family head, who apparently had a more spectacular record, had been engaged in international rice trading. This latter man, who knew some English, had worked in a large rice mill in Nonburi which was exporting rice under strict government control after the war. Discovery by the government agent of irregularities of the firm led to the man's flight abroad to Hongkong or Swatow some eight years ago. It is assumed with his

178 appearance in the village that the case has been closed.
592 One reason he chose to take up residence in Bangchan after
621 business failure in Bangkok was that his wife owned through
166 inheritance a 17-rai parcel of rice land in the village. Another equally important reason was the relatively low cost of living in the village as compared to the city, which could not be overlooked especially when he had a large family of ten.

162 Of the 21 families evolving or separating from
178 existing families in Bangchan during the period from 1949
592 to 1953, sixteen were young married couples seeking inde-
591 pendent families of their own. Eight of these were married
621 before 1949, and the rest after that year. These sixteen young couples altogether contributed, in the 1953 census, 21 children of age-group 0-4 years or about ten percent of all children of that age-group in the whole village.

This process of separation of young married couples from the old families is normal, in fact a characteristic feature, in areas where the nuclear family system predominates. Although some newly wed couples were able to establish independent families immediately, the pattern was that they remained for a year or more with family of either side, during which time they accumulated capital necessary for future establishment. A separate section will be devoted to this important feature of the village economy.

178 In contrast to the above normal separation from old
592 families, the remaining five of the 21 families underwent
621

178 different types of separation which will be described indi-
• 532 vidually as follows:
621

Case 1: This involved the two sons who inherited landed property from his father described in Case 2 for the disintegration of the family, and in fact this was the first Bangchan family we met in 1948. At that time the elder brother, then age 37, was a widower and was courting a woman in another village along the Minburi Road. His work in road construction and maintenance (the Minburi Road) gave him a good excuse for continued absence from home, leaving his two daughters and three sons under the care of his younger
[587] brother who was the family head. Just before the 1949 census
[464] was made, he married the woman and once again became settled down. Meanwhile the younger brother got a job in road construction. With regular monthly cash income, he took to drinking and established himself as one among the few notorious dipsomaniacs in the village. This was intolerable to the elder brother who finally moved his nuclear family out to their new home just across the road.

Case 2: In 1949, an unmarried woman was living in an 'extended' family headed by a son of her elder sister. The combined landed property of the family was 67 rai of rice land, 40 rai of which was a share of the woman and her aged mother who was also living in the family. Some time before the 1953 census was made the woman and her mother moved out to form a separate household. The reason for the separation was not quite clear. It was assumed, however,

178 that these two women were happier living by themselves than
• 592 with their junior relatives.
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Case 3: A married couple were living in 1949 with
[586] the wife's parents. They were later separated, the husband leaving his former wife with her parents. In the 1953 census the man appeared in KY7 list as head of a one-person household.

Case 4: In 1949, a woman appeared in the census as wife of a family head in KY6. In that same year she left him and lived as wife with another man in KY8. A few years after, she left this second man again. She then appeared in the 1953 census as family head of a family of six including her three children and her aged parents.

Case 5: In 1949, a man of 47 was head of a laboring family of nine in KY, including his wife, three adult off-
[464 spring and four young children. Later in that year he left
586] the family and hired himself out as a regular laborer to a farm operator with whom he worked for two years. He then left the village for a year after which he returned to work as regular hired laborer for another operator for almost a year and a half. In the 1953 census he appeared as head of a one-person household in KY6. Our records show that he was a diligent worker, excellent fisherman, averse to sweet cookies, but very fond of liquor. When asked why he did not go back to his family in KY8, he replied "The larger the family you have, the more trouble you get. I have more fun living alone."

178 These five cases may be grouped as follows: two
592 cases of relatives of family heads separating from 'extended'
621 families, two cases of one spouse leaving the other, and one case of a family head deserting his wife and children.

Pattern of Establishment of New Families

593 Bangchan offspring customarily continued to live with
592 their parents as long as they were not married regardless of how old they might be. In the eyes of the parents, an offspring is always their child, immature and needing parental supervision, as long as he has not been able to acquire a spouse; and until then the parents-offspring mutual obligations, necessitating living together, must continue to exist. Thus, it was not uncommon to see several unmarried adults crowding in one family providing too large a labor force relative to a small parcel of land on which the family
[58] worked. In this context, marriage serves an important economic function of giving impetus to the start of new producing units in the village. There is no corresponding service in areas where the extended family system predominates such as in China and India.

583 Two distinct kinds of marriage were conceived of in Bangchan: the conventional marriage with the sanction of parents or guardians of both parties which was usually preceded by formal arrangement and accompanied by marriage rites sponsored by the bride's family; and the popular marriage by mutual understanding between the man and wife without

591 proportion for immediate establishment was 20 out of 54 or
184 37 per cent for those married before 1932, and 10 out of
178 37 or only 27 per cent for those married after 1932. A declining trend was thus observed of the ability to establish a new family immediately after marriage.

591 Table 7 also shows that the 'nascent' period of 50
592 families (that had ones) ranged from one to twenty years,
184 averaging four years, the mode being one year, and the median
178 two years. Among the fifteen non-separating families, eight headships were taken over by offspring while one or both of the parents were still alive (we shall call this 'type A'), four headships were taken over by offspring through the death of parents (we shall call this 'type B'), and three headships were taken over by spouses ('type C'). The last mentioned changing over of family headship (type C) occurred in three ways: through marriage of a man to a female head of a family whereby the husband automatically became the family head, death of the husband, and desertion of the husband.

591 The changing over of the family headship of the type
592 B in Table 7 was a natural process of inheritance. In type
184 A, it was found that senility accounted for seven out of
428 eight cases of the changing over, the one exception being
587 the case of a widower who wanted to have a second wife and who thought that the family assets originally belonged to his first wife's biological family and therefore an outside woman should not lay a hand on the 300,000 baht property.

591 A factor that should also be taken into account was that he
592 had a regular income of 450 baht a month from his job in the
434 Highways Department, which by the village standard was more than enough for him to live comfortably with his second wife.

591 Historical records of the 96 farm operating families do not contain information as to how the 50 families passing through nascent period were divided into those staying with wives' families and those staying with husbands' families. The 1953 census, however, reveals that of 48 married couples then living in 42 families of parents of either side (four such families included two couples and one family three couples), 23 were with husbands' parents and 25 with wives' parents. The proportion may thus be estimated at about one to one.

59 During the nascent period, the couple ordinarily
434 received from the parents they were staying with a kind of
[431] annual bonus locally called lampai which varied according to the economic status as well as generosity of the parents. Lampai took several different forms. Thus, a couple might receive all the paddy harvested from a specified area of the field of three, five, or ten rai; they might be given a fixed quantity of the crop -- say 50 or 100 tang; they might receive cash -- say 500 baht or any other varying amount. In some cases, the couple were expected to earn their lampai outside the family farm after obligation to family work had been fulfilled. This took the form of piece-working or trivial trade.

59 If no lampai was given, the parents might give some gold in
[431]

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Family workers are members of farm operating families other than the farm operators themselves who regularly participate in the farm work of the families. These do not include children of school age who occasionally help in the farm work especially during the busiest period.

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Hired laborers are farm laborers who are hired for all or part of the work season for more or less fixed wages in kind or in cash. These hired laborers have in addition to their yearly wage a privilege to board and lodge freely at their employers' home, and thus become part of their employers' household. The contract, usually verbal, is on a one year basis.

#243
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Piece-workers are farm laborers who receive wages on a piece-work basis for such short-term tasks as uprooting the seedlings, transplanting, and harvesting. Payment for piece-work is made at the end of the day at going rates. It has been observed that most of the extra work in Bangchan is done by piece-workers, and that very few farms engage hired laborers. Piece-workers may be called independent workers, for they have no obligation other than finishing the day's task agreed upon. They may work whenever they please and may stop working altogether if they have enough money. The disadvantage of piece-workers is that they do not have, as hired laborers do, the guarantee of a job. This is quite crucial especially if under-employment of farm labor exists.

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125 it would deny any benefit that would arise out of continuous observation of each farm and farm operator through a series of years. With a view to retaining this benefit of continuity, we decided to adopt the first method -- that,is, we included in the sample the ten new families branching out from the original sample-families. Thus, in our subsequent study in 1952 the size of our sample became 106 farm operating families.

There were, however, some types of data which involved records in the past four or five years, such as harvested crop during 1948-52, accumulation of wealth, major receipts and expenses during the same period. In these cases we naturally used the continuing sample of 96 families.

*243 Composition of Farm Operating Families

162 Table 31 shows that the size of the farm operating
• 592 family decreased from 6.3 in 1948 to 5.7 in 1952. It also shows that, while the number of adults remained more or less constant, the decrease in the size of the family was due almost entirely to the decrease in the number of the young from 2.5 in 1948 to 2.0 in 1952.

*243 A possible explanation for this lies in the economic
162 consequence of the war. Strict government control of the
592 price of rice and of the internal movement of paddy during
182 the war and also in the immediate postwar period has so
178 adversely affected the economic condition of rice farmers
[582] that marriage has often been postponed. In cases where

[TEXT CONTINUED ON PAGE 182]

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TABLE 31

COMPOSITION OF FARM OPERATING FAMILIES
Bangchan, Thailand, 1948 and 1953

Year	Number of Families	People Included			Average Family Composition		
		Young*	Adult**	Total	Young*	Adult**	Total
1948	104	256	398	654	2.5	3.8	6.3
1952	106	215	391	606	2.0	3.7	5.7

* Age 14 years and under.

** Age over 14 years.

243 marriage did take place, the couple were usually obliged
162 to stay with the parents of either the husband or the wife.
178 It is reasonable to believe that the nascent period was
592 prolonged during this period of hard times. Thus, the
182 family size tended to be larger than it normally is. This
[582] is especially true for rice farming families where there always is some work for members able to work. It is not surprising, then, that the average size of farm operating families in Bangchan was 6.3 in 1948 while the average size of all families was 5.7 according to the 1949 census. A steady rise in the price of paddy after the war has improved the economic condition of rice farmers. The increased income, however, had to be spent first on replacement of equipment and housing facilities which had been long overdue.
[792] Finally, the bumper crop of 1948 with an ever-increasing price put an end to farm misery, and the following dry season saw a record number of newly ordained priests and
[591] merit making activities. From then on proportionately more marriages took place and there were fewer economic obstacles to keep newly wed couples from starting out independently. The combined effect of termination of prolonged nascent period and freer establishment of new families was that the size of the farm operating family was considerably reduced.

16 It may seem strange that more marriages should bring about a drop in the number of the young from 2.5 per family in 1948 to 2.0 in 1952. By the young is meant, however,

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16 all children up to the age of 14 years. So it is only a fraction of these children, probably those in the age group of 0-3 years, that was contributed by marriages after 1948. While it is true that this contribution was quite considerable, since the proportion of children in the age group of 0-4 years rose from 10 per cent of total population in 1949 to 13 per cent in 1953, yet it was not enough to offset the effect of the decline in birth rate resulting from the war. Another factor to be considered is that children born during 1935-38, who were included as the young in the 1949 census, became adults in the 1953 census. Since these children were born before the war which did not affect their proportionate percentage in the total population, their removal from the young category in 1953 was not compensated by the entry into that category of children born during 1950-53. Finally, it was observed that among people who emigrated during 1949-53 small nuclear families consisting of young husband and wife and two or three children in the age group of 0-14 years predominated. Since the proportion of the young in these families, which had existed in Bangchan independently or more likely as a part of the extended families, is larger than the village figure, emigration must also be considered a factor responsible for the decline in the proportion of the young from 2.5 per family in 1948 to 2.0 in 1952.

*243 • 592 178 *128 It was found in the preliminary survey in 1948 that of 398 adults in the 104 sample-families 319 or 80 per cent were working members of the family. Unfortunately, we did

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not obtain comparable figure for our 106 sample-families in 1952. The question is whether or not we might assume that 80 per cent of the adult members of the 106 sample-families in 1952 were working members. It should be understood that working members of the family were those who participated in the family farm work, but they did not have to be fully employed. If the family farm is rather small, say only 10 rai, and there are as many as four able members of the family, naturally the four members will take turns in the farm work although the whole job can be easily done by two family workers or even one. In this case, we still consider that there are four working members of that family, for it is inconceivable that two able members of the family without help from the other two, would do all the farm work for the whole season.

What about the other 20 per cent of adult members? It was observed in 1948 that these adult members of farm operating families did not participate in the family farm work because they were too old to work, they were nursing mothers, sick (including pregnant), still incompetent in farm work (especially young people at the age of 15-16 years), or they were tied up with other jobs. All these factors except the last one may be considered natural factors which occur in a somewhat constant proportion regardless of ti[illegible] It would seem, then, that we might reasonably assume that 80 per cent of adult members of our sample-families in 1952, or 313 out of the total of 391 persons, were working members.

243 except for the question of some of these adults being tied
178 up with other jobs. Nevertheless, when limited job oppor-
592 tunity was considered, it was unlikely that this last
128 factor would appreciably affect the estimate. It was assumed, therefore, that 313 out of the total of 391 adults in our 106 sample-families, or an average of 3.0 persons per family, were working members in 1952.

[162] Table 32 shows that the size of farm operating families in 1952 ranged from one to thirteen, averaging 5.7, the median being 6. Eighty-six of these 106 families, or 81 per cent, had a size between three and eight.

Training for Farm Work

243 Every adult in the village of both sexes is expected
462 to be able to do farm work. This includes the ability to perform the following jobs.

Minimum standard: Every step of rice production except uprooting of rice seedlings which is performed only by adult males (for various steps of rice production, see the chapter on farm technology); digging and mounding; paddling and rowing; hauling except a heavy load like gas engines; tending the buffaloes and livestock; gardening; pounding of cargo rice for consumption during the work season; fishing by line-and-hook, dipping net, and trap; food preparation.

In addition to the minimum standard listed above for both male and female adults, male adults are expected to be able to perform the following jobs: Uprooting of rice

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TABLE 32

DISTRIBUTION OF FAMILY SIZE 106 FARM OPERATING FAMILIES
Bangchan, Thailand, 1953

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• 592

Family Size	Number of Families
1	2
2	4
3	15
4	16
5	17
6	12
7	14
8	12
9	8
10	4
11	1
12	0
13	1
Total	106
Mean size	5.7
Median size	6.0

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465 two laborers -- 1,000 baht for Laborer 7 and 900 baht for Laborer 30, averaging 950 baht for the year. In 1950, earnings of 500, 850, and 1,000 baht were reported respectively by Laborers 18, 19, and 29, averaging 783 baht for the year. In 1951, only one case of 600 baht earning was reported by Laborer 5. In 1952, earnings of 600, 1,000, 1,000, 1,000, and 350 baht were reported respectively by Laborers 5, 14, 29, 30, and 32, averaging 790 baht for the year. In 1953, earnings of 2,000, 600, 1,000, and 300 baht were reported respectively by Laborers 4, 5, 14, and 15, averaging 975 baht for the year.[4]

• 592
464 In the preceding paragraph, the term "transient family worker" was introduced. This refers to a person distantly or not at all related to the family in question who has been accepted as a family member with a dual status of half relative and half laborer. Since there is actually no genuine family tie, such member has been observed to come in and go out of the family rather freely as the occasion [465] may arise, and hence the term "transient". While staying with the family, the transient member is expected to participate in the family work that is appropriate to him in exchange for good, shelter, clothing, and occasional monetary gifts.

In 1948, we came across a case where an old man of 80 was living with one of the seven headmen of Bangchan as

4. Table 53 gives an idea of the meaning in real terms of these incomes.

592 a transient member of the family. This was rather unusual,
464 however. The pattern was that a transient member was
[561] accepted when he is rather young. If he was quite mature,
he might also be accepted; but the expressed motive of the
592 accepting family would then be somewhat different. When
465 approached by a mature prospective transient member, the
464 family head would most probably say that he could not afford to keep a hired laborer but he would be glad to let the man or woman stay with him as a member of the family, and that they might as well "share in the food, and share in the work".

It has been observed that transient family workers received much less from the family than the standard wage
[435] of hired laborers. While the latter received an annual wage of 1,000 baht or the crop from 5 rai, the former might be given only 50 or 100 baht a year. To farm operators of moderate or large rice farms, transient family workers were certainly an economic advantage. It was quite natural that these operators would try to keep them in the family as long as possible. Among the several methods observed were the following: (1) adoption; (2) promise to sponsor ordination of the young male transient member; and (3) giving a certain amount of lampai.

592 It was mentioned in the section on the family in
464 Chapter II that adoption as practiced in Bangchan did not
[597] involve legal registration of the adopted child, and that
[792] maltreatment of adopted children was not infrequent. To sponsor an ordination was in fact not quite as expensive

592 as it might seem to be, for there was a wide range of
464 ordination expenses and the family head naturally tended
792 to arrange one that was not so expensive unless it was for his own son. He might even arrange a joint ordination of
592 which the cost was much reduced. Moreover, most of the cost
464 of the ordination would be covered by the customary contributions made by neighbors. The lampai arrangement, which was nothing but a sophisticated term for wage, was a real concession on the part of the family head, indicating that he really wanted to keep the transient member in the family even at a certain cash expense.

464 The presence of transient family workers and their
592 relatively low remunerations indicated a condition of popu-
466 lation pressure onland. Already, these people had adversely
[167] affected the laboring sector of the village economy because they represented an additional supply of cheap labor. Although they had contributed to a low cost of producing paddy and thus benefited the operators, with the rise of the price of foods which farmers had to buy and with the decline of free food (in the forms of fish and aquatic plants) transient family members may in time become a liability rather than an asset to the family. To be sure, when such a time has arrived, the family would be reluctant to admit a transient member. The trouble, however, is that the cost of maintaining an extra family member is implicit and not readily distinguished by the family. It would thus take some time before the real situation would be recognized.

182 464 • 592 Nevertheless, the advantages of transient member arrangements to both parties should not be overlooked. It has at least provided the poor with a kind of economic security, since they might arrange to join some families in the village in time of crises. This is perhaps the principal reason why the village, not the living quarter, is considered by most Bangchan people to be their home. By sending some offspring to live with a more affluent family, the poor villagers had been able to reduce the size of their families and thus had managed to prevent their level of living from falling far below the minimum level of subsistence. As for the accepting families, it has already been shown that they had enjoyed the benefit of cheap labor provided by transient family workers.

*243 178 463 621 [592] Changes in Farming Population in Bangchan

Table 11 shows that the number of farm operators in Bangchan had decreased from 229 in 1949 to 216 in 1953, while the number of the family heads whose main incomes were derived from farm labor had increased from 27 to 38 within the same period.

When the farm operating families were studied individually, it was found that 181 families had been operating their rice farms in Bangchan throughout the period. There were 48 farm operators whose names disappeared from the list of operators in 1953. These were compensated by 35 new operators. Thus, there was a net loss of 13 farm operating families during the period from 1949 to 1953.

*243 would detach themselves from the ground and be seen afloat on the surface water. To remedy this, the farmer usually inspected his newly transplanted parcel and simply pressed the floating seedlings back into the ground. Sometimes, transplanting was poorly done or the seedlings were roughly handled during uprooting, resulting in "dead stands." These dead stands could not be distinguished from the live ones in the first few days after transplanting, for both would appear greenish yellow in color. In four days after transplanting, however, the root system of the live rice plant resumed its normal function and most stands assumed their true green color. The dead stands could then be easily detected for they remained greenish yellow. These dead stands were removed and new seedlings were transplanted in their places.

Weeding was another care given to the rice plants. Again, it was difficult to apportion the time spent on each of these separate activities -- pressing the floating seedlings back into their original position on the ground, replacement of the dead stand stands with the live seedlings, and weeding -- for at certain periods (within a few days after transplanting) they were all done in the same trip and almost concurrently.

[476] Weeding was also done cooperatively, although recently cooperative weeding has become less popular and involved only [592] few families. It may be said, therefore, that care of the [178] plants as of 1953-54 was largely a family undertaking. Our records show that care of the plants in our sense of the term [476] started on July 24 and ended on September 29. Of this, the [592]

*243 work done by the family members themselves lasted from July
[476 24 to September 28 and the work done through cooperative work
• [592 group (weeding only) lasted from September 20 to September 29. It was observed that as from the end of September there was no need for weeding, for weeds could not keep up with the rising water level.

14. Preparation of threshing floor. When harvesting was approaching, the farmer would get busy preparing the threshing floor. He had to do this well ahead of time, that is, before harvesting actually started, or else there would be complications during that busy period. As a matter of fact, this was a rather short step of rice production. Although our records show that it lasted from November 29 to January 27, that seemingly long period was due to the fact that cracking appeared and repair of the threshing floor was necessary on the latter date. In fact, the whole work took only seven work days, involving only 13½ man-hours and 32 buffalo-hours. The method of preparing the threshing floor was simple. The ground space designated to be the floor was first soaked with water for the whole night. In the following morning, four buffaloes were led to tramp over and over this small earth floor for an hour and a half, in the meantime another worker levelled the floor with grub hoe. The process was repeated on each of the four following days until the floor became compact and level.
*243 Finally the surface was pasted with wet buffalo manure to mini-
476 mize surface cracking.

15. Harvesting. This was largely done through a

243 461 128 Since the farm work usually followed the same pattern for a certain period, it was observed that Phan remembered quite well the time and the kind of work done by each family worker during the past two or even three days. The time of work was recorded [231] to the hearest half-hour. In Tables 35 and 35, labor spent by [464] family workers, piece-workers hired by the family, and buf- [592] faloes, on different steps in rice production was given in man-hours and buffalo-hours. The dates when these various [476] jobs started and ended were also given. It should be noted, however, that labor recorded as spent on cooperative work was actually not spent on the family farm but rather on farms of other cooperative members. This was nevertheless exactly compensated by cooperative work on this farm on several occasions which were not entered in the calculation to avoid error because of duplication.

243 461 The data from Tables 35 and 36 may be summarized as follow:

221 1. Man labor provided by farm staff.

[592] [464] [231]

Work started June 4, ended February 14, a total of 248 work days.
Total man-hours spent by farm staff -- 5,478½.

2. Man labor provided by piece-workers.

Work started July 19, ended August 30, a total of 10 work days.
Total man-hours spent by piece-workers -- 229.

3. Animal labor provided by buffaloes.

Work started June 4, ended February 13, a total of 112 work days.
Total buffalo-hours -- 2,119.

[TEXT CONTINUED ON PAGE 246]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 35

SUMMARY OF YEAR ROUND WORK BY CHOM FARM STAFFS
Bangchan, Thailand, 1953

*243
221
461
[592]

Steps*	Duration Start	Duration End	Days in work	Man-hrs.
A. Work by Farm Staff				
1. Plowing	June 4	Aug 23	49	918½
2. Harrowing	June 13	Aug 24	28	291
3. Remove weeds after harrow	June 13	Aug 15	25	219½
4. Irrigate and drain	June 4	July 8	21	186½
5. Rolling	June 13	Aug 22	7	42
6. Sow, broadcast	June 18	July 15	13	42½
7. Prepare and repair	July 5	Dec 9	10	106½
8. Prepare bamboo binders	July 17	Aug 27	10	45½
9a. Coop uprooting	July 15	Sept 11	25	127½
9b. Family uprooting	July 17	Sept 8	20	115½
10a. Coop transplanting	July 18	Sept 19	36	267½
10b. Family transplanting	Aug 20	Sept 10	13	125
11. Hauling	July 17	Sept 14	55	733
12. Field inspection	Aug 25	Nov 30	42	87
13a. Care of the plants	July 24	Sept 28	14	114½
13b. Coop weeding	Sept 20	Sept 29	8	86
14. Prepare thresh floor	Nov 29	Jan 27	7	13½
15a. Coop harvesting	Dec 4	Jan 25	44	747½
15b. Family harvesting	Dec 12	Feb 6	18	148½
16. Threshing	Dec 15	Feb 14	43	597
17. Winnowing	Dec 25	Feb 14	9	86½
18. Stacking of straw	Dec 29	Feb 4	2	16
19. Procure grass for buf.	June 14	Nov 27	83	157
20. Supervise coop work	July 22	Jan 24	8	26
21. Entertaining guest workers	July 22	Jan 24	7	158½
Total	June 4	Feb 14	248	5,478½
B. Work by Piece-workers				
1. Coop uprooting	Aug 18	Aug 25	6	24
2. Uprooting	Aug 23	Aug 30	.2	45
3. Transplanting	July 19	Aug 2	5	160
Total	July 19	Aug 30	10	229
Grand total	June 4	Feb 14	248	5,707½

[464]

* See details in the section on steps in rice production.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 37

DAILY LABOR SPENT BY CHOM FARM STAFFS
Bangchan, Thailand, 1953

243
221
231
461
476
592

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Jun	4	8	24	--	24
	5	16	28	--	28
	6	16	28	--	28
	7	16	28	--	28
	8	16	28	--	28
	9	16	28	--	28
	10	8	12	--	12
	11	--	16	--	16
	12	16	18	--	18
	13	16	15½	--	15½
	14	16	27½	--	27½
	15	13½	29	--	29
	16	22	19½	--	19½
	17	22	16½	--	16½
	18	20	26½	--	26½
	19	--	14½	--	14½
	20	24	25	--	25
	21	24	24	--	24
	22	23	33	--	33
	23	24	24	--	24
	24	21½	25½	--	25½
	25	18	14	--	14
	26	--	18½	--	18½
	27	25	25	--	25
	28	24	25	--	25
	29	22	34½	--	34½
	30	28	32	--	32
July	1	22	43	--	43
	2	30	38	--	38
	3	27½	30	--	30
	4	--	23	--	23
	5	28	38	--	38
	6	30½	32½	--	32½
	7	18	21	--	21
	8	32	35	--	35
	9	28	28	--	28
	10	28	3-½	--	30½

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

*243
221
231
461
476
• 592

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hr	man-hr	man-hr	man-hr
July 11	--	23½	--	23½
12	24	20	--	20
13	24	26½	--	26½
14	28	31	--	31
15	24	38	5½	43½
16	28	27½	--	27½
17	28	36	--	36
18	22	30	5	35
19	--	36	--	36
20	30	37½	--	37½
21	28	37	4½	41½
22	19	46½	5	51½
23	8	20½	4½	25
24	9	31	--	31
25	10	16	--	16
26	--	4	4	8
27	--	17	4½	21½
28	25½	27½	12	39½
29	26	28½	9½	38
30	28	21	13½	34½
31	30	35	--	35
Aug 1	16	18	6	24
2	20	21½	7	28½
3	--	7½	8½	16
4	5	17	9½	26½
5	22½	24½	16	40½
6	29½	29½	10½	40
7	24	30½	6½	37
8	25½	25½	7½	33
9	38	26	10½	36½
10	--	8	19½	27½
11	28	16	13	29
12	34	19	16½	35½
13	34	25½	12	37½
14	29	19	7½	26½
15	32	81½	4	85½
16	11	67½	4	71½
17	12½	35	5½	39½
18	--	4½	8	12½
19	36	38	--	38
20	29	17½	8½	26

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date	Animal labor	Human labor		
		On farm	On coop. work	Total
	buf-hr	man-hr	man-hr	man-hr
Aug 21	32	18	6½	24½
22	19	28	7	35
23	17	41½	--	41½
24	8	16	4½	20½
25	--	19	7	26
26	--	14½	3½	18
27	--	21	15	36
28	--	4	16	30
29	--	2	22½	24½
30	--	14	14	28
31	--	8	4	12
Sept 1	--	8	9	17
2	--	27½	10	37½
3	--	12½	11½	24
4	--	19	7	26
5	--	21½	3½	25
6	--	19	--	19
7	--	17	--	17
8	--	12	--	12
9	--	24	--	24
10	--	6	--	6
11	--	11	3	14
12	--	9	--	9
13	--	6	--	6
14	--	2	--	2
15	--	8	--	8
16	--	3½	--	3½
17	--	4½	--	4½
18	--	2	--	2
19	--	2	3½	5½
20	--	2	12	14
21	--	2	7	9
22	--	2	11	13
23	--	2	7	9
24	--	2	--	2
25	--	2	14	16
26	--	2	14	16
27	--	2	14	16
28	--	16	--	16
29	--	2	7	9
30	--	2	--	2

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		Total
			On farm	On coop. work	
		buf-hr	man-hr	man-hr	man-hr
Oct	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	2	--	2
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2
	11	--	2	--	2
	12	--	2	--	2
	13	--	2	--	2
	14	--	2	--	2
	15	--	2	--	2
	16	--	2	--	2
	17	--	2	--	2
	18	--	2	--	2
	19	--	2	--	2
	20	--	2	--	2
	21	--	2	--	2
	22	--	2	--	2
	23	--	2	--	2
	24	--	2	--	2
	25	--	2	--	2
	26	--	2	--	2
	27	--	2	--	2
	28	--	2	--	2
	29	--	2	--	2
	30	--	2	--	2
	31	--	2	--	2
Nov	1	--	2	--	2
	2	--	2	--	2
	3	--	2	--	2
	4	--	2	--	2
	5	--	2	--	2
	6	--	2	--	2
	7	--	5	--	5
	8	--	2	--	2
	9	--	2	--	2
	10	--	2	--	2

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hr	man-hr	man-hr	man-hr
Nov	11	--	2	--	2
	12	--	2	--	2
	13	--	2	--	2
	14	--	2	--	2
	15	--	2	--	2
	16	--	2	--	2
	17	--	2	--	2
	18	--	2	--	2
	19	--	2	--	2
	20	--	2	--	2
	21	--	2	--	2
	22	--	2	--	2
	23	--	2	--	2
	24	--	2	--	2
	25	--	2	--	2
	26	--	2	--	2
	27	--	2	--	2
	28	--	2	--	2
	29	--	2	--	2
	30	6	3	--	3
Dec	1	6	2½	--	2½
	2	6	1½	--	1½
	3	6	1½	--	1½
	4	8	2	7	9
	5	--	--	--	--
	6	--	--	--	--
	7	--	--	--	--
	8	--	2½	--	2½
	9	--	33	--	33
	10	--	--	--	--
	11	--	12½	4½	17
	12	--	8	5	13
	13	--	16	22	38
	14	--	--	15	15
	15	10	17	16	33
	16	10	30	19	49
	17	20	33	10	43
	18	22	34	15	49
	19	28	24½	21	45½
	20	28	19½	24	43½

7: Janlekha X-4,5 (1948-1953)p956 AO7 Gentral Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human labor		
			On farm	On coop. work	Total
		buf-hrs	man-hr	man-hr	man-hr
Dec	21	--	4½	18	22½
	22	28	30½	21	51½
	23	28	43½	27½	71
	24	6	40	8	48
	25	6	21	18½	39½
	26	8	34½	--	34½
	27	8	24	18	42
	28	12	17½	24	41½
	29	--	14½	24	38½
	30	--	47	--	47
	31	--	14½	16	30½
Jan	1	6	23	24½	47½
	2	4	17	24	41
	3	6	26½	24	50½
	4	--	27½	32	59½
	5	12	25½	32	57½
	6	4	20	36	56
	7	12	25½	32	57½
	8	12	26½	32	58½
	9	--	34	15	49
	10	--	19½	16	35½
	11	--	25	9	34
	12	--	23½	18	41½
	13	--	23½	10	33½
	14	4½	32	11	43
	15	--	26	16	42
	16	--	10	9	19
	17	--	16½	15	31½
	18	6	21	9½	30½
	19	--	33	10	43
	20	14	25½	16	41½
	21	14	17½	10	27½
	22	--	32½	5	37½
	23	6	5½	9½	15
	24	--	74½	--	74½
	25	--	2½	8½	11
	26	--	22	--	22
	27	--	29½	--	29½
	28	20	47½	--	47½
	29	14	31	--	31
	30	20	24	--	24
	31	24	29	--	29

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 37 (Cont.)

DAILY LABOR SPENT BY CHOM FARM STAFFS

Date		Animal labor	Human Labor		
			On farm	On coop. work	Total
		Buf-hrs	man-hr	man-hr	man-hr
Feb	1	16	25½	--	25½
	2	16	39½	--	39½
	3	14	43½	--	43½
	4	--	34	--	34
	5	24	38½	--	38½
	6	8	22	--	22
	7	--	5	--	5
	8	8	10½	--	10½
	9	--	--	--	--
	10	--	--	--	--
	11	--	--	--	--
	12	--	--	--	--
	13	16	12½	--	12½
	14	--	16	--	16

243 433 water conditions is also a major factor militating against investment on fertilizer. As it happens, therefore, fertilization does not prevail in the decision making of Bangchan operators.

If the operator has any positive role at all in the production plan, it is in the selection of rice varieties. This topic has already been dealt with in the section on labor adjustment devices of the preceding chapter.

243 433 423 Finally, one of the most important organizational decisions involves the choice of the size of the farm. It has been observed that poverty in agriculture is as much a problem of farm size as of any other single factor. Most frequently, farm size is spoken of in terms of acres -- the land input. Although this measure is generally not sufficient, it serves the purpose quite well in single-crop farming areas such as Bangchan and all other rice areas in this country. In this study, therefore, farm size will be expressed in rai (two-fifths of an acre) devoted to rice.

Generally speaking, if the Bangchan operator is free [464 592] to choose the farm size that suits him best, his decision will be based almost entirely on the size of labor force under his command, which in turn depends largely on the size of his family labor. As it happens, most operators are not 243 free to do so. It was mentioned in the section on land tenure 427 of Chapter III that it was only the landlord-operator group, 464 actually 11 out of a total of 216 farm operators in Bangchan, 423 that had demonstratively shown sign of land saturation and

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 433 [427] 1. Land: This element represents 22 per cent of the total cost of producing paddy (Table 38). Of this, 15 per cent is actual payment for explicit rent while 9 per cent is assessed value of implicit rent.

Among the cost items in Table 38, cash expenses include actual rent (13%), wages for pieceworkers (3%), wages for hired laborers (3%) and seeds and materials (6%), while imputed expenses include implicit rent (9%), value of family labor (31%), value of the operator's labor (13%), depreciation (10%) and interest on investment (11%). It is seen that cash expenses comprise only 25 per cent, while imputed expenses comprise as high as 75 per cent of the total cost.

In view of the high proportion of imputed expenses, the method adopted in the imputation will be explained here.

[427] [435] 1. Rent: Going rate for 1948-49 of 6.2 tang (49 baht) per rai was used.

* [592] [461] 2. Value of family labor: Labor requirement based on acreage was first calculated, using the standard factor of 13.4 adjusted rai to one fully employed worker (this was the 1949 average for farms with regularly hired laborers on which [435] workers were assumed to be fully employed). When the labor requirement in terms of number of fully employed laborers needed was known, imputed family labor cost was calculated at the going wage rate for the year of 1,600 baht (1,000 baht cash and 600 baht of food privilege).

3. Value of the operator's labor: In addition to

[TEXT CONTINUED ON PAGE 280]

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TABLE 42

DISTRIBUTION OF FULL TIME LABOR FORCE OF 104 FARMS
Bangchan, Thailand, 1948

Condition of Regular Labor Force	Number of Farms	Number of Workers	Adjusted* Areas	Adjusted Rai Per Man
			rai	rai
Farms without hired laborer				
One family worker	8	8	131.75	16.5
Two family workers	28	56	497.50	8.9
Three family workers	25	75	646.25	8.6
Four family workers	20	80	747.50	9.3
Five family workers	10	50	487.25	9.7
Six family workers	--	--	--	--
Seven family workers	1	7	75.50	10.8
Eight family workers	1	8	83.00	10.4
Nine family workers	--	--	--	--
Ten family workers	1	10	107.50	10.8
Sub-total	94	295	2,776.25	--
Average	1	3.1	29.50	9.4
Farms with hiredlaborers				
a. With one hired laborer				
One family worker	1	2	58.50	29.2
Two family workers	5	15	177.50	11.8
Five family workers	2	12	108.00	9.0
b. With two hired laborers				
One family worker	1	3	70.00	23.3
c. With three hired laborers				
Two family workers	1	5	80.00	16.0
Sub-total	10	37	494.00	--
Average	1	3.7	49.50	13.4
Grand total	104	332	3,270.25	--
Average	1	3.2	31.50	9.8

* An "adjusted" rai equals one transplanted rai or two broadcast rai. Cultivation of one rai by the broadcasting method requires roughly only one-half the labor involved in the transplanting method.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

121 lies the main problem of Southeast Asia -- the problem basically of transition. Writing in 1949, Paul Mus rightly states: "The traditional world was not dead; it still held sway in the countryside. A state of affairs, in which the people's livelihood is calculated in terms of one world and their taxes in those of quite another, cannot endure."[2]

* 128 433 Degree of Self-sufficiency

During 1952-53, a consumption study was made on 106 sample-farms, which include the 96 continuing sample-farms and 10 new farms brancing off from the original sample-farms of 1948. Details of this consumption study will be discussed in the section on ordinary household expenses later in this chapter. For the purpose of the present discussion, Table 46 -- frequency distribution of degree of self-sufficiency of those 106 sample-farms -- is here introduced. By degree of self-sufficiency is meant the proportion of the value of home-grown products expressed as a percentage of the total value of annual consumption. Quantitatively speaking, it is seen that Bangchan farm families produce more than half of the things they ordinarily consume.

24 433 • [592] 000 However, the number of different products consumed which are produced by the family can be counted with the fingers of one hand. These are rice, fish, eggs, fruit and vegetables. On the other hand, there are scores of items

2. Paul Mus, The Role of the Village in Vietnamese Politics.

[TEXT CONTINUED ON PAGE 296]

12

581 It was not felt necessary to marry. Because of the strong
589 economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married.
• [593] One group of grown siblings of both sexes stated they were "too happy together to marry."

836 Pre-marital chastity was more or less observed. If a girl became pregnant before marriage, her parents brought pressure,
848 usually successful, on the boy to marry her. The occasional illegitimate child was raised without stigma in the girl's family, though problems arose during pregnancy and delivery (cf. "cone of wood" below). The mother later found a husband. One father was angered because he felt his daughter's pregnancy wrecked her chances for a marriage of prestige. He was conspicuous for his social aspirations towards city ways.

864 Information on human sexual matters was gathered by the
831 young sometimes by accidental observation of parents and others, through hints from hearing cursing, and by conversations with grandparents, older siblings, and friends of the same sex. Men joked on sex matters at the all-male rice-uprooting parties. Being antithetic to the ascetic prescriptions of Buddhism, sex talk was highly charged. Sex was never discussed in mixed company.

Residence

592 The nuclear family of husband, wife, and unmarried children was the primary social and productive unit, but other resident kinship units larger and smaller also occurred. After marriage,
[591] the couple usually lived for a time in the house of the parents of one spouse or the other; then, as soon as they could afford it, set up housekeeping in their own house. Of a sample of 96 families in Bang Chan, 30 set up independent households at once after marriage, 16 after one year, and the rest, a few per year, on throughout 10 years; 15 of the families never had a house of their own but lived with other relatives (Janlekha:37). Of 298 families, 59.4 per cent lived independently as a nuclear family, while 34.9 per cent lived with other relatives in the house. (The remaining were single persons living alone, or priests at the temple in the "ecclesiastical family.") The average size of the households (not necessarily the nuclear families) was 5.7 persons, with a range of 1 to 14, the median
361 being 6 (ibid. 28-29). The house of a new couple was usually built adjacent to parents or relatives, and certainly within
621 calling distance or sight of some other household. Social patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

close touch with each other's activities and needs.

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time.

Wealth Differences:

Way of Life

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable.

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 50 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygynous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap. V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:147).

Chapter V

BIRTH CUSTOMS: THEIR SIGNIFICANCE

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Physiological ideas clarify only part of DÛan's tale. To illuminate other underlying tenets, we begin with the idea of help.

Help

[812]

In "Influences on Health" (p.27) it was pointed out that Bang Chan conceived of individuals as unique beings, each with his fate in his own hands, with no bonds nor responsibilities to any other being. In an earthly existence, though, it would be difficult to obtain satisfaction or even life itself under such separatist terms. What relationship was possible between such autonomous beings? How in fact was rebirth brought about? Help (chûai) was the fundamental principle for organizing social interaction. Without help, the villagers saw existence not only as lonely and ineffective but even unrealizable. With it, personal and mutual goals were achieved, and life was enriched. People were "independent agents serving each other because it is mutually beneficial" (Phillips:63).

Responsibility for initiating help lay formally with persons of greater age or higher status. Elders assisted juniors, government officials assisted peasants. They received in return gratitude, obedience, and respect. Parents received care in their old age from the children they had nurtured. In the ordinary walk of life, particularly in a household, though, aid took the form of a continuous give and take with associates. The view of help as the mainspring of social action cut through many a problem of initiating aid or waiting on another to act, for fundamentally, on the cosmic scene, all beings were equally old. The child who helped most by giving over his earnings was loved most by his parents (Phillips:69); when married, children helped their parents less than before marriage, still less if they cooked in separate kitchens in the same house, and much less when they moved to a separate house, for their time and cash went increasingly to maximize their own interests.

[593]

retreat (ōk phansā) in order that her child would come out (ōk) more easily. Here none sought to divide the worlds of the natural and the supernatural, or to mark off "imitative magic" from the "learning by example of the natural world." A stronger influence came from more powerful agents, so that the effects of the Buddhist temple carried greater effect than the actions of a mere neighbor. Yet any like influence was of aid, especially in a verbal similarity. Thus, an event occurring on a Friday was apt to be auspicious because the Thai name for Friday contains an element identical in sound (though etymologically different) to the word for happiness (wansuk= Friday; suk=happiness), and for the fortunate status of true adulthood (suk=mature, ripe).

Stability in a Floating World

In explaining why some children were "born easily and were easy to raise" (liang ngāi) certain persons simply said, "They were born into the right family. Those born to the wrong family usually die." In defining the "right" family, merit, habituation, and helpfulness converge.

Most families were thought to live together as a group in life after life. In view of the separateness of souls, how was this brought about? The key lay in the conviction that people who made merit together met in future lives. Since most merit-making was undertaken as an enterprise of the nuclear family, sometimes with close kinsmen and friends, they would find each other. Some of the eagerness of friends to help (chuāi ngān) with cash or labor was in order to meet in later lives. These persons were used to each other, used to helping each other, and so might marry. Thus, if they lived rightly, the nuclear family, maybe with an infusion of beloved old friends, expected to carry on in the next existence. Although a family's prosperity proved its merit, and its wealth facilitated making more merit, continuity in time was not limited to the wealthy. Proof that a couple had been married in a previous life lay in the birth of a boy as first born. Such a couple was known as a "khū" (pair), and divorce was held to be highly unlikely.

How did a child find its "right" family? After whatever necessary stay in purgatory, the khwan soul of a deceased member roosted in a tree near to its old home, then flew into an accustomed womb. One recalls the start of the blessing (p.48), "Come, khwan! Come my own child!" A woman hoped that the khwan was one previously born to her. "A couple lost its first child. Later the wife was fearing for the life of their sickly second-born." The husband said, "It is according to your sin and merit. If the child is your own child, he will live with you. If not, he cannot."

761 Since only meritorious children were born into the
775 "right family," they were helpful and so easy to raise. The
• 593 easiest to raise were reincarnations of babies deceased in
829 the mother's present life. "A girl of three died. Her father
782 dreamed he was at her coffin. She asked for water which he gave her, then brought her home. Months later a boy was born, so easily raised up that people knew it was a reincarnation of that girl." Here amiability and the change to male sex demonstrated merit. In another tale, "a woman lost many babies at birth. Her husband, thinking it was the same child trying to be born to that mother, marked the forehead of the last deceased baby. His surmise proved correct, because the next baby born had this mark on its forehead."

This assumption that a woman's children were born to her over and over led to a measure of control over the cooperativeness of the child in the womb. A child trained to "good habits" became a meritorious adult who, when reborn, would of course "help" his mother in childbirth. It was advisable to set one's own child into paths of proper behavior, for he could be born again to a descendent, and in all likelihood to oneself.

On the other hand, families were not closed groups. "Like a leech that sticks in one place, then goes to stick somewhere else, so a deceased person may be reborn somewhere else," said a priest. The marriage blessing stated, "May angels, not criminals or beggars, reincarnate as your children." Thus was explained why upright parents might have a disobedient, roaming child. He had roamed into a new family which perhaps he had met during a pleasant casual visit to them in another life. If he did not stay home to make merit with his present family, a wayward child would roam out of it as easily as he came in. Here was the ultimate danger in visiting around too much.

761 Because all individuals lacking in merit died off at
593 birth, some of whom because they got into the wrong family,
782 a selective process continuously weeded out the extremely non-meritorious so that those who were born usually survived. In fact, Hauck's figure of 90.6 live-births [163] (1956:33), the percentage of total pregnancies shows how many meritorious babies were born to the right family!

852 The Winnowing Ceremony
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This ceremony, described in Dũan's tale, was usually performed shortly after delivery, though it might occur anytime during the first three days of a baby's life. The child, placed on the tray (twins were laid together or separately) was claimed by the mother or the father, who

852 after whoever claimed him, a mother might ask a "wealthy
856 person, of polite, calm, and good character" to do this.
789 The baby also started an association with whatever items were placed on his tray with him. Besides the most common ones mentioned in Dûan's tale were ink and books (which induced learning); gold, rings, jewelry, money (wealth); bergamot thorn, a tin of kaffir lime (sharp wit); and a razor (a good wood-cutter for the fire; said to be a Muslim
852 custom). When the baby was finally transferred from tray
789 to cradle these items were returned to household use. The bamboo cutter, rhizome of phlai, and earth associated with cutting the cord were taken off the tray and buried with the placenta. Their significance lay as part of a binding ritual. The phlai and earth might be taken off ahead of time.

Binding Rituals

829
774 Because Bang Chan accorded autonomy to every individual, whatever his age, everyone had the free choice to go wherever his advantage lay. In infancy and childhood, the khwan soul might flee at any time, and could only be re-
[852 captured by a khwan-calling or khwan-leading rite (Textor: 396-411). After about the age of 8, a thaem khwan ceremony helped to bind in and strengthen the khwan soul. In daily life, the fear that a loved one, whatever his age, would withdraw or run away if unhappy, frightened, or over-
829 burdened dogged people their whole lives. Casual episodes
• 593 were sometimes viewed with alarm. Once a boy of 10 on his own initiative went off to live a few days with his grandmother only 10 minutes away by boat. His mother complained that he had wandered (pai thiaw) and feared it would become a habit. Parents dreaded that grown children would find work away from the village; that daughters would elope; that adopted children or spouses run away; or even that their child, at marriage, would elect to go live with his in-laws. At any time a husband might go into the priesthood leaving his wife and children to fend for themselves, though here the wife had to give her permission and the motive was sympathetically viewed.

A traditional jesting threat was to "go away to the jungle-forest" (pai pâ).

The economic and social base for this fear of losing a child to the world was that children were a parental investment with an anticipated return: for the trouble of bearing and raising them, children should work for the family until their marriage. Furthermore, a boy was to bring his parents merit by being ordained, while a girl was to care for them in their old age. If a child moved away

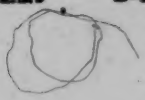
before completing these obligations, the parents lost out on their anticipated reward (cf. L.M. Hanks, 1962).

Since waywardness (pai thiaw) was considered a continuous threat, magical means were taken at the moment of birth to ensure that a child stay close to the family that raised him. The blessing following the winnowing ceremony invoked immovable things: the post, the cat that traditionally never roamed far, the pumpkin that sat and fattened:

> "...Stay at home like the bottom of the house post. Watch the house like a cat. Eat and stay here! Never leave home. Be fat and heavy as the ash pumpkin..."

The most important binding actions utilized, or brought the child into physical contact with, objects long associated with family, in particular the house and land. The umbilical cord was cut on earth or phlai dug from the house-land itself with a bamboo "knife" sliced from one of the deeply sunk house posts. Of these "the knife is the important thing." The phlai also had medicinal purposes. With a feather "from the mother's house" the baby's navel was smeared with cobwebs from a spider whose web indicated long undisturbed residence. They buried the placenta either under some large old tree that stood near the house, or under the house stair. The old family winnowing tray, old clothes, and well-used family possessions were used first before any new furnishings were purchased for the baby. A fire of sakae wood grown on premises boiled the water for the baby and mother, and heated the mother. Sakae "was planted when a house was first built so that every generation of occupants would have it available for use at confinement" and also for firewood at other times (cf. McF. 834). All these binding rites assured that the child being rooted to a home terrain, would not wander frightened, and so "would not cry." He also would be at home to participate in the merit-making that would reconstitute the family in another existence.

If a child were born away from home, how was this bond to his locality established? On one to two occasions when the child was born at the Minburi Health Center, Hauck (notes, 1954) observed a solution to this dilemma. The mothers returned home, as was customary, within a few hours of delivery and were established by their respective fires. Their babies were winnowed and laid on their trays with the usual auspicious book, pencil, and needle. Neither tray held any bamboo, clod, nor phlai, however, for these had not been used. On one tray, though, was laid a steel knife from the kitchen, mute proof that a family cutting instrument ought to be there. On another occasion, a father asked to be given his child's placenta so as to bury it on the house site. In so far as possible, people in Bang Chan tried to carry on the old rites.



000 in Bang Chan tried to carry on the old rites.

848 372 The Cone of Wood

When a child was conceived out of wedlock, the first problem raised was, "Who will build the wood pile?" The actual father had to come forward and identify himself, for he and no one else could perform this duty. A child could not be born without the father giving this assistance.

a 593 84 789 372 This cone of wood represented a "womb" towards which a father actively played out his role. His child was in it. While building it, his behavior affected the child, just as his wife's behavior acted on the child in her womb. If the pile were incomplete before the onset of labor or gave out before the fire-rest was terminated, the child would "never finish any task in its life." The very manifestation of industriousness involved in collecting the wood, though, made the unborn child industrious. Gathering a quantity of wood for this big pile was not easy. Old houses had plenty of wood, for they stood in thick groves, but new houses sometimes stood bare and stark in the fields. He placed spiny Indian jujube or Chinese date (phutsā) and Manila tamarind (ma khām thē?) all over the outside to protect [824] this "womb" from invasion by malevolent spirits. Thus he also protected his wife's womb. Sakaē wood was preferred because it was smokeless. Collecting a mixture of woods was easier, but then the fire smoked. Mixed or all sakaē, whichever the constitution of the pile for a woman's first confinement set the pattern for all her later ones.

At the onset of labor, the father had to open the way for his child to come out of the womb, so the pile was tipped over in a direction paralleling the position of the Great Snake. This astrological orientation was exactly that of the woman in labor. Unless the mother's head and the apex of the fallen wood pile coincided with the direction of the head of the Snake, with the open end of womb and cone below, "with and not against the lie of the snake's scales," the child would have to struggle against these scales as he came out. By tipping the cone of wood properly the father helped his child to an easy exit.

The thorns protected the womb and the baby inside from all evil spirits during the months of pregnancy. With the onset of labor, the holy cord which surrounded the mother took over this function, and kept away such dangerous spirits as phī krasū and, if the baby died at birth, the violent New Baby Ghost (cf. Textor:261).

562 delivery, "her blood was purified to a white color to become
[827] the milk of the breast."[48] Nursing a child was the essence
[853] of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 In a wider context, not only all their household members
462 but people anywhere were the objects of women's nurture:
252 women were in charge of the cooking even if occasionally
264 helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor houshold, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry
[082] any more." She construed this as proof that she had ample
[431] merit, but it also meant that she was a great donor who gave
[796] continuously and took little. Women usually offered the early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When
• 593 age pushed women past their mature capacities, they returned
888 to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 A desire to give tender care and nourishment was deemed
857 inborn in all women. Although sex was not strongly
[291] differentiated in babyhood,[49] by age 3 a hard-to-handle
[593] skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phūm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[856] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

Only when the youngster was satiated did she gobble the remainder.[50] Parents often commented that girls in general were obedient and good, but boys were not. Everyone spoke, however, of exceptions. The capacity to play the female role grew with the child. It was not completed with the physiological maturity of first menstruation but only with ritual maturity.

The rituals to fit a woman for her office, described as "directly related to the welfare of the child," had 4 specific purposes. They perfected her as a compassionate being; restored and strengthened her body; improved her capacities as a nourisher; and strengthened her own khwan. The key to each of these aims was the holy fire.[51] Because actions taken by the fire were immediately and permanently effective, every effort was made to induce auspicious happenings. Words spoken by the fire had compelling effect so even ordinary speech became magical. Speaking of the fire's hotness so raised its heat that a mother was burned. For this reason, uninformed or careless visitors like children or foreigners were a danger.

According to Buddhist thinking, suffering developed compassion. Through the discomfort of pregnancy, followed by the anguish of childbirth and the heat of the fire, a woman became compassionate and so achieved the guide-line for moral behavior. Then a woman was sure to be touched with pity for the younger or less fortunate. One teacher despite the inconvenience went home twice a day from school to nurse her new baby because she "pitied" him too much to hire a wet-nurse. It was "pitiful" to see a child at another woman's breast for it implied that its mother was either unwilling or unable to nurse it. Thus, babies were rarely nursed by others than their own mothers.

The fire also strengthened a woman by ridding her of bad blood and foul fluids. Wind and fire, the 2 spirit guardians of the elements necessary to the occasion, were invoked to assist in the drying of the uterus. In addition, strengthening

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50. Boys too fed their younger siblings but their purpose was a power-play: "to assure obedience in the future" (cf. Hanks and Phillips:648).

51. This fire was kept entirely separate from the one for cooking and boiling of water. It was ritually lit and ritually extinguished at the end of the fire-rest.

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to temper with man's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mō, she could do everything a mō could do. Men were never mediums. Bang Chan's only medium was possessed by a male mō.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

[832] [156] [688] [626] [593] ---

59 My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasū as married women ("never a maiden"), in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "suk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasū's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

Chapter VI

MIDWIFE AND [illegible]

759 In Bang Chan it was easy to ask, "Who has delivered babies?" The answer would run into dozens of names. To respond to "Who are the midwives?" an informant would give the names of 6 or 8 persons, then add, "Some people call them professional midwives but some do not. X is not a midwife but she knows how. Y delivers babies, but only out of pity. Z has delivered 38 babies or more, but she is not a midwife." If asked, "Are there doctors among those who deliver babies? " he would say, "[illegible] (doctors) never deliver babies."

Before a definition of a midwife is given, a general picture of midwifery in Bang Chan is needed.

844 The Practice of Midwifery

Normal childbirth, a cooperative venture between mother and child, was not an illness. It called only for the help of kin or neighbors. Anyone who had seen or experienced childbirth at least once before was considered a possible, though not necessarily competent, "deliverer" of a child. [593] The husband was supposed to be present to assist; failing whom a father or brother should attend. Consequently a good many men had witnessed birth. The spectacle was disliked, however. Anyone, though, young or old, male or female, kin or not, might offer or be asked to help. Private magic was [579] not essential, though it was necessary for someone with incense, flowers, and a candle in hand to inform (บอก), the Lord Buddha, the ancestors, and the ordinary protective spirits of the land and home and so enlist their help. The customary post-partum rituals and blessings were not esoteric. Enough popular astrological knowledge was known, or quickly and freely available from a priest at the temple, to orient the woman in labor. Consequently, many a woman was delivered by her mother or other kin. One poor farmer and masseur, with the assistance of his sister, delivered all [759] but one of his own children. On another occasion, a visiting kinsman, by chance a medical orderly in the Royal Thai Navy, safely delivered a relative. In all these cases the cost or "gift" was less, or non-existent, and the convenience

252 cooking water was discarded. In Bang Chan, foods were not usually cooked a long time.

In most village homes, one fire only was built for ordinary meal preparation. Rice was cooked first, then "with-rice" dishes, no attempt being made to serve the rice and accompanying foods hot. Indeed, with the frequent use of chilies, one might have the sensation of eating hot foods, no matter when they were taken from the fire. Notes on the preparation of a meal in one household that participated in the dietary study, are included in Appendix C, p. 119.

Meal Service and Techniques of Eating

264 Food was generally served in the kitchen area. When possible, family members ate together at the evening meal, sitting on the floor, each one old enough to feed himself having a bowl of rice before him. The "with-rice" dishes were placed in the center of the group. Family members helped themselves to portions of the "with-rice," using the right hand to take solid foods, and a serving spoon for fluid foods. Enough rice for a bite was pressed together with the fingers of the right hand, so that grains would not be scattered as the rice was conveyed to the mouth. "With-rice" of semi-fluid consistency was eaten by dipping the ball of rice into it, or more exactly, touching one side of the ball of rice to it. The amount of "with-rice" was generally small, and to take more than one spoonful onto the plate at a time would appear greedy.

264 When families did not sit down to eat together, those
593 who ate first were expected to take no more than their share. The wife saw to it that her husband had a liberal serving of the best food available. She also gave generously to the children, holding back, eating last or what was left, herself. In a well-to-do household, where food was ample, the mother would be as well fed as others; in a poor household she might be short-rationed day after day.

When priorities in serving were observed,[1] young children, "not old enough to know better" were not expected to wait until the elders had been served. A frequent pattern at both breakfast and dinner was for older children to feed the younger ones before their own meal; elders in the family then ate, and husband and wife ate together if possible, or as convenient to their separate schedules. In the morning if food was to be offered to priests, family members did not ordinarily eat until after the priests had been served. If necessary, however, the priests' food could be served onto a tray, then others might eat. The observer often had

1. See footnote 1, p. 49.

Notes on Meal Service

In a Relatively Prosperous Household

Friday, May 22, 1953

Before breakfast is served, the six-year old girl comes with a piece of jack fruit. SS weighs it and tells her to bring back what she does not eat. Later she comes with hands full of stones (14 of them). She has eaten this much as a "snack" before the regular meal. The grandmother finishes the piece (7 stones) and gives the rind to SS to weigh.

At breakfast the family sits in a circle on the kitchen floor. Each person except the baby has his own bowl of rice before him. In the center of the circle, within reach of all, are four small dishes of "with-rice" which has been prepared for breakfast: sour curry of buffalo meat, curry of (3)khii-(2)leg leaves, bean sprouts and one small fried fish. The mother takes a very small bit of fish on a spoon with rice, and feeds baby. During breakfast baby has 6 bites of rice with fish, nine small spoonfuls of rice with sour curry. The mother herself eats one bite of fish. She takes four spoonfuls of sour curry on plate with rice. This is shared with baby. Mother and baby eat mainly rice, fish and sour curry of buffalo meat, whereas grandmother and the six-year old girl have curry of (3)khii-(2)leg leaves and bean sprouts with their rice.

In a Relatively Poor Household

Wednesday, May 27, 1953

While the mother finishes the meal preparation, the seven-year old girl feeds the baby, first rice with some chopped egg, then rice with the "water" from the egg. The mother remarks that she cannot cook unless someone looks after the baby.

Technique of eating -- A tray with the "with-rice" is set out, also a bowl with water, for rinsing the hand, and a basin or bowl with drinking water. There are spoons in the "with-rice," but these seem to be used for taking some of the juice, which may be eaten directly or put on the individual's bowl of rice. Solid pieces are taken from the serving dish by hand, and mixed with some of the rice, which is then picked up in the right hand. Occasionally the person eating will rinse his hand with water. When finished, each person rinses his bowl (using either water from the bowl nearby, or from the general supply -- in this case the canal). Dishes are turned upside down on the platform near the stove, to dry.

4:Phillips E-4,5 (1956-1957) 1966
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596 182 586 [578] [576] the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

586 595 Precise figures on the divorce or separation rate in Bang Chan are unknown, primarily because many marriages as well as divorces are never registered on the government rolls; also, many separations seem to follow an on-again-off-again pattern; the sanctioned occurrence of polygyny (only eight known cases out of the 296 families) and even polyandry (two known cases) complicates the problem even further. However, the fact that *four months* after I had designated a sample of thirty families from which to select informants, six of those families, or 20 percent of the sample population, had dissolved would strongly suggest that Bang Chan families are not particularly stable. [581]

• 593 586 183 The causes of family fission in these specific cases are unknown, but what is impressive is the apparent ease with which it takes place and the equanimity with which people seem to accept it. Other informants, reporting their own experiences or observations, discuss family breakups as if they were among the more normal events of the workaday world and completely understandable. They seem to be of no greater emotional import—in the sense of eliciting recognizable feelings of distress—than losing a good price on the sale of a piece of land or on the sale of some rice. In fact, the latter kinds of situations are considerably more likely to evoke expressions of hurt or exasperation. One repeatedly encounters in Bang Chan instances on the following order: a family breaks up simply because the husband has an inclination to work for a particular person whom he likes; a wife ("she is a touchy woman") runs away every time she has a minor disagreement with her husband (minor even by village standards, for example, "Should I buy my lottery tickets from Mr. X or Mr. Y?"; "Should we invite seven monks or ten monks to officiate at this ceremony?"). The point here is that these explanations—and the low tolerance for discord, the importance to a person of a boss or job over a spouse, the desire to be footloose, which they imply—are to the villagers completely reasonable justifications for the dissolution of family units.

174 594 596 Many of the family relationships referred to above as "centripetal" in nature are clearly related to or derived from patterns of social organization characteristic of an earlier Bang Chan. Although most evidence indicates that even in the years immediately following the settlement of the village in

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As the reader might by now suspect, it is not easy to determine the basis of the unity of the family. However, of all the factors that keep people living together in amity and affection, two come to the fore: a sense of love, obligation, and respect that is derived from the simple fact of kinship, but which must be continuously confirmed by mutual benefits; and economic considerations.

The economic foundation of the family is significant not only because the family is in fact the sole economic and occupational unit in the community (with the exception of the monkhood and school) but because the villagers themselves think of the family in terms of its economic functions. People say that they marry for wealth or because of the productive capacities of their spouses;[10] spouses stay together because the economic costs of a split are too great; most important of all, people are keenly *aware* of their economic interdependence. Fathers say that they need children to work in the fields and care for the buffalos, that a family needs a mother so that its members will be fed, that siblings are useful because it is easy to borrow from them (although, as noted earlier, some are unhappy about the intrusion of the kinship tie into what they regard to be a commercial transaction). Many villagers extend this economic, transactional type of thinking to other aspects of the kinship relationship. Thus they say that "the purpose of marriage is to have a companion who will take care of you when you get sick," or very frequently that "my parents went to the trouble of bringing me up so they would have a person to make merit for them when they die." The emphasis here is on independent agents serving each other because it is mutually beneficial.

The love and affection that people feel for each other is of course grounded in the close associations that one finds in most nuclear families. However, the attitudes of respect that one sees are perhaps more distinctively Thai. Almost all the literature on Thailand refers, at one point or another, to the patterns of respect (*khwaamnabthyy*) existing between people, both within and without the family. These patterns are based, in the first instance, on the status inequalities that exist in almost all social

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[10] In responding to the unstructured Sentence Completion Test item, "*He* (*she*) *wants to get a wife* (*husband*) who. . . ," for example, thirty-one of sixty informants indicated that they wanted a mate who "was a good worker," "earned a living," "was rich," or otherwise had high socio-economic status. Only two persons said that they wanted a spouse for reasons that could be reasonably defined as sentimental: one woman wanted a husband who "would be a good friend with whom she could discuss things," and a man said he wanted a wife whom "he loved." Other informants gave completions distributed among a variety of categories: "polite, well-mannered, handsome, kind, strong, and good" spouses; and six women wanted husbands who would be faithful.

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relationships: within the family, usually in terms of the relative ages of people; elsewhere, in terms of age, wealth, power, knowledge, religious or governmental role. Secondly, they are based on the assumption that every individual, regardless of his position in the hierarchy, deserves respect. The first is a respect associated with the proper performance of one's role; the second, a recognition of the essential dignity of every human being.

The role of these respect patterns cannot be emphasized enough. Benedict, in her study (1946) of Thai culture at a distance, referred to the learning of the *wai*, or gesture of obeisance, as "the first teaching the child receives." Although the *wai* is perhaps not the very first social act the child learns, I have seen infants no more than two weeks old being guided by the mother in raising the palms of their little hands to the forehead in expression of deference to superiors. The older infant who can do this on his own almost always receives acknowledgments of approval and delight from the adults in attendance. An older sibling really means it when he says of his relationship with his younger brothers, "when I ask them to do some kind of work, they go and do it. They never disobey, and when there is no disobedience, there is no hatred. . . . Formerly, whenever there was entertainment somewhere I took them with me. My younger siblings love me a lot. . . ." His position in the authority structure assumes the respect of those younger than he, and they willingly grant it for, among other things, he plays his role well as the kindly superior who takes them with him whenever there is entertainment. All the polite little linguistic forms (honorifics, expletives suggesting status and, most important, ordinary kinship terminology with its specification of relative age) as well as kinesthetic forms (lowering the body while passing a seated older person, holding the younger between one's legs and with arms around him in a position of protection) also serve to emphasize the respect that people grant one another because of their differential status. Perhaps the most revealing illustration of the strength of these patterns, at least the authority pattern, was provided by a two-year-old toddler who pointed to the stomach of his pregnant mother and said with pride, "My younger sibling is in there. When he is born he will be *my* responsibility." Little doubt that when the child is born he will give his older brother his due.

With regard to the other respect form, recognizing the dignity of every human being, more than once I have heard parents say that they disliked giving their child a certain medicine "because it offends the baby; he does not like it. It is better not to give it to him than to hurt his feelings." Although I do not doubt that in some instances the parents were annoyed more by the screams of the child than anything else, I am also convinced that for the most part they were respecting his basic individuality and right

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the parents often do not really care and children can pretty much get away with doing what they want.[14]

With regard to other expressions of the recognition of individual dignity, one rarely sees in Bang Chan any physical or even verbal coercion. (The rare use of whipping, noted above, is to punish transgression, not to implement action.) Other than in horseplay, children do not push each other around; in my twenty-two months in Thailand, I saw not one case of young children in a serious fight, despite the fact that I looked for it. Very rare indeed is the parent who uses force or the threat of force on his child; there is no Siamese equivalent to the American intimidation, "You had better do that or else. . . ." In general, Bang Chaners proceed on the simple assumption that if people, including children, do not do what you ask them, they have good—and more important, private—reasons for responding that way; there is no need for, or interest in, self-justification. The major means of inducing recalcitrants to conform to your wishes is to cajole, wheedle, and flatter them (see particularly the responses to the Sentence Completion items, *"The best way to treat a subordinate is . . ."*; *"The worst way to treat a subordinate is . . ."* in chapter V). A less conscious but more frequently practiced alternative is simply to withdraw support: the parent who turns his back on the child and walks out (particularly evident in our TAT stories),[15] the older sibling who refuses to take his younger ones with him when there is entertainment to be seen, and the like. It must be noted, however, that social disengagement, although frequently utilized, does not always work; often the individual who is left suspended merely accepts the fact and continues about his business. The major point to be recognized is that villagers do not use forms of direct, blatant coercion on others. If soft words or the withdrawal of love will not move them, then their decision, freely determined, must be respected.

Love and affection within the family appear primarily in two forms. Their most typical expression is shown through the gifts, favors, and services people do for each other. The degree of affection that individuals feel toward one another is in fact explicitly measured in these terms. Thus, a father says that of all his daughters, the one who has given him the greatest pleasure is "the one who sells things . . . When she gets money,

[14] In qualification, however, it must be noted that all Bang Chaners are extremely sensitive to social cues—partially as a consequence of having to balance off their individualistic propensities against the demands of the authority system—and here the children ignore their parents only because the latter have indicated by their very halfheartedness that they do not care. The children can, and do, quickly hop to it on the slightest indication of parental seriousness: a stern look, for example. My point, however, is that such looks are comparatively rare.

[15] In another paper, Hanks and Hanks (1963) make the same observation on the basis of behavioral materials.

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she gives it to me." In describing his relationship with his maternal grandparents, with whom he spent all but two of the first twelve years of his life, this same person says:

> My younger sister and I were born one year after the other. So mother gave me to grandmother to be weaned. I lived with her until I became a novice at the monastery at the age of twelve. I lived with grandmother, so I loved grandmother and grandfather more. I loved grandmother even more than my own mother and father. Wherever grandfather and grandmother went, I went too. Grandmother loved me: she always gave me sweets and toys. I had everything I wanted because I was the only young thing in the house. She loved me. She was going to give her property to me, land and gold, as much as she was going to give to her own children. But it was only a promise. I got the gold, but not the land, because when grandmother died, grandfather got a new wife. She was young. . . . I didn't quite like her. The young woman was too economical. . . . Sometimes she prevented grandfather from buying good things for me. When grandfather was going to buy gold or anything for me, she stopped him. She wanted him to buy for her more than for his grandchild.

This excerpt, taken from the biography of one of the life history informants and comprising almost the complete portrayal of the relationship between the informant and the individuals with whom he spent the crucial years of his childhood, is by no means atypical. The point is that of all the myriad elements in the relationship, or of all the loving characteristics that in his eyes the grandparents had, he chose to emphasize only the material gifts they had given him as the measure of their love. Other informants are no different: one man said he knew his father did not love him because when he died he left the family home to the Buddhist monastery; and a woman said she admired her father because "when he died there was property left. He was a good man: he did not abandon his children. He was worried about them." (Her other reason for admiring him was that "he was the person who brought me into the world.")

The other major form of familial love is evidenced in the camaraderie, warmth, and generosity that surrounds the family in planning and accomplishing the various tasks associated with rice farming. As indicated earlier, the cultivation and harvesting of rice is not only an economic operation in Bang Chan, but almost a way of life. When villagers must deal with the very real and complex problems of planting and bringing in the harvest, all the individualistic propensities, and even to an extent the authority patterns, with which they normally indulge themselves recede before the coöperative requirements of the task at hand. In a very real sense the functional requirements of the economic activity, particularly during

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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[10] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[10] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish talking about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

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career. From an epistemological point of view, there is of course nothing strange about such an approach. What is perhaps somewhat unique, however, is that the villagers actually use it as the point of departure in their treatment of the child.

The practical consequences of these equalitarian notions are manifold. For one thing, with the child defined as a separate and equal soul, the relationship between parent and child takes on a highly instrumental flavor; that is, rather than expressing love toward the child as an end in itself or otherwise treating him in ways that require no further justification (it is assumed that love is characteristically an absolute sentiment, not a means to any other satisfaction) villagers explicitly see the relationship between parent and child in contractual terms. Thus villagers say that they "are going to the trouble" of bringing up their children and "doing good things for them" (just as their own parents "went to the trouble" of bringing them up and "doing good things" for them) so that they will have someone to care for them in their old age and make merit for them when they die. Similarly, they say they love their parents because they are indebted to them for bringing them into the world. The language of the "contract" is poignantly explicit: "When I think of my mother, I think of the debt I owe her for bringing me into the world and feeding me so I would survive"; "Parents who do not teach their children how to *waj* [exhibit respect to the parents] get nothing from them. I did many *bunkhuun* [good things requiring reciprocation] for my daughter, so now she gives me everything"; "When I was three my father gave me to my uncle who fed me and trained me, so I loved my uncle more" (cf. pp. 64–66, L. M. Hanks 1959c, and Phillips 1959 for further documentation of this point).

In and of themselves there is nothing strange about these "contractual" criteria. However, they do reflect a fundamental recognition of the independence of parent and child and of the fact that parent and child have the *option* of fulfilling each other's needs. More specifically, they are expressions of the assumption that there is nothing intrinsic to the parent-child relationship that requires the two persons to be linked together. The relationship clearly is not fortuitous, but neither is it absolute. It functions primarily for the instrumental and symbiotic satisfactions that its participants can gain from it.[20] Lacking the absolute elements of an ultimate

[20] In his paper on "Changes in Family Life" in Bang Chan (1959c) L. M. Hanks notes: "At birth a parent ceremonially formally accepts obligations to an unknown infant soul lightly bound to its body; to this point the new-born one without relation to its parent has been under the protection of a spirit mother. This phrasing contrasts sharply with the Occidental concept of 'flesh and blood.'" In another place in the manuscript, Hanks also comments: ". . . but every case [every kinship tie] is reducible, if one presses the question, to benefits of an older or richer or stronger for the

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593 relationship (*disinterested* appreciation or admiration of the other individual; loving the child or parent in his own right, rather than in terms of his effect on the self) [9] it has a strong undercurrent of unreliability. Since the maintenance of the relationship is always dependent on what the participants can gain from it, *i.e.*, from the other person, and since the participants are essentially free to break the relationship once they feel that such rewards are not forthcoming, it is inevitable that there will be many instances when just that will happen. The crucial point is that there is nothing over and above the instrumental nature of the relationship to keep the individuals tied to one another. The only possible exception, an important one, is that which goes with the realization that by treating one's child or parent nicely, one is behaving in a moral way and is thus accumulating Buddhist merit; but even this purpose is avowedly self-referring in nature. In this regard, it might be noted that other than the [585] marriage ceremony, which is ignored by half of Bang Chan newlyweds, there are no institutionalized attempts to sanctify the solidarity of the family, or for that matter the solidarity of almost any social group. That is, unlike China and the West, there is nothing in traditional Thai folk belief and ritual, or in the literature of the indigenous "Great Tradition," that alludes to the sacredness of the family as a social unit. All moral aphorisms concerning family relationships are phrased in terms of the dyadic relations between individuals, not in terms of affiliation with the family unit as such.

593 The looseness of the ties that result from the instrumental nature of the
*125 parent-child relationship are perhaps best revealed in the villagers' responses to the Sentence Completion stimuli, *"We want to give our child to him because . . .* (This is the English translation of the best Thai translation of the original English item, *"He wanted to give his child away because . . ."*). The reasons behind the use of this somewhat uniquely worded item are important. (The reader might imagine American responses to such a query.) The item was selected for inclusion in the SCT battery only after it became apparent that there might be a pattern to what

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[593] services of a younger, poorer, or weaker. This includes parent and child, sibling and sibling, or husband and wife, and all kinship relations are reducible to these terms."

*[125] [9] The responses to the Sentence Completion stimuli, *"When I think of my mother, I think of . . ."* and *"When I think of my father, I think of . . ."* are particularly revealing on this point. The vast majority of the responses on both these stimuli are in terms of the parents' effect on the self rather than in terms of what the parents are in their own right. Careful checking of the cues indicates that there is nothing in their grammatical or semantic structure that would predispose informants to produce such completions, *i.e.*, it is just as easy and feasible for informants to say ". . . how beautiful she is" or ". . . how clever she is" as it is for them to say ". . . the good things she has done for me." See chapter v for the actual responses.

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were at first a series of unrelated incidents—that is, the possible tenuousness of the links between parent and child first came to my attention with the occasional, but wholly unselfconscious, reports from informants on what to my Western ears seemed like rather turbulent childhoods: their frequent movement from family to family while they were still children and their own care, as adults, of friends' or relatives' children. (This suspicion was reinforced and partially verified later while recording life histories). Later it was noticed that, in sharp contrast to the West, villagers tend to be less concerned about the illness of children than the illness of adults; informants with whom this observation was discussed said either that they had not noticed or explained it by saying that since children recover so quickly from sickness there is less need to worry about them. Finally and perhaps most important, it became clear that the request of the villager who stopped me and asked me to take and rear her child was by no means idiosyncratic; the request was made on four separate occasions by different individuals, both within and without Bang Chan. The intent of these requests were difficult to ascertain. Since the requests tended to come up rather suddenly, in the presence of the child, and were always accompanied by laughter, they may well have been said in "jest" or [illegible] threat to the child. On a few occasions the parent took pains to be sure the child understood what was being said, in which case the child responded with screaming. Also, Europeans have traditionally been used as bogeymen in the disciplining of children. (I myself have occasionally been addressed as a malevolent spirit by youngsters.) On the other hand, because children of poor families have been known to be given to individuals of high status, and because Occidentals are automatically assigned such status, it is not altogether unlikely that the parent was sounding me out as a potential patron of the child.

The problem with all the above, however, is that it was unknown to what extent they represented typical or deviant attitudes and responses. The Sentence Completion item, *"We want to give our child to him because . . ."* was selected for use in the SCT administered to a larger, representative sample of villagers because, being an extreme phrasing of these attitudes, it might shed light on the villagers' general readiness to accept them as well as their justifications for them. Of the fifty-six informants who responded to the item, 79 percent accepted the premise and 21 percent rejected it, *i.e.*, "I do not want to give my child to anybody." Of the forty-five individuals who accepted the premise, nineteen said it was good for either the child or the parent, *i.e.*, "that person was good, and he wanted that person to teach his child to be good"; "I would get some money by giving it away"; "I could not stand the child anymore." And eighteen said it was justifiable, *i.e.*, "because of poverty"; "I did not have the means to rear the child."

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None of the above is meant to imply that 79 percent of the adults of Bang Chan would in fact give away their children. But the relatively high frequency of agreement they exhibited in admitting to such a possibility and the fact that as many as 65 percent agreed that it was either good or justifiable reveals something of the psychological environment within which the Bang Chan child is reared and where he learns his basic orientations toward other persons. The responses to this single stimulus must of course be seen in the context of the more naturalistic, behavioral materials presented earlier. The point of all these illustrations, however, is that they indicate there is nothing sacrosanct about any human tie in Bang Chan, even that which exists between parent and child. If necessity or personal predilection requires, then this tie too may be broken. What is perhaps most significant here, from a developmental point of view, is that the breaking of the tie always exists as a realistic potentiality in the life of the child. Reared in an environment where he learns that no human tie need be permanent or sustaining, the developing child inevitably takes on some of these same patterns of expectation in his own dealings with others. Thus the villager who abandons his spouse or the employee who with little warning leaves his employer are acting in terms of patterns the prototypes of which they either actually experienced as children or came to expect as part of the realities of interpersonal relations in Bang Chan.

The second major source of the villagers' loose relationships lacks the developmental reference of the above. To a certain extent it is not even social relational in nature, although our concern with it stems from its having crucial consequences to the social orientations of individuals. I am referring here to the Buddhist emphasis on the primacy of individual action and individual responsibility. Without going into a lengthy discussion of the subtleties of Buddhist doctrine, it is imperative to point out that the principal tenet of Hinayana Buddhism is the complete psychological freedom, isolation, and responsibility of every person. This is not the Occidental idea of "free will," but rather the notion that every person is a free agent, responsible only to and for himself, and that he inevitably reaps the fruits of his own conduct. Buddhist canonical literature is replete with references stressing the centrality of this doctrine. The last words of the Lord Buddha before he left this world to achieve the sublime state of *nibphaan* (nirvana) are said to have been: "Work out your own salvation with diligence." A frequently quoted passage of the *Dhamapada* reads: "By oneself is evil done; By oneself one suffers; By oneself evil is left undone; By oneself one is purified." The whole complex cosmology relating to the accumulation of merit and demerit is phrased in terms of the individual's lonely journey through cycles of interminable existences working out his own moral destiny. Who his progenitors were, what kind of environment he was born

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1923–1924], translated by Cunnison) and Homans (1961) have argued, that human relationships everywhere are based on just such a consideration, usually concealed by ethically palatable amenities (such as in American culture, from which most of Homans' empirical materials come). However, what is so intriguing about the Thai case is that *quid pro quo* factors are forever in mind as justifications and explanations of why people relate to one another. Although villagers, because they are such polite people, rarely say to others, "I am helping you because I know the day will come when I need your help," or "Do this for me because you owe me a favor," they do use such arguments *to explain* the basis of their ties: "Of all my friends I love Lek the most because she has done me the most favors (*bunkhuns*)"; "The purpose of marriage is to have a companion who will take care of you when you get sick"; "Of all my daughters, the one who gives me the greatest pleasure is the one who sells things. . . . When she gets money she gives it to me"; "Friends are very useful because it means that you have people who will do you favors. And when they need help, you will take care of them. This is love." [21]

One of the finest discussions of the nature of reciprocal obligations appears in a recent paper by George M. Foster (1961) that deals not with a Thai community, but with the Mexican village of Tzintzuntzan. Foster outlines in his paper the notion of the "dyadic contract" which he presents as a model for the social structure of Tzintzuntzan. Or, more precisely: "Specifically, I suggest a model . . . to reconcile the institutionalized roles which can be recognized and described in the community with the underlying principle which gives the social system coherence." Foster's focus thus differs somewhat from our psychological emphasis. However, his abstract statement of the "dyadic contract" provides such an excellent summation of the major factor making for enduring social relationships in Bang Chan that it merits quoting in detail here. There are of course inevitable differences in cultural content between the two communities and the fact that

[21] Such explanations are not unique to Bang Chan. In his description of the Thai–Lue village of Ban Phaed in Northern Thailand, Moerman (1962) observes: "The society of Ban Phaed operates in terms of something got for every something given. This is not merely an analytic device which permits a predictive, if crass, view of any human society. It is the way in which villagers explain and evaluate their own behavior. Favor for favor, visit for visit, meal for meal, one should return what he receives. 'We help our kinsmen because they help us. If a kinsman however close didn't help me, I wouldn't help him.' 'We care for our children when they are young; they will care for us when we are old.' Actions which we would justify in terms of compassion, generosity, public-spirit, patriotism, pride in a job well done, the Lue villager speaks of in terms of reciprocal, short-term self-interest. Their actions are no more selfish than ours. Far from it. But the moral rhetoric of a Lue villager is different from our own. In politics, economics, family life, and religion it focuses on something got for something given."

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V

Analysis: The SCT's Exploration of Thai Personality[1]

Attitudes Toward Authority

The first area to be dealt with is in a sense the easiest. Thai attitudes toward authority represent what is perhaps the most explicitly expressed and highly ramified area of their social psychological life. The notion of authority—a sense of superordination and subordination—is an intrinsic part of their linguistic structure, it being impossible to address or refer to a person without indicating his social status relative to the self; two-week-old infants are taught to *waj*, or offer the gesture of obeisance to superiors; during elections, villagers say that they are going to vote for the prime minister because "he is our Master. He has been very good and kind to us. He is like our father, and we are like his children"; the entire structure of the family is predicated on a system of superordination and subordination, even to the extent of considering a twin born a few minutes ahead of his sibling the latter's social superior. Examples expressive of this emphasis in the workaday life of the villagers could be cited endlessly.

What is impressive in the data to follow is not only the near unanimity of villagers in responding positively to what are essentially neutral authority situations, but the tendency on the part of a large number to respond positively to the authority situation even when the authority figure is avowedly wrong. Many of their responses also make quite explicit the underlying ethical justifications for the authority system.

The first item, *"When the phuujinjaj told him to do it, he . . . ,"* is a

[1] Words and phrases appearing in parentheses in the responses on the following pages are for purposes of clarification. The few Thai words appearing in the responses are either "complex concepts," or "difficult to translate" terms, and have been retained mainly for those readers familiar with Thai. At the top of the table, the English language item that was originally prepared for the villagers appears first; it is followed by the best English translation of the actual Thai item given to informants, including the Thai pronouns that were used. Intra-sample differences (age, sex, religion, economic position), where important, are indicated in the text, not the tables.

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social relationship that the rejection creates. One gains the distinct impression that to the emotionally self-concerned and self-sufficient villager (for whatever reasons he became self-concerned and self-sufficient) it is generally not worth the trouble to reaffirm the relationship.

None of the above should be taken to mean that the villagers do not *behave* in a dependent manner. Nothing could be further from the truth. The entire authority system is based upon the individual's willingness to consider himself a dependent subordinate to somebody else. But this dependency is phrased in terms of the reciprocal relationship existing between the subordinate and his superior. He remains dependent only as long as the superior satisfies his individual needs. From a social psychological point of view, his superior is actually just as "dependent" upon him.

The villagers' distinctive phrasing of their "dependency" needs is perhaps revealed most clearly in their structuring of the items, *"When he thinks of his mother, he thinks of . . ."* and *"When he thinks of his father, he thinks of. . . ."* These stimuli are related to dependency in the simplest possible way: they ask the informant to organize his thoughts and perceptions about those individuals who have been his greatest sources of dependency. Perhaps the most striking attribute of the responses is that, with the exception of two informants on the "mother" item, every villager explicitly thinks of his parents in terms of himself rather than in terms of what the parents are in their own right. There are simply no completions here on the order of "how wise she was," "how strong he was," "what a wonderful person he was," and the like. It is as if disinterested appreciation were simply not one of the villagers' cognitive and emotional premises.

TABLE 8

When he thinks of his mother, he thinks of . . .
When we think of mother, we think of . . .

SELF-BENEFIT:	46%	her love and her kindness and her protection.
		the good deeds she has done for him; her taking care of him since he was a little boy.
		her bringing him food and water ever since he was a child.
		her bringing him up.
OBLIGATION:	43%	making merit for her, as she died a long time ago.
		her well-being; he is concerned about it.
		her goodness. He had fed from her breast; it was her blood that fed him. He must not forget her kindness (her *bunkhun*).
		her kindness (*bunkhun*) to him. He must obey his mother.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

TABLE 9

*125 *When he thinks of his father, he thinks of . . .*
*128 *When thinking of father, he think of . . .*
*156
593

SELF-BENEFIT:	36%	the protection which his father offered to him.
		the good deeds his father has done for him; his father has taken care of him since he was a little boy.
		the time when he looked after him, taking care of him in sickness. If he had no father, he might not be alive.
OBLIGATION:	50%	he prays for him on Friday.
		his goodness in bringing us up from childhood. It is essential that children repay their father's goodness when he is old and can no longer work.
		if father is alive, he should go visit him and bring food. If father is dead, he should make merit for him.
		his kindness (*bunkhun*) done for her.
		his kindness to him (*bunkhun*). He obeys his father and repays the debt of kindness.

In thinking about their parents in terms of themselves, the informants give their responses in two closely related forms. They think of those characteristics of the parents that directly benefited them: their goodness and kindness to the informant; that they carried the informant in their womb or brought him into the world; that they reared the informant, took care of him when he was ill, or gave him money. Forty-six percent of the sample respond in this manner on the "mother" item and 36 percent on the "father" item. Some of their responses suggest that they were deeply touched by their recollections: one informant remembered her father "bringing her up, since the time her feet were as small as shells," and another thinks of the time her mother "brought me sweets and comforted me when I was frightened." The numerous references to food, as expressions of benevolent concern, should not be overlooked.

The other major form of the villagers' responses, and the one that bears out our earlier point, is the deep feeling of obligation that individuals feel toward their parents. In several instances, the obligation is simply assumed, and the informant gives a completion which describes the nature of his obligatory act: making merit for the parent, giving alms or blankets to monks, caring for the parent when he gets old. In most instances, however, informants indicate that they are obliged to their parents because of the kind and good things their parents have done for them. In a few cases, it is a moral imperative: "It is essential that the children repay their father's

4:Phillips E-4,5 (1956-1957) 1966
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goodness when he is old and can no longer work"; "if you are a male, you must get ordained to redeem the sins of the parents. Just like sending them money." Many of the responses included in this category do not refer explicitly to the reciprocity of the child, but are phrased in terms of the *bunkhuns* that the parent has done for the child. Because the term *bunkhun* assumes reciprocity as part of its root meaning—good deeds which are reciprocated—references to the *bunkhuns* of the parents are included here. All told, 43 percent of the sample fall into this obligation category on the "mother" item and 50 percent on the "father" item.

The entire discussion above leads to the proposition that if the premise of reciprocity did not play such a major role in the villagers' assumptive world, there would be a few more informants who would be willing to perceive their parents as living an existence independent of themselves, and fewer informants so concerned with repaying their parents for fulfilling what is, after all, the parents' primary psychosocial role. Such a concern is likely to arise only when there is an underlying awareness that the parents have an option of fulfilling or not fulfilling their role, and that this has been impressed on the individual so dependent upon their choice.

The next item, in its manifest purpose and in its diversity of response, is less emotionally loaded than the above. In fact, perhaps the major function of the item, *"A real close friend is one who . . ."* (and its companion piece, *"The thing I want most in my closest friend is . . . ,"* which is so similar in response it will not be presented), is to indicate that there are no widely shared notions of a "real close friend" in Bang Chan. Whether this suggests that the figure of the "close friend" is unimportant to the villagers is uncertain. However, the diversity of the villagers' responses permits us to say relatively little about the typicality of the socially equal, yet dependent, figure in the village.[4]

Examination of the responses indicates that they fall into six different categories. Listed in the order of their frequency, "a real close friend is one who" has such qualities as faithfulness, loyalty, the willingness to die for his friend, and keeps his word (27 percent). Almost as many people (24 percent) agree that he is an individual who helps you, especially if you are poor or are in need of reminders to behave in a moral way. One informant in this category voices a definition of a "close friend" that I have heard on several occasions when villagers were discussing their relationships with kinsmen or neighbors: ". . . one who helps you when you are in trouble and goes away when you are happy." A third group (18 percent) perceives

[4] An earlier point by Hanks and Phillips (1961: 642) might not be insignificant in this regard. We noted that it "is difficult for an equal to give anything of value to an equal or to command his 'respect.' Indeed, he stands as a potential competitor for favors."

4:Phillips E-4,5 (1956-1957) 1966
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human beings. In fact, the absence of any reference to other human beings, especially parents, is striking.

Of the seventeen persons who ask for supernatural help, seven, all women, explicitly say that they would call their *khwaan* (or "soul-stuff") back. Since this is a distinctively Thai concept, it merits a few words of explanation. Thai ontology holds that every individual is inhabited by a *khwaan*, who during childhood (when the individual is unstable and immature) or during a crisis can escape the body through an invisible hole in the head. One of the major functions of the top-knot worn by half the children of Bang Chan is to cover the invisible hole so that the *khwaan*

TABLE 21

If one is frightened, the best thing to do is . . .
If one is frightened, the best thing one ought to do is (namely) . . .

EQUANIMITY:	40%	to keep his heart calm. to pull yourself together (to try to compose yourself). Sometimes, just run away. to control oneself. to control your emotions until they are better. to stay *chəəj-chəəj*.
DEPENDENCY:	31%	to exclaim, "Lord help me!" to call one's soul-stuff back; call upon God, Allah. to think of Lord Buddha, his teaching, and his priests. to sometimes exclaim, "*phra chəəj*" ("Lord Buddha, or Buddhism, or monks—help me.")
FLIGHT:	8%	to avoid the situation; to run away.

cannot escape; also most life-cycle ceremonies have a special ritual devoted to "calling the *khwaan*," who although obviously not absent from the individual at the time, is called to reaffirm the necessity of his being in his place when the individual needs him most. At the same time, the formal ritual of "calling the *khwaan*" memorializes the fact that the *khwaan* is in his proper place, thus indicating that the individual in whom he resides has had the internal stability to reach the point in life that he has in fact reached. The "calling of the *khwaan*" is usually, although not always, performed by women, which might explain why all the villagers who give this response are female. The *khwaan* has four crucial attributes: (1) although he is of the self, he does have an independent existence of his own; (2) he is that part of the self that gives the self stability, and from an analytic point of view, is really an objectification of human stability; (3) he

4:Phillips E-4,5 (1956-1957) 1966
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Thus, in explaining why he loves one of his closest friends, a villager says:

> We love each other because we never contradict each other or disagree. That is why we love each other. If we disagreed, there would be no love. [Investigator: "It is normal sometimes even for close friends to disagree. About what kind of things do you and your close friend disagree?"] We never disagree. Only people who are drunkards and take opium disagree. That is why our friendship has lasted so long. [Investigator: "What would happen if you disagreed?"] We would not love each other, and maybe he would take revenge on me.

In another place, this same informant says of his relationship with his wife: "My wife and I never quarrel. If we quarreled, we would have to separate. There would be nothing to divide—except the children." As indicated earlier, many villagers, fearing the volatility of a quarrel, actually do separate, often even before the dispute gets going. Similarly, individuals, particularly if they are in subordinate positions, hesitate even to approach others lest they stimulate, let alone elicit, anger. Villagers will hesitate to approach others even if they are not the object, but simply a possible catalyst, of another's potential aggression: witness the cases of the land sale deal and the broken noria cited earlier. Note that in these cases it is not manifest aggression but merely the anticipation of it that inhibits villagers from initiating or maintaining interpersonal involvements.

Although villagers decline to express or to be exposed to direct aggression, they do have several indirect, if somewhat more complicated, ways of venting these feelings. Of these, the simplest is to gossip nastily about people. The frequency of this characteristic peasant activity is considerable in the village: in fact, an uncharitable observer might, on the basis of Bang Chan, just as readily entitle a book about Thailand *Land of Gossip* as *Land of Smiles*. However, the very frequency of gossip seems to mitigate its intensity or effect. Villagers are so accustomed to it that it is almost a way of talking, a style of speech. And as is the case with much village speech, villagers listen to, but do not necessarily believe, the nasty things one person might say about another. Also, excepting those cases where a person's complaints are either realistic or justifiable, people are just as likely to listen to an individual's gossip for what it says about him as for what it says about the person whom he is criticizing. None of this is to suggest that the person gossiping does not attain release, or that the person about whom he is gossiping, *if* he found out, would not be hurt or peeved. Rather, it is the situation in which the hostility is expressed that mitigates its effect.

Less frequent and more painful than the above are the formal, almost

4:Phillips E-4,5 (1956-1957) 1966
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*125 *128 781 [782] *125 *128 521 *156 181 • [593] the part of older people.[10] Particularly obvious is the absence of any reference to accumulating Buddhist merit. Neither is there any reference to the pleasures derived from dealing happily or enjoyably with other people. The closest we get to this is with the responses of two informants who are concerned mainly with the welfare of their children, and who speak in terms of "inspiring respect" in their children or assuming the role of "doctor" who, either by his knowledge (in case the children are ill) or wealth, could take care of them. Given all the conceivable things that villagers might wish to be—fanciful, real, personal, social, of this world, and of any world—the dominant wish is to have status, wealth, and respectability within their prevailing peasant context.

*125 *128 181 556 The next item, "*Most of all he wants to . . .*" is essentially a confirmation of the above findings. However, perhaps because of the syntax of the Thai version of the item and the inclusion of the word, "most" ("*The thing which raw wants the most is* (*namely*) . . .") the responses assume a considerably more extreme and "unimodal" form. The overwhelming majority of the informants, 77 percent, want only one thing: money. A few of them say that they want what are essentially cultural variations of money: property, rice fields, land, cattle, and jewelry. Several of them almost wax purple about the significance of money in their lives: "*The thing which raw wants the most is* (*namely*) . . . have money and gold, because money can help us all the time. Whatever one wishes to have, one can use money to buy it all. Even when one wants a wife, if one has a lot of money one can have anyone's daughter"; ". . . have money. Money is better than anything else. It is only the moon and stars that money cannot buy"; ". . . to have money. She wants money very much because when she lacks other things she can find something to take their place, but when she lacks money she is most unhappy"; ". . . have wealth because everything else comes after that." These responses, of course, explicate the major function of money. They indicate that money is not an end in itself, but a means by which to achieve some of the other life goals appearing here.

*125 *128 181 593 556 The minority responses to this item are in no case held by more than four individuals. Four villagers do give religious responses, saying that what they want most is to accumulate merit (one mentions both merit and money); three refer to maintaining the welfare of their families (one of them merging money and succorance by saying that he wants enough money to provide for his family); and four say that they want happiness (again, two of them linking money and happiness together).

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[796] [793] [10] There is nothing in the grammatical-semantic structure of the Thai version of this item inhibiting a religiously oriented response. The Thai cognate for the verb "to be" here is "*pen*," which could easily result in a response such as ". . . *pen khon thii mii bun*," or ". . . a person who has merit." This would be the most obvious "religious" completion under the circumstances.

125
[592]

37.a. Excuse me, but at present do you have a (wife/husband) who lives and eats with you, or not?

1.	Yes	456
2.	Yes, qualified _____	6
3.	No	78

[589]
[586]

b. IF NO: Excuse me, but is this because you are widowed, separated, divorced, or is there some other reason?

4.	Widowed	45
5.	Separated	9
6.	Divorced	1
7.	Other, specify	10
—	No Answer	7

[592]
[162]

38.a. Your own children, all of them that have ever been born, how many are there?

0.	None	84
1.	One	32
2.	2 to 3	70
3.	4 to 5	76
4.	6 or more	233

b. How many of your children are still living?

0.	None	89
1.	One	80
2.	2 to 3	83
3.	4 to 5	77
4.	6 or more	77
—	No Answer	4

c. How many of your children have died?

[165]

0.	None	196
1.	One	48
2.	2 to 3	34
3.	4 to 5	17
4.	6 or more	9
—	No Answer	9

39.a. Have you ever been ordained as a priest, or not?

[793]
[792]

1.	Yes	197
2.	No	11
—	No Answer	4

(Male Buddhist (210))

b. IF NO: In the future, do you want to be ordained as a priest, or not?

3.	Yes	20
4.	No	11

c. ASK ALL: How many sons do you have twenty years old or over?

[592]
[162]

5.	None	178
6.	One	24
7.	Two	29
8.	Three or more	29
—	Unascertainable	23

50

125 [793] [593] [792] [162]

39.d. IF A MAN HOME 20 AND UP: Of your sons over twenty, how many have been ordained as Buddhist priests, or not?

7. No	210
8. None	33
9. One	58
X. Two	25
Y. Three or more	15

e. Do you have any sons under twenty?

9. Yes	198
X. No	108
— No Answer	37

[793] [782]

f. IF YES: In future, do you want your sons under twenty to be ordained as priests, or not?

X. Yes	186
0. No	—
— No Answer	2

g. IF YES: But aside from your admirable desire to have them ordained, in your true heart how sure is your expectation? Are you very sure or not very sure, or fairly sure that they will be ordained?

1. Very sure	150
2. Not sure	26
3. Fairly sure	12
4. Unascertainable	9
NA	1

h. All over Thailand there are some Thai men who are over 50 but have never been ordained as priests. For what various reasons might this happen?
(Use code at end)

[461] IC. Suppose there was some work you could do individually, or that could be done in a small group of two or three, or that could be done in a large group. [illegible] way would you prefer to do the work--as an individual, or as a group of two or three, or in a large group?

8. Individually	60
9. Small group	55
X. Large group	202
Y. Undecided, depends	4
0. Unascertainable	12

[572] IL. Around here in BC-ET there are some people who have many close friends and there are other people who have few close friends. And how about yourself? Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?

5. More than most	62
6. Fewer than most	36
7. About the same	154
8. Unascertainable	23

60

125 64.c. IF YES: At what age did he leave HO?
[166] 1. Below 15 years 8
[592] 2. 15 to 19 years 28
3. 20 to 29 years 50
4. 30 years or more 5
5. Unascertainable 6

d. IF YES: For how long has he (she, they) been gone from HO?
6. Less than one year 12
7. 1 to 4 42
8. 5 to 9 19
9. 10 years or more 19
X. Unascertainable

[464] e. IF YES: What various duties or jobs does he (she, they) do in
[463] Bangkok?
1. Housewife 17
2. Unskilled laborer 19
3. Skilled laborer 33
Armed forces 17
Service 9
Employee 5
4. Other (retired, selling things) 2
5. Unascertainable 4

[166] f. IF YES: During the last year, have you seen this person(s)
[592] several times, once, or not at all?
[602] 9. Several times 65
X. Once 16
Y. Not at all 8
O. Unascertainable 3

g. IF YES: Does he (she, they) make regular remittances to this house?
X. Yes 31
Y. No 56
O. Unascertainable 5

[207] 65. Do you listen to the radio regularly, daily, occasionally, seldom, or never?
6. Regularly-daily 45
7. Occasionally 66
8. Seldom 148
9. Never 60
— Unascertainable 14

[525] 66.a. Do you play the lottery regularly, occasionally, seldom, or never?
1. Regularly 20
2. Occasionally 54
3. Seldom 220
4. Never 38
5. Unascertainable —
— No Answer 1

b. IF REGULARLY, OCCASIONALLY, OR SELDOM: Suppose you were to win the second prize of 10,000 baht. What various things would you do with this money?
(See code)

597 As of 1953 seven adopted children were reported to
621 be living in Bangchan. Since only those mentioned by family
• 593 heads as their adopted children were so recorded and since some of the information on family members were not given directly by the family heads, it is possible that there might be some more adopted children who appeared in the 1953 census as nephews or nieces. The authenticity of the term 'adopted child' as used in the village is nevertheless rather questionable. There has never been such a practice like legal registration of adopted children in the village, although this is provided by law. Moreover, maltreatment of an adopted child was not unheard of. In 1952 one family head reported that his adopted daughter had "run away" to Bangkok. In 1953 a young widow, an adopted daughter of an operator of a coffee shop in the village, also "ran away". When her whereabouts became known, no effort was made by the foster parents to return to the woman her golden necklace valued at one thousand baht. Later she was forced back home, being beaten all the way in spite of her complaint that she was pregnant. It was also not infrequent that an adopted child left his foster parents and took residence as a dependent relative in another family in the neighborhood. Such incidents points toward the possibility of 'adopted child' being used as a nom de grace for a prospective free family laborer.

162 Table 4 shows that with the exception of the ecclesi-
592 astical family the size of families in Bangchan ranges from
621 one to fourteen, averaging 5.7 persons per family. This

[TEXT CONTINUED ON PAGE 66]

178 laboring profession, limiting the work to transplanting only.
592 Apparently she did not earn enough. During this hard period
621 the young boy left her. The woman continued to live alone for two years. After the collapse of her shack in 1953 she went to live with a young couple in KY5 who are not related to her. In exchange for room and board and a nominal allowance, the old woman agreed to take care of the couple's baby.

178 Case 8: In 1949, a couple, both teachers in the Bang-
592 chan Primary School, were sharing the same dwelling with the
895 wife's mother's family, but having a separate food arrange-
434 ment for themselves and their two young daughters. Thus,
621 they appeared in the 1949 census as a separate family. In local standard, the combined income of these two teachers
[416] was quite high. The family lived well and was the only family in Bangchan that owned a camera. In the 1953 census this family became a part of the wife's mother's family because they had arranged to share the same food. The reason that was given for this new arrangement was that some time earlier the wife's brother, who had been living with his mother, got married and moved out to start an independent family, whereupon the old lady suggested that her daughter move in to fill the vacancy.

178 Case 9: In 1949, a family of three, consisting of
592 a young couple and their six years old daughter, worked as
621 farm hands for the wife's mother for fixed pay on which they
[593] were able to live independently. Two or three years later, the wife's mother asked this family to move into her household

178 592 621 [593] because four members of her family had just left her to establish families of their own. The son-in-law accepted this invitation and had since taken over the management of his mother-in-law's large 60-rai rice farm.

Case 10: In 1949, an old woman was living with two boys, one distantly related to her, the other without any [427] [792] [431] blood relationship. She was operating a small rented rice farm. Some time in the past she had made a generous offer of her own house to the temple which was not acted upon by the receiving party. In 1953, the headpriest contemplated an expansion of one of the temple buildings and approached the woman for the gift. The woman complied with the request, had her house dismantled, saving only the kitchen, and sent all the building materials to the temple. Meanwhile, the two boys had left her; one went to live with his mother in [593] [431] the village, the other went to Bangkok. Later, the woman joined the household of her younger brother, who lived next door, with the understanding that the brother had free use of her buffalo in exchange for her room and board.

Case 11: In 1949, a woman was living in KY8 with her aged mother and her baby born of her separated husband [586] [587] who was a policeman. Two years later, the woman married a widower, who lived in the same hamlet, and brought along her mother and son to live with her new husband.

With the exception of Case 6, a lone aged woman who was survived by none after her death, these cases may be grouped according to the nature of acceptance of the families

178 These five cases may be grouped as follows: two
592 cases of relatives of family heads separating from 'extended'
621 families, two cases of one spouse leaving the other, and one case of a family head deserting his wife and children.

Pattern of Establishment of New Families

593 Bangchan offspring customarily continued to live with
592 their parents as long as they were not married regardless of how old they might be. In the eyes of the parents, an offspring is always their child, immature and needing parental supervision, as long as he has not been able to acquire a spouse; and until then the parents-offspring mutual obligations, necessitating living together, must continue to exist. Thus, it was not uncommon to see several unmarried adults crowding in one family providing too large a labor force relative to a small parcel of land on which the family
[58] worked. In this context, marriage serves an important economic function of giving impetus to the start of new producing units in the village. There is no corresponding service in areas where the extended family system predominates such as in China and India.

583 Two distinct kinds of marriage were conceived of in Bangchan: the conventional marriage with the sanction of parents or guardians of both parties which was usually preceded by formal arrangement and accompanied by marriage rites sponsored by the bride's family; and the popular marriage by mutual understanding between the man and wife without

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 8

PARENTAL GIFTS TO 63 NEWLY ESTABLISHED FAMILIES
Bangchan, Thailand, 1909-48

593
431
434

Items	Number of Families Receiving	Range of Individual Gift	Total	Average for Those Receiving
F. implement*	63	1 set	63 sets	1 set
Buffalo	47	1-4 heads	73 heads	1.5 heads
Land	37	6-228 rai	1112 rai	30 rai
Paddy stock	32	40-1000 tang	4495 tang	140 tang
Building	12	1-2 bldg.	16 bldg.	1.3 bldg.
Cash	4	80-400 baht	760 baht	190 baht
Boat	3	1 boat	3 boats	1 boat
Gold	2	2-20 baht**	22 baht**	11 baht**

* Only basic items were included -- plow, harrow, sickle, etc.

** One baht weight of gold is equivalent to fifteen grams.

593 There was one item of parental gifts which is not
431 shown in Table 8 -- the household equipment. Two of the
415 63 families reported that they received a complete set of kitchen utensils, and two included jars in their gift lists. After checking the result of this survey with some informants, however, many admitted that they did not include these kitchen utensils in the list because they were obvious items. Nevertheless, there was no basis on which it could be inferred that every newly established family received a set of the kitchen utensils. It was therefore decided to omit the household equipment from the table.

593 Another form of parental gifts was the practice,
427 if the parents had enough land to spare, of letting the
423 couple work on some ten or twenty rai free of charge for the first two years. Rent might be charged after that, but there were also cases in which the couples continue to work on the parcel without paying any rent to their parents and finally took it for granted that the parcels belonged to them.

Economic Significance of the Family

59 Much space has been devoted to discussion of the family because of its significant role as the only organized producing unit in the village economy. Another important function of the family was mentioned in previous sections -- through privileges extended to the majority of newly wed couples during the nascent period, the old family facilitated

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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CHAPTER IV

FARMING POPULATION

*243
*128
463
621

It was indicated in the section on occupational structure in Bangchan, Chapter III, that there were two groups of villagers whose main incomes were directly derived from farming -- the farm operating and farm laboring families. These two groups constituted 254 out of a total of 296 families in the village in 1953 (Table 10). It should be noted, however, that Table 10 was constructed on the basis of the principal source of income of the family heads, and that the family was taken as a unit.

When individual farm workers are considered, four groups may be differentiated: (1) Farm operators; (2) Family workers; (3) Hired laborers; and (4) Piece-workers.

*243
*128
462
593

Farm operators are those who are assumed to actively manage the farm. Actually, it has been observed that some wives did direct the farm work while their husbands assumed only a passive role. It is rather difficult, however, to point out among some one hundred couples which spouse actually manages the family farm. To save time, and perhaps embarssment, it was assumed that, where both husband and wife were involved, the husband -- the official family head --was the farm operator regardless of his actual role.

243 434 household. Although labor earnings is a truer measure of a farmer's return, it is less widely used than labor income because no such estimation is involved in this latter measure and because prequisites are much less important in the United States. On Thai rice farms, however, it is not as difficult to estimate the value of farm products used in the household because generally only one kind of farm product -- rice -- is involved and the consumption of rice, although in large amount, can be precisely determined. To a much lesser extent poultry products may be used, but it is also fairly easy to estimate.

593 465 In theory, the remuneration for family workers' effort is imputed at the going wage rate on their actual contribution in the farm work, when labor earning is calculated. In practice, however, Bangchan family workers receive in addition to board and lodging a certain amount of cash from their family head who is also the farm operator and who pays this amount from farm net cash return. The amount an individual family worker receives varies according to individual need and often to the whim of the family head. To be sure, there is no such thing as a fixed allowance because yearly fluctuation of farm income does not permit such arrangement. One Bangchan farmer put it this way, 593 434 465 "Hired labor is usually more expensive than family labor except in good years, for you can't help giving generous gifts to the family in a good year. This year (1949, the year following a bumper 1948-49 crop) I gave my two daughters

434 300 baht for clothing, 500 baht which they spent mostly
465 on a pilgrimage to the Temple of Buddha's Footprint, and
• 593 670 baht for two gold necklaces. That's a total of 1470 baht for the two of them. My wife alone took 1,100 baht received from the sale of the early variety, and I don't want to take the trouble to ask where the money went."

It has been observed that farm income varies greatly from farm to farm as well as from year to year. Farm household expense, on the other hand, has been observed to be less variable. Although the remunerations for farm operators and family workers are directly related to farm income, it would seem unwise to discuss farm income without bringing in first the discussion on farm technology and farm organization and management. We propose, therefore, to limit at the time being our discussion of the remunerations of farm operators and family workers to indicating their respective sources only. We shall have occasion to deal with their patterns and magnitudes in Chapter VII, which will be exclusively devoted to income and consumption of farm operators.

465 The hired laborer receives his remuneration for the
178 farm work in the form of annual wage which is paid by his employer, the farm operator, according to the provision of the oral contract made before each working season. It was found in 1948 that this annual wage was paid in either cash or kind, and in addition the laborer received free board and lodging and one or two working suits. Of 13 hired laborers covered by the 1948 survey, five were paid a cash wage

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

511
525
691
484
431
593

recovery of a boat stolen, 390 baht on "laxity", and 30,000 baht on a trip to Mecca. The gifts to offspring included only gifts presented when offspring left the family to start an independent family of their own.

Special Receipts

*128
434

By special receipts we mean major items of receipts in addition to those regularly obtained from crops, labor, rent, and interest on loans extended. These are counterparts of special expenses, and informations about them were obtained from the 96 sample-families in the same manner and almost concurrently. Examples of these special receipts are: sales of land, gold, and major farm equipment; loans obtained, full or partial settlement of loans extended; gifts and remittances; and odd receipts like those from government lottery prizes, running a gambling house, and laxity practices. Special receipts of the 96 sample-families during the period from March, 1948 to February, 1953 were shown in Table 58.

Some of these items of special receipts need explanation. Land sold by two farm operators were sold for cash needed for loan repayment. It is perhaps worth noting that one of these two operators was in the habit of heavy drinking and had been in recent years spending about two thousand baht annually on liquor alone, while the other was in the habit of gambling. All five operators reporting sales of gold gave the reason for the sale that cash was needed to either buy farm equipment (buffaloes) or to repay

[TEXT CONTINUED ON PAGE 333]

594 What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the
434 families, living in tiny separate cottages.[1] Usually with in-
444 adequate or no land, they earned an irregular income by hiring
423 themselves out for farm or other work. At the other extreme,
596 in a hamlet-like cluster of dwellings, lived a closely affili-
592 ated group of kin. A senior couple more or less headed the
476 married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

855 Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or
[252] to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying home from school to do so. Where the adult cooperative
596 group was larger, movement was freer. All the strong adults
476 could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons
[871] could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

241 Plowing could be done by a man and wife, but for both
462 transplanting and harvesting which had to be done within a few
476 days, large groups were necessary. Two patterns of auxiliary
464 group labor prevailed: reciprocal cooperative work, and hiring of labor.

113
114 1. Janlekha, 1955, categorized families as 5% "one-
162 person," 59% nuclear, 8% limited extended (including one or
594 more parents of a spouse), 27% extended (including dependent
596 married couples or other collateral relatives), and the temple
423 residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959*b*: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family,

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home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

4:Phillips E-4,5 (1956-1957) 1966
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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.* Bang Channers do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

* There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost *a* Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

4:Phillips E-4,5 (1956-1957) 1966
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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
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121 remotely extended families, or with what L. M. Hanks [1959c] calls the
594 multi-local extended family, about which there is more below.)

591 The variations of the nuclear family, obviously excepting the monkhood,
594 arise primarily out of the large proportion of recently married couples who find it more expedient to continue living with one set of parents while accumulating funds for setting up their own independent households. In the case of one-person families, the variation arises when individuals are unable to live with their kin, are deserted by them, or have none. All the one-person families tend to be poor and are comprised largely of elderly people. In arrangements of the former type, there is a slight (five to three) tendency to matrilocality over patrilocality, and despite the intention of all concerned that the arrangements remain impermanent, there is considerable variability as to how long they are maintained. Analyzing a sample of 96 Bang Chan families, Janlekha found that although 30 percent came into being as nuclear families immediately after marriage, the balance underwent a period of residence with parents ranging from one to twenty years, the average being four years, with 16 percent never moving from the parents' home at all. Most cases of what Janlekha calls "limited extended families" result from a stem family inheritance pattern, although some entail elderly parents breaking up their households and moving in with the family of one of their mature children.

In addition to these basic variations, more accurately labeled "alternatives," there are several other variations of the nuclear family that occur with sufficient frequency to be noticed and at the same time are considered not at all unusual by the villagers themselves. Their significance for us is that they reveal what appears to be an almost nonchalant willingness or acquiescence on the part of the villagers to make modifications and adjustments in their living arrangements whenever necessary. Underlying this seems to be a fundamental assumption that the question of who lives with whom simply is not one of overriding importance: as long as individuals can live together without discord, act in terms of the household's established patterns of superordination and subordination, contribute labor or money to the family larder commensurate with their ages, and not inconvenience each other, they will be welcomed into the household; if unable or unwilling to fulfill such elementary obligations, they may take their leave, even if they are in fact full-fledged members of the nuclear family.

This rather flexible, or what the late John Embree would have called (1950) "loosely structured," approach to family organization is expressed in both centripetal and centrifugal ways.

596 Consonant with the fact that in all but the poorest Bang Chan families there is almost always enough rice to feed another mouth, it is common in

4:Phillips E-4,5 (1956-1957) 1966
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the village to find dependent relatives—siblings, cousins, nephews, nieces— 596
who, unable to make a go of it elsewhere, are accepted into a relative's family, sometimes to the extent of eventually taking over the headship of the family. Sometimes, on the initiative and invitation of an elderly or lonely relative, an entire nuclear family will be asked to take over or share a household. Children of poor or "inconvenienced" families (where a new 596
child is born before the first is weaned, where there are too many children 597
for the mother to handle comfortably, where a youngster is simply being "troublesome") are adopted or "borrowed" by other villagers for varying periods of time. This is done preferably by relatives, sometimes by neighbors, and often, in the case of boys, by the monastery, where the children become hand-servants to the monks and are supposed to absorb, by a kind of osmotic process, righteous ways of behaving. (Of my three male life history informants, two were given over to relatives at the ages of two, the third at the age of eight; one spent his childhood with four different families, another with five families; one describes his adolescence as "wandering from place to place." The psychological implications of such displacement should not be underestimated.) On occasion, two independent 596
nuclear families—almost always connected by some kinship tie—will join [594]
together for convenience to share cooking facilities, in which case they effectively become a single extended family. And in some cases, although rare, one will encounter adult children living in independent households but handing over their income to a parent, living in still another home, who disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a 596
husband to be away for four or five months at a time earning money in 591
Bangkok, or during the dry season on a vegetable farm, returning home to [464]
visit his wife and children whenever opportunity permits, with or without funds. The wife may still maintain their household, but often returns to 596
live with her own parents.[7] In a similar vein, although obviously more 586
extreme, it is not unusual to find families in Bang Chan which have simply 182
"disintegrated," as the villagers say. Much depends here on the circumstances of family members. Bang Chaners usually reserve the term "disintegrated" for families that no longer have the economic wherewithal or justification for staying together as functioning units. In these instances, family members simply go their separate ways, if possible back to their families of orientation or to other relatives, husbands perhaps into the monkhood, and the children to whomever will take them. Most frequently, [578]
"disintegration" is characteristic of very poor families, and in the minds of

[7] This pattern may be related to the old *corvée* labor pattern when able-bodied village men were away from their families for extended periods of time. [466] [651] [174]

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

596 182 586 [578] [576] the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

586 595 Precise figures on the divorce or separation rate in Bang Chan are unknown, primarily because many marriages as well as divorces are never registered on the government roll. Also, many separations seem to follow an on-again-off-again pattern; the sanctioned occurrence of polygyny (only eight known cases out of the 296 families) and even polyandry (two known cases) complicates the problem even further. However, the fact that *four months* after I had designated a sample of thirty families from which to [581] select informants, six of those families, or 20 percent of the sample population, had dissolved would strongly suggest that Bang Chan families are not particularly stable.

593 586 183 The causes of family fission in these specific cases are unknown, but what is impressive is the apparent ease with which it takes place and the equanimity with which people seem to accept it. Other informants, reporting their own experiences or observations, discuss family breakups as if they were among the more normal events of the workaday world and completely understandable. They seem to be of no greater emotional import—in the sense of eliciting recognizable feelings of distress—than losing a good price on the sale of a piece of land or on the sale of some rice. In fact, the latter kinds of situations are considerably more likely to evoke expressions of hurt or exasperation. One repeatedly encounters in Bang Chan instances on the following order: a family breaks up simply because the husband has an inclination to work for a particular person whom he likes; a wife ("she is a touchy woman") runs away every time she has a minor disagreement with her husband (minor even by village standards, for example, "Should I buy my lottery tickets from Mr. X or Mr. Y?"; "Should we invite seven monks or ten monks to officiate at this ceremony?"). The point here is that these explanations—and the low tolerance for discord, the importance to a person of a boss or job over a spouse, the desire to be footloose, which they imply—are to the villagers completely reasonable justifications for the dissolution of family units.

174 594 596 Many of the family relationships referred to above as "centripetal" in nature are clearly related to or derived from patterns of social organization characteristic of an earlier Bang Chan. Although most evidence indicates that even in the years immediately following the settlement of the village in

4:Phillips E-4,5 (1956-1957) 1966
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the 1880's, the nuclear family was the primary social unit,[8] it is equally clear that extended family relations played a highly significant role—considerably more so than they do today—in the total life of the community. The precise nature of that role resists easy terminological formulation. In his reconstruction of the history of Bang Chan, L. M. Hanks (1959c) speaks of two types of "extended families" typical of early Bang Chan, one organized along lineal lines toward a single parent, and the other based on an alliance of siblings. In both cases, members of these groups assisted each other "by working in the fields, sharing food and equipment, helping with chores and celebrating special occasions together," and effectively formed what Hanks calls "extended family hamlets." These larger family units, however, were based on personal compatability, or in the case of the lineally oriented family, on the wealth and leadership of a particularly dynamic individual. They were never based on compelling structural characteristics such as corporate ownership of land or homes. Since many of the individual nuclear families were poor and trying to live off a land that was essentially a frontier, it made sense that they should join together or attach themselves to a wealthier, more powerful individual, and that the primary criterion for association should be the kinship tie with its built-in sentiments of affiliation, familiarity, and trust. However, since the basis of association here was at all times an economic-functional one—it was *reciprocal* and *mutual* benefits that brought people together, not an overriding ethic of familial solidarity—it might perhaps be better to think of such families as associations of "kindred" in the technical sense rather than

[8] Since almost all Thai history, by Thai or foreigners, is primarily a court history and concerned with activities of the kingdom at large or activities at the seat of power (where, of course, most of the literati, writers and readers, lived) there is little documentation on the history of the peasant family or any changes it might have gone through. Phya Anuman Rajadhon's profoundly knowledgeable, but highly idealized, essays on "ancient customs" of Thailand (Rajdadhon ["Sathien Koset"] 1957 and Rajadhon 1954, 1958) contain references vaguely suggestive of an extended family system among peasants: "the house a groom built always had to be in the home compound of his father-in-law," for example, the time and effort demanded by house-building suggesting a high degree of permanency, the compound implying extended family unity. But the data are too meager and uneven to form the basis of anything more than speculation. On the other hand, comparative distributional data on other Thai-speaking peasants (P. K. Benedict 1943, Seidenfaden 1958); the great emphasis in traditional law, going back to the decrees of Rama Tibodi I in the mid-fourteenth century, on the absence of family responsibility in the commission of individual crime (Lingat 1936 and 1952); and the background commentary in Thailand's great multi-authored love epic of the late eighteenth–early nineteenth century, *Khun Chang and Khun Phaen*, all suggest that the peasant family has remained remarkably stable through the centuries as a nucleated, independently functioning unit linked to other families in the community by loose ties of kinship. The fact that family names did not come into use in Thailand until 1916, and then only by royal decree, further suggests that the extended family was never the major kinship unit.

4:Phillips E-4,5 (1956-1957) 1966
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"extended families." The aim of all Bang Chan families even then was to attain a position in which they would be free from such obligations or would have other families dependent upon them.

In the intervening years the influx of new families into Bang Chan, the increased self-sufficiency of the individual nuclear families and, most important, the increased acceptance of commercial values, have served to break down kindred groups so that today few kinsmen work their fields together and even fewer share their food or equipment with one another, beyond what has been noted above. Perhaps the only remaining *universally* practiced function of the old kindred groups is the celebration of ceremonials involving members of the family, particularly cremations and ordinations, the cost and merit of which are shared among the participants, depending upon their wealth. Very often people do not want to borrow from or lend money or equipment to kinsmen precisely because the intrusion of the kinship tie makes the collection of such debts doubly awkward ("relatives take twice as long in repaying money; I do not want to lend anything to them"). However, the old forms have not been completely obliterated and when necessity requires or personal convenience moves an individual to look to others, the traditions of extended kinship, as indicated earlier, may be invoked.

For purposes of conceptual convenience, two types of kindred may be specified: the kind referred to above which involves kinsmen living in the village and to which Kaufman (1960) gives the name "spatially extended family"; and the type descriptive of relatives living outside Bang Chan, dispersed throughout other villages and provinces or in Bangkok, and called by Kaufman "the remotely extended family" and by L. M. Hanks (1959c) "the multi-local extended family." These terms are of course generic labels descriptive of actual or potential relationships between individuals, not of specifically delimited groups. Sometimes Bang Chaners attempt to extend the definition of the latter type of relationship to individuals who have never heard of them, but who may be in a position to help their son obtain a job in the city or get him admitted into a vocational school. Hanks has shown how the multi-local extended family has to a limited extent in recent years rejuvenated extended kinship ties by becoming the major institutional mechanism through which villagers leave Bang Chan to seek their fortunes elsewhere. (This last phrase is not merely a figure of speech; many young Bang Chan men have what could be called almost a Dick Whittington view about leaving Bang Chan for Bangkok.) A cousin who undertakes to serve as a villager's liaison to a city job or who offers him a place to stay usually does so willingly, for it creates obligations which may be called upon later if need be.

The above description of variations and extensions has been presented

*243
476 utilized only 26 man-hours of labor, entertaining the same
461 groups involved as many as 158½ man-hours.

Labor Requirement in Rice Production

*243 During the 1953-54 rice year, an exploratory study of
461 labor requirement in rice production was conducted, using
*128 only one farm. This farm was operated by Headman Chom Srisuay of KY5. It was one among the 104 sample farms covered by the preliminary survey in 1948-49. The choice of this farm was made on the basis of the high degree of cooperation given us by Chom and all his family.

• [594] During the period covered by this special study of labor requirement, Chom had a family of nine, consisting of Husband Chom (47), Wife Sai (44), three sons -- Phuan (19), Phan (16) and Phloen (8), and four daughters -- Phung (15), Phad (13), Bunmarg (7) and Mian (4).

In the year of the study of labor requirement, Chom operated a farm of 49 rai consisting of four parcels: Parcel A, 7 rai; Parcel B, 20 rai; Parcel C, 7 rai; Parcel D, 15 rai. The locations of these parcels are shown in the sketch map on page

Part of Parcel A was used at the beginning of the sea-
*243 son as seedbed. After the seedlings had been uprooted and
461 transplanted, this parcel was again plowed and harrowed and planted to three varieties of rice -- Mue Hag, Ched Ruang and Khao Sa-ing. Parcel B was also planted to three varieties -- Mue Hag, Ched Ruang and glutinous rice. Parcel C was planted to only one variety -- Mue Hag. Parcel D was planted to two

*243 varieties -- Khao Sa-ing and floating rice. The areas in each
461 parcel planted to different varieties are given below.

Parcel	Total area rai	Area planted to each variety Var. name	Area in rai
A	7	Mue Hag	3
		Khao Sa-ing	3
		Ched Ruang	1
B	20	Mue Hag	10
		Ched Ruang	7½
		Glutinous rice	2½
C	7	Mue Hag	7
D	15	Khao Sa-ing	9
		Floating rice	6

It may be seen that actually there were five varieties altogether. The areas devoted to these varieties were as follow: Mue Hag, 20 rai; Khao Sa-ing, 12 rai; Ched Ruang, 8½ rai; glutinous rice, 2½ rai; floating rice, 6 rai. Since 6 rai was planted to floating rice and it was mentioned in the first section of this chapter that this floating rice lent itself only to the broadcasting method, it may be noted here that of the total area in rice of 49 rai, 43 rai was devoted to transplanted rice and 6 rai was devoted to broadcast rice.

*243 Of the nine members of the family, Chom, Sai, Phuan
• 594 and Phan were first-rate workers while Phung -- the fifteen
461 year old daughter -- was diligent but still needed more training in the farm work. Chom kept four buffaloes. Thus the needed four regular workers who were supposed to be Chom, Sai, Phuan and Phan. When the work season was about to begin, however, Phan was engaged by the Cornell research team as a

[TEXT CONTINUED ON PAGE 242a]

*243 row man. He could not very well be substituted by his younger
• 594 sister who was also needed to perform the housework. A worker
461 was thus hired for the period of two months -- from the middle
[464] of June to the middle of August -- primarily to help in plowing. Phan also partially helped in plowing and harrowing in part of the morning session before he started his work for the Cornell team at nine o'clock.

[476] During the cooperative work season, Chom represented the family in cooperative uprooting and cooperative harvesting, and Phuan in cooperative transplanting, weeding and harvesting. Phan also represented the family in cooperative work scheduled for Saturdays and Sundays when he was free from Cornell duty.

*243 Work records of all workers of this farm were kept by
461 the author throughout the work season from June 4, 1953 to
*128 February 14, 1954. At the beginning, the author stayed overnight with the family. Family workers were requested to give accounts of their activities of the day. To facilitate more accurate accounts regarding the time of the work, a clock was
[115] given to the family. When family workers became acquainted with the type of information that was needed, Phan, our row man, was assigned to make a daily report on the kinds and time of work done by each worker. Phan's daily report was taken down by the author in the labor schedule specially prepared for the purpose.[3] Later, when Phan's reporting skill was well developed, he was asked to report on the daily labor records only four times a week, usually Monday, Tuesday, Thursday and Friday.

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3. See Appendix B.

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 60 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygynous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap.V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

4:Phillips E-4,5 (1956-1957) 1966
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the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

Precise figures on the divorce or separation rate in Bang Chan are unknown, primarily because many marriages as well as divorces are never registered on the government rolls; also, many separations seem to follow an on-again-off-again pattern; the sanctioned occurrence of polygyny (only eight known cases out of the 296 families) and even polyandry (two known cases) complicates the problem even further. However, the fact that *four months* after I had designated a sample of thirty families from which to select informants, six of those families, or 20 percent of the sample population, had dissolved would strongly suggest that Bang Chan families are not particularly stable.

The causes of family fission in these specific cases are unknown, but what is impressive is the apparent ease with which it takes place and the equanimity with which people seem to accept it. Other informants, reporting their own experiences or observations, discuss family breakups as if they were among the more normal events of the workaday world and completely understandable. They seem to be of no greater emotional import—in the sense of eliciting recognizable feelings of distress—than losing a good price on the sale of a piece of land or on the sale of some rice. In fact, the latter kinds of situations are considerably more likely to evoke expressions of hurt or exasperation. One repeatedly encounters in Bang Chan instances on the following order: a family breaks up simply because the husband has an inclination to work for a particular person whom he likes; a wife ("she is a touchy woman") runs away every time she has a minor disagreement with her husband (minor even by village standards, for example, "Should I buy my lottery tickets from Mr. X or Mr. Y?"; "Should we invite seven monks or ten monks to officiate at this ceremony?"). The point here is that these explanations—and the low tolerance for discord, the importance to a person of a boss or job over a spouse, the desire to be footloose, which they imply—are to the villagers completely reasonable justifications for the dissolution of family units.

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What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the families, living in tiny separate cottages.[1] Usually with inadequate or no land, they earned an irregular income by hiring themselves out for farm or other work. At the other extreme, in a hamlet-like cluster of dwellings, lived a closely affiliated group of kin. A senior couple more or less headed the married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying home from school to do so. Where the adult cooperative group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

Plowing could be done by a man and wife, but for both transplanting and harvesting which had to be done within a few days, large groups were necessary. Two patterns of auxiliary group labor prevailed: reciprocal cooperative work, and hiring of labor.

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1. Janlekha, 1955, categorized families as 5% "one-person," 59% nuclear, 8% limited extended (including one or more parents of a spouse), 27% extended (including dependent married couples or other collateral relatives), and the temple residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

4:Phillips E-4,5 (1956-1957) 1966
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121 remotely extended families, or with what L. M. Hanks [1959c] calls the
594 multi-local extended family, about which there is more below.)

591 The variations of the nuclear family, obviously excepting the monkhood,
594 arise primarily out of the large proportion of recently married couples who find it more expedient to continue living with one set of parents while accumulating funds for setting up their own independent households. In the case of one-person families, the variation arises when individuals are unable to live with their kin, are deserted by them, or have none. All the one-person families tend to be poor and are comprised largely of elderly people. In arrangements of the former type, there is a slight (five to three) tendency to matrilocality over patrilocality, and despite the intention of all concerned that the arrangements remain impermanent, there is considerable variability as to how long they are maintained. Analyzing a sample of 96 Bang Chan families, Janlekha found that although 30 percent came into being as nuclear families immediately after marriage, the balance underwent a period of residence with parents ranging from one to twenty years, the average being four years, with 16 percent never moving from the parents' home at all. Most cases of what Janlekha calls "limited extended families" result from a stem family inheritance pattern, although some entail elderly parents breaking up their households and moving in with the family of one of their mature children.

In addition to these basic variations, more accurately labeled "alternatives," there are several other variations of the nuclear family that occur with sufficient frequency to be noticed and at the same time are considered not at all unusual by the villagers themselves. Their significance for us is that they reveal what appears to be an almost nonchalant willingness or acquiescence on the part of the villagers to make modifications and adjustments in their living arrangements whenever necessary. Underlying this seems to be a fundamental assumption that the question of who lives with whom simply is not one of overriding importance: as long as individuals can live together without discord, act in terms of the household's established patterns of superordination and subordination, contribute labor or money to the family larder commensurate with their ages, and not inconvenience each other, they will be welcomed into the household; if unable or unwilling to fulfill such elementary obligations, they may take their leave, even if they are in fact full-fledged members of the nuclear family.

This rather flexible, or what the late John Embree would have called (1950) "loosely structured," approach to family organization is expressed in both centripetal and centrifugal ways.

596 Consonant with the fact that in all but the poorest Bang Chan families there is almost always enough rice to feed another mouth, it is common in

4:Phillips E-4,5 (1956-1957) 1966
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the village to find dependent relatives—siblings, cousins, nephews, nieces— 596
who, unable to make a go of it elsewhere, are accepted into a relative's family, sometimes to the extent of eventually taking over the headship of the family. Sometimes, on the initiative and invitation of an elderly or lonely relative, an entire nuclear family will be asked to take over or share a household. Children of poor or "inconvenienced" families (where a new 596
child is born before the first is weaned, where there are too many children 597
for the mother to handle comfortably, where a youngster is simply being "troublesome") are adopted or "borrowed" by other villagers for varying periods of time. This is done preferably by relatives, sometimes by neighbors, and often, in the case of boys, by the monastery, where the children become hand-servants to the monks and are supposed to absorb, by a kind of osmotic process, righteous ways of behaving. (Of my three male life history informants, two were given over to relatives at the ages of two, the third at the age of eight; one spent his childhood with four different families, another with five families; one describes his adolescence as "wandering from place to place." The psychological implications of such displacement should not be underestimated.) On occasion, two independent 596
nuclear families—almost always connected by some kinship tie—will join [594]
together for convenience to share cooking facilities, in which case they effectively become a single extended family. And in some cases, although rare, one will encounter adult children living in independent households but handing over their income to a parent, living in still another home, who disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a 596
husband to be away for four or five months at a time earning money in 591
Bangkok, or during the dry season on a vegetable farm, returning home to [464]
visit his wife and children whenever opportunity permits, with or without funds. The wife may still maintain their household, but often returns to 596
live with her own parents.[7] In a similar vein, although obviously more 586
extreme, it is not unusual to find families in Bang Chan which have simply 182
"disintegrated," as the villagers say. Much depends here on the circumstances of family members. Bang Chaners usually reserve the term "disintegrated" for families that no longer have the economic wherewithal or justification for staying together as functioning units. In these instances, family members simply go their separate ways, if possible back to their families of orientation or to other relatives, husbands perhaps into the monkhood, and the children to whomever will take them. Most frequently, [578]
"disintegration" is characteristic of very poor families, and in the minds of

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[7] This pattern may be related to the old *corvée* labor pattern when able-bodied [466]
village men were away from their families for extended periods of time. [651]
[174]

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596 182 586 [578] [576] the villagers is contrasted with those cases of separation or divorce which are viewed as resulting more from social psychological reasons: arguments, contrariness, general incompatability, and wasting or not sharing money. The squandering of money is a most frequent cause of family discord contributing to family dissolution, especially when it involves the three aphoristic evils of Thai life: women, whiskey, and opium (although, in fact, I know of only two cases where Bang Chaners have been reputed to smoke opium).

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4:Phillips E-4,5 (1956-1957) 1966
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the 1880's, the nuclear family was the primary social unit,[8] it is equally clear that extended family relations played a highly significant role—considerably more so than they do today—in the total life of the community. The precise nature of that role resists easy terminological formulation. In his reconstruction of the history of Bang Chan, L. M. Hanks (1959c) speaks of two types of "extended families" typical of early Bang Chan, one organized along lineal lines toward a single parent, and the other based on an alliance of siblings. In both cases, members of these groups assisted each other "by working in the fields, sharing food and equipment, helping with chores and celebrating special occasions together," and effectively formed what Hanks calls "extended family hamlets." These larger family units, however, were based on personal compatability, or in the case of the lineally oriented family, on the wealth and leadership of a particularly dynamic individual. They were never based on compelling structural characteristics such as corporate ownership of land or homes. Since many of the individual nuclear families were poor and trying to live off a land that was essentially a frontier, it made sense that they should join together or attach themselves to a wealthier, more powerful individual, and that the primary criterion for association should be the kinship tie with its built-in sentiments of affiliation, familiarity, and trust. However, since the basis of association here was at all times an economic-functional one—it was *reciprocal* and *mutual* benefits that brought people together, not an overriding ethic of familial solidarity—it might perhaps be better to think of such families as associations of "kindred" in the technical sense rather than

[8] Since almost all Thai history, by Thai or foreigners, is primarily a court history and concerned with activities of the kingdom at large or activities at the seat of power (where, of course, most of the literati, writers and readers, lived) there is little documentation on the history of the peasant family or any changes it might have gone through. Phya Anuman Rajadhon's profoundly knowledgeable, but highly idealized, essays on "ancient customs" of Thailand (Radjadhon ["Sathien Koset"] 1957 and Rajadhon 1954, 1958) contain references vaguely suggestive of an extended family system among peasants: "the house a groom built always had to be in the home compound of his father-in-law," for example, the time and effort demanded by house-building suggesting a high degree of permanency, the compound implying extended family unity. But the data are too meager and uneven to form the basis of anything more than speculation. On the other hand, comparative distributional data on other Thai-speaking peasants (P. K. Benedict 1943, Seidenfaden 1958); the great emphasis in traditional law, going back to the decrees of Rama Tibodi I in the mid-fourteenth century, on the absence of family responsibility in the commission of individual crime (Lingat 1936 and 1952); and the background commentary in Thailand's great multi-authored love epic of the late eighteenth–early nineteenth century, *Khun Chang and Khun Phaen*, all suggest that the peasant family has remained remarkably stable through the centuries as a nucleated, independently functioning unit linked to other families in the community by loose ties of kinship. The fact that family names did not come into use in Thailand until 1916, and then only by royal decree, further suggests that the extended family was never the major kinship unit.

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"extended families." The aim of all Bang Chan families even then was to attain a position in which they would be free from such obligations or would have other families dependent upon them.

In the intervening years the influx of new families into Bang Chan, the increased self-sufficiency of the individual nuclear families and, most important, the increased acceptance of commercial values, have served to break down kindred groups so that today few kinsmen work their fields together and even fewer share their food or equipment with one another, beyond what has been noted above. Perhaps the only remaining *universally* practiced function of the old kindred groups is the celebration of ceremonials involving members of the family, particularly cremations and ordinations, the cost and merit of which are shared among the participants, depending upon their wealth. Very often people do not want to borrow from or lend money or equipment to kinsmen precisely because the intrusion of the kinship tie makes the collection of such debts doubly awkward ("relatives take twice as long in repaying money; I do not want to lend anything to them"). However, the old forms have not been completely obliterated and when necessity requires or personal convenience moves an individual to look to others, the traditions of extended kinship, as indicated earlier, may be invoked.

For purposes of conceptual convenience, two types of kindred may be specified: the kind referred to above which involves kinsmen living in the village and to which Kaufman (1960) gives the name "spatially extended family"; and the type descriptive of relatives living outside Bang Chan, dispersed throughout other villages and provinces or in Bangkok, and called by Kaufman "the remotely extended family" and by L. M. Hanks (1959c) "the multi-local extended family." These terms are of course generic labels descriptive of actual or potential relationships between individuals, not of specifically delimited groups. Sometimes Bang Chaners attempt to extend the definition of the latter type of relationship to individuals who have never heard of them, but who may be in a position to help their son obtain a job in the city or get him admitted into a vocational school. Hanks has shown how the multi-local extended family has to a limited extent in recent years rejuvenated extended kinship ties by becoming the major institutional mechanism through which villagers leave Bang Chan to seek their fortunes elsewhere. (This last phrase is not merely a figure of speech; many young Bang Chan men have what could be called almost a Dick Whittington view about leaving Bang Chan for Bangkok.) A cousin who undertakes to serve as a villager's liaison to a city job or who offers him a place to stay usually does so willingly, for it creates obligations which may be called upon later if need be.

The above description of variations and extensions has been presented

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in some detail not only to indicate the complex reality of Bang Chan family organization, but to convey—it is hoped with some measure of success by my prolonged, but obviously incomplete, qualifications—some sense of the amorphous nature of village kinship structure. Actually, I feel that any attempt to bring descriptive order to Bang Chan kinship does violence, in the very process of ordering, to the reality of what is being described. This is said neither out of a sense of inadequacy nor apology, but simply to underscore the fact that kinship relationships in Bang Chan are considerably more unpredictable, inconsistent, and chaotic than our descriptive modes typically admit, and that any coherent discussion of them must unavoidably involve an element of reification.[9] Our categories above are by no means inaccurate in indicating functioning kinship units, but they communicate little of the fluidity and tenuousness characteristic of such units. Individuals of all ages recurringly move in and out of families; families splinter, in full or in part, sometimes permanently, but more frequently to be formed again with the same or new members. What is perhaps most distinctive of this flux is the sense of uncertainty that surrounds it—a state that is easily tolerated by the villagers. Often during the course of field work we would enter a home looking for a particular informant only to be told that he had left for Bangkok or for another

[9] L. M. Hanks (1959*b*: 1) has made a similar observation with regard to Thai social structure in general: "The Thai social scene at its most orderly moment seems to flaunt conventional Western requirements for organization and to travel always on the brink of social chaos. Every inclination of the student would give it more regularity. . . ." However, in seeking to account for such instability, Hanks points to such historical circumstances as the freeing of the slaves in 1905, reorganization of the government, the expansion of the population on the new land frontier, the new market economy, and the new ideas and gadgets introduced from the West. One might add the presence of Buddhism and its emphasis on change and impermanence as another contributing factor. I would agree that these social upheavals and the presence of the philosophy represented by the "Wheel of Law" have contributed to the instability of Thai social life, but there is more to it than that, at least with regard to the family. Such explanations simply do not account for cases of a family breaking up because its members accuse each other of stealing lost equipment (why the alternative, "let us look for the lost equipment," is so rarely raised is unknown); or of a father sending his eight- and six-year-old sons to live at the monastery and with relatives because his new wife is annoyed by them; or of the case cited by Hanks of the person who was abandoned by his mother at the age of three months when she ran away out of anger at her husband for taking a second wife, and who later went to live with his grandfather "because he had no one to take care of the buffalo." The point of course is that the primary and immediate factors at work here are psychological ones: an intense narcissism; an assumption that all human beings, even children, are responsible for themselves; a tendency to respond to social discord by rupture rather than an attempt to work it through; in the first example cited, an expectation that others cannot be trusted. The factors that in turn determine these characteristics are of course considerably more difficult to identify, although biographical data (Phillips 1959) suggest that the seeds of such traits are implanted early in the life-cycle.

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• 596 village; for how long his wife or child did not know: "maybe he will be back next week or next month; it is not certain." In a similar vein, we would encounter a youngster serving at the monastery, a week later working as a chore boy in someone's home, and a few months later living in still another home. And most fascinating of all are those seemingly amicable and placid families—and it should be remembered that Bang Chan is small enough, and in the daily round of life open and quiet enough, so that the slightest manifestation of family tension may easily become public knowledge—which suddenly split apart after a disagreement about something as inconsequential as a missing shirt. Here, the cause of fission is of course not the intrinsic importance of the missing item (although a white "city" shirt is expensive and does have symbolic significance), but rather the villagers' extraordinarily low tolerance for interpersonal conflict and the challenge to their pride: rather than permit the disagreement to mushroom into an emotionally expressive conflict, it is much easier to leave the field. Because the volatility of a dispute is what is often most feared, one rarely hears of any actual argument accompanying the disagreement; instead villagers say, "We had a few words and he left. That's all." [10]

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None of the above is meant to imply that family fissions are typical, in a statistical sense, of Bang Chan or even less that discord is what causes them. (Our concern with discord was simply to illustrate that villagers feel so strongly about it that when it occurs, they will take the most extreme measure to avoid it.) However, together with the separations that result from economic opportunities, "arrangements of convenience," and the desire to be footloose, they do occur frequently enough to exist as potentialities in the life of every family; when they happen they are not completely unexpected.

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These points have been raised primarily because Bang Chan is in fact a rather placid community, and in discussing kinship it is easy to mistake placidity for inertia, especially when our typical categories of description almost assume the latter state to be the case. However, accompanying this placidity is a kind of quiet dynamic resulting from 1,771 individualists—polite, gentle, non-aggressive, but nevertheless individualists—pursuing their own purposes. These pursuits do not preclude family obligations, loyalties, and love—Bang Chaners repeatedly speak and act in terms of repaying the love that their parents have given them; of repaying them for

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[171] [10] The desire to avoid emotional climax here seems very similar to what Bateson (1949: 40) found among the Balinese where, when individuals quarrel, there is an attempt at a "formal recognition of the state of their mutual relationship, and possibly, in some sort, a pegging of their relationship at that state . . . this method of dealing with quarrels would correspond to the substitution of a plateau for a climax." In Bang Chan, the "plateau" is achieved by having nothing to do with one's antagonist.

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bringing them into the world; of helping siblings because of the kind things they have done; of loving children so that they will care for them when they are old [11]—but they do condition how and when such sentiments will be expressed. It is difficult to recall any instance of a Bang Chaner being caught in a situation of which *he was aware of* a conflict between satisfying his own desires and fulfilling his obligations to kin, so it is difficult to say which sentiment would ordinarily take precedence in his own mind; but to an observer, it would seem that the former would most likely have priority. (See Hanks and Phillips 1961 for evidence in support of this point.) [12] Actually, most villagers seem eminently successful in keeping the sentiments apart, which helps to account in part for the "centripetal" forms of kinship arrangement referred to earlier. Self-interest is of course not the same as selfishness, and when circumstances and inclinations permit, Bang Chaners can become among the most generous and hospitable of people (and in no sense paradoxically). Rarely have I seen, for example, people derive so much genuine pleasure from doing favors for others. In fact, these are among the first things that one notices about them: free agents helping others—but also ignoring them—when they see fit.

[11] This phrasing here in terms of *reciprocal benefits* is in the villagers' idiom, not mine.

[12] It is not insignificant that nowhere in Thai folklore does one find a recognition of possible conflict between the motives of self-interest and family obligation or of any moral lesson to be drawn from it; that is, there are no stories of a parent sacrificing himself for his children, or of children for their parents or, for that matter, of any moral value at all in self-sacrifice. On the other hand, one does find stories of individuals in conflict over which of two self-satisfying alternatives to select. In *Khun Chang and Khun Phaen*, for example, Wan Thong, the inconstant lover, could not make up her mind between love and wealth, and eventually was slain because of her indecision, the moral being that the person who cannot make up his mind deserves nothing.

On a more realistic level, one rarely finds anyone in Bang Chan being condemned for self-interest—the mother who abandons her children or the gallivanting husband—although one very frequently does encounter sympathy for those who suffer, the sympathy being elicited by the person or the fact of suffering, not the cause. The majority of Bang Chaners generally consider the motives of the self-interested party as the person's own business. This concern with sympathy (*sonsaan*) for those in difficulty, and simultaneous indifference to the source of their problem has deep roots in Buddhist doctrine and should not be glossed over.

To have compassion (*mettaa* and *karunaa*) is among the noblest of Buddhist virtues. It is at one time a kindly expression of concern with others and a recognition of—or coming to terms with—what is considered intrinsic to the human situation. "Life is suffering" is the first of Buddhism's Four Noble Truths. However, since such suffering is intrinsic, there is little to be gained by assigning blame for it. Equally important, villagers assume that a person who suffers may well have brought it upon himself. The other person, acting in his own natural self-interest, may have simply been an agent or catalyst. His motives are his own business because they will eventually contribute, for better or worse, to his own denouement. The dynamics of these attitudes are discussed in detail in the next chapter.

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As the reader might by now suspect, it is not easy to determine the basis of the unity of the family. However, of all the factors that keep people living together in amity and affection, two come to the fore: a sense of love, obligation, and respect that is derived from the simple fact of kinship, but which must be continuously confirmed by mutual benefits; and economic considerations.

The economic foundation of the family is significant not only because the family is in fact the sole economic and occupational unit in the community (with the exception of the monkhood and school) but because the villagers themselves think of the family in terms of its economic functions. People say that they marry for wealth or because of the productive capacities of their spouses;[13] spouses stay together because the economic costs of a split are too great; most important of all, people are keenly *aware* of their economic interdependence. Fathers say that they need children to work in the fields and care for the buffalos, that a family needs a mother so that its members will be fed, that siblings are useful because it is easy to borrow from them (although, as noted earlier, some are unhappy about the intrusion of the kinship tie into what they regard to be a commercial transaction). Many villagers extend this economic, transactional type of thinking to other aspects of the kinship relationship. Thus they say that "the purpose of marriage is to have a companion who will take care of you when you get sick," or very frequently that "my parents went to the trouble of bringing me up so they would have a person to make merit for them when they die." The emphasis here is on independent agents serving each other because it is mutually beneficial.

The love and affection that people feel for each other is of course grounded in the close associations that one finds in most nuclear families. However, the attitudes of respect that one sees are perhaps more distinctively Thai. Almost all the literature on Thailand refers, at one point or another, to the patterns of respect (*khwaamnabthyy*) existing between people, both within and without the family. These patterns are based, in the first instance, on the status inequalities that exist in almost all social

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[13] In responding to the unstructured Sentence Completion Test item, "*He (she) wants to get a wife (husband) who. . . ,*" for example, thirty-one of sixty informants indicated that they wanted a mate who "was a good worker," "earned a living," "was rich," or otherwise had high socio-economic status. Only two persons said that they wanted a spouse for reasons that could be reasonably defined as sentimental: one woman wanted a husband who "would be a good friend with whom she could discuss things," and a man said he wanted a wife whom "he loved." Other informants gave completions distributed among a variety of categories: "polite, well-mannered, handsome, kind, strong, and good" spouses; and six women wanted husbands who would be faithful.

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she gives it to me." In describing his relationship with his maternal grandparents, with whom he spent all but two of the first twelve years of his life, this same person says:

> My younger sister and I were born one year after the other. So mother gave me to grandmother to be weaned. I lived with her until I became a novice at the monastery at the age of twelve. I lived with grandmother, so I loved grandmother and grandfather more. I loved grandmother even more than my own mother and father. Wherever grandfather and grandmother went, I went too. Grandmother loved me: she always gave me sweets and toys. I had everything I wanted because I was the only young thing in the house. She loved me. She was going to give her property to me, land and gold, as much as she was going to give to her own children. But it was only a promise. I got the gold, but not the land, because when grandmother died, grandfather got a new wife. She was young. . . . I didn't quite like her. The young woman was too economical. . . . Sometimes she prevented grandfather from buying good things for me. When grandfather was going to buy gold or anything for me, she stopped him. She wanted him to buy for her more than for his grandchild.

This excerpt, taken from the biography of one of the life history informants and comprising almost the complete portrayal of the relationship between the informant and the individuals with whom he spent the crucial years of his childhood, is by no means atypical. The point is that of all the myriad elements in the relationship, or of all the loving characteristics that in his eyes the grandparents had, he chose to emphasize only the material gifts they had given him as the measure of their love. Other informants are no different: one man said he knew his father did not love him because when he died he left the family home to the Buddhist monastery; and a woman said she admired her father because "when he died there was property left. He was a good man: he did not abandon his children. He was worried about them." (Her other reason for *admiring* him was that "he was the person who brought me into the world.")

The other major form of familial love is evidenced in the camaraderie, warmth, and generosity that surrounds the family in planning and accomplishing the various tasks associated with rice farming. As indicated earlier, the cultivation and harvesting of rice is not only an economic operation in Bang Chan, but almost a way of life. When villagers must deal with the very real and complex problems of planting and bringing in the harvest, all the individualistic propensities, and even to an extent the authority patterns, with which they normally indulge themselves recede before the coöperative requirements of the task at hand. In a very real sense the functional requirements of the economic activity, particularly during

4:Phillips E-4,5 (1956-1957) 1966
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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[18] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[18] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

4:Phillips E-4,5 (1956-1957) 1966
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596 602 *156 [609] and not only in the abstract, symbolic sense. Non-kin are approached in the hope that they eventually may be treated as kin; good government officials are unabashedly described as being like "good fathers"; the basic patterns of respect that are learned and practiced in the family are extended to relationships outside of it, although inevitably in more formal ways. There is no *rigid* psychological cleavage between the sentiments of kinship and the sentiments about individuals outside of the family. Conversely the mere fact of kinship does not assure that individuals will be given special emotional treatment: often the love between friends is greater than the love between kin (see the case of "Dang," his father, and father's friends in Hanks and Phillips 1961, or the case cited earlier of the man who left his wife because of his fondness for an employer). Kinship represents to the villager relationships of warmth, familiarity, and conviviality, but also unpredictability and undependability. Such is the nature of most human contact in Bang Chan.

596 602 609 *156 [592]

621 596 [662] In this type of cultural situation, one does *not* find arising the type of community power struggles or schisms apparently characteristic of many peasant communities (see Foster 1960–61). Bang Chan is indeed a placid community because no family has the organizational means or the quality of familial cohesiveness necessary to assume a dominant social, political, or economic position. Individuals assume important positions and individuals disagree and squabble, but rarely families. In surveying the cultural landscape of Bang Chan, I often wondered whether the basic unit of anthropological and sociological, as well as psychological, analyses was perhaps not the individual rather than the family, monastery, school, or village itself.

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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592 do not share the same arrangements for preparing and consuming food.

621 59 [792] The 298 families living in Bangchan on May 23, 1953 may be grouped into five categories: (1) "One-person household" consisting of a lone man or woman /for ease in typological manipulation we arbitrarily consider this as a family, although strictly speaking a one-person household is not a family/; (2) "Nuclear family" consisting of a man and wife and their unmarried children; (3) "Limited extended family" consisting of a man and wife, either or both their sets of parents, and their unmarried children; (4) "Extended family" consisting of those included in "limited extended family" plus married children and children of the latter, plus any collateral relatives of any generation; and (5) "Ecclesiastical family" consisting of Buddhist priests, novices, and temple boys, all males, living together in the temple under the Headpriest's supervision. The distribution of these different types of families so defined is shown in Table 3.

592 596 621 Further explanation is perhaps necessary with respect to the "extended families" in Table 3. It must be pointed out that the term 'extended' is here used for the sole purpose of defining types of families which include dependent married couples as differentiated from the ordinary independent nuclear family. It will be seen in the next section, however, that there is no permanency in this inclusion of married couples whose intention is always to establish an independent family of their own. The so-called 'extended' family in

[TEXT CONTINUED ON PAGE 63]

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

597 Adoption was fairly common, though not always of lasting satisfaction. On the other hand, in this watery domain, the 842 trouble (lambāk) in raising children, mostly involving 855 ceaseless tending, was such that a childless woman was accorded a little surface envy as one who had missed or avoided a lot of trouble. The attitude towards twins was 845 ambivalent. "Twins are unlucky because there are more mouths to feed, more labour, trouble, and not enough milk. With twins, a poor family will never rise again." "No one will marry a twin for fear of begetting twins." "If twins are of a different sex, one must die." Yet others considered twins lucky "because they could be nursed at the same time, and given the same things."

855 Wealth differences also affected these attitudes, 842 especially if babies came in close succession. Comments 184 heard were: "Why do poor people have more children than the rich?" "Many visitors come bringing gifts to a rich parturient because she is respected. No one likes to talk to a poor person." "Those who have a baby oftener than every 3 years will never be rich. Fortunately, 4 of my 7 children died." The increasing cost of raising children was a concern. In one of the few families that had plans for their children's education, the father underwent a vasectomy after his 9 fine children were born, because he "feared he would not be able to feed them all." His wife, reassured that the operation had not "hurt" her husband, "was glad he had done so."

847 Abortifacients and Contraceptives

[779] Episodes concerning abortifacients were whispered about both Muslims and Buddhists. A Buddhist who induced abortion was seen as impeding an individual's rebirth and disobeying a religious prohibition on taking life, tenets which did not obtain among the Muslims. Abortifacient medicines to be used with abdomen-pressing were quietly sold by Muslims.[6] "Unmarried Muslim girls use them mostly," reported one Buddhist, "and they almost die in the process." A Buddhist curer had similar expensive medicine, but "unlike the Muslims, he will 842 not destroy the baby." Chinese boat-vendors also carried contraceptive medicines (ya) which were secretly discussed by wives. A husband reported his wife as saying, "Old ways

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6. Fraser (193) reports that in the Muslim village of Rusembilan, abortions were openly practiced, (as if part of a Muslim cultural heritage).

252 a woman's" (Sharp et al., 1953, p. 88). For instance, the
462 husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was
252 sick or resting after childbirth. The ability of boys as well
867 as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-[illegible] years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had
252 (Hauck, 1953). Responsibility for food preparation increased
[383] with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a
[597] daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 Certain men of eminence, e.g. headmen and elders, would
554 not be asked to cook at all, but as they aged, they might re-
887 turn to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for
252 2 months because his wife had back trouble. Some dishes were
562 cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 A premium was put on good cooking, and certain women
261 who were noted for their cooking were in great demand for large
[868] scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 Food was commonly prepared twice a day, in the morning
264 and late afternoon. The meal pattern was the same for breakfast

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114 1. Suvarnakich (1950) described the Thai diet in a
262 general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

4:Phillips E-4,5 (1956-1957) 1966
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the village to find dependent relatives—siblings, cousins, nephews, nieces— 596
who, unable to make a go of it elsewhere, are accepted into a relative's
family, sometimes to the extent of eventually taking over the headship of
the family. Sometimes, on the initiative and invitation of an elderly or
lonely relative, an entire nuclear family will be asked to take over or share a
household. Children of poor or "inconvenienced" families (where a new 596
child is born before the first is weaned, where there are too many children 597
for the mother to handle comfortably, where a youngster is simply being
"troublesome") are adopted or "borrowed" by other villagers for varying
periods of time. This is done preferably by relatives, sometimes by neigh-
bors, and often, in the case of boys, by the monastery, where the children
become hand-servants to the monks and are supposed to absorb, by a kind
of osmotic process, righteous ways of behaving. (Of my three male life
history informants, two were given over to relatives at the ages of two, the
third at the age of eight; one spent his childhood with four different
families, another with five families; one describes his adolescence as "wan-
dering from place to place." The psychological implications of such dis-
placement should not be underestimated.) On occasion, two independent 596
nuclear families—almost always connected by some kinship tie—will join [594]
together for convenience to share cooking facilities, in which case they
effectively become a single extended family. And in some cases, although
rare, one will encounter adult children living in independent households
but handing over their income to a parent, living in still another home, who
disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a 596
husband to be away for four or five months at a time earning money in 591
Bangkok, or during the dry season on a vegetable farm, returning home to [464]
visit his wife and children whenever opportunity permits, with or without
funds. The wife may still maintain their household, but often returns to 596
live with her own parents.[7] In a similar vein, although obviously more 586
extreme, it is not unusual to find families in Bang Chan which have simply 182
"disintegrated," as the villagers say. Much depends here on the circum-
stances of family members. Bang Chaners usually reserve the term "dis-
integrated" for families that no longer have the economic wherewithal or
justification for staying together as functioning units. In these instances,
family members simply go their separate ways, if possible back to their
families of orientation or to other relatives, husbands perhaps into the
monkhood, and the children to whomever will take them. Most frequently, [578]
"disintegration" is characteristic of very poor families, and in the minds of

[7] This pattern may be related to the old *corvée* labor pattern when able-bodied [466]
village men were away from their families for extended periods of time. [651]
[174]

592 Bangchan is thus not a counterpart of the Indian or Chinese
596 extended family and should not be conceived as such. Its
621 outlook is definitely that of the nuclear family. Its assumption of an extended family structure does not indicate an intended role of the conventional extended family but does rather demonstrate the inability, temporarily at least, to provide for an establishment of a new family for the newly
[511] wed members. Most of the 80 'extended' families existing in Bangchan at the time of the second census in 1953 cannot be regarded as well to do, and some are extremely poor, being families of the laboring group without any assured regular income.

592 All of the sixteen one-man families were poor, rang-
621 ing from destitute old people who had been deserted by their kin to small farm operators who had to make the most out of their under-sized farms.

592 There were some 53 dependent relatives staying with
602 twenty-five families. These relatives do not include parents
621 of family heads and family heads' direct descendants and
[597] their spouses. They also do not include 'adopted' children of family heads, who automatically become members of the family. Records show that most dependent relatives remained in the family only for a brief period of time. Seven relatives, however, were able during the period from 1949 to 1953 to assume the headship of the families of which they had been dependent members.[7]

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7. See section on change of family heads, Chapter II.

597 621 593 As of 1953 seven adopted children were reported to be living in Bangchan. Since only those mentioned by family heads as their adopted children were so recorded and since some of the information on family members were not given directly by the family heads, it is possible that there might be some more adopted children who appeared in the 1953 census as nephews or nieces. The authenticity of the term 'adopted child' as used in the village is nevertheless rather questionable. There has never been such a practice like legal registration of adopted children in the village, although this is provided by law. Moreover, maltreatment of an adopted child was not unheard of. In 1952 one family head reported that his adopted daughter had "run away" to Bangkok. In 1953 a young widow, an adopted daughter of an operator of a coffee shop in the village, also "ran away". When her whereabouts became known, no effort was made by the foster parents to return to the woman her golden necklace valued at one thousand baht. Later she was forced back home, being beaten all the way in spite of her complaint that she was pregnant. It was also not infrequent that an adopted child left his foster parents and took residence as a dependent relative in another family in the neighborhood. Such incidents points toward the possibility of 'adopted child' being used as a nom de grace for a prospective free family laborer.

162 592 621 Table 4 shows that with the exception of the ecclesiastical family the size of families in Bangchan ranges from one to fourteen, averaging 5.7 persons per family. This

[TEXT CONTINUED ON PAGE 66]

592 a transient member of the family. This was rather unusual,
464 however. The pattern was that a transient member was
[561] accepted when he is rather young. If he was quite mature,
he might also be accepted; but the expressed motive of the
592 accepting family would then be somewhat different. When
465 approached by a mature prospective transient member, the
464 family head would most probably say that he could not afford to keep a hired laborer but he would be glad to let the man or woman stay with him as a member of the family, and that they might as well "share in the food, and share in the work".

It has been observed that transient family workers received much less from the family than the standard wage
[435] of hired laborers. While the latter received an annual wage of 1,000 baht or the crop from 5 rai, the former might be given only 50 or 100 baht a year. To farm operators of moderate or large rice farms, transient family workers were certainly an economic advantage. It was quite natural that these operators would try to keep them in the family as long as possible. Among the several methods observed were the following: (1) adoption; (2) promise to sponsor ordination of the young male transient member; and (3) giving a certain amount of lampai.

592 It was mentioned in the section on the family in
464 Chapter II that adoption as practiced in Bangchan did not
[597] involve legal registration of the adopted child, and that
[792] maltreatment of adopted children was not infrequent. To sponsor an ordination was in fact not quite as expensive

4:Phillips E-4,5 (1956-1957) 1966
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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[6] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

[6] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost *a* Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

4:Phillips E-4,5 (1956-1957) 1966
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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

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The genetic connections of those who did not help in cash, or labor at, say, cremations or cooperative work-parties were forgotten. Degree of help was a measure of kinship solidarity, and even marked the outer boundaries of kinship.

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The word "help" turned up over and over again in the context of childbirth. Birth came about because a married couple, already steeped in the knowledge that they had been so helped by their parents, "helped another individual to new life" through the mingling of semen and blood. The midwife's role was merely to "help." When a woman engaged a midwife, her words were, "Will you come to help me?" A baby having trouble breathing right after delivery "had to be helped for half an hour." Most important, only through the reciprocal help of mother and child was rebirth to earthly life implemented at all. Parturition was an active, cooperative venture between 2 autonomous beings. The child set the time for labor to start by "deciding to be born" when his 32 parts were "complete,"[38] and he had worked off sufficient sin in purgatory to permit rebirth. The mother by her labor "helped the child to be born," but she could not succeed unless he actively "helped," too. Though other assistance to her was desirable, such as persons to support her back and press out the infant, only his help was essential. Without it she had a hard or unsuccessful labor. A woman who gave birth successfully without outside help created no stir because it was evident that the baby had been helpful.

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38. Informants were not uniform in opinion here. Some said the khwan (or winyan) was the first "part" to establish itself--arriving at the moment of conception--others that it was the last (Textor:262). In either case it was highly volatile during pregnancy, and the trapping by winnowing at birth was the major means of rooting it in the person. During pregnancy, medicine for wind in the fetus was given "which was not effective if there were no khwan," but whether the khwan was the mother's or the child's was not certain.

794 84 [115] [826]

greater, for relatives were at hand. Some of these ordinary persons developed skills of considerable consequence. 844

If difficulties developed, then a more experienced person, perferably a midwife, was needed. But many a midwife assisted at normal births. Because difficulties might arise from a deficiency of merit either in the mother or the child (one could never know which), many women preferred to have in attendance, for peace of mind, either a midwife or an experienced person to insure the presence of expert help. Sometimes they were engaged in advance, more often just sent for "as pain is increasing," it being not always certain whether the case was normal or not. 844 759

A few women were delivered at the Mīnburī Health Center. These were rarely normal cases. The Center was turned to as a last resort in dire circumstances, with the result that sometimes the woman died in the boat on the way. A few persons of rather more modern outlook, such as wealthy farmers, teachers, and traders, had been delivered there and recognized its usefulness. 844 [845] [847]

The midwives lived in all parts of the community, with 3 in the populous central temple area. No one was more than a half-hour's paddle, or an hour's walk from the home of some midwife. What was desired, however, was a particular person, even though he might not be the most accessible one. 759

Since midwives were all heads of large families their clientele was mostly their kinsmen. They also took care of non-kin who lived in their locality. A daughter or other close relative who had married out would be attended wherever she was, if she did not return home for confinement. 759 571 602

In choosing a midwife, a parturient sought out not only skill but favored a kinsman over a non-kinsman, a close relative over a distant one, a near person over a far.[63] Occasionally, to sustain an image of progressiveness, social superiority or of wealth display, a midwife from outside Bang Chan was imported. Sometimes proximity, convenience, and

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63. A male and 2 female kinsmen-midwives were called by the man's sister to deliver her, and all came. He did not deliver her because she was "too close a relative," but he said a brother "could deliver a sister."

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affection overrode kinship.[64] Thus affinal relatives and non-kin neighbors were also requested to assist. Buddhists attended Muslims and vice-versa, (though Muslim women preferred female assistance).

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In emergencies the professional midwives' area was the whole community. They travelled long distances to attend women who were not close kin. No parturient, however, even in an emergency, was ever attended by a complete stranger. In all likelihood, every adult in the community knew the midwives at least by sight.

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As to the size of the practices, reported activities ranged from the Muslim midwife's estimate of 10 per year, down to 2 or 3 per year.[65] The 2 men and the most competent female midwife reported about 4 per year, a figure probably weighted on the side of the difficult cases per year. It is noteworthy that the men, in spite of being as we shall see both mǒ and midwife, did not have larger practices than the women. It was considered basically a woman's skill.

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None of the midwives derived much income from their practices, nor did they expect it to be significant. Their main income came from rice-growing from which, however, the women and one of the males had largely retired because of age. The other male midwife was exceptionally busy as a labor contractor, builder of houses, land-owner. and headman as well. The midwives found the 5 to 30 baht offered

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64. Two teachers who were in the kinship category of granddaughter (lān) to the 3 best midwives, and lived only a few hundred yards from them, were delivered by a woman who was mother-in-law to one and husband's older sister to the other and who was "not a midwife but knows how." Since labor was quick and normal, no higher help was necessary. On the other hand, all 3 of these midwives turned up to help at the confinement of another cherished "granddaughter." Only one of them actually delivered the infant but other functions were diplomatically divided up by the young mother.

65. Hauck studied 46 babies, aged up to 3 and so not all born in one year. Thirty-one were delivered by 4 of the professional female midwives (12,9,7,3 respectively); a male midwife and an "experienced" person had done 2 each; 11 women, one each (Hauck, 1959:61). A few of the latter 11 were ordinary kin, not midwives.

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established midwife who was a "close relative."

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69. Daughters-in-law were within the validating circle if circumstances were "convenient"--i.e. if their own mothers did not deliver them and if they lived with their husband's people. No witchcraft was feared between women. A mɔ̄ in his specialty also had to validate his skills within his close kindred before non-kin would call on him. A reputation began at home.

[606] [764] [756]

759 sought, ritually requested of some relative who was a mid-
571 wife.[70] Some persons though continued to limit themselves
602 to delivering their relatives, and never sought magic at all.

Two Worlds: The Natural and the Supernatural

759 To deliver a baby as a midwife or even as an unskill-
772 ed kinsman, embraced 2 aspects: a manual or technical, and a magical. These aspects corresponded to Bang Chan's 2 great worlds of knowledge and experience: the natural and the supernatural.

Midwifery was not alone in embracing both of these categories. Every activity, bus-driving, dancing, printing, or other, had its incorporated magical means to augment the probability of success. Though with the manual or technical skills of the natural world alone one could come through all right with even a modicum of supernatural help, success was greater. No one wanted to take the responsibility and risks of "going it alone" especially when the resources of the supernatural world were so freely and easily accessible to everyone. At the very least, one could start an enterprise on Friday (Wan Suk: Happy Day). The closer an enterprise was to the margin of life and death, however, the larger the supernatural element. In farming, curing, and midwifery, for instance, the ritual component was strong.

[874] Since these 2 worlds were qualitatively different, each required a different method of learning. The supernatural world, immaterial, royal and sacred, was learned

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[789] 70. Three women had recieved theirs from their mother, mother's mother, and mother's older brother, respectively. A retired midwife planned to give hers "to the daughter or grandchild ("lan":sex not specified) who was interested enough to ask for it." One man had received his from his father's father. Childbirth magic would hardly be a suitable topic of conversation between priests, but it might have been passed down there, too. The midwife whom one accompanied while learning probably was the source of one's magic. Women's magic was passed down the maternal line only, whereas men could get theirs both from kinsmen and at the temple.

had 2 to 4 children. In each case, the information obtained related to the most recent delivery.

Delivery. - In Bang Chan delivery usually took place at home. Four of the mothers we interviewed went to the home of a relative or relative-in-law. In two of these instances the relative was also the midwife; in the others the mother was apparently seeking a place where she could be more satisfactorily looked after than at home.

Three women went to the Health Center at Minburi, about 3 miles from the center of the Bang Chan community, to have their babies. Two of these mothers expected to be delivered at home but were taken to the Health Center when labor proved long. All 3 returned home either on the day of delivery or the next day and lay by the fire. Two others, both school teachers, told us in advance that they expected or hoped to go to the Health Center, but when labor began they were unable to do so because their babies came so quickly. Aside from the 3 who went to the Minburi Health Center, only one of those interviewed went outside the community to have her baby. Informants usually considered the delivery uncomplicated; although, as noted, some labors were long.

Traditional midwives, who were not professionally trained but had learned from other traditional midwives before them, attended most of the mothers. One woman who was alone delivered the baby herself, one said she had no midwife but did not specify other help, and 2 had the help of women who did not ordinarily practice midwifery. The 3 women who were delivered at the Health Center had professionally trained help. Obstetrics as practiced in Bang Chan has been described by Hanks (1959).

Care of Mother During Postpartum Rest Period. - Traditional behavior during the postpartum rest period has been described by Hanks (1959).

Lying by the fire. - The ancient custom of (2)juu (1)faj[1] (literally to be by the fire) after childbirth was still observed by most women in Bang Chan. The chief difference between the practice as we observed it and as it was described in the Bangkok Calendar[2] for 1865 was in the length of the period. In former times this was as much as a month after the birth of the first child, with shorter periods for successive

1. See Appendix, p. 51 for glossary of Thai terms.

2. The unsigned article entitled "Siamese Obstetrics" was presumably written by the Rev. Dan Beach Bradley, M.D., a Protestant missionary who compiled the Calendar.

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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

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"extended families." The aim of all Bang Chan families even then was to attain a position in which they would be free from such obligations or would have other families dependent upon them.

In the intervening years the influx of new families into Bang Chan, the increased self-sufficiency of the individual nuclear families and, most important, the increased acceptance of commercial values, have served to break down kindred groups so that today few kinsmen work their fields together and even fewer share their food or equipment with one another, beyond what has been noted above. Perhaps the only remaining *universally* practiced function of the old kindred groups is the celebration of ceremonials involving members of the family, particularly cremations and ordinations, the cost and merit of which are shared among the participants, depending upon their wealth. Very often people do not want to borrow from or lend money or equipment to kinsmen precisely because the intrusion of the kinship tie makes the collection of such debts doubly awkward ("relatives take twice as long in repaying money; I do not want to lend anything to them"). However, the old forms have not been completely obliterated and when necessity requires or personal convenience moves an individual to look to others, the traditions of extended kinship, as indicated earlier, may be invoked.

For purposes of conceptual convenience, two types of kindred may be specified: the kind referred to above which involves kinsmen living in the village and to which Kaufman (1960) gives the name "spatially extended family"; and the type descriptive of relatives living outside Bang Chan, dispersed throughout other villages and provinces or in Bangkok, and called by Kaufman "the remotely extended family" and by L. M. Hanks (1959c) "the multi-local extended family." These terms are of course generic labels descriptive of actual or potential relationships between individuals, not of specifically delimited groups. Sometimes Bang Chaners attempt to extend the definition of the latter type of relationship to individuals who have never heard of them, but who may be in a position to help their son obtain a job in the city or get him admitted into a vocational school. Hanks has shown how the multi-local extended family has to a limited extent in recent years rejuvenated extended kinship ties by becoming the major institutional mechanism through which villagers leave Bang Chan to seek their fortunes elsewhere. (This last phrase is not merely a figure of speech; many young Bang Chan men have what could be called almost a Dick Whittington view about leaving Bang Chan for Bangkok.) A cousin who undertakes to serve as a villager's liaison to a city job or who offers him a place to stay usually does so willingly, for it creates obligations which may be called upon later if need be.

The above description of variations and extensions has been presented

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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[10] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[10] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an oversabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

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596 and not only in the abstract, symbolic sense. Non-kin are approached in the
• 602 hope that they eventually may be treated as kin; good government officials
*156 are unabashedly described as being like "good fathers"; the basic patterns of
[609] respect that are learned and practiced in the family are extended to relationships outside of it, although inevitably in more formal ways. There is no *rigid* psychological cleavage between the sentiments of kinship and the
596 sentiments about individuals outside of the family. Conversely the mere
602 fact of kinship does not assure that individuals will be given special
609 emotional treatment: often the love between friends is greater than the love
*156 between kin (see the case of "Dang," his father, and father's friends in
[592] Hanks and Phillips 1961, or the case cited earlier of the man who left his wife because of his fondness for an employer). Kinship represents to the villager relationships of warmth, familiarity, and conviviality, but also unpredictability and undependability. Such is the nature of most human contact in Bang Chan.

621 In this type of cultural situation, one does not find arising the type of
596 community power struggles or schisms apparently characteristic of many
[662] peasant communities (see Foster 1960–61). Bang Chan is indeed a placid community because no family has the organizational means or the quality of familial cohesiveness necessary to assume a dominant social, political, or
*[156] economic position. Individuals assume important positions and individuals disagree and squabble, but rarely families. In surveying the cultural landscape of Bang Chan, I often wondered whether the basic unit of anthropological and sociological, as well as psychological, analyses was perhaps not the individual rather than the family, monastery, school, or village itself.

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125 64.a. IF YES: At what age did he leave BC?

[166]	1. Below 15 years	8
	2. 15 to 19 years	28
	3. 20 to 29 years	50
[592]	4. 30 years or more	5
	5. Unascertainable	6

d. IF YES: For how long has he (she, they) been gone from BC?

	6. Less than one year	12
	7. 1 to 4	42
	8. 5 to 9	19
	9. 10 years or more	19
	X. Unascertainable	

[464] e. IF YES: What various duties or jobs does he (she, they) do in
[463] Bangkok?

	1. Housewife	17
	2. Unskilled laborer	19
	3. Skilled laborer	33
	Armed forces	17
	Service	9
	Employee	5
	4. Other (retired, selling things)	2
	5. Unascertainable	4

[166] f. IF YES: During the last year, have you seen this person(s)
[593] several times, once, or not at all?
[602]

	9. Several times	65
	X. Once	16
	Y. Not at all	8
	O. Unascertainable	3

g. IF YES: Does he (she, they) make regular remittances to this house?

	X. Yes	31
	Y. No	56
	O. Unascertainable	5

[207] 65. Do you listen to the radio regularly, daily, occasionally, seldom, or never?

	6. Regularly-daily	45
	7. Occasionally	66
	8. Seldom	148
	9. Never	60
	— Unascertainable	14

[525] 66.a. Do you play the lottery regularly, occasionally, seldom, or never?

	1. Regularly	20
	2. Occasionally	54
	3. Seldom	220
	4. Never	38
	5. Unascertainable	—
	— No Answer	1

b. IF REGULARLY, OCCASIONALLY, OR SELDOM: Suppose you were to win the second prize of 10,000 baht. What various things would you do with this money?
(See code)

592 Bangchan is thus not a counterpart of the Indian or Chinese
596 extended family and should not be conceived as such. Its
621 outlook is definitely that of the nuclear family. Its assumption of an extended family structure does not indicate an intended role of the conventional extended family but does rather demonstrate the inability, temporarily at least, to provide for an establishment of a new family for the newly
[511] wed members. Most of the 80 'extended' families existing in Bangchan at the time of the second census in 1953 cannot be regarded as well to do, and some are extremely poor, being families of the laboring group without any assured regular income.

592 All of the sixteen one-man families were poor, rang-
621 ing from destitute old people who had been deserted by their kin to small farm operators who had to make the most out of their under-sized farms.

592 There were some 53 dependent relatives staying with
602 twenty-five families. These relatives do not include parents
621 of family heads and family heads' direct descendants and
[597] their spouses. They also do not include 'adopted' children of family heads, who automatically become members of the family. Records show that most dependent relatives remained in the family only for a brief period of time. Seven relatives, however, were able during the period from 1949 to 1953 to assume the headship of the families of which they had been dependent members.[7]

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7. See section on change of family heads, Chapter II.

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established midwife who was a "close relative."

Sometimes the interest arose in young people. A girl started at 15 to accompany her mother, a midwife, as helper and delivered her first case alone (an emergency) at 20. A boy of 15 also helped his mother's sister, who was a midwife. Later, when married, he delivered some of his own children, but denied that he ever intended to take up the calling. One young man in his 30's, was seen going "as a team" with a well known old mɔ̄ who directed him in the manual operations but who did not ever touch the woman himself. He also assisted one of the female midwives, but had not yet delivered a baby alone.

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[606] [764] [756]

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called out "Mine!" ("khǭng chan" [female speaking] or "phom" [male speaking]). Never did a parent say "ours!"[44] Sometimes the mother might ask a relative or friend present to claim the child, and so become a godparent.

As the first human step to control the volatile khwan, the first objective of winnowing a baby was to seize it (kan rap khwan) and so "complete" the child's person.[45] By tying holy thread at the wrist and ankle soul-exits, the khwan which had flitted in and out of the womb was given root. It was still flighty, but now it had a life-long home.

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Secondly, the child was given membership in a human family. Connection through blood and semen did not establish kinship. At first, the child hovered between corporeal and non-corporeal existence. "The child is not fully human for the first 3 days." This period was under the supernatural control of Mother Sǭ, for babies "never died during the first 3 days after birth. They might be born dead or they died 6 or 7 days later." The shock of dropping the child on the tray "made him forget his life as a spirit." When someone cried "mine!" the child finally cut his relationship with the spirit-world. As an old woman explained, "The ties are the important part [of the ceremony]. They show that the child belongs to someone. Once a tie fell off one wrist. The child cried and cried until it was restored," fearing its lost khwan would attach itself elsewhere. The claiming set up kinship as a contract before witnesses. Whoever announced responsibility for the child's care, and this was usually the mother, deserved reciprocal care in old age. Other relatives would also help to bring him through to maturity. He would not be so frightened of an evil spirit because of family support, nor of the "ghost of an ancestor" who would be recognized as a relative.

852 [774]

Third, the ceremony strengthened the child. By giving him through the ties a stable khwan, he "grew better, cried less, and did not get sick."

[856] [789]

The incorporation of as many auspicious elements as possible into the ritual was customary. Since the child took

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[415] [776]

44. A winnowing tray (basket) had the capacity to "trap" spirits. It could sieze or trap not only the khwan soul, but, at New Year's, one of the fun ghosts (Textor:371).

45. There is no convenient way of expressing "ours" in Thai in this restricted sense (id.).

795 844 phlai and bamboo cutter under the house "so the child would not roam away from home." The circumcision (akiko) performed up to the eleventh year, allied a child to a human group. "Circumcision is to accept the new-born baby into the status of human beings" In a corresponding ceremony for girls, the To Iman "cut a little piece of the labia." However, some Muslims had the full winnowing ceremony performed. If it were not, the child was raised aloft in the midwife's hands with the words, "Mother Sī, Mother Sāk, may this child be cool and happy!" The new-born baby was then laid in a cloth cradle. Fruits were hung over the tray or cradle. If a lactating Muslim mother accepted another's child to nurse, the 2 babies had to be of the same sex "lest later in life they marry, in which case theirs would be an incestuous, brother-sister marriage." The Buddhists entertained no such idea, so nursed babies of either sex as needed. A Muslim view of colostrum as "like pus from a sore" carried a more negative overtone than the Buddhist's statement: "At first the mother's milk is too dilute to be useful."

795 759 At the annual homage of a Muslim midwife to her teacher each of her patients of the year sent a kilogram of sugar, one coconut, one or 2 liters of glutinous rice, and a hen (if a baby girl had been born) or a rooster (if a boy). The chicken was killed by the midwife and made into curries for mosque officials (men) invited to the ceremony. The incense and candles were burned "while she thinks of her teacher."

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affection overrode kinship.[64] Thus affinal relatives and non-kin neighbors were also requested to assist. Buddhists attended Muslims and vice-versa, (though Muslim women preferred female assistance).

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In emergencies the professional midwives' area was the whole community. They travelled long distances to attend women who were not close kin. No parturient, however, even in an emergency, was ever attended by a complete stranger. In all likelihood, every adult in the community knew the midwives at least by sight.

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As to the size of the practices, reported activities ranged from the Muslim midwife's estimate of 10 per year, down to 2 or 3 per year.[65] The 2 men and the most competent female midwife reported about 4 per year, a figure probably weighted on the side of the difficult cases per year. It is noteworthy that the men, in spite of being as we shall see both mǭ and midwife, did not have larger practices than the women. It was considered basically a woman's skill.

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None of the midwives derived much income from their practices, nor did they expect it to be significant. Their main income came from rice-growing from which, however, the women and one of the males had largely retired because of age. The other male midwife was exceptionally busy as a labor contractor, builder of houses, land-owner, and headman as well. The midwives found the 5 to 30 baht offered

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64. Two teachers who were in the kinship category of granddaughter (lān) to the 3 best midwives, and lived only a few hundred yards from them, were delivered by a woman who was mother-in-law to one and husband's older sister to the other and who was "not a midwife but knows how." Since labor was quick and normal, no higher help was necessary. On the other hand, all 3 of these midwives turned up to help at the confinement of another cherished "granddaughter." Only one of them actually delivered the infant but other functions were diplomatically divided up by the young mother.

65. Hauck studied 46 babies, aged up to 3 and so not all born in one year. Thirty-one were delivered by 4 of the professional female midwives (12,9,7,3 respectively); a male midwife and an "experienced" person had done 2 each; 11 women, one each (Hauck, 1959:61). A few of the latter 11 were ordinary kin, not midwives.

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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.* Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

* There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost a Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

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596 602 *156 [609] and not only in the abstract, symbolic sense. Non-kin are approached in the hope that they eventually may be treated as kin; good government officials are unabashedly described as being like "good fathers"; the basic patterns of respect that are learned and practiced in the family are extended to relationships outside of it, although inevitably in more formal ways. There is no *rigid* psychological cleavage between the sentiments of kinship and the sentiments about individuals outside of the family. Conversely the mere fact of kinship does not assure that individuals will be given special emotional treatment: often the love between friends is greater than the love between kin (see the case of "Dang," his father, and father's friends in Hanks and Phillips 1961, or the case cited earlier of the man who left his wife because of his fondness for an employer). Kinship represents to the villager relationships of warmth, familiarity, and conviviality, but also unpredictability and undependability. Such is the nature of most human contact in Bang Chan.

596 602 609 *156 [592]

621 596 [662] *[156] In this type of cultural situation, one does *not* find arising the type of community power struggles or schisms apparently characteristic of many peasant communities (see Foster 1960–61). Bang Chan is indeed a placid community because no family has the organizational means or the quality of familial cohesiveness necessary to assume a dominant social, political, or economic position. Individuals assume important positions and individuals disagree and squabble, but rarely families. In surveying the cultural landscape of Bang Chan, I often wondered whether the basic unit of anthropological and sociological, as well as psychological, analyses was perhaps not the individual rather than the family, monastery, school, or village itself.

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609 574 Of the various forms politeness takes, its most relaxed, least contrived form in the cordiality that villagers extend to newcomers. Strangers to Bang Chan are hardly swept off their feet, but once contact has been established, they are welcomed with a degree of attention far exceeding simple tolerance of their presence. People express a curious interest in them as individuals, as if somehow their presence were adding a new dimension to the lives of their hosts. In the case of many Bang Chaners, this is probably true: the lives of these villagers are sufficiently routine and insular that the appearance of a new face is identified also with the advent of a significant and new experience. Still other villagers approach the newcomer with an attitude that says in effect: "One should try to meet and know as many persons as possible. Who knows what good may come of it?" The implied meaning here is that the cursory contact may in time develop into a firm relationship of reciprocal rights and obligations, whereby person A could turn to B to borrow money, ask his help in finding a job, help sponsor his son's ordination, and vice versa. There is in this attitude a sense of gentle optimism combined with opportunism. And still other villagers, probably the majority, approach the newcomer with no self reference at all, but with the simple intention of trying to make him feel comfortable. Whatever the intention in each case, however, the dominant behavior exhibited to the newcomer is openness, amiability, and curiosity.

576 574 521 609 The actual expressions of conviviality are at all times simple and straightforward. They involve asking the person such questions as his age, place of birth, whether he is married, or whether he has yet served in the monkhood. (Notice the phrasing of this last question. The polite Thai form is never whether a person has been a monk or not, but rather whether he has already been a monk or not *yet* become one. The syntax of the interrogative form assumes the good intentions of the other person.) If the individual is identified as coming from a locale with special or distinguishing characteristics, the conversation will often involve humorous allusions to the place. For example, if he is from the North, there will most likely be joking references to the beautiful women of Chiengmai; if he is from the Northeast, to the funny accent of the people of that area. If the relative statuses of visitor and host can be quickly identified (based upon age, clothes, speech patterns, and occasionally surname), the conversation may turn to topics whose very purpose is to emphasize status considerations and thus make the participants more comfortable with one another. If they

*156 159 difficulties (ask his father to save the family land for him; tell the aunt he did not want to marry the girl she had chosen—which he could have done had he felt secure about his relatives' love for him), he politely said nothing. The net result of all of this, as indicated in the text, was a deep sense of personal inadequacy and resentment that loved ones cannot be depended on. Further, Dang had begun to treat others as he felt others had treated him.

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are social peers, the Bang Chaners would easily turn the conversation to a discussion of the technical aspects of rice farming or even gambling. The latter would likely be discussed with a social superior only after some acquaintance. On the other hand, if one were clearly the other's superior, the superior would probably talk not about the methods of rice farming but, more generally and benignly, inquire, "Is all going well with you? Is there any way I might help you?" He might even proffer some unsolicited advice or aid. The tone and theme of the conversation would be expressive largely of the superior's concern with the welfare of his new-found friend, which the latter would typically accept.

All this is usually accompanied by gentle laughter and careful attention to appropriate pronominal forms. The good host will also serve his guest rain water, and if possible, scented rain water. If opportunity and finances permit, he may even offer him a warm Coca-Cola. The youngster who will actually serve the refreshment will make sure that it is on a coaster and that his hands are in the proper ritual position when he offers the drink to the guest. Such are the ingredients from which potential friendships are made.

Although the particulars of the kind of politeness found among family and friends are different from the above, the forms are essentially the same. Villagers do not talk about the funny accents of the people who live next door to them, nor do they rush to serve scented water when a brother comes to call. But they do take pains to express respect for each other by using proper honorific and pronominal forms, by looking to the oldest competent family member for advice, by talking of subjects that are pleasant and amusing, but never threatening or embarrassing.

The avoidance of embarrassing topics—even when the airing of such topics may be crucially important or beneficial to one of the parties concerned—is one of the most pronounced facets of village social life. To a Westerner accustomed to outspokenness, the types of situations that villagers define as embarrassing and the lengths to which they will go to avoid them sometimes appear to border on the sado-masochistic. Detailed interviews with two women whose husbands had taken second wives, for example, indicate that although at the time they were deeply disturbed by their husbands' actions (primarily for economic reasons; secondarily for emotional-sexual ones) they never once even brought the subject up with their husbands. They explained that they were too *ʔaaj* (embarrassed) to do so. In neither case was this embarrassment expressive of any feeling of inadequacy on their parts (the fear of hearing their husbands say, "I took a second wife because you are not adequate"). It was prompted rather by the desire to avoid an awkward and potentially rancorous confrontation. They did not want to put anybody on the spot. (Whether such a confrontation would *actually* lead to overt rancor is almost impossible to ascertain because

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581 It was not felt necessary to marry. Because of the strong
589 economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married.
[593] One group of grown siblings of both sexes stated they were "too happy together to marry."

836 Pre-marital chastity was more or less observed. If a girl became pregnant before marriage, her parents brought pressure,
848 usually successful, on the boy to marry her. The occasional illegitimate child was raised without stigma in the girl's family, though problems arose during pregnancy and delivery (cf. "cone of wood" below). The mother later found a husband. One father was angered because he felt his daughter's pregnancy wrecked her chances for a marriage of prestige. He was conspicuous for his social aspirations towards city ways.

864 Information on human sexual matters was gathered by the
831 young sometimes by accidental observation of parents and others, through hints from hearing cursing, and by conversations with grandparents, older siblings, and friends of the same sex. Men joked on sex matters at the all-male rice-uprooting parties. Being antithetic to the ascetic prescriptions of Buddhism, sex talk was highly charged. Sex was never discussed in mixed company.

Residence

592 The nuclear family of husband, wife, and unmarried children was the primary social and productive unit, but other resident kinship units larger and smaller also occurred. After marriage,
[591] the couple usually lived for a time in the house of the parents of one spouse or the other; then, as soon as they could afford it, set up housekeeping in their own house. Of a sample of 96 families in Bang Chan, 30 set up independent households at once after marriage, 16 after one year, and the rest, a few per year, on throughout 10 years; 15 of the families never had a house of their own but lived with other relatives (Janlekha:37). Of 298 families, 59.4 per cent lived independently as a nuclear family, while 34.9 per cent lived with other relatives in the house. (The remaining were single persons living alone, or priests at the temple in the "ecclesiastical family.") The
361 average size of the households (not necessarily the nuclear families) was 5.7 persons, with a range of 1 to 14, the median being 6 (ibid. 28-29). The house of a new couple was usually built adjacent to parents or relatives, and certainly within
621 calling distance or sight of some other household. Social patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

close touch with each other's activities and needs. 621

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time. 621 844 592 844 476 593 [462]

Wealth Differences:

Way of Life

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable. 556 875 441 [464] 556 511 178 369

4

132 Bangkok. The tropical monsoon climate divides the year into
three seasons, a hot, wet season from late May to November, a
cooler, dry season from December to early February, and a hot,
361 dry season from late February to mid-May. The community,
scattered over an area of approximately five square miles, was
161 composed of seven neighboring hamlets. In 1954, the population
162 was approximately 1700, divided among 336 households. About
60 per cent of the households were made up of independent fam-
ilies, parents with unmarried children, with an average family
[145] size of 5.7 persons. The main occupation of 80 per cent of all
families was rice farming.

243 The climate together with the overflowing Chao Phraya
[13] river, provided natural conditions for raising a single crop
[220] of wet rice. From May or June to February, the principal activ-
ities were those connected with rice production. This crop
greatly exceeded the needs for local consumption as human food,
[435] feed, and seed. The surplus of rice which was sold, was esti-
mated for 1953 as 1.4 times the amount used for all purposes
within the village (Janlekha, 1955).

346 Wat Bang Chan, the Buddhist monastery and place for re-
621 ligious exercises, was also the center of social life in the
[795] community. When data for this study were being gathered, the
one primary school in the village was located on the grounds
of the wat. The community was defined simply by the clientele
which patronized Wat Bang Chan and this elementary school.
[563] Within the area of the community lived a small minority of Thai
Moslems who patronized a mosque and school just outside Bang
Chan. The few Chinese in the village were considered as part
of the Thai-Buddhist community. Information to be presented
[028] on food habits refers primarily to habits of the Buddhist major-
ity, although some reference will be made to ways in which
Moslem practices differed therefrom.

133 Although for six or more months of the year the fields
243 were covered with water, sometimes to a depth of a meter or
491 more, a year-round road, connecting Bangkok and Minburi, the
484 nearest market town, ran through one edge of the village. Bus
487 service was available along this road, to either Bangkok or
[494] Minburi but within the community one went by boat on the net-
work of canals during the wet season, and during the dry season,
[501] on foot along the dikes or across fields. From late January
through May, when subsidiary canals were apt to be dry, getting
about was somewhat difficult. Boat travel was considered easy,
but as many families had only one boat, a trip to the store or
even to a neighbor's home had to be planned with reference to
the activities of other family members.

443 Large scale purchases, as for a ceremony, were always
made at a big market, but in general, instead of people going
to the market-town, the "market" came to the people. Boat-
venders brought not only fresh produce and staples but also
sweets, ices, soft drinks, and cooked foods such as Chinese

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In addition to these widespread national patterns, Bang Chan has certain characteristics that seem relatively distinctive of villages of the Central Plain. Not of least importance is the demographic arrangement of the community: either isolated homesteads surrounded by rice fields and connected to larger canals by small tributaries or groups of households strung out along both sides of the canals. The former pattern is more commonplace and historically more recent, and is the result of an expanding population trying to live on a land that has been so committed to the commercialized cultivation of rice that the only available house sites are on the fields themselves. This "typical Central Plain" pattern contrasts with the "cluster" type villages found in the North and Northeast (deYoung 1955) where houses are integrated into compact communities around which are located the rice fields. Although it is difficult to draw precise relationships between demographic arrangements and psychological characteristics, it is noteworthy that the isolated locale of so many Bang Chan households is not out of keeping with the independent and individualistic propensities of the villagers. As one villager expressed it, "If people live far away from each other, there will not be any trouble."

Related to the above pattern and characteristic of other communities of the Central region (cf. Kaufman 1960) is the absence among village residents of any strong sense of identification with the needs of their community as a whole. Except for religious activities and the reciprocal work groups organized for rice transplanting and harvesting—the rewards for which are directly personal—the villagers simply are not predisposed to participate in communal projects. Thus, activities which require large-scale coöperation or organization to be effective—clearing or deepening canals, repairing the unusable road that leads from the main highway to the school, building a playground for the school—are either not carried out or are effected only with extreme difficulty. Although a few villagers recognize these as defects of social organization, it is clear that the majority find it easier to live with them than to try to change the basic institutional framework that sustains them; maintaining their own freedom of action is simply more important, and more culturally "natural," to the villagers than getting involved in public service projects. Again, this pattern seems to contrast with that found in the villages of the North (deYoung 1955) where individuals regularly contribute labor to their communities by repairing village streets and maintaining irrigation systems, even when such efforts require coöperation between adjacent villages.

The inability of Bang Chaners to organize coöperative projects is undoubtedly abetted by the formal governmental structure of the village which, although perhaps more of an administrative nightmare than is normally found elsewhere in the Central Plain, is in its organizational

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essentials not atypical of the region. Instead of villages being organized administratively on the basis of natural social groupings and demarcations—that is, social centers and groups with which people feel a primary identification, in Bang Chan's case the local Buddhist monastery and government primary school—so that governmental and social units are isomorphic, they are gerrymandered into highly arbitrary administrative units. Thus the village of Bang Chan is comprised of seven *muubaan* or hamlets, at the head of which are seven hamlet headmen; these hamlets are located in two different *tambon*, or communes (four in one commune, three in the other) headed by two commune headmen, neither of whom lives in Bang Chan; the two communes are located in two different districts headed by two different district officers and their staffs; the two districts fortunately are in a single province, Phranakhoon, the same administrative unit in which the metropolis of Bangkok is located. Yet the people who reside in these varying hamlets located in different communes and districts all perceive themselves as living in the single village of Bang Chan. The fundamental organizational problem here is that since the sources and lines of governmental authority do not follow the lines of the natural Bang Chan community, jurisdictional conflicts and confusions arise to threaten the effectiveness of those community-wide programs that occasionally may be initiated. For example, during a diphtheria immunization campaign in the village (Hanks and Hanks 1955), the public health officer from one of the district offices was reluctant to immunize all the children of Bang Chan on the grounds that some of them came from hamlets outside his district's jurisdiction; he yielded, as the Hankses note, only when a perceptive villager pointed out that if germs knew no boundaries why should he?

Not all villages of the Central region have such real or potential administrative difficulties. (And Bang Chan does not have them too frequently either, principally because the government does not initiate too many community service programs.) However, the basic organizational principle which admits them—that houses are grouped together as administrative "villages" on the basis of conceptual neatness rather than socially functional criteria—is a common feature of the administrative structure of the Central Plain.

The foregoing account describes some basic culture patterns which Bang Chan shares with other villages of either the region or the nation. In addition to these broader patterns, Bang Chan has certain traits which inevitably refer to local village conditions and contingencies. For example, the most active and viable social unit in Bang Chan beyond the familial level is the order of Buddhist monks associated with the monastery. It is the only organization within the village that has been successful in mobilizing community activity (Sharp *et al.* 1953), although much of this activity has

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been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad, national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.[4] As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

[4] It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

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continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959b: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family;

home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[6] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

[6] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost a Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

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harvest time, serve to create a rite of intensification as family members decide together what work will be done by whom, arise early in the morning to work together happily in the fields—sometimes for as long as fourteen hours at a stretch—and actually see the fruits of their coöperative labor mount up on the threshing floors. The sense of familial solidarity and intradependence, and its associated feelings of love, is experienced by all.[16] Also, since harvesting more often than not involves working reciprocally with other families, the host of a reciprocal labor group giving a feast whenever possible at the end of the day, it serves, although to a lesser extent, to intensify feelings of membership in the larger community.

Summary

In my discussion of the "cultural background," I have dwelt primarily on kinship because the family is functionally the most significant social unit in the village and because it is within the context of kinship that personality is developed and, in Bang Chan, most frequently expressed. None of this is meant to imply a lack of importance for other social units—the monastery, the school, the state—or for the non-institutionalized relationships—friends, drinking partners, and business contacts. However, kinship does provide the basic psychological model for all human relationships in Bang Chan,

[16] Although the annual cycle of Thai peasants is described in detail in the available ethnographies on Thai rural life (deYoung 1955, Fraser 1960, Kaufman 1960, Kingshill 1960, Sharp *et al.* 1953) a few words should be added about the psychological dimensions of this cycle. Thus familial solidarity, intradependence, and love are not the only sentiments that are heightened during the harvest period. Perhaps the most striking quality of this season (December to January) is the increase in the optimism, joy, and general psychic well-being of the villagers: people laugh more loudly than usual; they relish telling about the things they are going to buy; parents take more kindly to the gallivanting of the children. These months contrast with transplanting time (late July to early August) and the period prior to harvest (October to November), when an overabundance of rain can destroy the villagers' rice seedlings or their entire crop. These latter periods are marked not so much by anxiety as by a sense of watchful waiting. All these contrast with the Dry season when things are especially quiet in Bang Chan and when villagers spend their time repairing farming equipment and houses, gossiping, or are working on jobs outside the community. Villagers say that of the three major seasons of the year (Dry, February to June; Rainy, June to January; Cold, January to February) they like the Rainy season best. The season coincides with the rice-growing cycle, is marked by Buddhist Lent and, excepting a final week of Monsoon downpour, is in fact the most comfortable period of the year.

These seasonal activities and attitudes also have direct implications for field work. Thus, while villagers gave freely of their time during the dry season and after the harvest, and during the latter were especially outgoing and benign, many simply would not see me during the weeks of planting and harvesting. The benign attitudes of villagers interviewed after the harvest were reflected directly in the data, as were the noncommittal responses of some villagers who were interviewed during transplanting time.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

596 602 *156 [609] and not only in the abstract, symbolic sense. Non-kin are approached in the hope that they eventually may be treated as kin; good government officials are unabashedly described as being like "good fathers"; the basic patterns of respect that are learned and practiced in the family are extended to relationships outside of it, although inevitably in more formal ways. There is no *rigid* psychological cleavage between the sentiments of kinship and the sentiments about individuals outside of the family. Conversely the mere fact of kinship does not assure that individuals will be given special emotional treatment: often the love between friends is greater than the love between kin (see the case of "Dang," his father, and father's friends in Hanks and Phillips 1961, or the case cited earlier of the man who left his wife because of his fondness for an employer). Kinship represents to the villager relationships of warmth, familiarity, and conviviality, but also unpredictability and undependability. Such is the nature of most human contact in Bang Chan.

• 621 596 [662] *[156] In this type of cultural situation, one does *not* find arising the type of community power struggles or schisms apparently characteristic of many peasant communities (see Foster 1960–61). Bang Chan is indeed a placid community because no family has the organizational means or the quality of familial cohesiveness necessary to assume a dominant social, political, or economic position. Individuals assume important positions and individuals disagree and squabble, but rarely families. In surveying the cultural landscape of Bang Chan, I often wondered whether the basic unit of anthropological and sociological, as well as psychological, analyses was perhaps not the individual rather than the family, monastery, school, or village itself.

BANG CHAN

FOREWORD

The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, Minburi. A century-old canal and to the north of it a post-war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

In 1954, when data for the present study were still being gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the households were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupation of 80 per cent of all families. The population in 1954 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple food of the people. During the wet season and into the cooler dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

The Thai countryside is divided into hamlets, each with a headman in charge of the thirty to sixty households of the hamlet. Seven such hamlets constitute the Bang Chan community. (In the Project studies they are identified by the initials BC and KY followed by a number).

and KY followed by a number.) The center of social life in Bang Chan is the Buddhist monastery or wat and the adjacent government primary school. The community simply consists of the clientele which regularly patronizes Wat Bang Chan and this school rather than other comparable institutions elsewhere in the region. Within the area of the community lives a minority of Thai Moslems constituting about ten per cent of the population. They have their own mosque which happens to be just outside Bang Chan, but they attend many secular and some Buddhist functions at Wat Bang Chan. A number of small stores, which also serve as coffee houses and men's clubs, are used as neighborhood centers in different parts of the village. Near the central wat and school, there is also a store, and the house provided by one of the headmen for use as the Project headquarters.

This present interim report of the Cornell Thailand Project includes some of the data necessary for the design of a program to improve health and diet in Bang Chan. Another report, now in preparation, will give the results of a detailed dietary survey made in the community following the health survey reported on here. These two studies together will indicate existing deficiencies in health and diet, and will permit the formulation of recommendations for needed changes in behavior as these can be realized in the context of the village and national culture.

The author of this study, Dr. Hazel M. Hauck, is Professor of Food and Nutrition in Cornell University. She has been associated with the work of the Cornell Thailand Project since 1950. She not only designed and supervised the research on health, nutritional status, and diet in Bang Chan, but during almost a year of field work in Thailand she obtained valuable data on many other topics for the Project's files. Some of her daily work in Bang Chan made little sense to the villagers, but they nevertheless became devoted to her. Her energy, tact and fine spirit in facing the discomforts and difficulties of rough field work in a tropical foreign land inspired both her Thai and American associates. Working with Professor Hauck were Dr. Amusith Rajatasilpin, now a teacher in the School of Public Health in Bangkok; Miss Sapha Indrasud, now in the Ministry of Public Health; Dr. Chumlong Kittiveja, of the Dental School of the University of Medical Sciences, Bangkok; and Miss Saovanee Sudsaneh, who has been doing post-graduate work in nutrition at Cornell and Harvard. To all of these faithful workers, the Cornell Thailand Project is greatly indebted.

Lauriston Sharp, Director
Professor of Anthropology

Southeast Asia Program
Department of Far Eastern Studies
Cornell University
Ithaca, New York
September, 1956

BANG CHAN

12 As advoced by the Joint FAO/WHO Expert Committee on Nutrition (1951), this study combined clinical appraisal with dietary surveys. The only laboratory tests done were for hemoglobin content of blood, and examination of stools for parasites. Suggestions for planning the schedule for the clinical appraisal were obtained from the report on the second session of the Joint FAO/WHO Expert Committee on Nutrition (1951), Nicholls (1951) and especially from Professor Dean Smith of the London School of Hygiene and Tropical Medicine (1952).

125 Choice of physical measurements, and of procedures in making them, were influenced by a tentative list of specifications for anthropometric measurement, developed by the Committee on Anthropometry, Food and Nutrition Board, National Research Council (1951).

The schedule used for clinical examinations, and a description of procedures used, are included in Appendix A.

Sampling. - All of the children attending the Bang Chan primary school were examined. Three or four children who were listed on the school rolls were not present at any time during the period when examinations were in progress, and were considered by the teachers as non-attending.

Persons in a random sample of households in 5 of the 7 hamlets in the Bang Chan community were also examined. The two most outlying hamlets were excluded from the population to be sampled because of the difficulty, during the dry season, in getting to them or having them come to us. Of 230 households in the 5 hamlets, 31 were included in the random sample. Age and sex distribution of the 166 persons in the sample were roughly similar to distributions for the approximately 1700 persons in the village as a whole, as determined in the census of December 31, 1953. Following is a summary of the age distribution:

[162] [624]

Age in Years	Bang Chan, 7 Hamlets	Random Sample, 5 Hamlets
0-14	38%	41%
15-19	11%	10%
20-59	44%	41%
60 and over	7%	8%

[162] The sample included one Muslim family of 13 members.

In the 31 households, 166 of 184 persons, i.e. 90% were examined. Of the 10% non-response group, half were unavailable, for example away at work when the examinations were in progress. The remaining members of the non-response group [123]

A [See pp. 51-52--Analyst]

121 I recall seeing portable motors stored in some Bang Chan houses and
[243] can still picture many threshing floors with neatly layered heaps
[244] of rice straw where the mushrooms grew. A few of those apparently "progressive" farmers had special ponds to which they proudly invited me to watch the feeding of the tilapia fish. Occasionally one of them seized the opportunity of my visit to inquire about sending a sick kinsman to a Bangkok hospital. Without Dr. Goldsen's analysis I might easily have been lured to generalize that certain farmers were "innovation minded."

*177 The survey's evidence against a general "innovation mindedness"
*178 cautioned me to reconsider my impressions. I realized that it would
121 be an oversimplification of the social network in Bang Chan to
• 621 think of it as containing a group of "progressives" who sought avidly each new agricultural wrinkle and who pitted themselves against another group of "conservatives" who resisted change. Instead I was led to see some farmers interested in certain new things, others indifferent to these but interested in other things. Bang Chan looked more like a mosaic of small groups, each fitting or rejecting the new according to its circumstance.

*177 Instead of thinking simply of a group of highly motivated,
*178 wealthy farmers who assumed the responsibility of trying out the
243 new for the benefit of their less affluent neighbors, I was
244 alerted to recognize a variety of kinds of innovation., Innovation in growing rice, where one might employ a motor or fertilizer, differed considerably from earning extra cash during the dry season by growing mushrooms. The analysis of the survey evidence made me sensitive to the realization that mushroom culture was clearly a seasonal activity requiring little investment and open to any family, rich or poor, that needed cash. Certainly no genuine rice farmer would permit this extra work to interfere when the rains called time for ploughing. The finding that no correlation existed between acceptance of motors and growing mushrooms seemed in retrospect clear, almost self-evident.

*177 The survey analysis indicating that owning a motor, despite
182 my initial impressions, bears no relation to use of modern medical
244 facilities, made me reexamine my initial impressions. My own
757 studies had made me aware that making a living is a positive action among Bang Chan farmers: it requires forethought and will. Health, however, for Bang Chan is a kind of negative entity to be taken for granted until sickness arrives. Bang Chan has no vitamin pills nor tonics to maintain health, though all work actively to relieve sickness. Growing mushrooms and using modern medical facilities are phenomenally different undertakings. Certainly the survey analysis in this regard bore out and corroborated this "thematic" analysis.

established that none of the correlated factors finally turned out to produce the disease--the necessary condition was a bacillus. Indeed, some of the factors mentioned might be viewed as results of the illness rather than as causal factors. Correlational analysis in a study of this type can establish only that the factors associated with tuberculosis constitute the context within which the necessary condition (in this case the bacillus) was known to operate. In the second example, traffic accidents, it is perfectly apparent that age , or time of day, cannot produce a car accident, but the linkage between accidents and other factors provides portions of the context where accidents occur.

Why is it important to understand this context' Such knowledge can lead to inferences about more direct causation, which serve to narrow down the clinician or experimenter's search for the necessary condition. Indeed, a necessary condition may operate only when it is imbedded in this complex matrix of other related variables--or may even be rendered inoperative when the context is changed. Thus efforts toward change or improvement can be made more effective by being directed to the relevant conditions.

It is essentially this kind of reasoning which underlies the procedure of the present study. Just as in the examples cited, linkages can lead to inferences about causation which may later be checked in the laboratory, so, in the same way, linkages discerned in the present study can lead to inferences about causal factors. They are useful chiefly in providing the context within which the decision to try out these sorts of innovations comes about. In this sense of understanding the context, efforts to produce social change may be made with more understanding of the dynamics.

We may now turn to the data collected in Bang Chan for a study of factors related to acceptance or rejection of innovations within the larger context of a rural community in contemporary Thailand.

THE COMMUNITY AND THE INNOVATIONS

The Scene of Bang Chan

Twenty-five miles by highway northeast of Bangkok is situated the community of Bang Chan. In this section of the central plains the inhabitants live as near as possible to the rice paddies which they till, so that instead of a compact village Bang Chan is a community spreading broadly along the banks of a canal network which from its two-mile stretch through Bang Chan, covers most of Central Thailand. Under these circumstances precise definition of the community becomes difficult and might be

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. So also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

On the average, an interview took about 40 minutes. Interviews ranged from about 20 minutes to one and a half hours. During the first days of interviewing the duration of an interview was on the average a little longer, and decreased as the interviewers became familiar with the instrument. For the first four days of interviewing, the daily output of interviews amounted to an average of 23; from the fifth day on the daily average output increased to 32 interviews. 124

The survey focussed mainly upon factors associated with the acceptance or rejection of certain changes in the village. The questionnaire was designed to permit: (1) a check on whether a question was meaningful to the respondents in the sense of its analytic significance in the study design; (2) testing the relative analytic sensitiveness of different types of question and answer categories; (3) collecting data whose manifest content was identical to content which had been investigated in other field stations; (4) collecting data, which, while differing from the manifest content covered in other field stations, nevertheless, had the same conceptual significance in this particular culture analysis; and (5) collecting specific information of interest to the area specialists assisting the Methodology Study. 125

Sampling

Problems of sampling were minimal. The entire area previously studied by Cornell anthropologists, consisting of seven hamlets, constituted the universe from which respondents were to be selected. The sampling unit was a household, defined as a single person or a group of persons constituting an economic unit and customarily using the same kitchen. Interviewers were instructed to select the head of the household as respondent. The head of the household was defined as that resident whom other members considered to be the head. If the head of the household was unavailable, interviewers were instructed to substitute "an articulate member of the household," defined as a person in a given household eligible to substitute as head. The majority of the respondents (85 per cent) were the actual heads of their households; substitutions were made only in the remaining 15 per cent of the cases. Interviews were gathered from all but one of the 336 households in the Bang Chan area studied.

The sample obtained is composed of 243 males and 90 females, of 298 Buddhists and 35 Moslems. As far as ascertainable, the respondents reported their place of birth as follows: 125 621

140 were born in Khanhajaow Commune
116 were born in Bang Chan Commune
11 were born in Minburi Commune
30 were born outside of the three above communes

40

125
• 621 The age breakdown of the sample is as follows:

41 cases of 20 to 29 years of age
73 cases of 30 to 39 years of age
83 cases of 40 to 49 years of age
68 cases of 50 to 59 years of age
41 cases of 60 to 69 years of age
16 cases of 70 years or more

The occupational status breakdown is as follows:

269 farm operators
24 farm laborers
18 in trade or commerce
10 in service occupations
12 other (2 retired, 2 artisans, 1 traditional doctor, 1 janitor, 1 air force man, 1 policeman, 1 children's caretaker 1 gardener, 1 laborer in irrigation department, and 1 occupation unspecified)

123 Respondent Reaction to the Survey

The respondents were in general cooperative and congenial as is substantiated by the following interviewers' ratings:

(1) 93 per cent of the respondents were reported as cordial at first contact;

(2) 96 per cent of the respondents were reported friendly, cooperative, and responsive for all or most of the interview;

(3) 90 per cent of the respondents were reported as speaking freely for all or most of the interview,

(4) 91 per cent were reported as answering to the point of most or all questions, as giving reasonable, applicable answers;

(5) Only 5 per cent of the respondents were reported as giving many guarded, insincere or evasive replies, whereas 15 per cent were reported as giving some guarded, insincere or evasive replies; and 80 per cent of the respondents were reported as giving no guarded, insincere or evasive replies.

1(4 The interviewing period fell in a relatively quiet season between harvesting and planting of paddy. At that time farmers were readying implements and beginning to prepare for harrowing and sowing the seed-beds. The period coincided with a period of university vacation so as to recruit English-speaking interviewers. The morale of the staff was high at all times.

* * * *

APPENDIX B

Cornell Methodology Project
Thailand, May 1958

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BANG CHAN STRUCTURED QUESTIONNAIRE (Frequency Distributions)

A. Ser. No. B. Hamlet and H C. Date of Interview E. Name of Respondent [162]

F. Sex
9. male 243
X. female 90

G. Religious Affiliation
0. Buddhist 298
Y. Moslem 35

H. Main Occupation [46]
8. Farm operator 269
9. Farm laborer 24
X. Trade and commerce 18
Y. Service 10
0. Other, Specify _____ 12

I. R is HH or not HH
1. HH 277
2. Not HH 56

J. If not HH, relationship to HH
3. Husband —
4. Wife 41
5. Son 10
6. Daughter 2
7. Father —
8. Mother —
9. Mother-in-law —
X. Other relative 3

1.a. Were you born in Bang Chan Commune, Khanna Yao Commune, Minburi Commune, or outside?

b. If outside, in what province were you born? [166]

1. BC Commune 116
2. KY Commune 141
3. Minburi Commune 11
4. Commune unascertainable 2
5. Outside BC, KY, Minburi 30
7. Unascertainable 33

2.a. How old are you? [162]
b. In what zodiac year were you born?
1. 20 to 29 41
2. 30 to 39 81
3. 40 to 49 85
4. 50 to 59 68
5. 60 to 69 41
6. 70 and over 17

42

621
125
[872]

3.a. Is there anyone from your house who is now attending mattayom school?
1. Yes 24
2. No 309

b. Do you have any children who have not yet entered or not yet finished prathom school?
3. Yes 201
4. No 128
-- Unascertainable 4

c. IF YES: Do you plan to send any of these children to mattayom school or not, or is it uncertain?
5. Plans to send 66
6. Does not plan to send 83
7. Unascertainable 52

[863] 4. What kind of occupation would please you the most—farming or some other occupation? If some other occupation, what other occupation would please you the most?
1. Farmer prefers farming 266
2. Farmer prefers other occupation 25
3. R. from other occupation prefers his occupation 25
4. R. from other occupation prefers farming 8
5. R. from other occupation prefers another occupation 5
6. Unascertainable 4

5. How is Baan BC-KY in your opinion? Is it a very good place to live, a fairly good place to live, or not such a good place to live?
8. Very good 71
9. Fairly good 254
X. Not so good 4
O. Unascertainable 4

[276] 6.a. Do you smoke cigarettes or not?
7. Yes 208
8. No 118
-- No Answer 7

b. If yes: Would you say that you smoke more cigarettes than most people in BC-KY, less than most people in BC-KY, or about the same as most people in BC-KY?
9. More 14
X. Less 66
Y. About the same 124
O. Unascertainable 2

		Qu 46C	Qu 41B
125	1. Too old to move, old man	33	12
• 621	2. Easy to make living here, more comfortable, happy here	36	8
	3. Loves place, born here, would like to die here	37	26
	4. Doesn't like to leave area	10	4
	5. Relatives are here, likes neighbors, family here	32	28
	6. Own land	19	15
	7. Can't move her house, worried about housing in new place	7	1
	8. Change career, use other occupation	2	18
	9. Other: Big family, had to move too far, wouldn't know how to find a new place, people here one can trust, will help you	39	13
	0. D.A.	130	205
	X. No answer, unascertainable	7	23

		Qu 47B (labor contrib)	Qu 47D (money contrib)
125			
653	4. D.A.	238	202
	5. School	23	51
	6. Bridge	36	36
	7. Canal	16	8
	8. Road	13	23
	9. Other: district office, festival shelter, marriage of neighbors	8	8
	0. N.A.	1	9
	X. Rest house	5	5

		Qu 66B
125	1. Make merit, give alms, buy a golden belt, build a mosque	172
525	2. Purchase land	91
	3. Trade, build a market, open rice mill	34
	4. Spend for the family, unspecified, improve group condition	68
	5. Build a house	40
	6. Purchase of farming equipment or stock	22
	7. Pay debt	7
	8.	
	9. Other: Offer some to Thai army, to be carpenter, keep money in bank and collect interest, educate children, benefit country	44
	0. D.A.	39
	X. No Answer	2

The basic unit in the social structure of BC is the household. A number of households is grouped in a hamlet under a headman. We will bring our survey altogether into seven hamlets. The total number of households as defined by us above will be in the neighborhood of 350. Our target is to secure one interview from each household kitchen unit. 124 621.

Field conditions will be arranged such as to give each interviewer the best possible comfort and working facilities. Tentatively, interviewing time is set for 8 to 11 and 16 to 19 hours. However, weather and the experience of the first interviewing days will dictate the fixing of a more definite or a more flexible time schedule. After the end of each morning and afternoon interviewing period, the interviewers will deliver their completed interviews to Mr. Civ who will check the same for completeness. 124

Interviewing areas will be assigned and designated to each interviewer in due time. Then, the interviewer will proceed similarly or just as reported in notes on a trial interview by Mr. Civ: "I saw a man sitting on the ground in front of the house. With a smiling face, I made a Thai salute and said: Hello! Good morning, Sir, I would like to ask for your permission to ask you something about the life of Thai farmers as well as about the way of life in general... Sitting down near the R., I said smoothly: Excuse me, Sir, are you the HH?... How many kitchens do you have in your house? Only your family living in the house?... Thank you, Sir... Now, I am starting the questions, please be kind enough to answer, you will of course."

Should the potential R. ask the interviewer about his activity, the suggested reply is: I am doing research for the Cornell University.

Should the HH tell the interviewer that he has no time at the given moment, then the interviewer will attempt to fix an hour at the convenience of the HH.

Should any difficulty arise, it is suggested that the interviewer report the trouble as soon as practicable to the field director or his deputy.

Each interviewer is required to adhere rigorously to the phrasing of the questions in the questionnaire. Below, indications are provided for probing in situations, where it might be advisable. Probing is using some unbiasing short phrases for strengthening the question stimulus. Just what exactly is included in a probe will depend on the given situation, the nature of the R. and the degree of rapport between interviewer and R. At times, a short period of silence of perhaps 15 to 20 seconds might well produce the desired stimulus and make the R. speak after his first initial hesitation.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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• 621

Reasons for the Choice of the Field Site

After an extensive survey of a number of possible sites in the Central Plain, the community of Bangchan, some twenty miles northeast of Bangkok, was selected for intensive study. Among factors leading to this choice were the following: (1) accessibility from Bangkok, about forty minutes by car with optimal road conditions, and about two and a half hours by launch -- an important advantage because it was desired to maintain contact with events in the capital, to utilize research and other facilities there, and to work in a community which Thai from Bangkok or vicinity could easily reach should they participate in the research; (2) availability of a fairly concentrated population of over 1,600 almost entirely engaged in rice production; (3) production of a large surplus of rice sold to nearby Chinese millers for export; (4) local use of two alternative methods of growing rice -- transplanting and broadcasting; (5) presence of an active religious institution or wat; (6) presence of a large government primary school; (7) artificial division of the community between two administrative units or amphur, providing an exceptional opportunity for comparative study of local government; (8) presence of a small number of Moslem Thai, permitting study of this important minority group; (9) almost complete absence of Chinese residents, but dependence upon outside Chinese itinerant vendors or nearby traders and millers, permitting study of Thai-Chinese relations; (10) a wide range of variation with respect to individual

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

121 experience outside the community, from persons who had
621 never before seen any foreigner to others familiar with Bangkok or smaller centers of modernizing influence; (11) prospects of a fair degree of physical security from robbery or other violence during the study; and (12) the promise of excellent cooperation on the part of both peasants and officials of the region.[2]

121 A majority of the sites visited or heard about during the preliminary survey proved unsatisfactory for one or more of the following reasons: (1) they were too specialized (fruit or truck gardening, brick or pottery making, proximity of a naval establishment, preponderance of non-Thai or non-Buddhist groups); (2) they consisted of amorphous groups of sub-marginal tenant farmers exhibiting marked signs of social disorganization; or, most commonly, (3) they were decentralized and the dispersal of homesteads along canals would have required an inordinate amount of research time spent in moving about in order to communicate with the people.[3]

121 Although caution has been exercised to select a com-
184 munity most closely approximating a representative village
*243 of the Central Plain, we do not purport that economic conditions described in Bangchan are identical with those of other villages in the region. Bangchan's representativeness

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2. Lauriston Sharp, "First Progress Report on Cornell Thailand Project, August 1-November 1, 1948", p. 2. (Mimeographed.)

3. Ibid., p.2.

T 63 Place of Bangchan in the Administrative Area

In the highly centralized system of Thai administration, the whole country is divided into 9 circles (phaŋ), 71 provinces (changwad), 414 districts (amphur) and 77 sub-districts (king-amphur), 3,650 communes (tambol), and some 50,000 hamlets (muban).

CT 621 634 121 In the section on reasons for the choice of the field site (page 32)[a] mention was made of an artificial division of Bangchan between two administrative units. By that we mean one part of our "natural" or "functional" Bangchan village administratively belongs to one amphur and the other part belongs to another amphur. The situation will become more vivid when we discuss our "natural" Bangchan village.

CT Our "Natural" Bangchan Village

621 121 In this study we are not interested in an administrative unit which is often an artificial division, but rather in a "natural" or "functional" village which may be operationally defined as a geographical area inhabited by a conglomeration of people having one or more common social centers.

CT 621 794 872 Bangchan people patronize an active Buddhist religious institution popularly known as Wat Bangchan, and an adjacent government primary school, both centrally located in the community.

CT 621 *128 For practical reasons for ease in statistical manipulation, we assume that the smallest administrative unit --

[a] [Erratum: this should read "page 36"---Analyst]

621 *128 the hamlet or muban -- is indivisible, although as a matter of fact a Thai hamlet is actually made up of individuals and families. We proceeded, then, to draw the boundary line of our natural village by first selecting Wat Bangchan as the social center and defining the natural village as composed of all hamlets whose headmen and the birth of whose population patronized this wat. The hamlets thus included were found to be Muban 4, Muban 5 and Muban 6 of Tambol Bangchan, Amphur Minburi, Changwad Phra-nakorn, and Muban 5, Muban 6, Muban 7 and Muban 8 of Tambol Kannayao, Amphur Bangkapi, Changwad Phra-nakorn. For the sake of brevity these seven hamlets will henceforth be referred to as BC4, Bc5, BC6, KY5, KY6, KY7 and KY8 respectively.

[872] We then checked the list of students enrolled in the primary school which is adjacent to the wat and found that most of the families residing in the seven hamlets sent their children to this school and that only a negligible fraction of the student body consisted of those from other nearby hamlets.

Our "Bangchan Village" may thus be defined as an area within the composite boundary line of BC4, BC5, BC6, KY5, KY6, KY7 and KY8. This is an area of about 6,500 rai (of which 6,404 rai are privately owned), assuming a somewhat circular shape and having as its centers Wat Bangchan and the adjacent Bangchan Primary School (see Map I).

361 312 Across this "Bangchan Village" and through its center runs a main canal, the Bangchan Canal, in a northeast-southwest

361 direction dividing it into two halves, the Bangchan half
312 consisting of BC4, BC5, BC6, and the Kannayao half consistingoof KY5, KY6, KY7 and KY8.

621 As mentioned earlier, our functional Bangchan village
634 is under two different administrative authorities, the Bangchan half consisting of part of Tambol Bangchan which is in turn part of Amphur Minburi in Changwad Phra-nakorn (Bangkok) and the Kannayao half consisting of part of Tambol Kannayao which is part of Amphur Bangkapi in the same Changwad Phra-nakorn.

History of Settlement

194 No official records on the history of the settlement
361 of Bangchan could be discovered, but evidence from genealo-
[503] gies provides a few clues on the subject. Following the digging of Saensaeb Canal some one hundred and twenty years ago, settlement was made along the banks of this important canal which provides one of the few connections between the
175 Menam and Bangprakong rivers. It was not, however, until
621 the 1870's, apparently, that people found it necessary to
361 move onto the land away from the canal. At that time, according to one of our older informants, her father was born in what is now Bangchan, his father and mother having come out from Bangkok as a young married couple to take up farm-
175 ing where plenty of land was available from the Crown. These
621 people and their followers, usually kinfolk or friends, cleared off scrub jungle areas in which, it is claimed, tigers and

175
621 elephants still roamed. They thus opened up to commercial rice production a new region lying behind the thin fringe of population already occupying all land bordering Saensaeb Canal.

The genealogies suggest that it was not until the 1880's that any major settlement occurred in Bangchan. There is doubtless a correlation between the rapid development of the community from then on and the increasing national and international demand for rice. Many of the settlers of this period were persons displaced from a southern and a northern section of Bangkok who were uprooted by the government which forced purchase of their land for the first Thai railroad and a large munitions factory. The Thai Islam or Moslem group in Bangchan claims descent from Patani Malays who were sent north by the Thai government in the course of wars during the 1830's and 1840's; many of their families settled in Donburi or along Saensaeb Canal before moving into the Bangchan area. Another element came into the region in the 1890's when some Lao Thai were encouraged to settle here after having fled their countryiin the northeast when the French occupied it in 1893.

[173]
[794]

By 1895 the Bangchan population was sufficiently numerous to support its own wat, which was established and officially recognized about that time and has flourished ever since.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

592 do not share the same arrangements for preparing and consuming food.

• 621 59 [792] The 298 families living in Bangchan on May 23, 1953 may be grouped into five categories: (1) "One-person household" consisting of a lone man or woman /for ease in typological manipulation we arbitrarily consider this as a family, although strictly speaking a one-person household is not a family/; (2) "Nuclear family" consisting of a man and wife and their unmarried children; (3) "Limited extended family" consisting of a man and wife, either or both their sets of parents, and their unmarried children; (4) "Extended family" consisting of those included in "limited extended family" plus married children and children of the latter, plus any collateral relatives of any generation; and (5) "Ecclesiastical family" consisting of Buddhist priests, novices, and temple boys, all males, living together in the temple under the Headpriest's supervision. The distribution of these different types of families so defined is shown in Table 3.

592 596 621 Further explanation is perhaps necessary with respect to the "extended families" in Table 3. It must be pointed out that the term 'extended' is here used for the sole purpos of defining types of families which include dependent married couples as differentiated from the ordinary independent nuclear family. It will be seen in the next section, however, that there is no permanency in this inclusion of marrie couples whose intention is always to establish an independent family of their own. The so-called 'extended' family in

[TEXT CONTINUED ON PAGE 63]

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TABLE 3

DISTRIBUTION OF TYPES OF FAMILY
Bangchan, Thailand, 1953

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• 621
[792]

Family Types	Frequency	Per Cent
One-person household	16	5.4
Nuclear family	177	59.4
Limited extended family	24	8.1
Extended family	80	26.8
Ecclesiastical family	1	0.3
Total	298	100.0

592 Bangchan is thus not a counterpart of the Indian or Chinese
596 extended family and should not be conceived as such. Its
621 outlook is definitely that of the nuclear family. Its assumption of an extended family structure does not indicate an intended role of the conventional extended family but does rather demonstrate the inability, temporarily at least, to provide for an establishment of a new family for the newly
[514] wed members. Most of the 80 'extended' families existing in Bangchan at the time of the second census in 1953 cannot be regarded as well to do, and some are extremely poor, being families of the laboring group without any assured regular income.

592 All of the sixteen one-man families were poor, rang-
621 ing from destitute old people who had been deserted by their kin to small farm operators who had to make the most out of their under-sized farms.

592 There were some 53 dependent relatives staying with
602 twenty-five families. These relatives do not include parents
621 of family heads and family heads' direct descendants and
[597] their spouses. They also do not include 'adopted' children of family heads, who automatically become members of the family. Records show that most dependent relatives remained in the family only for a brief period of time. Seven relatives, however, were able during the period from 1949 to 1953 to assume the headship of the families of which they had been dependent members.[7]

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7. See section on change of family heads, Chapter II.

597 As of 1953 seven adopted children were reported to
• 621 be living in Bangchan. Since only those mentioned by family
573 heads as their adopted children were so recorded and since some of the information on family members were not given directly by the family heads, it is possible that there might be some more adopted children who appeared in the 1953 census as nephews or nieces. The authenticity of the term 'adopted child' as used in the village is nevertheless rather questionable. There has never been such a practice like legal registration of adopted children in the village, although this is provided by law. Moreover, maltreatment of an adopted child was not unheard of. In 1952 one family head reported that his adopted daughter had "run away" to Bangkok. In 1953 a young widow, an adopted daughter of an operator of a coffee shop in the village, also "ran away". When her whereabouts became known, no effort was made by the foster parents to return to the woman her golden necklace valued at one thousand baht. Later she was forced back home, being beaten all the way in spite of her complaint that she was pregnant. It was also not infrequent that an adopted child left his foster parents and took residence as a dependent relative in another family in the neighborhood. Such incidents points toward the possibility of 'adopted child' being used as a nom de grace for a prospective free family laborer.

162 Table 4 shows that with the exception of the ecclesi-
592 astical family the size of families in Bangchan ranges from
621 one to fourteen, averaging 5.7 persons per family. This

[TEXT CONTINUED ON PAGE 66]

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TABLE 4

DISTRIBUTION OF FAMILY SIZE
Bangchan, Thailand, 1953

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• 621

Family Size	Frequency	Per Cent
One-person family	16	5.4
Two-man family	18	6.0
Three-man family	34	11.4
Four-man family	35	11.7
Five-man family	43	14.4
Six-man family	48	16.1
Seven-man family	38	12.8
Eight-man family	26	8.7
Nine-man family	23	7.7
Ten-man family	10	3.4
Eleven-man family	1	0.3
Twelve-man family	2	0.7
Thirteen-man family	2	0.7
Fourteen-man family	1	0.3
[792] Forty-one-man family*	1	0.3
Total	298	100.0
Mean	5.7	
Median	6	

* Ecclesiastical family.

162 592 621 average size of family in 1953 is slightly larger than that calculated from the 1949 census.

Disappearance of Some Families from Bangchan

162 178 592 621 When the 1949 and 1953 censuses are paired hamlet by hamlet, appearance of new families and disappearance of some of the old families may be detected. Table 5 shows that during the four years between 1949 and 1953 forty-three families had disappeared from the lists of the seven hamlets constituting Bangchan. This loss was compensated by fifty-three new families, giving a net gain of ten families. In other words, of 288 families existing in 1949, 245 families remained throughout the period. When 53 new families were added to the continuing 245 families, a new total of 298 families was arrived at for 1953. A closer examination, however, will reveal that there were five families which disappeared from one hamlet only to appear in another hamlet of the same Bangchan village. If the seven hamlets are to be considered as one geographical unit, these five families should be deducted from both the disappeared and new families, giving a net disappearance of 38 families and a net appearance of 48 new families, while the number of continuing families becomes 250.

[166] Of 36 families which disappeared from Bangchan, 27 moved out to other villages nearby or afar, while 11 were disintegrated or simply annexed by other families in Bangchan itself.

[TEXT CONTINUED ON PAGE 68]

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TABLE 5

CHANGES IN NUMBER OF BANGCHAN FAMILIES FROM 1949 TO 1953

Hamlet	Number 1949	Number 1953	Continuing			Disappeared				New			
			Total	(1)	(2)	Total	(1)	(2)	(3)	Total	(1)	(2)	(3)
BC4	43	40	32	32	0	11	6	0	5	8	3	1	4
BC5	27	28	24	18	6	3	2	1	0	4	1	0	3
BC6	44	47	38	36	2	6	4	0	2	9	4	1	4
KY5	54	63	45	40	5	9	6	1	2	18	13	2	3
KY6	28	31	27	26	1	1	0	1	0	4	0	1	3
KY7	43	42	37	33	4	6	5	1	0	5	3	0	2
KY8	49	47	42	36	6	7	4	1	2	5	3	0	2
Total	288	298	245	221	24	43	27	5	11	53	27	5	21

Explanation

Continuing (1) . . same family head
Continuing (2) . . different family head

Disappeared (1). . moved out of the village
Disappeared (2). . moved to other hamlet in the village
Disappeared (3). . disintegrated or annexed by other family

New (1). . . . . moved into the village from other village
New (2). . . . . moved in from other hamlet of the village
New (3). . . . . separated from other family in the village.

592 178 621 Although disintegration and annexation of families have a common feature in that in either case the family loses its entity, they have different connotations as to how the family passes out of existence. In order to have a clear picture of the village economy it is necessary to make a distinction between these two dynamic processes. The best way, perhaps, is to study the eleven families individually.

592 178 621 511 Case 1: A poor laboring family of eleven lived in BC4. The family head was in 1949 an old man of 59, his wife an old woman of 64. The family also included a son, age 29, son's daughters, 16 and 10, son's son, 9, daughter, 35, daughter's son, 18, daughter's daughters, 11, 4 and 1. This was the situation when we were first acquainted with them. When we re-visited the village in 1952, however, we found that only two members remained -- A, the old woman now sick with malnutrition and almost immovable, and B, her granddaughter then age 14 and still in the primary school. Presumably the girl was taking care of her grandmother. Except for the clothes they were wearing and a small old shack which was about to collapse, they did not own anything. B said she worked on a three-fourth-rai parcel and did some fishing or vegetable gathering before and after school time. Actually, she did not get much out of that effort; for the rice crop, 30 tang of paddy or roughly 15 tang of clean rice, was barely enough for a few months' consumption, and fishing would not be productive unless she had several long uninterrupted hours. In tracing what had happened to the rest of

178 592 621

178 the family members we were informed that A's daughter and
592 her four children had moved out of the village separately
• 621 to different places which could not be traced, while B's brother and sister went to live with a relative in Lam-loogga, also a rice growing village some fifteen miles to the north. The two chief bread winners of the family, A's husband and B's father, managed successfully to get themselves ordained and are now residing in the village temple. Early in 1953 B went to live with her relatives in Lam-loogga, leaving the sick old grandmother alone in Bangchan.
[792] The arrangement was that the old woman was to quit the old
[288] shack and take refuge in the secular part of the temple where it would be possible for her ex-husband, now a priest, to have two meals delivered to her every day. Just before the 1953 census was taken, however, she was taken to Lam-loogga. The last member of the disintegrating family was thus left out of the 1953 census.

178 Case 2: After the death of his first wife, an old
592 man in BC4 gave his two sons equal shares of his property.
587 He then acquired a second wife and built a separate quarter
736 apart from the main building, thus creating a new family of
621 two. In 1952 he was fatally hit by a truck on the Minburi road. After a few months of unhappy stay with one of her step sons, the widow acquired a new husband and moved out to a neighboring village.

178 Case 3: There was in BC4 a laboring family of three
592 consisting of an old man, his daughter, and her son. After
621
[166]

178 592 621 [166] the death of her father, it was reported that the woman and her son moved to Bangplee, another rice growing village some fifteen miles to the south. After checking with some of the former Bangchan residents who are now living in that village, the first report was found to be inaccurate. In fact no one in Bangchan seemed to know where they were. The only hint available to us concerning the mother and son was "Family disintegrated. Mother went one direction, son another direction."

Case 4: A woman and her adopted son were operating [702] a 22-rai rice farm in BC6. After the death of the mother, the man remained in the village alone for a short time and then was conscripted into the army.

Case 5: After the death of the head of a laboring family in BC6, the wife and their four grownup children left the village separately. In the eyes of villagers this was [166] another case of "family disintegration." The wife's birth place was in KY8, but she could not go back to her old family because there was not enough land to work.

Case 6: An old woman, age 76, was reported in the [737] 1949 census to be living alone in KY5. Later she moved [792] into the secular compartment of the temple (she was an aunt of the headpriest) where she died before the 1953 census was made.

Case 7: A man, age 50, was living in KY8 with his older sister, age 60, and their nephew's son, age 6. When the man died, the older sister pursued her brother's farm.

178 laboring profession, limiting the work to transplanting only.
592 Apparently she did not earn enough. During this hard period
621 the young boy left her. The woman continued to live alone for two years. After the collapse of her shack in 1953 she went to live with a young couple in KY5 who are not related to her. In exchange for room and board and a nominal allowance, the old woman agreed to take care of the couple's baby.

178 Case 8: In 1949, a couple, both teachers in the Bang-
592 chan Primary School, were sharing the same dwelling with the
845 wife's mother's family, but having a separate food arrange-
434 ment for themselves and their two young daughters. Thus,
621 they appeared in the 1949 census as a separate family. In local standard, the combined income of these two teachers
[416] was quite high. The family lived well and was the only family in Bangchan that owned a camera. In the 1953 census this family became a part of the wife's mother's family because they had arranged to share the same food. The reason that was given for this new arrangement was that some time earlier the wife's brother, who had been living with his mother, got married and moved out to start an independent family, whereupon the old lady suggested that her daughter move in to fill the vacancy.

178 Case 9: In 1949, a family of three, consisting of
592 a young couple and their six years old daughter, worked as
621 farm hands for the wife's mother for fixed pay on which they
[593] were able to live independently. Two or three years later, the wife's mother asked this family to move into her household

178 because four members of her family had just left her to
592 establish families of their own. The son-in-law accepted
• 621 this invitation and had since taken over the management of
[593] his mother-in-law's large 60-rai rice farm.

Case 10: In 1949, an old woman was living with two boys, one distantly related to her, the other without any
[427] blood relationship. She was operating a small rented rice
[792] farm. Some time in the past she had made a generous offer
[431] of her own house to the temple which was not acted upon by the receiving party. In 1953, the headpriest contemplated an expansion of one of the temple buildings and approached the woman for the gift. The woman complied with the request, had her house dismantled, saving only the kitchen, and sent all the building materials to the temple. Meanwhile, the two boys had left her; one went to live with his mother in
[593] the village, the other went to Bangkok. Later, the woman
[437] joined the household of her younger brother, who lived next door, with the understanding that the brother had free use of her buffalo in exchange for her room and board.

Case 11: In 1949, a woman was living in KY8 with her aged mother and her baby born of her separated husband
[586] who was a policeman. Two years later, the woman married a
[587] widower, who lived in the same hamlet, and brought along her mother and son to live with her new husband.

With the exception of Case 6, a lone aged woman who was survived by none after her death, these cases may be grouped according to the nature of acceptance of the families

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178 592 621 to which surviving elements of the disappearing families were subsequently attached. It was noticed that in the last four cases -- Cases 8, 9, 10, and 11 -- merging with new families was arranged on the basis of mutual convenience, and the disappearing families moved en masse into the new ones (with the exception of Case 10 -- a lone woman when arrangement for merging was being made). It may even be said that the initiative came from the receiving families, although the new members may have been more anxious for the union. In the remaining six cases -- Cases 1, 2, 3, 4, 5, and 7 -- there was no element of mutual convenience, and the surviving elements of the disappearing families did not move into new families as a body but as an individual. It seemed in these latter cases that the force of circumstances -- death or extreme poverty -- had prompted either party, usually the disintegrating elements, to seek the union as a quick way out. Because of the purposive nature of the arrangement in the former cases, the process may be called 'annexation'; while for want of a proper term, the process seen among the latter cases will be called 'disintegration'.

[162] [423] [464] None of the eleven cases undergoing disintegration or annexation owned landed property. Table 6 shows that six of these were farm laboring families. The five others were distributed among the following occupational groups: farm operator, public servant, and no occupation.

[166] Among the 27 families that moved out of Bangchan, eleven families were known to be living in the bordering

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TABLE 6

DISINTEGRATION AND ANNEXATION OF FAMILIES
Bangchan, Thailand, 1949-53

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Case	Occupation	Landed Property	Immediate Cause	Number of Surviving Elements	Number of Attached Families
Disintegration:					
1.	F. laborer	no	poverty	11	4
2.	Public servant	no	death	1	1
3.	F. laborer	no	death	2	2
4.	F. operator	no	death	1	1
5.	F. laborer	no	death	5	3
6.	no occupation	no	death	0	0
7.	F. laborer	no	death	2	2
Annexation:					
8.	Public servant	no	convenience	4	1
9.	F. laborer	no	convenience	3	1
10.	F. operator	no	convenience	1	1
11.	F. laborer	no	marriage	3	1

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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178 villages, and six in villages within a distance of from four
592 to fifteen miles from Bangchan. These seventeen families,
• 621 whose locations were known, were engaged at the time of the
166 study in the same occupations they had been when they were in Bangchan -- either farm operating or farm laboring. Our investigation, however, covered only the whole family as a unit -- that is, we cannot say that every single individual constituting these seventeen families when they moved out of
[464] Bangchan was doing farm work in his new location. Only one case was known in which the family head got a permanent job as a janitor in Wat Makasan Primary School in Bangkok. This man was nevertheless commuting regularly between his farm home in Bangplee and his office in the suburb of Bangkok. His taking up a new job was thus a question of an individual member, not of the family as a whole.

It is not likely that the ten families whose locations were not known to us would take up new occupations in Bangkok. If they did work in Bangkok, they should pay some visits to Bangchan at least during festival time or family re-union occasioned by ordination or cremation, and their presence in the village would certainly be known to us. Besides, we were in constant contact with the core of a group of young men who went to work in Bangkok and who knew one another's whereabouts fairly well, and no information about these ten families was available from this source either. Our impression was that they were doing farm work in some villages not too close to Bangchan.

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Appearance of New Families in Bangchan

178 592 621 166

In the pairing of the 1949 and 1953 censuses against each other the appearance of new families was detected as was the disappearance of some of the old families which has just been discussed. Table 5 shows that there were 53 new families, but five of these were merely cases of reappearance of existing families from other hamlets of the same village. Actually, therefore, there were only 48 families that were really new in Bangchan.

Of these 48 new families, 27 moved into the village from the outside and 21 evolved from existing families in Bangchan. Of the 27 immigrating families, 18 came from the bordering villages and 9 from distant villages in all directions ranging from Lardprao and Samsen, some ten miles to the southwest, to Prachin, over a hundred miles to the east. While the eighteen families from the bordering were accustomed, as expected, to rice growing, not all of the nine families from distant villages had been farmers. A family head of one of these nine families came from a family of fruit growers, while another family head, who apparently had a more spectacular record, had been engaged in international rice trading. This latter man, who knew some English, had worked in a large rice mill in Nonburi which was exporting rice under strict government control after the war. Discovery by the government agent of irregularities of the firm led to the man's flight abroad to Hongkong or Swatow some eight years ago. It is assumed with his

[463]

178 appearance in the village that the case has been closed.
592 One reason he chose to take up residence in Bangchan after
621 business failure in Bangkok was that his wife owned through
166 inheritance a 17-rai parcel of rice land in the village. Another equally important reason was the relatively low cost of living in the village as compared to the city, which could not be overlooked especially when he had a large family of ten.

162 Of the 21 families evolving or separating from
178 existing families in Bangchan during the period from 1949
592 to 1953, sixteen were young married couples seeking inde-
591 pendent families of their own. Eight of these were married
621 before 1949, and the rest after that year. These sixteen young couples altogether contributed, in the 1953 census, 21 children of age-group 0-4 years or about ten percent of all children of that age-group in the whole village.

This process of separation of young married couples from the old families is normal, in fact a characteristic feature, in areas where the nuclear family system predominates. Although some newly wed couples were able to establish independent families immediately, the pattern was that they remained for a year or more with family of either side, during which time they accumulated capital necessary for future establishment. A separate section will be devoted to this important feature of the village economy.

178 In contrast to the above normal separation from old
592 families, the remaining five of the 21 families underwent
621

178 different types of separation which will be described indi-
532 vidually as follows:
621

Case 1: This involved the two sons who inherited landed property from his father described in Case 2 for the disintegration of the family, and in fact this was the first Bangchan family we met in 1948. At that time the elder brother, then age 37, was a widower and was courting a woman in another village along the Minburi Road. His work in road construction and maintenance (the Minburi Road) gave him a good excuse for continued absence from home, leaving his two daughters and three sons under the care of his younger
[537] brother who was the family head. Just before the 1949 census
[464] was made, he married the woman and once again became settled down. Meanwhile the younger brother got a job in road construction. With regular monthly cash income, he took to drinking and established himself as one among the few notorious dipsomaniacs in the village. This was intolerable to the elder brother who finally moved his nuclear family out to their new home just across the road.

Case 2: In 1949, an unmarried woman was living in an 'extended' family headed by a son of her elder sister. The combined landed property of the family was 67 rai of rice land, 40 rai of which was a share of the woman and her aged mother who was also living in the family. Some time before the 1953 census was made the woman and her mother moved out to form a separate household. The reason for the separation was not quite clear. It was assumed, however,

178 that these two women were happier living by themselves than
592 with their junior relatives.
• 621
[586] Case 3: A married couple were living in 1949 with the wife's parents. They were later separated, the husband leaving his former wife with her parents. In the 1953 census the man appeared in KY7 list as head of a one-person household.

Case 4: In 1949, a woman appeared in the census as wife of a family head in KY6. In that same year she left him and lived as wife with another man in KY8. A few years after, she left this second man again. She then appeared in the 1953 census as family head of a family of six including her three children and her aged parents.

Case 5: In 1949, a man of 47 was head of a laboring family of nine in KY, including his wife, three adult off-
[464] spring and four young children. Later in that year he left
[586] the family and hired himself out as a regular laborer to a farm operator with whom he worked for two years. He then left the village for a year after which he returned to work as regular hired laborer for another operator for almost a year and a half. In the 1953 census he appeared as head of a one-person household in KY6. Our records show that he was a diligent worker, excellent fisherman, averse to sweet cookies, but very fond of liquor. When asked why he did not go back to his family in KY8, he replied "The larger the family you have, the more trouble you get. I have more fun living alone."

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178 These five cases may be grouped as follows: two
592 cases of relatives of family heads separating from 'extended'
621 families, two cases of one spouse leaving the other, and one case of a family head deserting his wife and children.

Pattern of Establishment of New Families

593 Bangchan offspring customarily continued to live with
592 their parents as long as they were not married regardless of how old they might be. In the eyes of the parents, an offspring is always their child, immature and needing parental supervision, as long as he has not been able to acquire a spouse; and until then the parents-offspring mutual obligations, necessitating living together, must continue to exist. Thus, it was not uncommon to see several unmarried adults crowding in one family providing too large a labor force relative to a small parcel of land on which the family
[571] worked. In this context, marriage serves an important economic function of giving impetus to the start of new producing units in the village. There is no corresponding service in areas where the extended family system predominates such as in China and India.

583 Two distinct kinds of marriage were conceived of in Bangchan: the conventional marriage with the sanction of parents or guardians of both parties which was usually preceded by formal arrangement and accompanied by marriage rites sponsored by the bride's family; and the popular marriage by mutual understanding between the man and wife without

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TABLE 9

OCCUPATIONAL DISTRIBUTION BY FAMILY
Bangchan, Thailand, 1949*

Occupation	BC4	BC5	BC6	KY5	KY6	KY7	KY8	Total
F. operators	25	25	38	37	25	37	42	229
F. laborers	7	1	2	10	1	-	6	27
Traders	1	-	2	1	-	2	1	7
Investors	3	-	1	-	-	-	-	4
Professional	2	-	-	1	-	-	-	3
Public servants	2	-	-	3	-	-	-	5
Home enterprisers	2	-	-	-	1	1	-	4
Priest or novice	-	-	-	1	-	-	-	1
Miscellaneous	1	1	1	1	1	3	-	8
Total	43	27	44	54	28	43	49	288

* Some figures in this table differ slightly from those reported on pages 114-5 of the preliminary study (Sharp, Hauck, Janlekha and Textor, Siamese Rice Village) because errors such as duplications and omissions in the original census have been detected and corrected.

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TABLE 10

OCCUPATIONAL DISTRIBUTION BY FAMILY
Bangchan, Thailand, 1953

Occupation	BC4	BC5	BC6	KY5	KY6	KY7	KY8	Total
F. operators	26	19	33	42	28	31	37	216
F. laborers	6	3	8	7	2	5	7	38
Traders	4	4	2	6	1	2	2	21
Investors	2	1	-	1	-	1	-	5
Professional	1	-	-	-	-	-	-	1
Public servants	-	-	2	4	-	1	-	7
Home enterprisers	-	-	1	-	-	-	-	1
Priest or novice	-	-	-	1	-	-	-	1
Miscellaneous	1	1	1	2	-	2	1	8
Total	40	28	47	63	31	42	47	298

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 11

CHANGES IN OCCUPATIONAL STRUCTURE
Bangchan, Thailand, 1949-53

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Occupation	Distribution				
	Actual		Per Cent		
	1949	1953	1949	1953	Changes
Farm operators	229	216	80	72	-8
Farm laborers	27	38	9	13	+4
Traders	7	21	2	7	+5
Investors	4	5	1	2	+1
Professional	3	1	1	+	-1
Public servants	5	7	2	2	
Home enterprisers	4	1	1	+	-1
Priest or novice	1	1	+	+	
Miscellaneous	8	8	3	3	
Total	288	298	100	100	

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

434 463 7. Home enterpriser. Main income from food or handicraft articles produced at home.

434 792 463 8. Priest or novice. Though priests and novices do not receive salaries or wages, their maintenance, which comes from the temple and directly from the people in the form of contributions, is their main income. This category includes only permanent priests and novice personnel. Excluded here are all residents who enter the priesthood more or less perfunctorily for just a few months. Since sexual abstinence is demanded of all monastic personnel, no wives or offspring are found in this category.

434 9. Miscellaneous. The main income source for the eight families in this category is obscure. The heads of these families are not known to have any steady occupations.

178 463 -621 Table 9 shows the occupational distribution of Bangchan families as of 1949. It may be observed that some of the figures in this table differ slightly from those reported in the preliminary study previously cited. This is because errors such as duplications and omissions in the original census have been detected and corrected.

Table 10 shows the same distribution as of 1953, and Table 11 the change in the occupational structure of the village that took place during the four intervening years. In 1949, 80 per cent of Bangchan families were farm operators. Four years later, the figure was reduced to 73 per cent. While there was no percentage change in the figures for public servants, miscellaneous, and priest or

novice; there were noticeable increases in those for farm laborers and traders, and a slight increase in that for investors, which were offset by a marked decrease in figures for farm operators and slight drops in those for the professional and home enterprisers. In order to understand these changes in the occupational structure of the village, more information on some of these occupation than that given in our operational definitions at the beginning of this chapter is necessary.

Farm operation is a traditional way of life in the village. The primary motive is to secure enough rice for consumption. A secondary motive is to have cash from sale of surplus rice to buy goods that are not produced locally.

Farm laboring as a profession is limited to the poor. Farm laborers, occupying the lowest status in the village, are the most unstable and socially disintegrated group. They are not fully employed even during the work seasons of the year because there are too many of them in the locality. Thus, they exist in the village not because of demand for their work but because they have no opportunity for other occupations.

There were twenty-one families that were classified as traders in 1953. Of these, nine were permanent storekeepers, and twelve were peddlers selling food stuffs from door to door. Stores were situated at strategic places in the village -- two at the crossing of Minburi Road and Bangchan Canal which is the natural entrance into the village,

621 four in the immediate neighborhood of the temple or on the
463 temple ground itself, and three on the banks of up-canal
443 Bangchan. These stores varied in the size of business but the goods sold were almost identical. To be found in each store were inexpensive articles of daily use, mostly dry foods, cookies, tobacco, betel, areca, lime, toilet articles, matches, kerosene, and farm materials like ropes. Most of these stores also sold hot coffee, soft drinks, and liquor. It should be noted in this connection that the market town is only two miles away. This nearness to a large market adversely affects the nature and volume of business of local traders in two ways -- villagers bypass local stores and go to the market town for varieties and large purchase, and the village is daily invaded by a number of peddlers from the town selling perishable foods.

443 While local stores operated the whole year round, the
463 activities of twelve other trader families classified as peddlers were highly seasonal subject to local water condition, seasonal demand for purchased food, seasonal supply of cash, and alternative income on the part of the peddlers themselves. These peddlers sold small quantities of vegetables, fruit, and the cheap salt water platoo fish (Rastrelliger chrysozonus), receiving in exchange from buyers cash,
[426] eggs, or paddy. Extension of credit was necessary for villagers did not have cash especially during the period from July to November. The following passages in the author's daily note dated January 12, 1953 gives an idea as to how

443 she wanted to spend more time collecting debts."

221 433 434 443 261 262 It should be noted that A's brief duration of peddling started in the harvesting season. During this time the village cash supply was high, resulting in demand for such a delicacy as pork which normally constituted a negligible fraction of the diet of Bangchan people. This is a good business period for the peddlers. Another good business period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this latter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

443 It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

427 434 454 621 463 426 Five families were classified as investors in 1953. All these families lived on rents from land, interest on loans, and income from speculative sources such as buying paddy when the price was low and selling it at high prices. Actually, most of these five families were not among large land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

427 the combined land of five leading farm operators of 693
434 rai, averaging 139 rai per operator and ranging from 83
454 to 235 rai. It must be remembered that our operational
• 621 definition of occupations was based on the main source of
463 income and that many of the villagers had more than one
426 source of income. Investors as an occupational class in Bangchan should not be pictured as large landlords and large money lenders, possessing financial influences over their tenants and debtors. Rather, they were humble fellow villagers whose incomes were mainly derived from rents of small parcels of land or interest on small loans. To cite an extreme case, one aged woman was classified as an investor. She had only 17 rai which she rented out to her own son. She was living alone in an old shack and was too old to do any kind of work. She received as rent about a hundred tang of paddy a year which is equivalent to an annual income of only 800 baht. Thus she was considered one among the poor in the village.

198 There were three families whose occupations were
463 classified as professional in 1949. The number was reduced
621 to one in 1953. The head of this family was a Chinese car-
322 penter who derived his income primarily from boat building. Again, it must be pointed out that reduction of the number of families primarily engaged in professional services does not mean that professional services had been declining.
[305] On the contrary, they had been increasing. There were three barbers in 1953 as against only one in 1949. More traditional

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

178 463 621 doctors were practicing in 1953 than in 1949, while there was no change in the number of midwives. In most cases, however, these professional services had ceased to be the main sources of income of the families engaging in them.

621 434 463 647 [875] In 1953, occupation defined as public service included the jobs of an educational supervisor, one teacher, two school janitors, two workers in the government-owned Bangkok Wharf, and one policeman. Actually, there were five Bangchan residents who were teaching in 1953. Only one of these, however, was a family head. Two of the other four teachers were husband and wife living with the wife's mother who was classified as an investor -- the most prosperous of the investors mentioned earlier in this section. Another teacher, a wife, was also living with her mother who was also an investor. The last teacher, also a wife, was living independently with her husband who was operating a rice farm, and the occupation of the family was thus classified as farm operating. With the possible exception of the policeman, all these public servants were well paid in the village standard, ranging from some four hundred baht a month for a janitor to eight hundred baht for the educational supervisor. After the 1953 census was taken, more regular jobs were opened to Bangchan residents by the Highways Department, and also more people took up regular jobs of a public service nature in Bangkok while retaining residence in Bangchan by commuting daily between the village and their offices. Thus, [178] although the percentage figures remain constant during

434 amounted to somewhere around 5,000 baht, which was about
469 four times as much as the labor earnings of an average rice
621 farm operator as we shall see later.

178 The present occupational situation and accounts of
463 the changes in the past few years alone may not be enough to give us a complete picture of occupational development since the beginning of the history of Bangchan. Fourtunately, however, since settlement in the village in a considerable scale took place only some eighty years ago, evidence from genealogical studies has provided us with ample materials on which a reconstruction of the past development may be made.

[175] When Bangchan was being settled in the 1870's, as a probable consequence of the increasing national and international demand for rice and the revolutionary change in Thai society, every family was naturally a farm operator family. As long as there was land available for clearing, opportunity would be open for every new family, either branching off from the old ones or moving in from the outside, to operate a rice farm.

[161] Eventually, population grew up to a size large enough
[194] to support a temple in 1895. Population growth and the
[175] emergence of a village center at the temple prompted occupational specialization. At the beginning, investing, trading, professional servicing, and home enterprising probably took the forms of secondary occupations, while farm operating remained the primary occupation throughout. In time, these secondary occupations became more and more specialized and

178 finally, for a few families, took precedence over rice
463 growing. The relative importance of these new occupations remained low, however, since only a few families were needed to meet the village requirements for such services.

434 The establishment of the primary school some thirty
647 years ago opened up new jobs as teachers and janitors for
875 some educated villagers who were given preference over out-
[372] siders. It should be noted, nevertheless, that at the beginning the primary school teachers were not considered as regular officials and their pay was as low as six baht a month during the prewar years. Even during the war, they did not get as proportionately large a cost-of-living raise as did other regular officials. It was only after the war that they were made regular officials and that their pay rose almost a hundred times to 450 to 550 baht a month with provision for a steady raise to more than one thousand baht
[48] a month. This new occupation in public service also increased with the extension of the central government employment into the rural areas and with improved transportation facilities which permitted an individual to commute daily between his office in Bangkok and his home in Bangchan. Thus, a Bangchan resident is now serving as an educational supervisor in the nearby Minburi District and a few others are on the regular payroll of the government-owned Bangkok Wharf.

*243 With the background knowledge of the situation of
464 Bangchan farm laborers previously described in mind, we may
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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 464 621 463 hypothesize that the presence of farm laborer families in a rice growing village indicates a condition of land scarcity. This is to be distinguished from the presence of farm laborer families in intensive farming areas such as the truck gardening villages along the Damnernsaduag Canal and plantation villages in Cholburi where the marginal product of labor, even with the same crude implement, is much higher than that in the non-intensive rice growing areas. Usually, there are farm laborers in any commercial rice growing region, but they consist of members of farm operator families with excess family workers who work for their own lampai. With low marginal product of labor, the demand for extra labor outside the family is not great and is highly seasonal in rice growing villages, resulting in extremely low total income for farm laborers. Piece-working is thus only good as a subsidiary income for an under-employed farm operator family, and certainly not as the main source of income for any family. Farm laborer families such as those existing in Bangchan are indigenous and are the outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent in any land. These people prefer to remain in the home village, willing to accept meager income from piece-work which is perhaps the only type of job they could get in the village, in the meantime trying to eke out as much as possible from what nature has to offer in the form of fish or uncultivated aquatic plants. The abrupt rise of farm laborer families in Bangchan from nine [161] [178]

243 growing village could not very well be studied in a brief period of only one rice year. Rather, the field study should be extended to cover years of good as well as poor crop.

Land Utilization

Official records show that the area of land privately owned in the seven hamlets comprising Bangchan is 6,404 rai. [503] When an estimated area of 100 rai of public land occupied by the half dozen canals is added to the private land area, the total area of the village may be figured at about 6,500 rai.

243 351 423 911 621 The area of each of the 298 homelots in Bangchan varied. It is rather difficult to get accurate figures for these homelot areas. We may, however, give an allowance of one rai for each homelot on the basis of crude estimate. This would include space for buildings and all of the home compound including family pools as well as kitchen garden, and in some cases area devoted to fruit trees. Since all of the land area in Bangchan other than homelots is devoted to rice growing, we may estimate the land available for rice production by simply deducting the homelot area from the total area of land privately owned in the village. This was found to be 6,106 rai in 1953 (Table 12).

243 911 423 621 It should be noted that not all of this area of 6,106 rai was tilled by Bangchan residents, and that some of the villagers also worked on rice fields outside our arbitrary

[TEXT CONTINUED ON PAGE 113]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 12

LAND AVAILABLE FOR RICE PRODUCTION
Bangchan, Thailand, 1953

Hamlet	Land Privately Owned	Allowance for Homelot	Land Available for Rice Production
	rai	rai	rai
BC4	930	40	890
BC5	809	28	781
BC6	900	47	853
KY5	891	63	828
KY6	916	31	885
KY7	939	42	897
KY8	1,019	47	972
Total	6,404	298	6,106

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 311 423 621 village boundary. Table 13 shows that Bangchan residents worked on a combined area slightly larger than that available to them in our arbitrary village limits. This situation of a village resident working on a field outside the village boundary should not be perceived as one in which the farmer in one village had to walk a few miles to work in another village, for in all cases the fields involved were in the peripheral areas.

243 423 621 Since the approach adopted in this study was one through the people rather than through land, for ease in statistical manipulation we shall use the area worked by Bangchan residents to represent our natural Bangchan area. Thus, when we say that 64 per cent of the rice area in Bangchan are owned by operators, we refer to the 4,314 rai of the 6,722 rai worked by Bangchan residents, not the 3,908 rai of the 6,106 rai which is the actual rice area of the village.

243 In Bangchan, as elsewhere in the country except in limited areas in part of Chiengmai and Lampoon provinces in the north, a single crop of rice is grown without any crop rotation practice. The rice season starts in late May or early June depending upon the actual arrival of the rainy season, and lasts until the harvest of late varieties in the first half of February. At the beginning of the season, the field work is concentrated in the seedbed which is about one-twelfth of the total planting area. Most of the field, then, is not occupied by the crop until transplanting time

[TEXT CONTINUED ON PAGE 115]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 13

RICE LAND WORKED BY BANGCHAN RESIDENTS
Bangchan, Thailand, 1953

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Hamlet	Land Available for Rice Production	Land Worked by Residents	Net Area Outside, Worked by Residents
	rai	rai	rai
BC4	890	801	- 89
BC5	781	497	-284
BC6	853	1,102	249
KY5	828	1,295	467
KY6	885	850	- 35
KY7	897	1,016	119
KY8	972	1,161	189
Total	6,106	6,722	616

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7: Janlekha X-4.5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 18

RICE AREAS WORKED, OWNED, RENTED IN, AND RENTED OUT
Bangchan, Thailand, 1953

Hamlet	Total Families	Total Population	Area In Rai			
			Worked	Owned	Rented In	Rented Out
BC4	40	236	801	849	413	458
BC5	28	136	497	305	261	65
BC6	47	270	1,102	576	531	--
KY5	63	356	1,295	963	834	487
KY6	31	168	850	585	354	95
KY7	42	250	1,016	597	527	108
KY8	47	278	1,161	440	721	--
Total	298	1,694	6,722	4,315	3,641	1,203
Areas per family			22.4	14.5	12.2	4.0
Areas per man			4.0	2.5	2.1	0.7

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7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 19

DISTRIBUTION OF 216 FARMS ACCORDING TO LAND TENURE, BY CONVENTIONAL CLASSIFICATION
Bangchan, Thailand, 1953

Land Tenure	Number of Farms	Working Area				Average Number of Rai Operated
		Rai Owned	Rai Rented*	Total Rai Operated		
				Actual	Per Cent	
All owned**	48	1,589	--	1,589	23.9	33.1
Part owned	88	1,511	1,583	3,094	46.6	35.2
All rented	80	--	1,955	1,955	29.5	24.4
Total	216	3,100	3,538	6,638	100.0	30.7

* In cases where an operator both rents in and rents out some land, the net area rented in is used.

** Figures include only land owned and operated, land rented out is not included.

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7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 20

DISTRIBUTION OF 216 FARMS ACCORDING TO LAND TENURE,
BY SUGGESTED METHOD OF CLASSIFICATION
Bangchan, Thailand, 1953

Land Tenure	Number of Farms	Working Area				Average Number of Rai Operated
		Rai Owned	Rai Rented*	Total Rai Operated		
				Actual	Per Cent	
Landlord-operator	11	517	--	517	7.8	47.0
Owner-operator	79	2,131	513	2,644	39.8	33.5
Part-owner	23	227	325	552	8.3	24.0
Tenant	103	225	2,700	2,925	44.1	28.4
Total	216	3,100	3,538	6,638	100.0	30.7

* In cases where an operator both rents in and rents out some land, the net area rented in is used.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

*128 While this "functional" classification of land tenure
423 does not eliminate all of the shortcomings of the conventional
427 method which have been accentuated by land scarcity, it evidently helps to bring about a clearer economic picture of the farm. If the primary purpose of land tenure classification is merely to establish a plain typology of the land holding situation for its own sake only, the conventional method might suffice even in farm labor underemployment areas. On the other hand, if we want to probe further into the business aspect of the farm, as we propose to do in Part II of this study, then a more revealing system of classification is perhaps necessary.

*243 It has been mentioned earlier in this section that
423 of 6,722 rai planted to rice by Bangchan residents a total
427 of 4,315 rai was locally owned (Table 18) and that a total
463 area rented in from outside renters was some 2,407 rai.
• 621 Since the net area rented out by local renters was 1,186 rai (Table 21), the proportion of outside renters to local renters was roughly two to one. Table 21 shows that there were 21 local renters whose main occupations were distributed among landlord-operators, trader, investors, and public servants, and that an average area rented out by each local renter was 56.5 rai.

Table 22 shows a frequency distribution of land owned by operators, and Table 23 shows a frequency distribution of land owned by non-operators.

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TABLE 21

NET AREAS RENTED OUT BY VARIOUS OCCUPATIONAL GROUPS
Bangchan, Thailand, 1953

Occupation	Number	Total Area	Ave. Area	Range
		rai	rai	rai
Landlord-operator	10	683	68.3	5-170
Trader	5	189	37.8	17- 86
Investor	4	149	37.3	17- 76
Public servant	2	165	82.5	5-160
Total	21	1,186*	56.5	5-170

* This figure is slightly less than total area rented out of 1,203 rai in Table 18 because net figures are used here.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 22

FREQUENCY DISTRIBUTION OF LAND OWNED BY OPERATORS
BY SIZE CLASSES
Bangchan, Thailand, 1953

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Size Class	Frequency
rai	
0- 9	12
10-19	54
20-29	28
30-39	14
40-49	13
50-59	6
60-69	0
70-79	0
80-89	2
90-99	0
100-149	4
150-199	2
200 and over	1
Total	136
Mean	31.0 rai
Median	20.8 rai

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 23

FREQUENCY DISTRIBUTION OF LAND OWNED BY NON-OPERATORS
BY OCCUPATIONAL GROUPS
Bangchan, Thailand, 1953

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Class	Frequency	Total Area	Ave. Area	Range
		rai	rai	rai
Farm laborer	2	8	4.0	2- 6
Trader	8	184	23.0	3- 86
Investor	5	164	32.8	10- 76
Public servant	2	167	83.5	7-160
Total	17	523	30.8	2-160

*243
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427 landlord-operators were more sensitive to the change in
435 rent rates than were the other groups of farm operators.

Limited opportunity for an alternative occupation
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• 621 was mentioned in the preceding paragraph as one of the factors contributing to the inelastic nature of demand for working land. It was also mentioned in the section on the occupational structure of Bangchan that farm laboring families as existing in the village were indigenous and were an outgrowth of competition for land coupled with the reluctance to emigrate on the part of those who failed to rent
[443] in any land. Limited opportunity for an alternative occupation in the village was also suggested in the same section when it was mentioned that the only possible alternative -- petty trading which was actually taken up by some former farm operators -- was limited by the fact that villagers bypassed local traders and went to the nearby market town of Klinburi for major purchases and variety goods.

Limited opportunity for an alternative occupation
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465 outside the village, however, needs elaboration. It cannot
369 be denied that wages in Bangkok, only twenty miles away and easily accessible through good road and bus services, were higher on the average than corresponding returns for labor in the village. It is important to note, however, that what will attract a villager to seek a job in Bangkok is not a higher average wage level in the city but a higher marginal wage there. Regarding the marginal wage, it is highly doubtful that a better condition exists in Bangkok.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

CHAPTER IV

FARMING POPULATION

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It was indicated in the section on occupational structure in Bangchan, Chapter III, that there were two groups of villagers whose main incomes were directly derived from farming -- the farm operating and farm laboring families. These two groups constituted 284 out of a total of 298 families in the village in 1953 (Table 10). It should be noted, however, that Table 10 was constructed on the basis of the principal source of income of the family heads, and that the family was taken as a unit.

When individual farm workers are considered, four groups may be differentiated: (1) Farm operators; (2) Family workers; (3) Hired laborers; and (4) Piece-workers.

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Farm operators are those who are assumed to actively manage the farm. Actually, it has been observed that some wives did direct the farm work while their husbands assumed only a passive role. It is rather difficult, however, to point out among some one hundred couples which spouse actually manages the family farm. To save time, and perhaps embarrassment, it was assumed that, where both husband and wife were involved, the husband -- the official family head --was the farm operator regardless of his actual role.

*243 466 Difficulty arises when farm workers are classified individually because of duplication. It was mentioned in Chapter II that family members might work for their lampai after they had fulfilled their obligation on the family farm work. It is seen, then, that a family member may be considered as both family worker and piece-worker. Even the farm operator himself may earn extra income from piece-working and thus becomes also a piece-worker. In fact, most farm operators who had only a small area to work did have time to earn extra income this way. It is only the hired laborer that could not earn extra income from piece-working because he is bound by contract to devote all his time to his employer's farm and household work. It is considered unbecoming for a hired laborer to take time out, even at night, to fish for his own biological family.

Sampling Technique

*128 • 621 So far we have been dealing mostly with the universe of our study -- the total population of our "natural" Bangchan Village as defined in Chapter II; although occasionally, it might have been noticed, reference has been made to a sample of 104 farm operators and of 96 continuing farm operators.

[121] [161] Our primary attempt in this community study is to cover the entire village. It is obvious, however, that all relevant information cannot be gathered on some 300 families comprising this village of about 1,700 people. We may, for

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

*128 example, make a direct count of all the families and the
• 621 people living in the village. We may proceed to get the data of family composition, of land tenure, and of the main occupation for all these families. But we certainly would have neither the facility nor the time to study the business aspect of some 220 farms operated by Bangchan residents. In the study of labor utilization, where daily records of labor employed by the hour is necessary, we first tried two farms but later had to be content with records from only one farm.

It would appear that, while certain aspects of this study involved data from the universe, other aspects might be more efficiently carried on by sample study.

*128 There were, however, a series of technical problems in sampling. It must be recalled that we first went into Bangchan in September, 1948 with almost no basic economic information except the commonsense knowledge that it was a rice growing village which appeared to meet our basic requirements for a field site for a preliminary community study. After checking with the district office and subsequently with Bangchan headmen, it was found that even the latest official census for the village was both inadequate and inaccurate, although it did serve as an invaluable benchmark for the 1949- and 1953-censuses made entirely by our staff. As indicated in the chapter on methodology (pages 36-43), the nature of our area approach study by researchers of different disciplines had given top priority to our

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 29

REPRESENTATION OF 104 SELECTED FARMS IN THE TOTAL FARM POPULATION, BY HAMLET
Bangchan, Thailand, 1948

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Hamlet	Number of Selected Farms	Village Total	Per Cent
BC4	25	25	100
BC5	7	25	28
BC6	7	38	18
KY5	35	37	95
KY6	16	25	64
KY7	9	37	24
KY8	5	42	12
Total	104	229	45

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

TABLE 30

CHANGES IN OCCUPATION OF 104 SELECTED OPERATORS*
Bangchan, Thailand, 1948-53

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621
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Occupation	1948	1949	1950	1951	1952	1953
Farm operator	104	103	98	96	96	87
Farm laborer	-	-	-	-	1	3
Trader	-	-	-	-	-	2
Investor	-	1	1	1	1	3
Professional	-	-	-	-	-	-
Public servant	-	-	-	-	-	-
Home enterpriser	-	-	-	-	-	-
Priest or novice	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	1
Disappeared	-	-	5	7	6	8
Total	104	104	104	104	104	104

* Explanation for those changing occupations:

1949 A became an investor.

1950 B moved out to unknown locality.
C moved out to Lam Kralog.
D moved out to Sai Kong Din.
E moved out to Bang Plee.
F moved out to Bang Plee.

1951 G died, and family moved out to unknown locality.
H moved to Bangkok.

1952 H moved back from Bangkok into the village, became farm laborer.

1953 I moved to Lard Krabang.
J stopped farming, became an investor.
K stopped farming, became an investor.
L stopped farming, became a trader.
M stopped farming, became a farm laborer.
N stopped farming, became a farm laborer.
O's occupation became obscure (under miscellaneous).
P stopped farming, became a trader.
Q's family lost its identity, was annexed by a farm operating family not in the sample.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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*128
464
465 be of any help in the understanding of the hired laborer situation in Bangchan.

Let us now turn to the last group of farm laborers
*243
46 -- the piece-workers. These laborers receive their renumerations in the form of cash paid at the completion of each job contracted. Four types of farm work were observed to have involved the utilization of piece-workers -- uprooting of rice seedlings, transplanting, harvesting, and digging earth and mounding. Uprooting, the heaviest of all rice growing steps because seedlings must be pulled up in budle and smashed against the shank of the worker, was limited to adult male workers. Transplanting, on the other hand, was the lightest of all these steps involving the itlization of piece-workers and may be done by all kinds of workers including the young. Harvesting and digging and mounding are too heavy for the young but not for the adult female workers to participate, so they are usually performed by adult workers of both sexes.

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[435] It was found in the cost of production study in 1948 that 104 farm operators in Bangchan spent a total of 4,434 baht on uprooting done by piece-workers, 7,951 baht on transplanting, and 13,310 baht on harvesting, or an average per farm of 43 baht for uprooting, 76 baht for transplanting, and 128 baht for harvesting. Although digging and mounding is generally considered a part of farm work since it is done primarily in order to keep the buffalo shed above the water level as well as to improve the home garden; it is not

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 included in the items of cost of producing paddy, and there-
621 fore we do not have the figure for this item of farm expenses.
433

It was earlier mentioned in the section on occupa-
tional structure in Bangchan that most villagers regardless
434 of their main occupations did perform some piece-work for
464 either main or subsidiary incomes. It is almost impossible,
621 then, to give an exact figure of the number of piece-workers
463 in any one year. For the purpose of this study, however,
we may arbitrarily differentiate between the "professional"
and the "non-professional" piece-workers. Here, the classi-
fication suffers much overlapping -- even more than does the
classification of the occupation of the villagers, for we
cannot even use the concept of the main source of income as
a criterion in this connection. It was mentioned that farm
laborers existed in Bangchan not because of demand for their
work but because they have no opportunity for other occupa-
tions (page 100). Thus, if the main source of income was
used as the criterion for differentiating the "professional"
piece-workers, this group would exclude, for example, the
old woman described in Case 7 page 69, who after having been
left alone had managed to get a small income from trans-
planting which was the only type of farm work she could
perform. The main source of income was also not a good
criterion considering the fact that most piece-work was
done by family members after their obligation to the family
467 farm had been fulfilled. In a desperate attempt to differ-
463 entiate the professional from the non-professional piece-workers

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

182 Nevertheless, the advantages of transient member
464 arrangements to both parties should not be overlooked. It
592 has at least provided the poor with a kind of economic security, since they might arrange to join some families in the village in time of crises. This is perhaps the principal reason why the village, not the living quarter, is considered by most Bangchan people to be their home. By sending some offspring to live with a more affluent family, the poor villagers had been able to reduce the size of their families and thus had managed to prevent their level of living from falling far below the minimum level of subsistence. As for the accepting families, it has already been shown that they had enjoyed the benefit of cheap labor provided by transient family workers.

*243 Changes in Farming Population in Bangchan
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[592] Table 11 shows that the number of farm operators in Bangchan had decreased from 229 in 1949 to 216 in 1953, while the number of the family heads whose main incomes were derived from farm labor had increased from 27 to 38 within the same period.

When the farm operating families were studied individually, it was found that 181 families had been operating their rice farms in Bangchan throughout the period. There were 48 farm operators whose names disappeared from the list of operators in 1953. These were compensated by 35 new operators. Thus, there was a net loss of 13 farm operating families during the period from 1949 to 1953.

Bang Chan Canal bissected the community and joined, about one mile south, Sāensāeb Canal, a broad old waterway connecting Bangkok and Minburī with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Minburī, two miles east, cut through one side of the area. On it lay Bang Khūat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō paet," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Minburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Minburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Minburī, Kilō paet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoe), one located in Minburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 30 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

1. A new large school has since been built away from the temple compound.

4:Phillips E-4,5 (1956-1957) 1966
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621 631 essentials not atypical of the region. Instead of villages being organized administratively on the basis of natural social groupings and demarcations—that is, social centers and groups with which people feel a primary identification, in Bang Chan's case the local Buddhist monastery and government primary school—so that governmental and social units are isomorphic, they are gerrymandered into highly arbitrary administrative units. Thus the village of Bang Chan is comprised of seven *muubaan* or hamlets, at the head of which are seven hamlet headmen; these hamlets are located in two different *tambon*, or communes (four in one commune, three in the other) headed by two commune headmen, neither of whom lives in Bang Chan; the two communes are located in two different districts headed by two different district officers and their staffs; the two districts fortunately are in a single province, Phranakhoon, the same administrative unit in which the metropolis of Bangkok is located. Yet the people who reside in these varying hamlets located in different communes and districts all perceive themselves as living in the single village of Bang Chan. The fundamental organizational problem here is that since the sources and lines of governmental authority do not follow the lines of the natural Bang Chan community, jurisdictional conflicts and confusions arise to threaten the effectiveness of those community-wide programs that occasionally may be initiated. For example, during a diphtheria immunization campaign in the village (Hanks and Hanks 1955), the public health officer from one of the district offices was reluctant to immunize all the children of Bang Chan on the grounds that some of them came from hamlets outside his district's jurisdiction; he yielded, as the Hankses note, only when a perceptive villager pointed out that if germs knew no boundaries why should he?

Not all villages of the Central region have such real or potential administrative difficulties. (And Bang Chan does not have them too frequently either, principally because the government does not initiate too many community service programs.) However, the basic organizational principle which admits them—that houses are grouped together as administrative "villages" on the basis of conceptual neatness rather than socially functional criteria—is a common feature of the administrative structure of the Central Plain.

621 792 184 171 The foregoing account describes some basic culture patterns which Bang Chan shares with other villages of either the region or the nation. In addition to these broader patterns, Bang Chan has certain traits which inevitably refer to local village conditions and contingencies. For example, the most active and viable social unit in Bang Chan beyond the familial level is the order of Buddhist monks associated with the monastery. It is the only organization within the village that has been successful in mobilizing community activity (Sharp *et al.* 1953), although much of this activity has

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

596 602 *156 [609] and not only in the abstract, symbolic sense. Non-kin are approached in the hope that they eventually may be treated as kin; good government officials are unabashedly described as being like "good fathers"; the basic patterns of respect that are learned and practiced in the family are extended to relationships outside of it, although inevitably in more formal ways. There is no *rigid* psychological cleavage between the sentiments of kinship and the sentiments about individuals outside of the family. Conversely the mere fact of kinship does not assure that individuals will be given special emotional treatment: often the love between friends is greater than the love between kin (see the case of "Dang," his father, and father's friends in Hanks and Phillips 1961, or the case cited earlier of the man who left his wife because of his fondness for an employer). Kinship represents to the villager relationships of warmth, familiarity, and conviviality, but also unpredictability and undependability. Such is the nature of most human contact in Bang Chan.

621 596 [662] *[156] In this type of cultural situation, one does *not* find arising the type of community power struggles or schisms apparently characteristic of many peasant communities (see Foster 1960–61). Bang Chan is indeed a placid community because no family has the organizational means or the quality of familial cohesiveness necessary to assume a dominant social, political, or economic position. Individuals assume important positions and individuals disagree and squabble, but rarely families. In surveying the cultural landscape of Bang Chan, I often wondered whether the basic unit of anthropological and sociological, as well as psychological, analyses was perhaps not the individual rather than the family, monastery, school, or village itself.

BANG CHAN

FOREWORD

114 The Cornell Thailand Project, like other Cornell University studies in community development, is a long term investigation in the field of the processes involved in changing cultural behavior in a non-industrialized society. Field research was begun in 1948 in the central plain of Thailand with base line studies of the rice farming community of Bang Chan and its environs. A collaborating staff of Thai and Americans representing different disciplines has continued to work in Thailand at Bang Chan and elsewhere in a series of phases extending to the present.

[113] The first interim report issued by the Project gives a general account of the economic, political and social organization of Bang Chan in 1948-49 together with some material on [128] health and diet (Sharp et al., 1953). Since the circulation of this first interim report was limited, some of the salient characteristics of Bang Chan should be outlined here.

361 Bang Chan is located some twenty roadmiles northeast of Bangkok, the rapidly growing major metropolis and capital of Thailand. The village is between two and three miles west of a small district administrative center and market town, [48] Minburi. A century-old canal and to the north of it a post- [991] war hard surface road connect Minburi and Bangkok so that villagers have easy access to these two centers by boat or bus.

621 In 1954, when data for the present study were still being 162 gathered, the population of Bang Chan was about 1700, divided among about 300 households. Roughly 60 per cent of the house- [592] holds were made up of independent nuclear families consisting of parents and unmarried children. The average size for all families was 5.7 persons. Rice farming was the main occupa- 243 tion of 80 per cent of all families. The population in 1954 241 worked and lived on about 2800 acres (7000 rai) of land. With the exception of some 120 acres (300 rai) used for the home [463] sites and home gardens scattered along the network of canals in the village, all land was devoted to the cultivation of wet [311] rice. Nutritional density is thus practically the same as population density. Of the rice crop, 60 per cent or more may be sold, the remainder providing seed, feed, and the staple [132] food of the people. During the wet season and into the cooler 224 dry season, from May or June to February, the growing of the single crop of rice is the main activity. The hot dry season [517] from March until the rice planting begins again is a period of fiestas, ceremonies, and visiting.

621 The Thai countryside is divided into hamlets, each with a headman in charge of the thirty to sixty households of the [622] hamlet. Seven such hamlets constitute the Bang Chan community. [128] (In the Project studies they are identified by the initials BC and KY followed by a number).

*243
434 on a small plot that they own or rent, but all families
463 in this category derive their main income from wages.

3. Trader. Main income from the more or less regular sale, not production, of rather considerable amounts of goods. Perhaps somewhat arbitrarily, we have not included in this category those very few families who derive their main income from production of cookies or the like, even though such families might themselves perform the selling of their products to local consumers; such families are included in the 'home enterpriser' category below.

[426] [427] 4. Investor. Main income from land rent, interest on loans, and/or speculative gain.

5. Professional. Main income from such specialties as midwifery or dramatic entertainment.

434 647 463 6. Public servant. Main income from, or majority of working time spent in, government employment. This is the only category in which we had to add the additional criterion of "majority of working time"; government pay is rather low, and one person who works full time in the employ of the government actually receives more income from other sources. [875] This category includes regular government officials, teachers and school janitors. The hamlet headmen are not included, [622] however, as their main incomes are otherwise derived and their remuneration from the government is extremely low. They maintain no daily routine as public servants. The headmen are all farm operators, except one who is an investor.

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. Up also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 16.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)		Twice or more (Proportion who own or use the motor)	
Illiterate	44%	(40)	58%	(51)
Literate	83	(36)	88	(83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

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562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with men's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mō, she could do everything a mō could do. Men were never mediums. Bang Chan's only medium was possessed by a male mō.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

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[832] [156] [688] [626] [593] 59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasū as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "suk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasū's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filia duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

4:Phillips E-4,5 (1956-1957) 1966
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bringing them into the world; of helping siblings because of the kind things they have done; of loving children so that they will care for them when they are old [11]—but they do condition how and when such sentiments will be expressed. It is difficult to recall any instance of a Bang Chaner being caught in a situation of which *he was aware of* a conflict between satisfying his own desires and fulfilling his obligations to kin, so it is difficult to say which sentiment would ordinarily take precedence in his own mind; but to an observer, it would seem that the former would most likely have priority. (See Hanks and Phillips 1961 for evidence in support of this point.) [12] Actually, most villagers seem eminently successful in keeping the sentiments apart, which helps to account in part for the "centripetal" forms of kinship arrangement referred to earlier. Self-interest is of course not the same as selfishness, and when circumstances and inclinations permit, Bang Chaners can become among the most generous and hospitable of people (and in no sense paradoxically). Rarely have I seen, for example, people derive so much genuine pleasure from doing favors for others. In fact, these are among the first things that one notices about them: free agents helping others—but also ignoring them—when they see fit.

[11] This phrasing here in terms of *reciprocal benefits* is in the villagers' idiom, not mine.

[12] It is not insignificant that nowhere in Thai folklore does one find a recognition of possible conflict between the motives of self-interest and family obligation or of any moral lesson to be drawn from it; that is, there are no stories of a parent sacrificing himself for his children, or of children for their parents or, for that matter, of any moral value at all in self-sacrifice. On the other hand, one does find stories of individuals in conflict over which of two self-satisfying alternatives to select. In *Khun Chang and Khun Phaen*, for example, Wan Thong, the inconstant lover, could not make up her mind between love and wealth, and eventually was slain because of her indecision, the moral being that the person who cannot make up his mind deserves nothing.

On a more realistic level, one rarely finds anyone in Bang Chan being condemned for self-interest—the mother who abandons her children or the gallivanting husband—although one very frequently does encounter sympathy for those who suffer, the sympathy being elicited by the person or the fact of suffering, not the cause. The majority of Bang Chaners generally consider the motives of the self-interested party as the person's own business. This concern with sympathy (*sonsaan*) for those in difficulty, and simultaneous indifference to the source of their problem has deep roots in Buddhist doctrine and should not be glossed over.

To have compassion (*mettaa* and *karunaa*) is among the noblest of Buddhist virtues. It is at one time a kindly expression of concern with others and a recognition of—or coming to terms with—what is considered intrinsic to the human situation. "Life is suffering" is the first of Buddhism's Four Noble Truths. However, since such suffering is intrinsic, there is little to be gained by assigning blame for it. Equally important, villagers assume that a person who suffers may well have brought it upon himself. The other person, acting in his own natural self-interest, may have simply been an agent or catalyst. His motives are his own business because they will eventually contribute, for better or worse, to his own denouement. The dynamics of these attitudes are discussed in detail in the next chapter.

4:Phillips E-4,5 (1956-1957) 1966
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In addition to these widespread national patterns, Bang Chan has certain characteristics that seem relatively distinctive of villages of the Central Plain. Not of least importance is the demographic arrangement of the community: either isolated homesteads surrounded by rice fields and connected to larger canals by small tributaries or groups of households strung out along both sides of the canals. The former pattern is more commonplace and historically more recent, and is the result of an expanding population trying to live on a land that has been so committed to the commercialized cultivation of rice that the only available house sites are on the fields themselves. This "typical Central Plain" pattern contrasts with the "cluster" type villages found in the North and Northeast (deYoung 1955) where houses are integrated into compact communities around which are located the rice fields. Although it is difficult to draw precise relationships between demographic arrangements and psychological characteristics, it is noteworthy that the isolated locale of so many Bang Chan households is not out of keeping with the independent and individualistic propensities of the villagers. As one villager expressed it, "If people live far away from each other, there will not be any trouble."

Related to the above pattern and characteristic of other communities of the Central region (cf. Kaufman 1960) is the absence among village residents of any strong sense of identification with the needs of their community as a whole. Except for religious activities and the reciprocal work groups organized for rice transplanting and harvesting—the rewards for which are directly personal—the villagers simply are not predisposed to participate in communal projects. Thus, activities which require large-scale coöperation or organization to be effective—clearing or deepening canals, repairing the unusable road that leads from the main highway to the school, building a playground for the school—are either not carried out or are effected only with extreme difficulty. Although a few villagers recognize these as defects of social organization, it is clear that the majority find it easier to live with them than to try to change the basic institutional framework that sustains them; maintaining their own freedom of action is simply more important, and more culturally "natural," to the villagers than getting involved in public service projects. Again, this pattern seems to contrast with that found in the villages of the North (deYoung 1955) where individuals regularly contribute labor to their communities by repairing village streets and maintaining irrigation systems, even when such efforts require coöperation between adjacent villages.

The inability of Bang Chaners to organize coöperative projects is undoubtedly abetted by the formal governmental structure of the village which, although perhaps more of an administrative nightmare than is normally found elsewhere in the Central Plain, is in its organizational

4:Phillips E-4,5 (1956-1957) 1966
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631 essentials not atypical of the region. Instead of villages being organized administratively on the basis of natural social groupings and demarcations—that is, social centers and groups with which people feel a primary identification, in Bang Chan's case the local Buddhist monastery and government primary school—so that governmental and social units are isomorphic, they are gerrymandered into highly arbitrary administrative units. Thus the village of Bang Chan is comprised of seven *muubaan* or hamlets, at the head of which are seven hamlet headmen; these hamlets are located in two different *tambon*, or communes (four in one commune, three in the other) headed by two commune headmen, neither of whom lives in Bang Chan; the two communes are located in two different districts headed by two different district officers and their staffs; the two districts fortunately are in a single province, Phranakhoon, the same administrative unit in which the metropolis of Bangkok is located. Yet the people who reside in these varying hamlets located in different communes and districts all perceive themselves as living in the single village of Bang Chan. The fundamental organizational problem here is that since the sources and lines of governmental authority do not follow the lines of the natural Bang Chan community, jurisdictional conflicts and confusions arise to threaten the effectiveness of those community-wide programs that occasionally may be initiated. For example, during a diphtheria immunization campaign in the village (Hanks and Hanks 1955), the public health officer from one of the district offices was reluctant to immunize all the children of Bang Chan on the grounds that some of them came from hamlets outside his district's jurisdiction; he yielded, as the Hankses note, only when a perceptive villager pointed out that if germs knew no boundaries why should he?

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Bang Chan Canal bissected the community and joined, about one mile south, Sāensaēb Canal, a broad old waterway connecting Bangkok and Mīnburī with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Mīnburī, two miles east, cut through one side of the area. On it lay Bang Khūat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō pāet," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Mīnburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Mīnburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Mīnburī, Kilō pāet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoē), one located in Mīnburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

1. A new large school has since been built away from the temple compound.

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. So also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

T 63 Place of Bangchan in the Administrative Area

In the highly centralized system of Thai administration, the whole country is divided into 9 circles (pharg), 71 provinces (changwad), 414 districts (amphur) and 77 sub-districts (king-amphur), 3,650 communes (tambol), and some 50,000 hamlets (muban).

CT 621 • 634 121 In the section on reasons for the choice of the field site (page 32) mention was made of an artificial division of Bangchan between two administrative units. By that we mean one part of our "natural" or "functional" Bangchan village administratively belongs to one amphur and the other part belongs to another amphur. The situation will become more vivid when we discuss our "natural" Bangchan village.

CT Our "Natural" Bangchan Village

621 121 In this study we are not interested in an administrative unit which is often an artificial division, but rather in a "natural" or "functional" village which may be operationally defined as a geographical area inhabited by a conglomeration of people having one or more common social centers.

CT 621 794 872 Bangchan people patronize an active Buddhist religious institution popularly known as Wat Bangchan, and an adjacent government primary school, both centrally located in the community.

CT 621 *128 For practical reasons for ease in statistical manipulation, we assume that the smallest administrative unit --

[Erretum: this should read "page 36"---Analyst]

361 direction dividing it into two halves, the Bangchan half
312 consisting of BC4, BC5, BC6, and the Kannayao half consistingcof KY5, KY6, KY7 and KY8.

621 As mentioned earlier, our functional Bangchan village
• 634 is under two different administrative authorities, the Bangchan half consisting of part of Tambol Bangchan which is in turn part of Amphur Minburi in Changwad Phra-nakorn (Bangkok) and the Kannayao half consisting of part of Tambol Kannayao which is part of Amphur Bangkapi in the same Changwad Phranakorn.

History of Settlement

174 No official records on the history of the settlement
361 of Bangchan could be discovered, but evidence from genealo-
[503] gies provides a few clues on the subject. Following the digging of Saensaeb Canal some one hundred and twenty years ago, settlement was made along the banks of this important canal which provides one of the few connections between the
175 Menam and Bangprakong rivers. It was not, however, until
621 the 1870's, apparently, that people found it necessary to
361 move onto the land away from the canal. At that time, according to one of our older informants, her father was born in what is now Bangchan, his father and mother having come out from Bangkok as a young married couple to take up farm-
175 ing where plenty of land was available from the Crown. These
621 people and their followers, usually kinfolk or friends, cleared off scrub jungle areas in which, it is claimed, tigers and

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

MAP I

131
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102
• 634
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491
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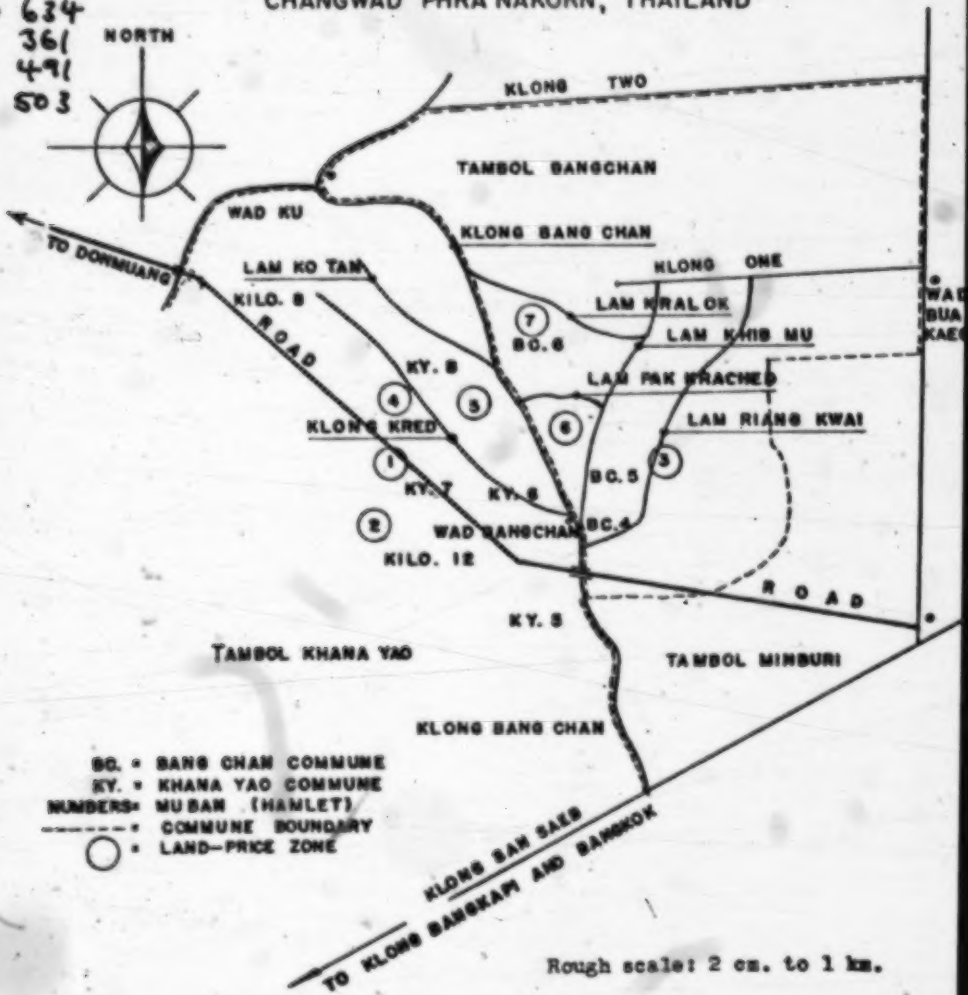
SKETCH MAP OF TAMBOL KHANA YAO, AMPHOE BANGKAPI AND TAMBOL BANGCHAN, AMPHOE MINBURI CHANGWAD PHRA NAKORN, THAILAND



Rough scale: 2 cm. to 1 km.

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mɔ̄, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mɔ̄ gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mɔ̄. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the thaw khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

whole, depends in large part on one's frame of reference.[2] In the most general terms, the people of Bang Chan are like almost all ethnic Thai peasants (excepting on some counts Thai Moslems and some of the economically disenfranchised people of the Northeast) in that they have a keen sense of membership in the nation-state with a deep loyalty to the Crown, speak the Thai language, are Therevada Buddhists, are outwardly highly deferential to the authority of the Central government, and have a conception of the good life that stresses fun, physical comfort and security, intellectual simplicity and practicality, and a moral (as contrasted with a natural) ordering of the universe. Too, like the vast majority of their rural compatriots,[3] they are engaged in the production of rice, an activity which to them is not only an economic operation (Ingram 1955, Janlekha 1955) but almost a way of life, being bound up with their social structure, dietary habits, religious practices, and even their philosophical (J. R. Hanks 1961) and aesthetic conceptions.

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[2] For readers unfamiliar with Thailand, the nation-state, it should be noted that the country is predominantly rural; 84 percent of the total national labor force is in agriculture and there are only ten towns with populations of 20,000 people or more, in which 6 percent of the national population (1947 census) live. Although Bangkok has a population of approximately 1,200,000, the second largest city, Chiengmai, has only 60,000 (1957 estimate).

The nation also has a high degree of ethnic homogeneity, 82 percent of the population considering themselves native Thai (1957 estimate). The largest ethnic minority group is the overseas Chinese, comprising 11.3 percent of the population (1953 estimate, from Skinner 1957), the balance being Malays, Cambodians, and Indians; the so-called tribal groups number in toto only about 150,000 people.

The religious composition of the country is 94.1 percent Buddhist, 3.9 percent Moslem, 0.5 percent Christian, and 1.5 percent "others," many of whom are tribal animists. Thai Buddhism is of the Southern (Therevada, Hinayana, or "Lesser Vehicle") variety and as practiced by most Thai, has syncretized within it many Brahmanic and traditional Southeast Asian animistic elements (see the chapter on "Religion" in Sharp *et al.* 1956, and Textor 1960). The largest minority religion, Islam, is practiced by ethnic Malay living in the four southernmost provinces of Thailand, as well as by some ethnic Thai—many of them descendants of former Malay slaves or war prisoners—scattered through the areas north and east of Bangkok, including Bang Chan, where they comprise 9.8 percent of the local population. Relationships between Buddhists and Moslems, at least in Bang Chan, are quite amicable and except for ideal prohibitions against intermarriage and occasional offhand remarks such as "Moslem women are loose" or "Moslems kill animals," there is little overt hostility between the two groups. Certainly few Bang Chaners ever distinguish between their Buddhist and Moslem neighbors when arranging a work group, selecting a drinking partner, or even compiling a guest list for a son's ordination.

[3] Janlekha (in Sharp *et al.* 1953: 110) indicates that 55 percent of the total national labor force is involved *solely* in the cultivation of rice—which occupies approximately 90 percent of the total cultivated land area—and as many as 92 percent of all agricultural households are rice households. The 55 percent figure excludes all those people who are involved in the transportation, milling, storing, and distribution of rice. Eighty-five percent of the population of Bang Chan (1953) are rice farmers.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959*b*: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family;

home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[4] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

[4] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost *a* Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

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that the relation of these two indices appears valid. In addition there is further substantiation of the hypothesis that contacts with the world outside Bang Chan are linked with use of modern medical practices: The incidence of such use is significantly higher among those who have visited the airport than among those who have never done so.

TABLE 32. INCIDENCE OF HOSPITAL OR CLINIC USE IS HIGHER AMONG THOSE WHO HAVE VISITED THE AIRPORT

	Trips to the Airport		
Have you ever been to a clinic or a hospital?	None (148)	One (50)	Two or more (124)
No, never	41%	36%	28%
Yes, for treatment	35	40	39
Yes, for other reasons	24	24	33

Moreover, additional support for this contention is found in the higher incidence among hospital and clinic users, of knowledge of the world outside the community.

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743

It is reasonable to assume that greater contact with the capital city is likely to increase the farmers' awareness of its major public figures. And, indeed, the incidence of hospital and clinic use is highest among those who are able to name correctly certain of Thailand's major public figures, as the Prime Minister and the National Police Chief.

TABLE 33. INCIDENCE OF HOSPITAL OR CLINIC USE IS MORE WIDESPREAD AMONG VILLAGERS WHO ARE AWARE OF THAILAND'S PUBLIC FIGURES

	Have you ever been to a hospital or a clinic?			
	No, Never	Yes, for other reasons	Yes, for treatment	Total 100%
...Who is now the Prime Minister of Thailand ...Would you please tell me his name?				
Names Prime Minister	27%	30%	43%	(192)
Does not know	48	23	29	(140)
...Who is now the Chief of Police of Thailand...Would you please tell me his name:				
Names Chief of Police	23%	31%	46%	(166)
Does not know	48	23	28	(164)

125

[787] 22. Have you consulted with a medium frequently, occasionally, seldom, or never?

1. Frequently	7
2. Occasionally	4
3. Seldom	66
4. Never	856

[775] 23. Have you been disturbed by a ghost frequently, occasionally, seldom, or never?

5. Frequently	6
6. Occasionally	8
7. Seldom	55
8. Never	864

[641] 24.a. Excuse me, could you tell me, who is now the prime minister of Thailand? If you know, could you please tell me his name?

1. Correct answer	193
2. Incorrect answer	89
3. DK, cannot recall	111

b. Excuse me, could you tell me, who is now the chief of police of Thailand? If you know, could you please tell me his name?

4. Correct answer	167
5. Incorrect answer	24
6. DK, cannot recall	142

25.a. IF R LIVES IN BC COMMUNE: Who is the district officer in Minburi? If you know, could you please tell me his name?

1. DA, as from Bangkapi	194
2. Correct name of present DO	9
3. Correct name of past DO	—
4. Incorrect name	16
5. DK, cannot recall	111
— No Answer	3

b. IF R LIVES IN KY COMMUNE: Who is the district officer in Bangkapi? If you know, could you please tell me his name?

6. DA, as from Minburi	141
7. Correct name of DO	10
8. Incorrect name	—
9. DK, cannot recall	154
— No Answer	28

[434] [829] [556] 26.a. Throughout the world and here in Bang Chan-Khamno Yao too, it is common among men that there must be some who are rich and some who are poor and some who are neither rich nor poor. How about you yourself? Are you rich, or poor or neither rich nor poor?

1. Rich	2
2. Poor	68
3. Neither	263

b. IF POOR: Here in BC-KY, do you think there are many or few people who are poorer than you?

5. Many	30
6. Few	31
7. Unascertainable	7

*243
434 on a small plot that they own or rent, but all families
463 in this category derive their main income from wages.

3. Trader. Main income from the more or less regular sale, not production, of rather considerable amounts of goods. Perhaps somewhat arbitrarily, we have not included in this category those very few families who derive their main income from production of cookies or the like, even though such families might themselves perform the selling of their products to local consumers; such families are included in the 'home enterpriser' category below.

[426] 4. Investor. Main income from land rent, interest
[427] on loans, and/or speculative gain.

5. Professional. Main income from such specialties as midwifery or dramatic entertainment.

434 6. Public servant. Main income from, or majority of
• 647 working time spent in, government employment. This is the
463 only category in which we had to add the additional criterion of "majority of working time"; government pay is rather low, and one person who works full time in the employ of the government actually receives more income from other sources.
[875] This category includes regular government officials, teachers
[622] and school janitors. The hamlet headmen are not included, however, as their main incomes are otherwise derived and their remuneration from the government is extremely low. They maintain no daily routine as public servants. The headmen are all farm operators, except one who is an investor.

178 doctors were practicing in 1953 than in 1949, while there
463 was no change in the number of midwives. In most cases,
621 however, these professional services had ceased to be the main sources of income of the families engaging in them.

621 In 1953, occupation defined as public service in-
434 cluded the jobs of an educational supervisor, one teacher,
463 two school janitors, two workers in the government-owned
647 Bangkok Wharf, and one policeman. Actually, there were five
[875] Bangchan residents who were teaching in 1953. Only one of these, however, was a family head. Two of the other four teachers were husband and wife living with the wife's mother who was classified as an investor -- the most prosperous of the investors mentioned earlier in this section. Another teacher, a wife, was also living with her mother who was also an investor. The last teacher, also a wife, was living independently with her husband who was operating a rice farm, and the occupation of the family was thus classified as farm operating. With the possible exception of the policeman, all these public servants were well paid in the village standard, ranging from some four hundred baht a month for a janitor to eight hundred baht for the educational supervisor. After the 1953 census was taken, more regular jobs were opened to Bangchan residents by the Highways Department, and also more people took up regular jobs of a public service nature in Bangkok while retaining residence in Bangchan by commuting daily between the village and their offices. Thus,
[178] although the percentage figures remain constant during

178
434 1949-53, in actuality public service as an occupation is
463 increasing in Bangchan.
621
• 647 There were four home enterprisers in 1949, mostly
engaged in making cookies. As in case of the professional,
434 this activity still existed in Bangchan, but by 1953 it had
443 degenerated into a secondary income, leaving the lone case
463 of basket making in the home enterprise category.
621
285 Only one family head was classified in 1953 as a
home-enterpriser. The family was engaged in making takraw
-- a cane utensil used in picking mangoes from the tree.
On January 27, 1953 we met A, the head of this family, who
was taking 103 takraws of various sizes to sell in Bangkok.
[435] A gave the amounts and prices of these takrawa as follows:
56 large size, @ 3.00 baht; 31 medium size, @ 2.50 baht;
16 small size, @ 2.00 baht. A said he and his wife worked
on these 103 takraws alone, and finished them in twelve
days, using 50 baht worth of materials including cane, wood,
and binders. Ordinarily, they started making takraws in
December and continued through May. They were able to make
about 3,000 baht within this period. They also made other
things like baskets, but takraws were their main source of
income. In rice growing season, they also did some piece
working. They did not operate a farm. Piece working and
basketry during rice growing season brought them a combined
income of about 2,000 baht. The amount of each kind of
621 basketry they made was not as constant as takraws. It de-
434 pended more on which paid best. Their total annual income
463

178 finally, for a few families, took precedence over rice
463 growing. The relative importance of these new occupations remained low, however, since only a few families were needed to meet the village requirements for such services.

434 The establishment of the primary school some thirty
647 years ago opened up new jobs as teachers and janitors for
875 some educated villagers who were given preference over out-
[872] siders. It should be noted, nevertheless, that at the beginning the primary school teachers were not considered as regular officials and their pay was as low as six baht a month during the prewar years. Even during the war, they did not get as proportionately large a cost-of-living raise as did other regular officials. It was only after the war that they were made regular officials and that their pay rose almost a hundred times to 450 to 550 baht a month with provision for a steady raise to more than one thousand baht
[48] a month. This new occupation in public service also increased with the extension of the central government employment into the rural areas and with improved transportation facilities which permitted an individual to commute daily between his office in Bangkok and his home in Bangchan. Thus, a Bangchan resident is now serving as an educational supervisor in the nearby Minburi District and a few others are on the regular payroll of the government-owned Bangkok Wharf.

*243 With the background knowledge of the situation of
464 Bangchan farm laborers previously described in mind, we may
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4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

the village to find dependent relatives—siblings, cousins, nephews, nieces— 596
who, unable to make a go of it elsewhere, are accepted into a relative's
family, sometimes to the extent of eventually taking over the headship of
the family. Sometimes, on the initiative and invitation of an elderly or
lonely relative, an entire nuclear family will be asked to take over or share a
household. Children of poor or "inconvenienced" families (where a new 596
child is born before the first is weaned, where there are too many children 597
for the mother to handle comfortably, where a youngster is simply being
"troublesome") are adopted or "borrowed" by other villagers for varying
periods of time. This is done preferably by relatives, sometimes by neighbors, and often, in the case of boys, by the monastery, where the children become hand-servants to the monks and are supposed to absorb, by a kind of osmotic process, righteous ways of behaving. (Of my three male life history informants, two were given over to relatives at the ages of two, the third at the age of eight; one spent his childhood with four different families, another with five families; one describes his adolescence as "wandering from place to place." The psychological implications of such displacement should not be underestimated.) On occasion, two independent 596
nuclear families—almost always connected by some kinship tie—will join [594]
together for convenience to share cooking facilities, in which case they effectively become a single extended family. And in some cases, although rare, one will encounter adult children living in independent households but handing over their income to a parent, living in still another home, who disburses the proceeds when necessary.

On the other side, it is common practice in Bang Chan now for a 596
husband to be away for four or five months at a time earning money in 591
Bangkok, or during the dry season on a vegetable farm, returning home to [464]
visit his wife and children whenever opportunity permits, with or without
funds. The wife may still maintain their household, but often returns to 596
live with her own parents.[7] In a similar vein, although obviously more 586
extreme, it is not unusual to find families in Bang Chan which have simply 182
"disintegrated," as the villagers say. Much depends here on the circumstances of family members. Bang Chaners usually reserve the term "disintegrated" for families that no longer have the economic wherewithal or justification for staying together as functioning units. In these instances, family members simply go their separate ways, if possible back to their families of orientation or to other relatives, husbands perhaps into the monkhood, and the children to whomever will take them. Most frequently, [578]
"disintegration" is characteristic of very poor families, and in the minds of

[7] This pattern may be related to the old *corvée* labor pattern when able-bodied village men were away from their families for extended periods of time. [466] [651] [174]

54

125 42.c. IF DISAGREE: For what various reasons do you disagree?

[369]

If Disagreement (See code at end)

[829]

[793] 43. Do you agree or disagree that all priests are honest and moral men?

[792]

X. Agree	197
Y. Disagree	90
O. Undecided	40
— No Answer	6

[829] 44. Do you think it is right or wrong for a Thai to marry a Chinese?

1. Right	55
2. Wrong	182
3. Unascertainable	91
— No Answer	5

[775] 45. Do you believe that ghosts bother people? Strongly, somewhat, or not at all?

4. Strongly	40
5. Somewhat	136
6. Not at all	124
7. Unascertainable	28
— No Answer	5

[653] 46.a. During the past year, have there been any activities for the public welfare in BC Wat, or not, to which you contributed labor?

1. Yes	231
2. No	102

b. IF YES: For what various activities did you contribute labor?

_____

_____

c. During the past year or so, have there been any activities for the public welfare in the wat, or not, to which you contributed money or goods?

1. Yes	264
2. No	63
— No Answer	6

[651] d. IF YES: For what various activities did you contribute money or goods?

_____

_____

47.a. How about activities not connected with the wat or with religious ceremonies in the home. During the past year, have there been any such activities for the public welfare in BC-KY, to which you contributed labor, or not?

1. Yes	94
2. No	232
3. Unascertainable	7

Question 42.c. (Cont'd)

Need for Money in Bangkok (Only happy there when have plenty of money)	6	125 369
Amount of effort in earning a living (Have to work every day there	4	829
Other reasons (Too many poor people there, many illnesses there, the life of the people there depends on the farmer, people from Bangkok always go to the country when anything bad happens, people can be happy both places, different people have different hearts)	12	
No Answer	4	
Don't know	5	

Question 46.b. For what various activities did you contribute labor? 125 653

Earth work	
Earth work at Wat	18
Earth work at Mosque	7
Earth work, unspecified (digging dirt, filling low places, digging Klong, loading and unloading earth and bricks)	53
Cement Work	
Cement work at Wat (moved cement bags, laid concrete floor)	12
Cement w ork, unspecified (building cement sidewalks, helped make concrete, poured concrete)	14
Building and Repairs	
Building sala (pavilion, repairing pavilion)	51
Building mosque (repairing Surao porch)	8
Built priest house, construction work in wat, latrine in Wat, repair crematorium	8
Building bridge	21
Building road	13
Constructionwork, unspecified (carried posts, repair a building, carpentry)	7
Services	
At Wat fair (helped cook and serve, helped manage, sweeping)	27
At Surao fair (helped cook and serve)	3
Services, unspecified (boiled water, cooked, carried water)	15
Guilding the gold leaf, miscellaneous labor at footprint guilding festival)	7
Priest's funeral (cooked, helped at cremation)	7
Other (served at Katlin ceremony, solicited money for Wat)	3

Question 46.d. For what various activities did you contribute money or goods? 125 431 651

To the Wat, unspecified	19
Contribution, unspecified	19
Construction activities	
To build pavilion (sala), to repair pavilion	57
To make path, build street on Wat grounds	27

125 Question 16.d. (Cont'd)

431

651

Construction activities (Cont'd)

To the Wat (to repair Wat, construction in Wat, fixing walls)	27
Contribution for building materials (buy cement, concrete floor, wood and tin, for new cement sidewalks, water tank)	21
To Surao (general fund, repair)	9
To build a bridge	8
To buy a generator	6
To build priest's house bathroom	5
To build preaching hall	3

Ceremonials

[796]
[764]

For ceremonies, unspecified	12
To guild the golden leaf	27
To cremation (to build crematorium; to cremate father, people without relatives; to build corpse go-down; priest's funeral)	12
To Wat fair	10
Other (to Katlim, to revise the Buddhist sacred book, to ordain priest, for building Buddha figure, to New Year festival, for dancing girls)	11
To Surao fair	4

Food and related donations

Gave rice, unspecified	5
Gave rice (food) for Wat, priests	18
Gave rice for Wat fair	7
To buy utensils (including cooking utensils) for Wat	6
To buy utensils for Surao	6
Gave food to Surao	1

427 author's father who gave this man an initial capital of 600
556 baht when he made his start in Bangchan some thirty years ago. He is now a millionaire and a father-in-law of a former top military officer.

427 Again it is the author's impression that, from the viewpoint of the villagers' best interests, the good side of absentee landism seems to outweigh the bad side.

427 Going back to the forces of demand for and supply of
434 rice land, it should be noticed that, as was so often the
435 case, free competition in the classical economist's sense did not exist in Bangchan where rents were often sticky. There was a wide range of different rent rates for fields of almost homogeneous nature as far as agronomic properties were concerned. Preference for prospective tenants was observed to have a personal rather than economic basis even on the part of the local landlords who were found to be most sensitive to rent rates. When a new higher rent rate was to be charged, it was observed that the most plausible excuse had to be found and presented to the tenants by the landlord. An example was the general raise of rent in 1953 when the new land tax was raised from 0.30 to 4.00 baht per rai, whereupon most local landlords immediately raised their rent from seven tang to eight tang per rai. One tang of
[651] paddy, however, was worth nine baht. It is seen, thus, that as a result of an increase of the government revenue of 3.70 baht per rai the local landlords also received an extra 5.30 baht per rai from their tenants who alone had to suffer an increase cost of nine baht per rai.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan'

In addition to these widespread national patterns, Bang Chan has certain characteristics that seem relatively distinctive of villages of the Central Plain. Not of least importance is the demographic arrangement of the community: either isolated homesteads surrounded by rice fields and connected to larger canals by small tributaries or groups of households strung out along both sides of the canals. The former pattern is more commonplace and historically more recent, and is the result of an expanding population trying to live on a land that has been so committed to the commercialized cultivation of rice that the only available house sites are on the fields themselves. This "typical Central Plain" pattern contrasts with the "cluster" type villages found in the North and Northeast (deYoung 1955) where houses are integrated into compact communities around which are located the rice fields. Although it is difficult to draw precise relationships between demographic arrangements and psychological characteristics, it is noteworthy that the isolated locale of so many Bang Chan households is not out of keeping with the independent and individualistic propensities of the villagers. As one villager expressed it, "If people live far away from each other, there will not be any trouble."

Related to the above pattern and characteristic of other communities of the Central region (cf. Kaufman 1960) is the absence among village residents of any strong sense of identification with the needs of their community as a whole. Except for religious activities and the reciprocal work groups organized for rice transplanting and harvesting—the rewards for which are directly personal—the villagers simply are not predisposed to participate in communal projects. Thus, activities which require large-scale coöperation or organization to be effective—clearing or deepening canals, repairing the unusable road that leads from the main highway to the school, building a playground for the school—are either not carried out or are effected only with extreme difficulty. Although a few villagers recognize these as defects of social organization, it is clear that the majority find it easier to live with them than to try to change the basic institutional framework that sustains them; maintaining their own freedom of action is simply more important, and more culturally "natural," to the villagers than getting involved in public service projects. Again, this pattern seems to contrast with that found in the villages of the North (deYoung 1955) where individuals regularly contribute labor to their communities by repairing village streets and maintaining irrigation systems, even when such efforts require coöperation between adjacent villages.

The inability of Bang Chaners to organize coöperative projects is undoubtedly abetted by the formal governmental structure of the village which, although perhaps more of an administrative nightmare than is normally found elsewhere in the Central Plain, is in its organizational

54

125 [369] [829] [793] [792] 42.a. IF DISAGREE: For what various reasons do you disagree?

If Disagreement (See code at end)

43. Do you agree or disagree that all priests are honest and moral men?

1. Agree	197
2. Disagree	90
0. Undecided	40
— No Answer	6

[829] 44. Do you think it is right or wrong for a Thai to marry a Chinese?

1. Right	55
2. Wrong	182
3. Unascertainable	91
— No Answer	5

[775] 45. Do you believe that ghosts bother people? Strongly, somewhat, or not at all?

4. Strongly	40
5. Somewhat	136
6. Not at all	124
7. Unascertainable	28
— No Answer	5

[653] 46.a. During the past year, have there been any activities for the public welfare in BC Wat, or not, to which you contributed labor?

1. Yes	232
2. No	102

b. IF YES: For what various activities did you contribute labor?

_____

_____

c. During the past year or so, have there been any activities for the public welfare in the wat, or not, to which you contributed money or goods?

1. Yes	264
2. No	63
— No Answer	6

[651] d. IF YES: For what various activities did you contribute money or goods?

_____

_____

47.a. How about activities not connected with the wat or with religious ceremonies in the home. During the past year, have there been any such activities for the public welfare in BC-KY, to which you contributed labor, or not?

1. Yes	54
2. No	232
3. Unascertainable	7

47.b. IF YES: For what various activities did you contribute labor? 125
(See code at end) [853]

c. During the past year, have there been any public welfare activities, not connected with the wat or with religious ceremonies in the home, or not, to which you contributed money or goods?

1. Yes	128
2. No	197
3. Unascertainable	8

d. IF YES: For what various activities did you contribute money or goods?
(See code at end)

48.a. Have you attended the ceremony of wisaka bucha at Wat BC every year, or only in some years, or only once in many years, or never? [796]

8. Every year	156
9. Only in some years	135
X. Once in many years	21
Y. Never	14
0. Unascertainable	7

b. Have you attended the ceremony of gilding the Buddha's footprint at Wat BC every year, or only in some years, or only once in many years, or never?

1. Every year	225
2. Only in some years	62
3. Once in many years	17
4. Never	9
5. Unascertainable	20

49.a. Excuse me, this is a strange question, but do you own a pair of shoes? [291]

6. Yes	136
7. No	197

b. Of what various materials are your shoes made?

8. Leather	65
9. Cloth, canvas	87
X. Other, specify _____	11
0. Unascertainable	
— No Answer	1

50.a. In your household, is there a hatchet, or not? [412]

1. Yes, hatchet	309
2. No	24

b. (In your household), is there a pressure lamp, or not? [416]

3. Yes, pressure lamp	188
4. No	145

c. (In your household), is there a flashlight or not?

5. Yes, flashlight	271
6. No	61
— No Answer	1

62

		Qu 46D	Qu 41B
125	1. Too old to move, old man	33	12
621	2. Easy to make living here, more comfortable, happy here	36	8
	3. Loves place, born here, would like to die here	37	26
	4. Doesn't like to leave area	10	4
	5. Relatives are here, likes neighbors, family here	32	28
	6. Own land	19	15
	7. Can't move her house, worried about housing in new place	7	1
	8. Change career, use other occupation	2	18
	9. Other: Big family, had to move too far, wouldn't know how to find a new place, people here one can trust, will help you	39	13
	0. D.A.	130	205
	X. No answer, unascertainable	7	23

		Qu 47B (labor contrib)	Qu 47D (money contrib)
125			
653	4. D.A.	238	202
	5. School	23	51
	6. Bridge	36	36
	7. Canal	16	8
	8. Road	13	23
	9. Other: district office, festival shelter, marriage of neighbors	8	8
	0. N.A.	1	9
	X. Rest house	5	5

		Qu 66B
125	1. Make merit, give alms, buy a golden belt, build a mosque	172
525	2. Purchase land	91
	3. Trade, build a market, open rice mill	34
	4. Spend for the family, unspecified, improve group condition	68
	5. Build a house	40
	6. Purchase of farming equipment or stock	22
	7. Pay debt	7
	8.	
	9. Other: Offer some to Thai army, to be carpenter, keep money in bank and collect interest, educate children, benefit country	44
	0. D.A.	39
	X. No Answer	2

Question 42.c. (Cont'd)

Need for Money in Bangkok (Only happy there when have plenty of money)	6	125
Amount of effort in earning a living (Have to work every day there	4	369
Other reasons (Too many poor people there, many illnesses there, the life of the people there depends on the farmer, people from Bangkok always go to the country when anything bad happens, people can be happy both places, different people have diffcront hearts)	12	829
No Answer	4	
Don't know	5	

Question 46.b. For what various activities did you contribute labor? 125

Earth work		653
Earth work at Wat	18	
Earth work at Mosque	7	
Earth work, unspecified (digging dirt, filling low places, digging Klong, loading and unloading earth and bricks)	53	
Cement Work		
Cement work at Wat (moved cement bags, laid concrete floor)	12	
Cement w ork, unspecified (building cement sidewalks, helped make concrete, poured concrete)	14	
Building and Repairs		
Building sala (pavilion, repairing pavilion)	51	
Building mosque (repairing Surao porch)	8	
Built priest house, construction work in wat, latrine in Wat, repair crematorium	8	
Building bridge	21	
Building road	13	
Constructionwork, unspecified (carried posts, repair a building, carpentry)	7	
Services		
At Wat fair (helped cook and serve, helped manage, sweeping)	27	
At Surao fair (helped cook and serve)	3	
Services, unspecified (boiled water, cooked, carried water)	15	
Guilding the gold leaf, miscellaneous labor at footprint guilding festival)	7	
Priest's funeral (cooked, helped at cremation)	7	
Other (served at Katlin ceremony, solicited money for Wat)	3	

Question 46.d. For what various activities did you contribute money or goods? 125

To the Wat, unspecified	19	431
Contribution, unspecified	19	651
Construction activities		
To build pavilion (sala), to repair pavilion	57	
To make path, build street on Wat grounds	27	

which the leafy vegetable (2)phag (2)ka-(2)cheed is one, and digging a deep hole at its entry. At the proper time the opening was plugged. The fish grew in the pool and were taken as needed, sometimes, for convenience, several at a time, to be kept alive in a large pot near the house. By draining the pond fish were "harvested" (p. 12). Yields varied, but villagers had the impression that they had declined considerably over a period of years.[1] In 1952, at the suggestion of FAO, the Thai government tried to increase the supply by introducing tilapia culture. During the first three years of the experiment about one-third of the families in Bang Chan had tried to raise tilapia, but in the summer of 1957 members of the research group were told that no one had persisted (see Appendix A, p. 101).

Eggs. - Chickens were raised by about 90% of the families in Bang Chan, and over 70% owned 10 or more. In contrast, only 37% of the households had ducks, and only 13% had 10 or more (Goldsen and Ralis, 1957, p. 56). Ducks were regarded as trouble makers. Moreover, chickens could feed "naturally" and certainly helped themselves to paddy from the bin, whereas ducks did not eat paddy, but had to be provided with bran and broken rice.

Most of the eggs produced were sold. Janlekha (1955) estimated the annual production of chicken eggs in Bang Chan as 366,540, and that of duck eggs as 268,200 eggs. According to the information which Janlekha obtained from 106 households in 1953, about 4/5 of the chicken eggs were sold as a secondary source of farm income whereas more than 3/4 of the duck eggs were home consumed. Slightly over 2/5 of all eggs produced in the village were consumed there. On a per capita basis, the average annual consumption of 708 eggs for an average family size of 5.7 persons (Janlekha, 1955) amounted to a little over 1/3 of an egg per day. Home consumption of eggs might be less in households in which enough chickens were raised to make regular sale of eggs possible. Thus in 5 of the 31 households studied by Sharp et al. (1953, p. 197) all hen's eggs produced were consumed at home.[2] For these families, an average of 452 eggs per family per year or about 1-1/4 egg per family per day, were thus available. Home consumption in the 26 families which sold eggs amounted to an average of 215 per year or about 0.6 egg per family per day. One informant commented that a rich man could eat an egg every day, but she could not afford to do so. She said she sold eggs, when she had them, and bought foods to eat with rice.

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1. Sharp et al., 1953, pp. 191-192.

2. This probably means that eggs were not sold in quantity, not that none were used in barter (cf p. 5); thus the number of eggs available may be overestimated.

511 appeared to account in large part for the greater cash expenditures of some families than others. Thus Household 25, with the highest total and per capita cash expenditure for food among these 11 families, consumed a larger quantity of meat than others, and often bought beef, which was the most expensive item purchased. This household bought fruit, meat, and vegetables from venders almost every day. They said [554] [822] "Some do not pay money to buy food, but pick or get it from the canal or gardens —this family cannot live like that because they come from a rich family and cannot live on poor food, so most of the money goes for food." The husband said "I cannot work on poor food." In Group A, Household 12, which had the highest per capita food expenditure, had little home produced food. The wife, who went to Bangkok often, usually bought food when in town. Household 2, with a total cash expenditure for food higher than others, did not have pork or beef on survey days, but ate more (1)plaa (1)thuu, a sea fish which is purchased.

433 511 Home Production of Food. - In keeping with the general pattern in the community, the families surveyed produced most of their own food.

243 [461] 256 [262] Rice. - The hired laborer received rice as part of his pay, but all other families produced their own. Seven households used polished rice exclusively (Table 9). The only one to use home pounded rice in major part was Household 103. This family lived near a little canal which was dry in summer, so they were using home pounded rice when visited toward the end of March and in mid-July (Rounds IV and I). When the observer came in January (Round III), transportation of rice to the mill by boat was possible, but the family members had little farm work to do and were willing to spend some time milling rice. This family, which lived in the home-milling area (see p. 40), took rice to be milled only during the harvest season when they were busy, and the level of the canal was still high. The families which used home pounded rice in minor part did not live in the home-milling area, and apparently milled rice at home only when they were unable to get to the mill by boat.

244 [554] [245] Fruits and vegetables. - Although the Thai government has attempted to encourage kitchen gardening, few vegetables and fruits were produced by the families which cooperated in the dietary study (Table 10). All families grew bananas, and certain common ingredients of curries: chilies, bergamot, galangal and lemongrass. No other plants were grown by as many as half of the families studied.

222 262 Of the edible plants which grew wild, swamp cabbage was used by 7 families on 11 of the 44 survey days. Bamboo shoots, the white flowers of the West Indian pea tree and yellow (2)sa-(5)noo flowers were used by 3 families on one day each;

Notes on Tilapia Culture in Bang Chan

228 654 In 1952, the Thai government, at the suggestion of FAO, began to encourage tilapia culture. Fingerlings and some information on tilapia culture could be obtained from the Minburi district office, where a demonstration pond was maintained. Early in 1953, we learned from the records of the district officer that three persons in Bang Chan, two of them hamlet headmen, had obtained tilapia from this source. In 1953 the commune chief called a meeting in the village and explained the importance of tilapia raising. In May 1955 when Ralis conducted a survey in Bang Chan (Goldsen and Ralis, 1957), tilapia raising had been tried in nearly a third (31%) of the households, but was considered by 2/3 of the respondents to pay little.

The authors comment:

> From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months. [434]

From the comments just quoted, tilapia culture appears to have been undertaken for the anticipated cash return. No information was obtained by Ralis concerning the extent to which the villagers used tilapia to increase their supply of fish for home use. In the summer of 1957 members of the research group who visited Bang Chan found that no one was raising tilapia; they were neither a source of food nor of cash. Some indication was obtained that their flavor and texture were not agreeable. Clearly the attempt to introduce a rapidly growing but unfamiliar variety of fish failed in Bang Chan. An understanding of the reasons for this failure might help to prevent other costly failures in future. [114]

Notes on Mushroom Culture in Bang Chan

177 244 Goldsen and Ralis (1957) commented as follows:

> Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

178 survey in 1948, the "negligible amounts" comes from daily
226 talk with Bangchan residents). Third, several informants
433 testified that the amount of fish caught from the same pool
[262] by the draining method had been decreasing each year. One of these gave the following comparative figures for fish caught from the same pool on April 8 - 10, 1953 and on approximately the same time of the year in 1952 as follows:

Kind of Fish	Number Caught in 1953	Number Caught in 1952
Pla Salid	400	800
Pla Salad	100	200
Pla Kasong	50	120
Pla Chado	6	15
Pla Krai	1	--
Pla Doog	50	50
Pla Mor	20	25
Pla Chorn	150	300
Large turtle	5	3
Small turtle	7	3
Eel	5	5

Others also gave the 1953 figures, but could not itemize the 1952 figures; they only said that they "got much more than this year."

226 There had been until 1952 no positive program for
654 fish conservation; only negative measures have been taken, such as the Ministry of Agriculture's ordinance against fishing by certain methods at certain times of the year. In 1952, however, the Government began an extensive program of introducing a new variety of fish, Pla Mor Thed, into rural areas of Thailand. This new variety has been claimed to grow faster than the native varieties. While this program cannot as yet be appraised, a point of observation may be

226 made that any program of fish raising in a closed pond, no
654 matter how effective it may be, should not preclude the need for conservation of fish naturally existing in the open canals.

243 It has been pointed out that Bangchan operators
226 produce 52 per cent of the things they need for ordinary
433 consumption. Thus, rice growing may be seen as a farming-
434 to-reduce-cost enterprise where maximization of profit ceases to be the primary motive of production. It has been pointed out also that rice growing is a losing concern to many operators (in terms of labor income and operator's labor earnings), but the loss has been compensated by the privilege to fish
[146] which is open to all village residents. Since the amount of fish caught constitutes the main and probably the only source of protein intake and at the same time a considerable share in the diet of villagers, continually decreasing supply of fish therefore underscores the immediate need for an effective program for fish conservation as a means to prevent the standard of living of the villagers from falling below the minimum level of subsistence.

161 Over-population in an area of limited job opportuni-
464 ties naturally creates an over supply of labor, which in
465 turn results in low wages. This is further complicated by a wide variation of individual earnings from labor of from two thousand baht annually to almost nothing, the latter being the case of transient members of farm operating families.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 reduction in crop failures, and the improved quality of
312 rice, irrigation would also enable each family to cultivate a larger amount of land. The farmer could regulate the softening and flooding of his fields and thereby increase the number of days available for cultivation of rice. Without irrigation the work load was dictated by the rains.
[654] This over-all scheme was rejected by the government. Instead, a scheme drawn twelve years later by Sir Thomas Ward, a British irrigation expert, calling for separate small projects was adopted in 1916. Since the main source of water -- that from the Chao Phya River -- was not utilized by this latter scheme, the problem of scarcity of water in the early period of rice season has not been solved. Commenting on this point, Ingram wrote in 1955: "It is perfectly clear that if Van der Heide's irrigation schemes had been pushed forward rapidly, using foreign capital when necessary and domestic revenue where possible, the investment would have proved a sound one for the nation. The crop failure of 1919-20 alone cost the nation more than the entire
[654] cost of the works."[2] With loan from the International Bank for Reconstruction and Development, the government is now undertaking the Chainat Project which includes construction of a barrage across the Chao Phya River as envisaged by Van der Heide half a century ago.

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2. Ingram, op. cit., p. 87.

243 434 464 Some farmers had artificially reduced their operational cost by utilizing free labor of transient members of the family, who would not stay long if they were not adequately taken care of. These farmers would have to resort to pieceworkers or hired laborers when transient members decided to leave them.

243 434 655 The farm price of paddy was adversely affected by the government control of rice export. It was estimated that huge profits of no less than 100 per cent had been made each year by the government through its monopoly over and later control of rice export and foreign exchange control. This will be dealt with separately later in this chapter.

243 434 423 Although the average size of farm of 30.7 rai for Bangchan can be favorably compared to the average of 23.1 rai for the Central Plain, this does not mean that size of farm is not a problem contributing to low returns from rice. [464] It was pointed out earlier that there was a condition of disguised unemployment among Bangchan operators. Small size elsewhere simply indicates the widespread nature of the problem of disguised unemployment among farm operators in the Central Plain.

243 434 Limited earning opportunity for incomes from sources other than rice is due to the fact that at the present stage of technological development no other crop can be profitably grown in rotation with rice because of agronomic limitations.

243 434 221 The inundation period from the middle of September to early December, during which time no work is needed on

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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• 655

Problems in the Marketing of Rice

Another factor which has aggravated the basic economic problem of Bangchan lies in the marketing of rice. In order to meet its contract commitments, as well as to obtain control over the price of rice to domestic consumers, the Thai government declared a monopoly on rice export at the end of World War II. This monopoly enabled the government to appropriate a large part of the high prices received for rice exports. Surplus rice had to be sold to the Government Rice Office at prices fixed in baht. Millers were allowed to sell rice for local consumption, but the entire surplus over domestic needs had to be sold to the government, which resold it to foreign buyers. Internal transport of rice and paddy was strictly controlled, and provincial surpluses of milled rice were delivered to warehouses in Bangkok. The government did not control the price of paddy. It merely bought milled rice for export, and the paddy price was determined by the competition of millers and middlemen, the willingness of growers to sell their paddy, and the rice prices paid by the Rice Office.[3]

*243
439
655

Government profits arose in two ways. First, the Rice Office sold rice to shippers for about 20 per cent more than the price it paid to the millers. This trading profit was considerable because both the purchase and sale by the government were paper transactions involving little expense. Second, a potential exchange profit arose from the fact that

3. Ibid., p. 88.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 the export price was expressed in foreign exchange. The
439 Rice Office figured its accounts at the official rate of
655 exchange, and the price in foreign currency was fixed at such a level that even when converted at the official rate the Rice Office could buy rice from millers and still make a 20 per cent profit on the transaction. The foreign exchange proceeds were turned over to the Bank of Thailand. The bank in turn might sell part of the foreign exchange at the official rate, e.g., for certain imports, but it also sold part at the open-market rate of exchange. On this portion it made an additional profit equal to the difference between the two rates. Ingram estimates that for each metric ton of white rice, 15 per cent broken, for which the gross price to miller was 1,306 baht in 1951, the total government profit was 1,304 baht, of which 248 baht was trading profit and 1,056 baht was exchange profit.[4] Another writer estimates that the government's profit from each metric ton of white rice, 5 per cent broken, was 1,650 baht.[5]

*243 In 1951, the Ministry of Commerce began to issue a
435 number of permits to export rice against commercial con-
439 tracts. Since the world price of rice was still above the
655 prices fixed in government contracts, exporters were eager
661 to obtain the private permits, and a lively market for

4. Ibid., pp. 89-90.

5. M. R. Anuporn, "Rice and the Thai Government," Prachatipatti, February 5, 1955.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

permits sprang up. During 1951 the black-market price for such permits reached U. S. $35 per ton. Officials were obtaining permits for export against commercial contract and promptly selling them in the market. A permit for 10,000 tons meant $30,000 even at the low price of $3 per ton, and when the price hit $20-$30, the temptation to bribe the crucial officials was enormous. Millers were eager to get a cut also, and they were reluctant to make rice available unless they got some kind of a premium.[6]

By 1953, however, the world demand for marketable rice began to decline, and it may be said that the rice trade had shifted from sellers' market bo buyers' market. The primary reason for this decline was the recent increase in production in the deficit countries. As a rice exporting country, Thailand was naturally adversely affected. Her position was further aggravated by high production in Burma which offered lower prices in the international market.

In recent years, the export prices of Thai rice had been steadily raised. For a ton of white rice, 5 per cent broken, it was L47 5s in 1951, L50 5s in 1952, and L55 5s in 1953. The decline of demand forced the government to lower the export prices by L1 - L5 per ton for the first time in 1954, and finally to virtually abolish its monopoly over the export of rice in 1955.

Thus, rice export has now become "free", but actually under rigid rules and regulations especially with reference

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6. Ingram, op. cit., p. 91.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 to the control of foreign exchange. By abolishing its
439 monopoly over rice export the government simply gives up
655 its trading profit but still retains the huge exchange
435 profit.

It is seen that the government had been strengthening its finances and increasing its revenues through the operations of rice monopoly and exchange control, and at the same time the internal prices of rice were kept at a low level. The largest share of the burden has no doubt fallen on the rice farmer, who receives less than one-half of the paddy price he would have received in a really free market. The lively market for export permits and frequent reported incidents of irregularities by crucial officials mean that the difference between the price that the farmer should receive and the price he actually receives has not all gone to the government revenue. This difference, amounting to no less than a billion baht annually, cannot therefore be expected to be channelized back to the farm. The worst part of the system, however, is that in practice there has been a kind of an upper limit without any corresponding lower limit for farm prices of paddy. Thus, while export prices steadily rose, the farm price of paddy in Bangchan was maintained at 900-1,000 baht per ton during the period from 1950 to 1952. When the export price began to decline in 1953, but in fact it was still well over the 1951 level, the Bangchan paddy price dropped abruptly to 600 baht.

"not wanting to help." The mother and baby were seen as having to fend for themselves. The very confidence built up in modern medications led to a conviction that doctors maliciously withheld available, effective medicines. "She died at the Center because she needed medicine but was not given any." Personality factors sometimes were involved: one doctor was considered incompetent, fearful of complicated obstetrical cases, and brutally indifferent to a countryman's views and circumstances--("Since we have no room, why don't you charter a bus to take your parturient wife to Bangkok?"), whereas another was friendly and wise. Since doctors were part of the respected government hierarchy which enjoyed superior knowledge and status, and also of the supposedly compassionate medical tradition, they were expected to be competent, kind, and protecting. Those who failed in winning confidence undermined the status of modern medicine.

The midwives themselves thought of the Mīnburī Center not only as a recourse if a case were in deep trouble, but also as a personal convenience. One male midwife, who was also a headman, mō and carpenter-contractor, was often too busy to stay with a woman in prolonged labor. To turn her over to another midwife other than a kinsman would damage his reputation. Knowing Mīnburī well, he found the Center a convenient solution to his dilemma. He had respect for the nurse-mid wife's skills, which he had witnessed, and regarded the doctor as a colleague on his own level, a view probably not reciprocated. The women midwives, too, always considering themselves at bottom volunteers, when faced with pressing home chores and the "impossibility of turning a relative over to another midwife," utilized the impartial service of the nurse-midwife. One cloud impeded the female midwives from making full use of the occasion as an opportunity for observation and so instruction. They refused to identify themselves as midwives out of fear of legal sanctions. Having neither taken the course prescribed by the government for "ancient" midwives nor paid the fee, they were not licensed. Thus, they lived in dread of fines if their calling became known outside the community. They knew they were permitted to deliver babies within the family, but outside those rather hazy boundaries, they took refuge in an old view, "I am not a midwife. I only help out of pity."

All in all, the people of Bang Chan had fitted modern medicine into their broad medical scheme where it could be accepted on its merits, if not blocked off by inconvenience, high cost, and discourtesy.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Halis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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*243 256 472 Although private rice millers in Bangkok operate with a rather high degree of collusion, in the countryside the many small millers compete actively on the basis of price charged for their services or price paid for paddy or both. The comparatively high capital investment of the enterprise has rendered inter-mill competition in the countryside very intense, and it is obvious that the farmer gains economically from such competition. If somehow the government could, by a carefully conceived gradual program, induce a large number of smaller mills to move from Bangkok to the countryside, the farmer will benefit all the more. Already, the trend has been for gradual business decline for Bangkok mills and business upswing for the countryside mills.[8]

*243 256 •656 44 It is rather unfortunate, however, that the government has explicitly taken the view that small rice mills (capacity of five tons and under) in the countryside are detrimental to the interest of the farmer. It is officially held that small rice mills would bring about a large number of middlemen who would then combine to suppress the farm price. Actually, more middlemen tend to produce correspondingly keener competition in the marketing process which is beneficial, not detrimental, to rice growers.

*243 256 433 Small rice mills, which may be more conveniently erected in the villages and perhaps with local capital, will reduce the cost of transporting rice by a third, for about two-thirds of the weight of paddy is head rice, the other

8. The Economic Yearbook, edited by Luan Pannoi, Bangkok, 1951.

Attitudes Toward Food

To older Bang Chan residents, to lack rice was to starve even though fish or vegetable fare were at hand. Since rice was the staff of life, many important customs clustered about it. Ceremonies to the Rice Goddess accompanied the raising, selling, and storing of rice. When the unhusked rice was in the bin, it could not be withdrawn at any time as needed, but astrological charts had to be consulted to make sure the day was auspicious. Paddy could never be withdrawn on Friday, a day sacred to the Rice Goddess. After cooking, the best rice was said to be at the mouth of the pot, so this was offered on ceremonial occasions. Important rules were that when cooking rice, the cover of the pot must never be laid in a mortar and it must be inverted, never laid down flat; otherwise one would be short of rice. One must never scrape the top of the rice with the cover, or the "soul" of the rice would be scraped out of the pot. Moslem residents murmured an Arabic prayer every time the rice was put into the pot, and every time the pot was put onto the fire, as well as before eating.

Rice has been generally regarded as the strength-giving food par excellence. A portion of Chutima's (1939) description of the "old system" follows:

> Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal. Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply.

The quotation indicates first that in the past, rice was considered much more important as food than the "with-rice" dishes. Since the Food and Drug Division of the Ministry of Public Health has been attempting to encourage the eating of more "with-rice," the attitudes found in Bang Chan are of interest. One informant stated that only rice can make children fat, and that the "hot taste" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish, and was weak; he refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk (evaporated or dried milk, diluted with boiled water) expressed the opinion that the ancient belief was based on thrift. He said that thrifty

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AQ7

Chapter IX

GUIDES FOR THE INTRODUCTION OF CHANGES

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The government of Thailand provides in Bangkok and in other centers of the country up-to-date facilities for training in modern midwifery. It has also created in some places special opportunities for the traditional midwives to upgrade their skills. One of the objectives of the Minburi Health Center was to carry on a certain amount of instruction in modern views. For reasons that have been explained, no one in Bang Chan ever had or even sought modern instruction. The midwives of whom we have spoken grew up entirely in the folk tradition.

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On the basis of the material presented at length in the previous pages, a few suggestions are here advanced which may be of help to these public programs in maternal and child health.

1. Build a program around the idea that it will help women in their age-old role of caring for, raising, and nourishing (liang) children. Emphasize that through new techniques they may increase their strength and care better for themselves and the babies.

2. Change existing practices as little as possible.

3. When a change is offered, ask that the midwife, mother, or whoever observed it watch for certain results which allow them to judge it in relation to the old. The idea is strong that aspects of the natural world can be analyzed and considered pragmatically, then legitimately utilized as a basis for modifying customary behavior.

4. Pay special attention to the places where the old and the new come into conflict and seek ways to resolve these conflicts.

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As an example, let us consider these points in relation to cutting the umbilical cord. Modern instruction recommends the use of scissors--neat, sterilizable, handy--to avoid infection while cutting the cord. People in Bang Chan wish to avoid this infection, too, but for them scissors are unsatisfactory for several reasons: they are scarce, they rust--and

Bang Chan Canal bissected

the community and joined, about one mile south, Sāensaeb Canal, a broad old waterway connecting Bangkok and Minburī with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Minburī, two miles east, cut through one side of the area. On it lay Bang Khūat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō paet," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Minburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Minburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Minburī, Kilō paet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoe), one located in Minburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided, reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

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1. A new large school has since been built away from the temple compound.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 439 655 the export price was expressed in foreign exchange. The Rice Office figured its accounts at the official rate of exchange, and the price in foreign currency was fixed at such a level that even when converted at the official rate the Rice Office could buy rice from millers and still make a 20 per cent profit on the transaction. The foreign exchange proceeds were turned over to the Bank of Thailand. The bank in turn might sell part of the foreign exchange at the official rate, e.g., for certain imports, but it also sold part at the open-market rate of exchange. On this portion it made an additional profit equal to the difference between the two rates. Ingram estimates that for each metric ton of white rice, 15 per cent broken, for which the gross price to miller was 1,306 baht in 1951, the total government profit was 1,304 baht, of which 248 baht was trading profit and 1,056 baht was exchange profit.[4] Another writer estimates that the government's profit from each metric ton of white rice, 5 per cent broken, was 1,650 baht.[5]

*243 435 439 655 661 In 1951, the Ministry of Commerce began to issue a number of permits to export rice against commercial contracts. Since the world price of rice was still above the prices fixed in government contracts, exporters were eager to obtain the private permits, and a lively market for

4. Ibid., pp. 89-90.

5. M. R. Anuporn, "Rice and the Thai Government," Prachatipatti, February 5, 1955.

permits sprang up. During 1951 the black-market price for such permits reached U. S. $35 per ton. Officials were obtaining permits for export against commercial contract and promptly selling them in the market. A permit for 10,000 tons meant $30,000 even at the low price of $3 per ton, and when the price hit $20-$30, the temptation to bribe the crucial officials was enormous. Millers were eager to get a cut also, and they were reluctant to make rice available unless they got some kind of a premium.[6]

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Thus, rice export has now become "free", but actually under rigid rules and regulations especially with reference

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6. Ingram, op. cit., p. 91.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

Villagers also recognize the reluctance of an individual to become involved in another person's problems on the grounds of avoiding the accusation of *actually* having caused them. They say (but again, empirical instances of this type are very hard to find) that frequently the person with good intentions is turned on by the very friend he is trying to help, for example, "Since you know so much about the broken windmill perhaps you were the one who broke it!" Both these attitudes result from a rather overinflated view of one's importance to the friend, as if the friend would be more concerned with the agent of information than with the information itself. This is not so much a confusion of means and ends as a re-identification of them. Finally, some of the villagers' reluctance is probably also due to simple indifference or laziness regarding the plight of the friend.

Other expressions of *the "?aaj-ness" complex are more clearly altruistic* than the above. Villagers explain, for example, that the reason there is never any more than one candidate for the post of hamlet or commune headman, on the rare occasions when such elections are held, is to avoid embarrassing the individuals involved. The eventual headman would be embarrassed because the presence of a competitor would suggest doubt about his competence; the candidate who lost would be embarrassed by the very fact that he lost. To avoid hurt feelings, only one candidate is presented, voted on, and elected.

We have been talking above about politeness primarily in a negative sense, that is, about the lengths to which villagers will go to *avoid* discomforting others or upsetting peaceful relationships. This aspect was stressed because its expressions represent a somewhat unique form of patterned social interaction. However, the many positive forms of the villagers' politeness to friends and kin should not be minimized: their concern with choosing topics of conversation they think will interest or entertain others; their search for opportunities to flatter them, sometimes in pseudo-mocking fashion, but more often to make them feel good; their attention to providing others with a pleasing audience—being silent, attentive, and eager when others are declaiming on a favorite subject. Of course, many times the villagers are not listening, but they try to behave as if they were. The aim here is to make others feel that what they are saying is worthwhile. An important part of this is that one almost never directly challenges the veracity or logic of the speaker's statements. If disbelief is the only appropriate response, it should be done silently. Nothing except personal pain and interpersonal tension would be gained from a direct challenge. If one feels strongly enough about the issue, which is very rare,[16] the presentation of an *alternative* view would not be inappropriate. But one

[16] The rarity of strong feelings is due to the fact that so often the very purpose of such conversations is to convey politeness and nothing more. The actual topic of conversation is simply a medium of contact, not a matter to be seriously discussed.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

[P.143]

V

Analysis: The SCT's Exploration of Thai Personality[1]

Attitudes Toward Authority

The first area to be dealt with is in a sense the easiest. Thai attitudes toward authority represent what is perhaps the most explicitly expressed and highly ramified area of their social psychological life. The notion of authority—a sense of superordination and subordination—is an intrinsic part of their linguistic structure, it being impossible to address or refer to a person without indicating his social status relative to the self; two-week-old infants are taught to *waj*, or offer the gesture of obeisance to superiors; during elections, villagers say that they are going to vote for the prime minister because "he is our Master. He has been very good and kind to us. He is like our father, and we are like his children"; the entire structure of the family is predicated on a system of superordination and subordination, even to the extent of considering a twin born a few minutes ahead of his sibling the latter's social superior. Examples expressive of this emphasis in the workaday life of the villagers could be cited endlessly.

What is impressive in the data to follow is not only the near unanimity of villagers in responding positively to what are essentially neutral authority situations, but the tendency on the part of a large number to respond positively to the authority situation even when the authority figure is avowedly wrong. Many of their responses also make quite explicit the underlying ethical justifications for the authority system.

The first item, *"When the phuujinjaj told him to do it, he . . . ,"* is a

[1] Words and phrases appearing in parentheses in the responses on the following pages are for purposes of clarification. The few Thai words appearing in the responses are either "complex concepts" or "difficult to translate" terms, and have been retained mainly for those readers familiar with Thai. At the top of the table, the English language item that was originally prepared for the villagers appears first; it is followed by the best English translation of the actual Thai item given to informants, including the Thai pronouns that were used. Intra-sample differences (age, sex, religion, economic position), where important, are indicated in the text, not the tables.

432 It has been observed that most business trans-
426 actions were done on credit. When the farmer went to town to receive payment for his paddy from the rice dealers, he would at the same time settle his accounts with the lumber yard and several dry-goods stores. So actually in many cases cash was not brought into the village except in limited amounts.

432 People do not like to carry a large amount of
[674] cash around in the village for inherent fear of robbery which rarely happens. Chinese rice dealers prefer to pay for the paddy they bought at their own home. If sellers insist that the money should be brought to them in the village, the dealers will break the total of say 5,000 baht into one or two thousand baht at each of three or four payments.

Villagers also do not like to keep a large amount of cash at home. In case the payment for paddy sold is to be made at the farmer's home, he would arrange for borrowers to come to his home at the same time so that the money will be immediately passed on to the others, thus avoiding risk involved in keeping cash. One of our sample operators said that he arranged a few years ago that a large sum of 10,000 baht be paid at his home so that he might pass the whole amount immediately to the owner of a parcel of land he agreed to buy. Everybody in his household was frantic when the money was received from the Chinese dealer but the

4:Phillips E-4,5 (1956-1957) 1966
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"sweet speech." The second major response, representing 24 percent of the sample, is more generic in nature: it encompasses the trait of inciting other people to have arguments; the capacity to annoy people, in a manner akin to what is connoted by the American slang term, "to bug" a person; and the capacity actually to threaten others. The emphasis here is on intruding on the peace, stability, and self-concerns of other people. The last response, representing 10 percent of the sample, is interesting because of its rather non-psychological, highly practical, nature: people are disliked because they steal. Theft is something that one *hears* about in Bang Chan very frequently, but actual cases are almost never encountered. What its symbolic significance may be is unknown, unless it is simply a more concrete expression of the concern about the untrustworthiness of others.

The most striking characteristic of the above responses is that despite their diversity they almost all emphasize qualities that are directly interpersonal, rather than intrapersonal, in nature. There are no responses here which say that the most dislikable thing about a person is "his stupidity"; "his weakness"; "his incompetence." It is only when unattractiveness takes on a manifestly social dimension, when a person's activities can actually harm others, that most villagers become exercised. Otherwise, Bang Chaners seem to assume (and it is the assumption that is important) that a person can be any way he wants. To a large extent, this same assumption was implicit in the villagers' structuring of the previous item on "likable" qualities, and may help to explain why they often define positive qualities as the absence of negative ones. In that item, if a person could not be of direct help to the self or love the self (the major response), villagers desired that he deal with others in a "soft spoken" and gentle way (the second most frequent response) or at least lack offensive qualities (the third most frequent response). They seem to assume that it is better not to have a relationship at all than to have one that admits unpleasantness. Or, phrased in another way, they seem to assume that if a relationship is even to occur, it must be useful, pleasant, or harmless. What the person is otherwise like, outside of the relationship, is irrelevant to one's assessment of him.

This attention to the manifest nature of social relationships and to the necessity of keeping the relationships smooth and uncomplicated is revealed most sharply in the next two items, *"People who never show their feelings are . . ."* and *"It is sometimes good to hide your true feelings about a person because. . . ."* The latter item is clearly biased in the direction of sanctioning the social pose, and is valuable mainly for the kinds of justifications it reveals. The former item, however, has no evaluative connotations and permits villagers to respond in any direction. Examination of the responses indicates overwhelming agreement on the part of villagers about the desirability of hiding one's feelings. Eighty percent of

779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

84 A soul desiring rebirth flew into the womb of a woman at
[775] conception. By care and imitative magical practices, both
774 parents helped the fetus grow but the mother gave the baby its
[789] body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of
846 several days was taken beside a hot fire, the purpose of which
392 was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman.
793 The comparable ceremony of maturation for men, when they too
789 were changed from "raw" to mature, compassionate, and strong
562 males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to
[688] nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

844 This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

128 The understanding of, and the attitudes toward, modern
844 medicine are given along with findings accounting for
846 acceptance or rejection of modern hospital care for parturients. Accepting the changes that were observed in the practices
369 surrounding childbirth proved to be a means of expressing
178 partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with men's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mō, she could do everything a mō could do. Men were never mediums. Bang Chan's only medium was possessed by a male mō.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

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[832] [156] [688] [626] [593] 59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasū as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "auk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasū's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

128 511 crop year. Except for a few exceptional cases, no new item appeared during the few months that lapsed because rice farmers customarily make their major purchases during the dry season following harvesting time. Special expenses of the 96 continuing families during the period from March, 1948 to February, 1953 were shown in Table 57.

511 Some explanations are necessary for Table 57. In the first place, whereas ordinary household expenses are estimates based on experience of farm operators, these special expenses are actual amounts spent during the specified period of five years. Most of the expenses on land [432] purchases were down payments and subsequent partial payments. Of the four families reporting purchases of household equipment, three bought guns and one bought a sewing machine. [757] All major repairs were for dwellings. The major medical [755] expenses did not include small amounts of money regularly spent on drugs for headache and stomachache or even on delivery of babies which was done by traditional midwives whose fees were nominal. In fact, there were only three cases of major medical expenses. The largest one included [525] Bangkok hospital bills amounting to 14,000 baht. The 36,190 [484] baht of odd expenses included 3,000 baht on gambling(only [691] two operators reported expenses on this item, others admitted win and losses but did not give the amounts), 2,000 baht on purchases of government lotteries which are issued once a week and also on several other occasions, 500 baht on legal prosecution, 300 baht on reward for the

[TEXT CONTINUED ON PAGE 331]

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recovery of a boat stolen, 390 baht on "laxity", and 30,000 baht on a trip to Mecca. The gifts to offspring included only gifts presented when offspring left the family to start an independent family of their own.

Special Receipts

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By special receipts we mean major items of receipts in addition to those regularly obtained from crops, labor, rent, and interest on loans extended. These are counterparts of special expenses, and informations about them were obtained from the 96 sample-families in the same manner and almost concurrently. Examples of these special receipts are: sales of land, gold, and major farm equipment; loans obtained, full or partial settlement of loans extended; gifts and remittances; and odd receipts like those from government lottery prizes, running a gambling house, and laxity practices. Special receipts of the 96 sample-families during the period from March, 1948 to February, 1953 were shown in Table 58.

Some of these items of special receipts need explanation. Land sold by two farm operators were sold for cash needed for loan repayment. It is perhaps worth noting that one of these two operators was in the habit of heavy drinking and had been in recent years spending about two thousand baht annually on liquor alone, while the other was in the habit of gambling. All five operators reporting sales of gold gave the reason for the sale that cash was needed to either buy farm equipment (buffaloes) or to repay

[TEXT CONTINUED ON PAGE 333]

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

261 As we turn to a detailed description of the family fare, 701 we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in 731 diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be ra- 133 tioned. People still ate their fill. Even floods had their 226 advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the 146 school children (Hauck, 1956). "On the average . . . Bang 145 Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American 141 standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

262 Rice. - Rice is an essential part of any Thai meal. 256 The majority of the rice farmers in Bang Chan had rice for 251 home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely 126 used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

221 In households where home-milled rice was used, during 256 June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and 505 home pounding was impossible. At the time when data for the 256 present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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292 1. In some large houses, two related family groups lived together but maintained separate kitchens.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise of regular wages, lighter work, and the bright lights of the city, leave Bang Chan with the hope that they will never have to return, although of course many do. The Goldsen-Ralis survey reveals that 26 percent of their respondents had lived in Bangkok for a year or more, although for most this was in fulfillment of military service.

Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

The frequent transit between Bang Chan and Bangkok,[8] however,

[8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 16.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)		Twice or more (Proportion who own or use the motor)	
Illiterate	44%	(40)	58%	(51)
Literate	83	(36)	88	(83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

Marriage

As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Minburī to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.[4] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:62) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

storekeeper: about 800-900 liter bottles per month during the 3 months dry season as compared to about 350 bottles per month during the 9 months of the rice season.

Moslems never served liquor at their weddings, cremations, and other auspicious events. Moslem residents occasionally attended Buddhist (l)ngaan in spite of dietary proscriptions that Buddhists did not observe.[1] A medium (spiritualist) commented however that because pig's head was essential for her homage-to-the-teacher rites, some Moslem sick persons preferred to go to the Buddhist temple for treatment. There the priest-practitioner could afford to set up a separate kitchen for his Moslem patients, and so spare them the distress of confronting pork. To one big ordination Moslem guests brought their own food. Buddhists came somewhat more often to Moslem ceremonies.

We do not have enough information to appraise the nutritional significance of food eaten at ceremonies. Some individuals got a great deal of it, others very little. One must remember that the (l)ngaan was not a public but a private event at home, to which guests came on invitation. Although cremations and the teacher-rites of priest-practitioners were held at the temple, and so had a semi-public character, no one who was not invited presented himself for food. Of the participants, the working group undoubtedly received the most food; they were there the longest time, had regular meals, tastings and snacks throughout the (l)ngaan meal itself. This group comprised the host, co-sponsors and their immediate kin; other relatives and friends who were asked or who volunteered to help. The feeling was, if one were "very fond" of the host, one volunteered to cook. If less close, one was invited as a guest, but made the usual cash donation. Sociable persons combining skill and energy were invited often and volunteered often, hence spent many days at ceremonies. Young unmarried men and women were asked and liked to be asked to work, for such occasions offered a great chance for fun and flirting.

Different degrees of participation may be estimated from Janlekha's (1955) figures for reported contributions ranging from 30 to 1000 baht in a year. Since a contribution of 5 to 10 baht per (l)ngaan was customary, the villager with the lowest reported contribution probably attended from 3 to 6 ceremonial occasions. Attendance at 100 or more (l)ngaan is unlikely, hence the villager who gave as much as 1000 baht probably made larger contributions per (l)ngaan.

What sort of persons or groups in the village were invited as guests? Every host's list included his older

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1. Moslems were said to resist army service because they were afraid they would have to eat pork.

178 592 621 [166] the death of her father, it was reported that the woman and her son moved to Bangplee, another rice growing village some fifteen miles to the south. After checking with some of the former Bangchan residents who are now living in that village, the first report was found to be inaccurate. In fact no one in Bangchan seemed to know where they were. The only hint available to us concerning the mother and son was "Family disintegrated. Mother went one direction, son another direction."

Case 4: A woman and her adopted son were operating [702] a 22-rai rice farm in BC6. After the death of the mother, the man remained in the village alone for a short time and then was conscripted into the army.

Case 5: After the death of the head of a laboring family in BC6, the wife and their four grownup children left the village separately. In the eyes of villagers this was [166] another case of "family disintegration." The wife's birth place was in KY8, but she could not go back to her old family because there was not enough land to work.

Case 6: An old woman, age 76, was reported in the [737] [792] 1949 census to be living alone in KY5. Later she moved into the secular compartment of the temple (she was an aunt of the headpriest) where she died before the 1953 census was made.

Case 7: A man, age 50, was living in KY8 with his older sister, age 60, and their nephew's son, age 6. When the man died, the older sister pursued her brother's farm

GENERAL DESCRIPTION OF FAMILY FARE IN BANG CHAN

As we turn to a detailed description of the family fare, we should like to point out that starvation was unknown in Bang Chan. Although much room remains for improvement in diet, "hollow hunger" was uncommon. In the few times when disastrous flood destroyed the year's crop, the government was able to provide enough rice so that it need not be rationed. People still ate their fill. Even floods had their advantage: one could fish out the window. That gross caloric undernutrition was rare was borne out by examination of the school children (Hauck, 1956). "On the average . . . Bang Chan children could not be considered as markedly underweight. Few were so thin that one could 'count their ribs' and still fewer would be considered plump by American standards." In a random sample of village households that included about 10% of the population, the heaviest man weighed 69 kg. (151.8 pounds) and the heaviest woman 70 kg. (154 pounds). We noted no more than half a dozen adults who appeared to be "overweight." Most were middle aged or older, and none of them did strenuous field work.

Sources of Food

Home Production, Storage and Preservation

Rice. - Rice is an essential part of any Thai meal. The majority of the rice farmers in Bang Chan had rice for home consumption milled for them at Minburi. In general, they took their own paddy to the mill, and brought the resulting milled rice home, where it was stored in a box or mat-bin. Although, according to a recent survey (Goldsen and Ralis, 1957) nearly a third of the households owned a home rice mill, undermilled or home-pounded rice was not widely used in Bang Chan. Information on this point was obtained for 333 of 336 "kitchen-unit"[1] households in the village. Of these 5 consumed home-milled rice only, 51 used home-milled rice in major part, 78 in minor part, and 199 not at all.

In households where home-milled rice was used, during June enough would be pounded to last until harvest, at which time hands were sore and bleeding from the field work and home pounding was impossible. At the time when data for the present report were being gathered, most families took paddy to the mill when water in the canal was high enough so that it could be transported by boat. If a farmer on a subsidiary

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1. In some large houses, two related family groups lived together but maintained separate kitchens.

854 278 medications were taken internally, sometimes being painted on the tongue with a feather; but two preparations were applied over the abdomen. Some of the medications were described as "stomach medicine" or "to prevent flatulence." Five different kinds of proprietary medicine were given to 18 infants. In 13 instances, the medicine given was clearly homemade and included as major ingredients items such as flattery fruit, (3)luug (1)yauau; cobra oil; horseshoe crab; and buffalo skin. The nature of the medicine, whether homemade or proprietary, was not clear in 8 instances. Usually medicine for infants was mixed with honey, but in 2 cases, alcoholic liquor was used as it customarily was for the mother.

Six newborn infants in this series were given no medicine. One of these was born at the Health Center. One of the other 2 infants delivered at the Health Center was given homemade medicine later, and no information was obtained on the third. Eye prophylaxis[1] was probably routine at the Health Center, as, in 2 of the 3 cases delivered there, informants knew that drops had been put in the infant's eyes. Traditional midwives, however, did nothing of this sort.

Water for Drinking and Bathing.

853 312 For the newborn infant as well as for the mother, water for drinking and bathing was boiled and was usually used while hot, often being kept warm in a vacuum bottle. Either rain water or canal water might be used depending on what was available at a given season. The water was dribbled from an adult's fingers into the infant's mouth. When the mother was no longer lying by the fire, boiled water was not considered essential for the infant. Nevertheless, over half the infants seen from this time up to 3 months of age were being given boiled water to drink. After 6 months of age this was rare.

853 855 312 In one instance, during the time when a younger sibling received boiled canal water, a 21-month old child was given boiled water also. At the time of a later visit both of these children were drinking unboiled canal water. In another case an orphaned boy's formula was made up with boiled water, although

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[744] [751] [731] 1. Vaccination for smallpox was the only modern preventive treatment which we knew to be used in Bang Chan in the absence of an epidemic. Since a severe epidemic of smallpox with many deaths ten years previously, health officers came to the Bang Chan elementary school once a year to vaccinate children, and other residents of the community could be vaccinated at this time. Four of the young children whom we visited periodically were vaccinated, at 4 months, 8 months, 1 and 2 years of age, respectively.

4:Phillips E-4,5 (1956-1957) 1966
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to be somewhat nervous. Like the conversational topics mentioned above, its purpose is to maintain social contact, but at a minimal substantive level.

Other uses of giggling are less consciously purposeful than the above. Perhaps the most frequent instance of this is when villagers are talking about or responding directly to an unfortunate situation: a flood destroying the rice crop, a friend or relative dying or being beaten up, a person committing suicide. Giggling under these circumstances seems to represent several related sentiments. On the one hand, it indicates a slight feeling of embarrassment over having discovered something or talked about something which would have been better left undiscovered and undiscussed. At the same time, it is an attempt to make light of the misfortune by suggesting that the speaker and those present should not be overly pained by what they are encountering. Giggling here serves very much the same kind of function as the phrase *maj pen raj* ("it is nothing") referred to earlier; it is a means of shrugging off and denying a feeling of distress. Finally, giggling often is also a kind of ironic commentary on the human situation—not in any abstract philosophical way, but in the sense that a tragedy is so often actually felt to be a comic exposure of human hopes and intentions. A little exchange between the writer and an elderly villager perhaps best illustrates this. During one of the two rainy seasons I spent in Thailand, the rains were especially heavy in the Central Plain and destroyed the rice crop of many Bang Chan farms. As might be expected, it was a topic of considerable discussion. Paddling down the canal one morning, we met a villager who was returning from inspecting his fields, and we stopped to chat. The discussion inevitably turned to the flood, and he told us, in a completely matter-of-fact way, that he had already lost about 50 percent of his crop. He then giggled nervously over what he had said, and followed it up with, "But that person over there has lost everything." His giggles then turned into laughter as he nodded his head in an attitude of pain. Months later, when things were considerably more comfortable for the villager (as it turned out, he had lost only about 5 percent of his crop) I recalled our meeting and asked him what he thought was so funny about the flood. He did not remember, but volunteered in a nice, didactic way: "When something like a flood happens, all you can do is laugh."

Giggling is also a favored mode of dealing with the countless situations that arise in daily life that are perceived by the villagers as potentially, or imminently, embarrassing. Here giggling is a substitute for an explanation of one's actions, particularly those that are considered annoying to others. Villagers who have missed an *important* appointment (lesser ones are missed with few qualms) will tend to giggle when they finally meet the person and there is the slightest indication of the latter's displeasure.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

132 The monsoon climate of the region in which the village lies gives the area an annual rainfall, averaged over a recent ten year period, of about fifty inches; the effective rainfall, for the critical months when the rice is in the ground, is about forty inches.[3] The minimum precipitation requirement for wet rice is about seventy inches a year. This rainfall deficiency in the central plain of Thailand is made up by direct flooding from the rivers which flow in from the mountains and plateaux on the northeast, north, and west, the run-off rate fortunately being low because forests still cover much of these uplands. The whole plain is channeled for simple distribution of the spate of these rivers which occurs during October, November, and December, just before the harvest of rice. Because most fields are fed by gravity without an artificial head of water, or with only small heads impounded behind water gates, the depth and duration of flooding cannot be wholly controlled. As a result, variable water supply produces a wide variability in harvests and crop risks may be considerable. For 117 years between 1831 and 1948 the ministry of Agriculture records four major damaging floods (1831, 1879, 1917, and 1942), four years of extreme drought, thirty-five years of severe drought, and twenty-one years of moderate drought, leaving only fifty-three years of optimal supply of water.[4]

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3. Central Service of Statistics, Statistical Yearbook of Thailand, No. 21, 1939-40-1944. Bangkok, 1950.

4. Ministry of Agriculture, Thailand and Her Agricultural Problems (Bangkok, 1950).

*243 161 178 464 Finally, it has been pointed out that the kind of training and the type of financial preparation given to young married couples have served only to confirm Bangchan people to their preference for rice cultivation. This together with limited job opportunities open to them elsewhere have tended to keep the villagers on the farms, and thus have tended to regenerate the condition of population pressure in Bangchan.

Lack of Effective Control and Regulation of Water Supply

*243 458 Another contributing factor is the lack of effective control and regulation of water supply, which has caused annual fluctuation of rice crop. On the whole, this crop fluctuation is not as high as is the case in most of rice [731] growing areas elsewhere. Famine certainly has not been known in Bangchan. Nevertheless, it is a certain sector of rice growers -- the marginal farmers with limited ability to adjust or with relatively little command over capital -- who are seriously affected by annual fluctuation of rice crop.

*243 426 When affluent farmers have a poor crop, their credit purchase accounts may go up beyond the normal level, but they are usually in a position to clear this type of high interest bearing debts at the end of the business year by their net cash incomes or at least by securing loans with lower rates of interest to pay the accounts. On the other hand, marginal farmers are not in a position to seek low interest bearing loans. In case of crop failure, therefore,

178 592 621 the family members we were informed that A's daughter and her four children had moved out of the village separately to different places which could not be traced, while B's brother and sister went to live with a relative in Lam-loogga, also a rice growing village some fifteen miles to the north. The two chief bread winners of the family, A's husband and B's father, managed successfully to get themselves ordained and are now residing in the village temple. Early in 1953 B went to live with her relatives in Lam-loogga, leaving the sick old grandmother alone in Bangchan. [792] [888] The arrangement was that the old woman was to quit the old shack and take refuge in the secular part of the temple where it would be possible for her ex-husband, now a priest, to have two meals delivered to her every day. Just before the 1953 census was taken, however, she was taken to Lam-loogga. The last member of the disintegrating family was thus left out of the 1953 census.

178 592 587 736 621 Case 2: After the death of his first wife, an old man in BO4 gave his two sons equal shares of his property. He then acquired a second wife and built a separate quarter apart from the main building, thus creating a new family of two. In 1952 he was fatally hit by a truck on the Minburi road. After a few months of unhappy stay with one of her step sons, the widow acquired a new husband and moved out to a neighboring village.

178 592 621 [166] Case 3: There was in BO4 a laboring family of three consisting of an old man, his daughter, and her son. After

792 262 991 village offers of regular service, the holiday offerings, home invitations and sporadic gifts so that all priests had places to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut[1] or hardship.

792 794 262 About mid-July, Buddhist Lent changed the food habits somewhat. This three-month period corresponded with the height of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering, and thereafter the priests went regularly on their appointed rounds.

796 261 On Buddhist holidays, the people did not usually eat any of the food brought to the temple, but on (3)thaauad (2)ka-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bounteously.

792 857 262 Residing at Wat Bang Chan in 1954 were 22 boys, aged 10 to 16, sent to serve the priests, get their living and attend school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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792 262 737 235 1. Amounts of food given usually exceeded the actual needs of the priests and temple boys. One instance was noted in which food was sent by the priests to a needy old person nearby. Leftover rice was dried and sold for chicken feed.

114 104 2. The transcription used throughout this report is that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

178 the death of her father, it was reported that the woman
592 and her son moved to Bangplee, another rice growing village
621 some fifteen miles to the south. After checking with some
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Modern Medical Resources

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Since no modern doctor or midwife lived in Bang Chan nor visited regularly or on call, the nearest modern medical assistance was at the Health Center[3] in Minburi. This was an out-patient clinic and small hospital established by the Ministry of Public Health to give modern care, instruction, and occasional free issues of such items as dried milk and cod-liver oil. It was conveniently located on the big Saensaeb Canal, near smaller canals and a foot-road, and only a few hundred yards from the bus terminal at the end of the auto road. The staff comprised a first-class doctor, a nurse-midwife (whom we shall call "the nurse"), a dental hygienist and a sanitarian. The main building had offices and pleasant waiting-rooms, with living quarters upstairs for the staff. Adjacent was a well-built and well-ventilated smaller building, with two good-sized rooms, one for general, and the other for maternity cases. The maternity half was divided again into a small room for labor and delivery, and a larger room for recovery with space for 2 persons. Beds were not used; patients were comfortable on the floor with mats. Relatives provided and cooked the food for each patient on their own portable charcoal braziers in a special area. Room and delivery were free, but a charge was made for medicines.

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In Bangkok, 20 miles away, on the northern edge of the city nearest to the community, was the fine new Women's Hospital to which one wife had gone for delivery before she became a Bang Chan resident. The other hospitals of the city were occasionally used for other medical or surgical reasons by Bang Chan residents, but not for maternity cases.

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In Minburi were also a few "second class practitioners." These were not graduates of Thailand's recognized medical schools, but they had some modern medical knowledge. A former medical orderly in the army, for instance, utilized his training to set up a practice. These practitioners used both traditional and modern systems. They would on rare occasions come to a Bang Chan farm house on call. They enjoyed the confidence and patronage of the most educated, progressive, and affluent element in Bang Chan's population, such as the teachers and many of the leaders, both young and old, who, in their patronage, saw themselves as less old-fashioned. Their large practice was lucrative, fees of 1000 baht for a course of injections being cited. Though consulted for maladies of pregnancy, to our knowledge they did no obstetrical work.

3. In 1957 a new building with expanded facilities was opened in Minburi. All our data refer to the old arrangements.

before completing these obligations, the parents lost out on their anticipated reward (cf. L.M. Hanks, 1962).

Since waywardness (nai thĭaŋ) was considered a continuous threat, magical means were taken at the moment of birth to ensure that a child stay close to the family that raised him. The blessing following the winnowing ceremony invoked immovable things: the post, the cat that traditionally never roamed far, the pumpkin that sat and fattened:

> "...Stay at home like the bottom of the house post. Watch the house like a cat. Eat and stay here! Never leave home. Be fat and heavy as the ash pumpkin..."

The most important binding actions utilized, or brought the child into physical contact with, objects long associated with family, in particular the house and land. The umbilical cord was cut on earth or phlai dug from the house-land itself with a bamboo "knife" sliced from one of the deeply sunk house posts. Of these "the knife is the important thing." The phlai also had medicinal purposes. With a feather "from the mother's house" the baby's navel was smeared with cobwebs from a spider whose web indicated long undisturbed residence. They buried the placenta either under some large old tree that stood near the house, or under the house stair. The old family winnowing tray, old clothes, and well-used family possessions were used first before any new furnishings were purchased for the baby. A fire of sakae wood grown on premises boiled the water for the baby and mother, and heated the mother. Sakae "was planted when a house was first built so that every generation of occupants would have it available for use at confinement" and also for firewood at other times (cf. McF. 834). All these binding rites assured that the child being rooted to a home terrain, would not wander frightened, and so "would not cry." He also would be at home to participate in the merit-making that would reconstitute the family in another existence.

If a child were born away from home, how was this bond to his locality established? On one to two occasions when the child was born at the Minburi Health Center, Hauck (notes, 1954) observed a solution to this dilemma. The mothers *returned home, as was customary, within a few hours of delivery* and were established by their respective fires. Their babies were winnowed and laid on their trays with the usual auspicious book, pencil, and needle. Neither tray held any bamboo, clod, nor phlai, however, for these had not been used. On one tray, though, was laid a steel knife from the kitchen, mute proof that a family cutting instrument ought to be there. On another occasion, a father asked to be given his child's placenta so as to bury it on the house site. In so far as possible, people in Bang Chan tried to carry on the old rites.

greater, for relatives were at hand. Some of these ordinary persons developed skills of considerable consequence. 844

If difficulties developed, then a more experienced person, perferably a midwife, was needed. But many a midwife assisted at normal births. Because difficulties might arise from a deficiency of merit either in the mother or the child (one could never know which), many women preferred to have in attendance, for peace of mind, either a midwife or an experienced person to insure the presence of expert help. Sometimes they were engaged in advance, more often just sent for "as pain is increasing," it being not always certain whether the case was normal or not. 844 759

A few women were delivered at the Mīnburī Health Center. These were rarely normal cases. The Center was turned to as a last resort in dire circumstances, with the result that sometimes the woman died in the boat on the way. A few persons of rather more modern outlook, such as wealthy farmers, teachers, and traders, had been delivered there and recognized its usefulness. 844 [845] [847]

The midwives lived in all parts of the community, with 3 in the populous central temple area. No one was more than a half-hour's paddle, or an hour's walk from the home of some midwife. What was desired, however, was a particular person, even though he might not be the most accessible one. 759

Since midwives were all heads of large families their clientele was mostly their kinsmen. They also took care of non-kin who lived in their locality. A daughter or other close relative who had married out would be attended wherever she was, if she did not return home for confinement. 759 571 602

In choosing a midwife, a parturient sought out not only skill but favored a kinsman over a non-kinsman, a close relative over a distant one, a near person over a far.[63] Occasionally, to sustain an image of progressiveness, social superiority or of wealth display, a midwife from outside Bang Chan was imported. Sometimes proximity, convenience, and

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63. A male and 2 female kinsmen-midwives were called by the man's sister to deliver her, and all came. He did not deliver her because she was "too close a relative," but he said a brother "could deliver a sister."

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in the khwan khāo "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mɔ̄ or to the Mīnburī Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

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Though living like other elder citizens of the community, in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mɔ̄ was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (tham ǎchīp [Mc.F. 990]) when others who had equal or more experience were not so considered?

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An old woman summed up significantly 2 attitudes saying, "In the old days people made more merit and so lived longer, but because we had no hospitals, the children died younger." The relation of good health and longevity to proper religious and moral behavior was fundamental in Bang Chan. If merit did not suffice, medical attention, traditional or modern, could not prolong life. Children, however, were tender (ɔ̄n) and easily prey to sickness.
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Traditional care could help them, but being delicate and tender like city people, children could also be helped by modern hospital care.

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Between the 2 systems people sensed little conflict, for each patient made a preliminary diagnosis of his symptoms and sought the type of assistance his diagnosis and convenience indicated. mɔ̄ with some knowledge of both systems might offer their patients a choice of remedy. With the right diagnosis, magic, and medicines, a quick cure was expected. if not forth-coming, people were disappointed and moved to another specialist for his help. Modern medicine merely took its place as one more recourse.

The basic handicap of modern medicine was that it had no magical resources or holy water. "Its effectiveness is limited to the properties of the ingredients." Old medicine on the other hand had, in addition to these properties, "The strength of the mɔ̄'s incantation plus the power of every person who learned and used that incantation, back to the time of its discovery, centuries ago." Thus where the medical schemes offered the same specialty, as in fevers, bone-setting, or obstetrics, the old appeared to offer more resources.

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Besides its deficiencies in magic and strength-making attributes, modern medical care had other drawbacks. First, it was not accessible. A trip to Bangkok for medical purposes involved far more time than a day. Mīnburī's Health Center was a feasible trip, even for a woman in labor (stays ranged from 6 to 24 hours). Home arrangements for tending children, feeding buffalo, and other chores were less demanding. Bang Chan's eagerness for local modern care was shown when a Bangkok physician visited Bang Chan for a few times as part of a nutrition study. He was besieged with private requests for medical advice. Secondly, modern medical care was expensive. In Bangkok, after the expense of getting there, taxis, food, and housing costs for accompanying relatives, hospital, and doctor's fees sometimes meant losing the family gold and even land. Mīnburī's costs were closer geared to farm income, but medicines appeared costly. "Modern drugs taste and act better, but the poor have to use the old." Third,

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to make use of modern facilities one suffered confusing and unhappy experiences. Bangkok traffic was dizzying, even if one knew just where to go. Hospitals had beds, not mats, and the personnel were strangers. Foods were often unfamiliar or violated traditional injunctions concerning heating and cooling. People were brusque, impersonal, and overbearing to country people. One woman complained, "I am afraid of the doctor there. She scolds me and does not treat me like city people. She will not explain what the sickness is." Minburī's clinic was small, set up in more familiar terms, and the staff known personally to many villagers.

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Finally, there was the problem of finding an experienced escort, i.e. someone who "knew the way." More was involved than just convenience. In all walks of Bang Chan's life, no one ever presented himself to a school, to a household, anywhere, without a personal introduction from someone who had been there before, and so was accustomed (khoei) to it. It was not hard to find someone who had been to the Minburī Health Center, but it was difficult to find one who had been to a hospital in Bangkok, knew what to do, and had the time, money, and inclination to act as escort. The latter was always a relative by blood or marriage or the sick person's mō himself (Hanks and Hanks, 1955: 160). Actually, five or ten persons might accompany an ill person, only one of which was acting as the recognized go-between. Many of those who had been to a hospital or clinic as patients had previously accompanied others merely as escort, or to visit (Goldsen and Ralis 1955:31).

758 743 184 178 [369] [844] [554]

Who had actually tried modern medicine for one reason or another? About a third of the household heads had used some modern clinic or hospital for treatment or hospitalization (Goldsen and Ralis 1955:31). Use was more frequent among (1) the literate, (2) those exposed to the mass media of radio and movies, (3) those accepting certain urban ways, and (4) those having greater contacts with the city in the way of visits, but users were not of a noticeably higher economic level (ibid:37). Women went no more frequently than men (ibid:32). No figures indicated how many of these occasions were for childbirth, but our interviews point to a small number. Taking the will for the deed, two women teachers who appeared to be the first to plan ahead to be delivered at the Minburī Health Center--but who did not get there because labor was too quick--seemed to be viewing the use of modern methods as a means to higher status.

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Why was modern obstetrics so largely eschewed? What had been Bang Chan's experience, unfavorable or favorable, that colored their attitudes? First, home was the most convenient place for care. Bangkok was ruled out categorically as too far. In fact, Minburī might be too far if labor manifested its normal celerity as the case of the two teachers showed, or if complications had developed. Furthermore, a Chinese resident of Bang

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743 Chan during a period of residence in Bangkok was delivered
844 at the Women's Hospital and at a later pregnancy at the
178 Mīnburī Center. With her last baby, however, she elected
[759] to be delivered at home by the local midwife as more convenient in order to assure from her bed supervision and proper care for her other children. One young woman of very high social and economic standing preferred to import a midwife from a community six kilometers down the canal, and bear her child in her own home rather than attempt getting to a hospital.

Moreover, basically the Mīnburī Health Center was seen
[845] as a place for sick people, while normal childbirth was not a medical matter. To plan ahead for medical care there was to invite an abnormal delivery. The Center also suffered a poor reputation for success because difficult cases, hopelessly advanced, were the usual ones brought in. "At the Center are many ghosts," people said.

743 Some comments were genuinely favorable. The cleanli-
759 ness of the hospital was greatly appreciated. Anyone who
178 witnessed the skill of the doctor or nurse-midwife held it in respect.

Techniques of delivery were sometimes mistrusted,
75 sometimes admired. "They pull out the child with their
844 hands, which is dangerous." "The fecal pump is unneces-
743 sary." "One may not crawl during labor." A mō-midwife
178 who witnessed the nurse-midwife at work said approvingly, "She can force a baby out, but our midwives can only press harder," and "The hospital knows when a baby will come." The stopping of the flow of birth fluids by an injection was resented as affecting strength adversely, yet the injection that "made the placenta come so fast I couldn't notice it," or "gave the mother strength when the baby was stronger than she" was liked. The pills for pain were enthusiastically received. The hospital's closed windows "protected the baby from wind element," but the journey home dangerously exposed it and the mother to cooling wind. The dietary recommendations during recovery appeared wrong: eggs, which were "too cooling," or fruit, which "gave no strength." The suggestion of a nurse that scissors be used to cut the cord was resented as uncomprehending of village living problems ("we haven't any!" and "scissors always rust") and also as unwise ("rust gives tetanus poisoning").

75 Another criticism was the lack of personal warmth and
844 pity manifested by modern physicians and nurses, unlike
178 the attentive, reassuring mō. By forbidding abdomen-pressing, they were accused of "not doing enough," even of

"not wanting to help." The mother and baby were seen as having to fend for themselves. The very confidence built up in modern medications led to a conviction that doctors maliciously withheld available, effective medicines. "She died at the Center because she needed medicine but was not given any." Personality factors sometimes were involved: one doctor was considered incompetent, fearful of complicated obstetrical cases, and brutally indifferent to a countryman's views and circumstances--("Since we have no room, why don't you charter a bus to take your parturient wife to Bangkok?"), whereas another was friendly and wise. Since doctors were part of the respected government hierarchy which enjoyed superior knowledge and status, and also of the supposedly compassionate medical tradition, they were expected to be competent, kind, and protecting. Those who failed in winning confidence undermined the status of modern medicine.

The midwives themselves thought of the Hinburi Center not only as a recourse if a case were in deep trouble, but also as a personal convenience. One male midwife, who was also a headman, mō and carpenter-contractor, was often too busy to stay with a woman in prolonged labor. To turn her over to another midwife other than a kinsman would damage his reputation. Knowing Hinburi well, he found the Center a convenient solution to his dilemma. He had respect for the nurse-mid wife's skills, which he had witnessed, and regarded the doctor as a colleague on his own level, a view probably not reciprocated. The women midwives, too, always considering themselves at bottom volunteers, when faced with pressing home chores and the "impossibility of turning a relative over to another midwife," utilized the impartial service of the nurse-midwife. One cloud impeded the female midwives from making full use of the occasion as an opportunity for observation and so instruction. They refused to identify themselves as midwives out of fear of legal sanctions. Having neither taken the course prescribed by the government for "ancient" midwives nor paid the fee, they were not licensed. Thus, they lived in dread of fines if their calling became known outside the community. They knew they were permitted to deliver babies within the family, but outside those rather hazy boundaries, they took refuge in an old view, "I am not a midwife. I only help out of pity."

All in all, the people of Bang Chan had fitted modern medicine into their broad medical scheme where it could be accepted on its merits, if not blocked off by inconvenience, high cost, and discourtesy.

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friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of ...medicines" (p. 81).[74]

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The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: fai chut) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Minburi Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered net-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

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Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (suk) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a mō did the same (with the possible exception of the sponging with tepid water), that as a mō-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorization, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calendar, 1871:107-109).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1920's.

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home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

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To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Mīnburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 2 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccesibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grow up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

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In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Mīnburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

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are less eaten today because they are too expensive."

A slight trend towards depersonalization might be part of the aping of urban behavior, or idiosyncratic, or of more general significance.[76] The Minburi Health Center may have been used to avoid certain face-to-face situations. A woman whose labor was prolonged was taken there by her (male) midwife who had to get to a meeting. He preferred the impartiality of the Center to turning her over to another midwife. A woman took up the hot ashes container so "others would not have to wait on her." Another appeared to have obtained a midwife from outside the community rather than seek out someone inside and closer at hand. A very poor woman used no boiled water because of inadequate help in the household to prepare it. Whatever the circumstances of her social isolation, ordinarily kin or neighbors would have seen to it that this job was done. This episode too was watched by neighbors who commented that since her health remained good, boiling might be unnecessary. Finally, to advertise certain medicines, a firm handed out yan, the magically inscribed cloth, to suspend on the holy cord that surrounded the mother. This was a long way from the personally inscribed "yan" of old.

[743] [571] [812]

A final reason for the acceptance of change was the larger number of choices of behavior because of a broader horizon. Bang Chan had never been an isolated community, for pilgrimages and visiting through easy boat-travel had been for decades part of its life. Yet the growing number of literates, the establishment of bus and other transportation services to the city, the experience, for a few, of work in Bangkok or of military service in Korea, the continuous association with non-Thai, (Chinese, Muslims, a Cambodian, and now the Americans), and the now somewhat diversified economy of the community all led to the increased familiarity with other ways of doing things. Patterns of childbirth were already reflecting this awareness.

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Unchanging in the scene at childbirth was the necessity of supernatural assistance, and heat to ripen and restore the mother.

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76. I feel this evidence is slight, and set it down merely as a point for future observation.

had 2 to 4 children. In each case, the information obtained related to the most recent delivery.

Delivery. - In Bang Chan delivery usually took place at home. Four of the mothers we interviewed went to the home of a relative or relative-in-law. In two of these instances the relative was also the midwife; in the others the mother was apparently seeking a place where she could be more satisfactorily looked after than at home.

Three women went to the Health Center at Minburi, about 3 miles from the center of the Bang Chan community, to have their babies. Two of these mothers expected to be delivered at home but were taken to the Health Center when labor proved long. All 3 returned home either on the day of delivery or the next day and lay by the fire. Two others, both school teachers, told us in advance that they expected or hoped to go to the Health Center, but when labor began they were unable to do so because their babies came so quickly. Aside from the 3 who went to the Minburi Health Center, only one of those interviewed went outside the community to have her baby. Informants usually considered the delivery uncomplicated; although, as noted, some labors were long.

Traditional midwives, who were not professionally trained but had learned from other traditional midwives before them, attended most of the mothers. One woman who was alone delivered the baby herself, one said she had no midwife but did not specify other help, and 2 had the help of women who did not ordinarily practice midwifery. The 3 women who were delivered at the Health Center had professionally trained help. Obstetrics as practiced in Bang Chan has been described by Hanks (1959).

Care of Mother During Postpartum Rest Period. - Traditional behavior during the postpartum rest period has been described by Hanks (1959).

Lying by the fire. - The ancient custom of (2)juu (1)faj[1] (literally to be by the fire) after childbirth was still observed by most women in Bang Chan. The chief difference between the practice as we observed it and as it was described in the Bangkok Calendar[2] for 1865 was in the length of the period. In former times this was as much as a month after the birth of the first child, with shorter periods for successive

1. See Appendix, p. 51 for glossary of Thai terms.

2. The unsigned article entitled "Siamese Obstetrics" was presumably written by the Rev. Dan Beach Bradley, M.D., a Protestant missionary who compiled the Calendar.

better nutrition for all family members or whether to concentrate on the feeding of children or other vulnerable groups, the values of the society should be considered. The importance of a suitable variety of food for health needs to be taught to adults as well as children in Bang Chan. The concept that good choice of food is important in pregnancy and lactation and for the health and growth of children seemed to be entirely absent. Since few believed certain foods to be harmful at these times, however, teaching how to choose foods for health should be easier in Bang Chan than it is in areas where positive taboos are common. 124 262

Behavior different from the traditional one may sometimes lead the way to changed practices among those who observe or hear about it. For this reason, in certain instances an informant who had ventured to deviate from the traditional practice has been identified in this record. Thus, we noted that in a number of ways the women school teachers and the wife of a man teacher deviated from the traditional behavior in Bang Chan. For example, a school teacher's wife used the hot ashes chamber after her fifth child rather than lying by the fire. She was one of two women informants who "ate all kinds of food" at this time when most women in the community restricted their diets very markedly. She did not consider taking the baby out into the sunshine harmful; indeed, she believed it would make the child stronger. This same mother was 1 of 4 in our series who had taken the baby to be vaccinated against smallpox. She and three women school teachers were among those who continued to give their babies boiled water to drink much longer than was customary in Bang Chan. The one person who suggested a specific food (eggs) as being good for a woman to eat during pregnancy was a school teacher. The two women who planned to go to the Minburi Health Center for delivery were school teachers. For lack of time after labor began they did not carry out their plans; but the fact that they intended to do, by choice, what was usually the last resort when labor proved long or difficult, may be significant. 121 183 178

Along with these departures from traditional ways and acceptance of some "modern" practices, the same persons might cling to other sorts of traditional behavior. The wife of a school teacher for example, though she thought that taking the baby into the sunshine might be favorable rather than harmful, said that if the baby were to be out very long she would cover its head with a beret to avoid bringing "cold" into the baby. This same mother took her child to the Minburi Health Center for treatment for a skin infection, but when the condition did not clear up immediately after modern therapy was begun, she took the child to a traditional doctor who prepared a decoction of herbs with which she treated the baby. [74] [278]

The behavior of respected persons, such as some of the school teachers, should be influential in helping to bring about

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164 [146] among children in Bang Chan is not known. One thing which residents of Bang Chan appeared to have in common with other populations which have been reported to be relatively caries free, was low intake of sugar, particularly in a form which would be apt to adhere to the teeth.

Adults up to 44 years of age, in the random sample, retained most of their teeth. A few adults in Bang Chan have had missing teeth crowned. More sound than missing teeth were found to be crowned, however, i.e. in this community a crowned tooth appears to have cosmetic value. [301]

759 [164] A variety of serious illnesses were found to occur among residents of Bang Chan. As a rule, local traditional practitioners were consulted first, but most persons reported to have been seriously ill eventually received treatment by outside practitioners with some training in modern medicine.

[844] [743] The majority of mothers in childbirth were attended by local traditional midwives, but a few difficult cases were taken to the government Health Center in the nearby town of Minburi, where a trained midwife was in attendance.

165 [163] Of 438 pregnancies reported by 84 mothers, over 90% resulted in live births. Of the 397 living children born to these women, 81% survived at the time of interview. Within the first month of life, 7% had died, and a total of 11% died within the first year. Tetanus was prominent among causes of death of infants under one month of age. Infantile beriberi caused some deaths among older infants. In a majority of cases, the cause of death of infants could not be clearly identified, but fever, debility and convulsions were the symptoms most commonly described.

146 [164] Almost half of the persons examined for possible signs of nutritional deficiency, 46% of the school children and 47% of the family sample, were free of such signs. The remainder, slightly more than one half of persons examined, had from 1 to 7 signs each. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Signs most often noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine in the diet. The only clearly defined deficiency disease observed among residents of Bang Chan during the field study was beriberi.

14 Hemoglobin values of 11.5 g or less per 100 ml. were

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Table 14

163 Relation of Live Births to Total Pregnancies as Reported by 84 Women in Bang Chan

	Number of mothers	Total cases	Percentage of total pregnancies
Pregnancies	84	438	100
Miscarriages	23	33	7.5
Deaths in utero	4	4	0.9
Stillbirths	3	4	0.9
Live births	84	397	90.6

Illness and Injury

759 Medical Services Available to Residents of Bang Chan. - Within the community of Bang Chan, about 8 traditional "doctors" and 15 traditional midwives practiced their skills. Three of the traditional practitioners were Buddhist priests. The others earned their living chiefly by farming. In addition, two or three persons who were skilled at massage, and at least one medium had some reputation for success in treating sick persons.

743 The nearest source of trained medical assistance was Minburi, the market town about 3 miles from Bang Chan. The staff of the Minburi Health Center, which was under Thai government auspices, included a first-class doctor, a dentist and a nurse-midwife. One or two beds were available for the use of critically ill patients until they could be taken to a hospital in Bangkok. For less critical illnesses, the second-class doctors who operated private clinics in Minburi seemed to get more patronage from residents of Bang Chan than did the doctor at the Health Center.

844 The majority of women in Bang Chan were delivered at home, by the traditional midwives. During 1952-53 we learned of two pregnant women who planned to go to the Minburi Health Center for delivery, but time did not permit them to carry out their plans. Some cases of prolonged or difficult labor were, [743] however, brought from Bang Chan to the Health Center, where a labor room and a delivery room were available in a separate wooden building. Facilities were very simple. Patients lay on

BANG CHAN

844 mats on the floor as most of them would have done at home.
[743] Relatives were welcome; indeed they were supposed to come and help.

164 12 Nature and Incidence of Illness and Injury, and Treatments Sought by Residents of Bang Chan. - Evidence concerning the nature of illness and injury in Bang Chan was obtained in connection with the clinical examination of school children and persons in the random sample of village households; from questions in two types of structured interviews with household heads: 1) in the entire village, and 2) in one hamlet, KY-7; and from the field notes of workers associated with the Cornell Thailand Project.

164 In connection with the clinical examination, information was obtained from heads of 30 of the 31 households whose members were examined (See schedule in Appendix A).[2] In this group, none reported any accident or injury, and 26 said that no member had been ill within the year. Illness was reported as occurring in 4 households only. In one of these, a 49-year old man reported loss of sensation over the extremities and other symptoms which led the physician in the research group to conclude that he had beriberi. As treatment, this man had used an herb recommended by a priest, a native medicine given him by a neighbor and had gone to a private clinic at Minburi where he received an injection.[1] In another family, a 39-year old man who had asthma, took an advertised remedy which he purchased from a drugstore. Two children in the third family had fever for 8 days, for which a traditional practitioner prescribed herbs. In the fourth family, a 1-year old child with eczema was taken first to a traditional practitioner, then to a private clinic in Minburi where he was given an injection.

164 128 On the basis of other observations, however, we believe that illness and injury are more common in Bang Chan than is suggested by the replies to this particular inquiry. For example, no mention was made in one of the households surveyed of a baby who had been too ill to be weighed and measured, when team members called, and who recovered in a day or two without outside help. Coming as they did at the end of the clinical examination which was new to most of those people, perhaps the questions asked seemed relatively unimportant. No attempt was made to probe beyond the person's reply to the questions as stated.

164 Replies to questions in connection with an intensive

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1. From casual observation, one is led to believe that the villagers have considerable confidence in "injections," although the nature of the injection received or desired, is not usually specified.

2 [see p.51 - Analyst]

757 to a second-class doctor in Minburi, then to a nearby Muslim
759 masseuse, then to a local traditional practitioner who gave her some jaa tom (cooked medicine). Another instance, recorded in the field notes, is that of a school teacher's baby who had abscesses on her head. The mother took her child first to Minburi, where she was given an injection and a sulfa drug to be taken orally. The child did not get well immediately, and before all of the drug had been taken, the mother took the child to a local traditional practitioner who gave her a decoction of herbs which was to be given by mouth. Thus in some cases, modern doctors were consulted first, and local traditional practitioners later, if relief was not as speedy as was expected. The experience in this one hamlet suggested a willingness to try a variety of treatments, and the existence of a considerable degree of confidence in modern medicine.

758 According to Ralis (1955), 213 of 335 household repre-
743 sentatives interviewed had visited a clinic or hospital. Of these, 156 had gone to Minburi, and 135 to hospitals or clinics in Bangkok, some having gone to both places. Of 250 hospital or clinic visits, 125 were for treatment or hospitalization; the bulk of the rest were to accompany patients or to visit hospitalized relatives or friends. No significant difference in reports about seeking treatment or hospitalization was found between groups of persons differing in literacy, or in socio-economic level.

164 Infectious disease. - The principal evidences of infectious disease noted in the course of the clinical examination for assessment of nutritional status were trachoma and smallpox scars. Occasional cases of ringworm and other fungus infection, and of pediculosis were observed by the physician.

When the 233 school children and 148 additional persons included in the random sample of village households are considered together, i.e. a total of 381 persons or more than one-fifth of the total population of the village, only 3% were found to have trachoma. Eleven of 13 cases found were among 237 children 7 to 14 years of age, i.e. an incidence for this group of 4.6%. Zimmerman (1931) reported 119 cases or 4.3% of all persons examined in Central Thailand, and 277 cases or 2.9% of persons examined in the whole Kingdom. Among the school children examined, however, he reported an incidence of 12.6%.

Of 381 persons examined in Bang Chan, only 10, or fewer than 3% had smallpox scars. Two cases only were in adults, the remaining 8 being among children of school age. Our records do not show when the most recent cases occurred in the village.
751 According to Zimmerman (1931), 88% of over 2200 school children examined had been vaccinated. No information was obtained concerning the proportion of residents of Bang Chan who had been

751 vaccinated but among school children the percentage is very high. During the survey period a health officer came to the Bang Chan elementary school to vaccinate children; and at that time at least one nearby resident, a school teacher's wife, brought her infant for vaccination.

164 Illnesses probably, in most cases certainly, of infectious origin, which were mentioned in the field notes, include the following, which are listed roughly in the order of frequency: skin disorders such as abscesses and boils, fever, respiratory disorders including colds and influenza, tuberculosis, "upset stomach," measles and diphtheria. Two cases of diphtheria with one death, occurred while the survey was in [744] progress. At this time health authorities came to the village to inoculate the children on a voluntary basis (Hanks et al. 1955). As already noted, malaria and typhoid (one case each), were mentioned as occurring during the year previous to the inquiry in Hamlet KY-7 (Hanks, 1954).

[759] [743] A number of references were made to history of cholera, smallpox and malaria, but these did not appear to be current threats. Two cases of severe diarrhea were called "cholera" but one was on the way to recovery the next day. The traditional practitioner who was asked to treat the other, urged that she be taken to the hospital, and himself accompanied the patient and family members. At the hospital, they were told that members of the family and neighbors should "get vaccinated and have their toilet covered."[1] No further mention of this case is made in the field notes, hence the correct diagnosis is not known to us.

Since a modern doctor was frequently not seen, diagnosis of disease was often uncertain. More often, major symptoms were described or the disorder was given a local name, for which there is no good English equivalent, such as various kinds of saang and lom.

Non-contagious disprders. - Among current non-contagious disorders mentioned in the field notes, in replies to questions on surveys, and in some cases observed by the physician, were the following, listed roughly in order of frequency: menstrual disorders, headaches, boriberi, cancer, asthma, eczema, nephritis, and rheumatism.

Accidents. - Accidents which were recorded in field notes include bites of dogs, spiders, leeches and snakes, falls from buffaloes and down ladders, burns, cuts, drowning and poison from drinking kerosene. Among the school children examined,

1. Field notes, S.S., April 29, 1954.

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• 743 #177 #178 [8. Institutional Care of the Sick: Equally important as agricultural innovations in raising the level of living of an area such as Bang Chan are the efforts to improve the health and welfare of the population. Since the thirties there has been a clinic in the neighboring market town of Minburi and some Bang Chan farmers used clinics and hospitals in Bangkok before that time. Only about a third (34 per cent) say they have never been to a clinic or a hospital; over a third (37 per cent) have themselves gone for treatment; about one fourth (23 per cent) report having brought a patient there; over one tenth (12 per cent) say they visited relatives there; and a few (3 per cent) say they went there for various other reasons.*

ANALYSIS OF DATA ON AGRICULTURAL INNOVATIONS

121 The central question to which the present analysis directs itself is: What are some of the factors which may be said to account for the fact that certain members of the community are willing to try out these innovations and to continue using them, while others are unwilling even to make the initial attempt? Is there some general pattern to be discerned among the several innovations? Is there any discernible clustering among them; that is, are some community members more "innovation-minded" than others, in the sense that if they try out or accept one innovation they are more likely to accept another? Or are these innovations accepted independently of each other? The following analysis of the survey responses attempts to shed some light on these and related problems.

Factors in Acceptance of Agricultural Innovations

241 402 #177 #178 Use of the small motor is basic to acceptance of other agricultural innovations. Although only a minority of the persons of Bang Chan report that they own a small motor, many more used this machine through joint ownership or borrowing. Indeed, knowing whether a person owns or uses such a motor is a useful indicator of his readiness to accept other agricultural innovations. If he owns or has used a motor, then he is about five times more likely than others to try fertilizer, about two and a half times more likely to try raising tilapia, and about one and a third times more likely to try straw mushrooms.

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[125] * The question: "Have you ever been to a clinic or hospital...? In what various places...? For what various purposes did you go ...?"

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228 And so much tendency may be discerned in the present data. (See
241 Table 2.)
244 TABLE 2. USERS OF HOSPITAL AND CLINIC FACILITIES SHOW NO SIGNIFI-
CANT DIFFERENCES IN RATES OF ACCEPTANCE OF AGRICULTURAL
INNOVATIONS

Agricultural Innovations	Percentage who have ever gone to hospital or clinic for treatment	Total cases
Mushrooms		
Tried them out	34%	(143)
Never did	30	(186)
Tilapia		
Tried it out	44%	(104)
Never did	36.	(225)
Water		
Tried it out	37%	(213)
Never did	34	(106)
Fertilizer*		
Tried it out	37%	(32)
Never did	34	(232)

* Farmers only

228 In the second place: use of the water is much less strongly
241 linked to use of mushrooms than the use of fertilizer or tilapia.
244 It may well be that there may be some common factor strongly under-
lying the decision to use the water on the one hand, fertilizer and
tilapia on the other, while the decision to try mushroom-growing
402 is relatively more "autonomous". A possible explanation for the
greater "autonomy" may be sought in the differential requirements
*177 for growing mushrooms compared with the requirements for adopting
*178 the other innovations.

Both tilapia and sulphates demand extra heavy work, care, an essential initial investment, and willingness to wait for a delayed return. An additional requirement for a successful and continuous pay-off from both these innovations may be an aptitude to follow rather complicated instructions. In the case of mushroom growing, however, the initial investment is relatively small, the labor may be tedious but is not heavy, no protracted or complicated care is involved, and the results of the effort are relatively quickly realizable.

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426 One is tempted to speculate about the significance of this re-
402 lationship. One possibility deserves further investigation if the data were only available. If one important reason for incurring debts is to secure or to replace capital equipment, then those farmers more willing to make a capital investment, even though they incur a debt, are more likely to use the motor. Conversely, farmers unwilling or unable to contract debts for a basic improvement in their capital equipment might be the ones less likely to adopt an innovation such as the motor.

Other Factors

121 A number of other factors which conceivably might have been expected to differentiate those who tried out these innovations from those who never made an attempt to use them were investigated and proved to have no differentiating power. Factors such as age and family size, for example, were examined to see whether differential acceptance existed among younger compared with older age groups, or small as compared with large families. No such differences appeared. In the same way, the survey's rough measures of community integration and identification, certain religious beliefs and superstitions, certain personality traits, of knowledge of political figures, and willingness to perform industrial work likewise revealed no differential rates of acceptance when groups were compared.

*178 USE OF MODERN HEALTH FACILITIES

• 743 Improvements in agricultural production must certainly not be
75 viewed as the only efforts worthy of attention to raise the level of living in Bang Chan. Equally important are efforts to train the population to use modern health practices and facilities.

Hospitals have been available since the twenties in Bangkok and a clinic in Minburi since the thirties. Despite these facilities, much curing continues in the traditional way through priests or certain farmers of the locality who have learned from other practitioners to compound medicines, set bones, deliver babies and expel demons.

743 In the present survey the majority of respondents reported
[125] that they have sometimes in their lives used hospital or clinic facilities. To the question, "Have you ever been to a clinic or hospital?" 63 per cent answered affirmatively. Less than half of those who replied indicated having gone for their own treatment or hospitalization, the remainder for other reasons. The distribution of responses is given below.

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[125]

"Have you ever been to a clinic or a hospital? (If yes) For what various reasons?

No, never went	37%
Yes	63
For treatment or hospitalization	37*
To bring a patient there	23*
To visit relative(s) or friend(s)	14*
Other reasons	3*

* These responses should not be cumulated since some respondents reported more than one reason for going.

If, indeed, the responses to this question are to be considered a valid index, one would expect respondents who reported having used these facilities also to report a higher incidence of visits to Bangkok, where the available hospitals are located. This expectation is confirmed by the responses to the two relevant questions.

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TABLE 25. INCIDENCE OF TRIPS TO BANGKOK IS HIGHER AMONG RESPONDENTS WHO REPORT VISITS TO CLINIC OR HOSPITAL

"In the past year, how many times did you go to Bangkok...?"	Have you ever been to a clinic or a hospital?"		
	Yes, for treatment (123)	Yes, for other reasons (91)	No (118)
Ten or more times	32%	31%	17%
Two to nine times	40	37	29
Once	13	12	23
Never	15	20	30

The present study now asks what factors are associated with use of modern health facilities.

Demographic Characteristics of Hospital Users

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It is important to answer one question in advance of more detailed analysis. Does an affirmative reply to the question, "Have you ever been to a hospital or clinic" measure need for medical care rather than acceptance of modern health practices.

No direct measure is available of the actual state of health of the survey respondents. But, assuming that older people need medical care more than younger people, then we have an indirect index of whether or not hospital use is higher among people of advanced age. The data show no such relationship.

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TABLE 26. INCIDENCE OF HOSPITAL AND CLINIC VISITS IS SIMILAR FOR ALL AGE GROUPS

Have you ever been to a clinic or a hospital?	20-29 (41)	30-39 (80)	40-49 (83)	50-59 (66)	60 or over (57)
No, never	31%	31%	34%	37%	41%
Yes, for treatment	39	44	39	31	31
Yes, for other reasons	29	25	25	32	28

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If the responses reflect primarily the need for medical care, women who bear children have a greater need for medical care than men, and one would therefore expect hospital use to be higher among women than men. But again, this hunch is not clearly borne out by the results.

TABLE 27. INCIDENCE OF HOSPITAL AND CLINIC USE IS SIMILAR FOR MEN AND WOMEN

Have you ever been to a clinic or a hospital?	Women (90)	Men (245)
No, never	41%	35%
Yes, for treatment	31	39
Yes, for other reasons	28	26

There is, then, reasonable justification for inferring that reported use of clinics or hospitals reflects predisposition to use modern health facilities and not simply a need for medical care.

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Economic Level

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Although higher economic level was linked to the principal agricultural innovations, it is not related to use of hospital or clinic facilities.

Literacy

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On the other hand, just as literate persons were more disposed to use the major innovations (p. 19), in the same way those who can read and write report a greater incidence of hospital or clinic use.

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TABLE 28. INCIDENCE OF HOSPITAL AND CLINIC USE IS HIGHER AMONG LITERATE VILLAGERS

Have you ever been to a clinic or a hospital?	Literate (163)	Illiterate (169)
No, never	27%	44%
Yes, for treatment	42	33
Yes, for other reasons	31	23

Apparently here, too, exposure to sources of information predisposes the inhabitants to greater acceptance of modern health practices.

Exposure to Mass Media

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Again, as with agricultural innovations, exposure to the media of mass communication is linked to acceptance of modern health practices.

TABLE 29. INCIDENCE OF HOSPITAL AND CLINIC USE IS HIGHER AMONG VILLAGERS EXPOSED TO MASS MEDIA

	Movie Attendance		
Have you ever been to a clinic or hospital?	Ten or more times (161)	4-9 times (60)	Three times or less (109)
No, never	25%	32%	55%
Yes, for treatment	48	33	22
Yes, for other reasons	27	35	23

	Radio Listening		
	Daily or occasionally (111)	Seldom (148)	Never (60)
No, never	20%	39%	58%
Yes, for treatment	52	33	18
Yes, for other reasons	28	28	23

Mass Media as a Substitute for Literacy

It will be recalled (see p. 21) that the mass media seem to act as a substitute for literacy. The same relationship reappears here. The table following indicates that literacy links with use of hospitals or clinics only when exposure to mass media is rare. [212]

*178 With more frequent exposure to these media, the link between literacy and use of hospitals or clinics decreases.
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TABLE 30. EXPOSURE TO MASS MEDIA IS LINKED TO HOSPITAL USE, ESPECIALLY AMONG ILLITERATES

	Literate (Proportion reporting use of hospital or clinic)		Illiterate (Proportion reporting use of hospital or clinic)	
Movie Attendance				
High (ten or more times)	78%	(103)	71%	(38)
Low (nine times or less)	64	(36)	48	(111)
Radio Listening				
High (listen "frequently")	81%	(48)	79%	(42)
Low (listen "seldom or never")	66	(88)	48	(122)

*178 Acceptance of Urban Practices

369 Table 17 showed that acceptance of certain urban practices was
743 linked to acceptance of the major agricultural innovations. Acceptance of urban practices is also associated with use of clinics and hospitals. Use of modern medicine is significantly higher among those who no longer eat with their hands than among those who do.

TABLE 31. ACCEPTANCE OF URBAN PRACTICES IS LINKED TO USE OF CLINIC AND HOSPITAL FACILITIES

	Customarily Eat With Fork or Spoon (84)	Hands (343)
Have you ever been to a clinic or a hospital?		
No, never	26%	39%
Yes, for treatment	48	33
Yes, for other reasons	26	28

*178 Contact Outside Bang Chan

369 It has already been reported (see Table 23) that hospital and
484 clinic use is higher for those who, during the past year, have
743 paid more frequent visits to Bangkok. This correlation may seem, at first, spurious, since the main centers of medical care are situated in Bangkok. But the questions asked about contact with Bangkok for the one-year period preceding the survey, and visits to the hospital or clinic over an unspecified time period chose

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that the relation of these two indices appears valid. In addition there is further substantiation of the hypothesis that contacts with the world outside Bang Chan are linked with use of modern medical practices: The incidence of such use is significantly higher among those who have visited the airport than among those who have never done so.

TABLE 32. INCIDENCE OF HOSPITAL OR CLINIC USE IS HIGHER AMONG THOSE WHO HAVE VISITED THE AIRPORT

	Trips to the Airport: None (148)	One (58)	Two or more (134)
Have you ever been to a clinic or a hospital?			
No, never	41%	36%	28%
Yes, for treatment	35	40	39
Yes, for other reasons	24	24	33

Moreover, additional support for this contention is found in the higher incidence among hospital and clinic users, of knowledge of the world outside the community.

It is reasonable to assume that greater contact with the capital city is likely to increase the farmers' awareness of its major public figures. And, indeed, the incidence of hospital and clinic use is highest among those who are able to name correctly certain of Thailand's major public figures, as the Prime Minister and the National Police Chief.

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TABLE 33. INCIDENCE OF HOSPITAL OR CLINIC USE IS MORE WIDESPREAD AMONG VILLAGERS WHO ARE AWARE OF THAILAND'S PUBLIC FIGURES

	Have you ever been to a hospital or a clinic? No, Never	Yes, for other reasons	Yes, for treatment	Total 100%
...Who is now the Prime Minister of Thailand ...Would you please tell me his name?				
Names Prime Minister	27%	30%	43%	(192)
Does not know	48	23	29	(140)
...Who is now the Chief of Police of Thailand...Would you please tell me his name:				
Names Chief of Police	23%	31%	46%	(166)
Does not know	48	23	28	(164)

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* 743 Use of Health Facilities and Other Factors Associated With
241 Agricultural Innovations
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426 Although use of the basic agricultural innovations was shown to be linked to breadth of contacts within the community, on the one hand, and to indebtedness, on the other hand, the association between these factors and use of modern health facilities, although showing the same tendency, is not statistically significant. For the sake of completeness, the figures are reported below:

TABLE 34. NO RELATIONSHIP BETWEEN INDEBTEDNESS OR INTERNAL SOCIAL CONTACTS AND USE OF HOSPITALS AND CLINICS

	"Have you ever been to a clinic or a hospital?"			
	No, Never	Yes, for treatment	Yes, for other reasons	Total 100%
Social Contacts				
"More friends"	31%	35%	34%	(62)
"The same"	40	35	25	(134)
"Fewer friends"	32	41	27	(94)
Do you now have a debt?				
No	40%	32%	28%	(140)
Yes	33	41	26	(193)

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SUMMARY

1. In the community of Bang Chan in Central Thailand, various factors are studied statistically in order better to determine the conditions of acceptance of selected agricultural innovations and conditions for using the facilities of modern medicine in clinics and hospitals. Four agricultural innovations were selected, viz. gasoline motor, raising of fish (tilapia), use of fertilizer, and mushroom culture.

2. The present study was concerned with the initial adoption or trial of innovations, rather than the continuing use of these innovations or the merging of the new with the old features of the culture.

3. While adoption of the gasoline motor was associated with all other agricultural innovations, no generalized acceptance of the new was found because: a) adoption of the gasoline motor bore little or no relation to use of non-agricultural innovations such as hospital and clinic facilities; and b) adoption of gasoline motors was only weakly associated with raising of mushrooms.

4. A cluster of traits including high motivation and sizable capital outlay was associated with the use of the gasoline motor.

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and acceptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike accepters of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

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32. Last night, when you ate at your own house, did you eat with your hands, with fork and spoon, or with spoon alone? [125] [264]

9. Hands	242
X. Fork and Spoon	11
Y. Spoon alone	73
O. Unascertainable	7

33.a. Have you ever been to a clinic or a hospital? [743]

1. Yes	214
2. No	119

b. IF YES: In what various places?

3. Minburi	156
4. Bangkok	135
5. Other place	7
6. Unascertainable what place.	

c. IF R HAS BEEN TO CLINIC OR HOSPITAL: For what various purposes did you go?

7. Treatment or hospitalization	123
8. To bring a patient there	77
9. Visit relatives or friends	45
X. Other reason, specify_____	11
O. Unascertainable	—

34.a. During the last year, did it occur to you frequently, sometimes, or never that you had difficulties falling asleep? [513]

1. Frequently	73
2. Occasionally	151
3. Never	109

b. During the last year, did it occur to you frequently, sometimes, or never that you had a headache? [164]

4. Frequently	50
5. Occasionally	174
6. Never	109

c. During the last year, did it occur to you frequently, sometimes, seldom or never that you lost your appetite?

7. Frequently	50
8. Occasionally	173
9. Never	110

d. During the last year, did it occur to you frequently, sometimes, or never that your hands trembled so as to bother you? [164]

X. Frequently	17
Y. Occasionally	93
O. Never	218
— No Answer	5

e. During the last year, did it occur to you frequently, sometimes, or never that your heart beat so fast as to bother you?

1. Frequently	36
2. Occasionally	154
3. Never	141
— No Answer	2

854 278 medications were taken internally, sometimes being painted on the tongue with a feather; but two preparations were applied over the abdomen. Some of the medications were described as "stomach medicine" or "to prevent flatulence." Five different kinds of proprietary medicine were given to 18 infants. In 13 instances, the medicine given was clearly homemade and included as major ingredients items such as flattery fruit, (3)luug (1)yauau; cobra oil; horseshoe crab; and buffalo skin. The nature of the medicine, whether homemade or proprietary, was not clear in 8 instances. Usually medicine for infants was mixed with honey, but in 2 cases, alcoholic liquor was used as it customarily was for the mother.

Six newborn infants in this series were given no medicine. One of these was born at the Health Center. One of the other 2 infants delivered at the Health Center was given homemade medicine later, and no information was obtained on the third. Eye prophylaxis[1] was probably routine at the Health Center, as, in 2 of the 3 cases delivered there, informants knew that drops had been put in the infant's eyes. Traditional midwives, however, did nothing of this sort.

Water for Drinking and Bathing.

853 312 For the newborn infant as well as for the mother, water for drinking and bathing was boiled and was usually used while hot, often being kept warm in a vacuum bottle. Either rain water or canal water might be used depending on what was available at a given season. The water was dribbled from an adult's fingers into the infant's mouth. When the mother was no longer lying by the fire, boiled water was not considered essential for the infant. Nevertheless, over half the infants seen from this time up to 3 months of age were being given boiled water to drink. After 6 months of age this was rare.

853 855 312 In one instance, during the time when a younger sibling received boiled canal water, a 21-month old child was given boiled water also. At the time of a later visit both of these children were drinking unboiled canal water. In another case an orphaned boy's formula was made up with boiled water, although

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[744] [751] [731] 1. Vaccination for smallpox was the only modern preventive treatment which we knew to be used in Bang Chan in the absence of an epidemic. Since a severe epidemic of smallpox with many deaths ten years previously, health officers came to the Bang Chan elementary school once a year to vaccinate children, and other residents of the community could be vaccinated at this time. Four of the young children whom we visited periodically were vaccinated, at 4 months, 8 months, 1 and 2 years of age, respectively.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

essentials not atypical of the region. Instead of villages being organized administratively on the basis of natural social groupings and demarcations—that is, social centers and groups with which people feel a primary identification, in Bang Chan's case the local Buddhist monastery and government primary school—so that governmental and social units are isomorphic, they are gerrymandered into highly arbitrary administrative units. Thus the village of Bang Chan is comprised of seven *muubaan* or hamlets, at the head of which are seven hamlet headmen; these hamlets are located in two different *tambon*, or communes (four in one commune, three in the other) headed by two commune headmen, neither of whom lives in Bang Chan; the two communes are located in two different districts headed by two different district officers and their staffs; the two districts fortunately are in a single province, Phranakhoon, the same administrative unit in which the metropolis of Bangkok is located. Yet the people who reside in these varying hamlets located in different communes and districts all perceive themselves as living in the single village of Bang Chan. The fundamental organizational problem here is that since the sources and lines of governmental authority do not follow the lines of the natural Bang Chan community, jurisdictional conflicts and confusions arise to threaten the effectiveness of those community-wide programs that occasionally may be initiated. For example, during a diphtheria immunization campaign in the village (Hanks and Hanks 1955), the public health officer from one of the district offices was reluctant to immunize all the children of Bang Chan on the grounds that some of them came from hamlets outside his district's jurisdiction; he yielded, as the Hankses note, only when a perceptive villager pointed out that if germs knew no boundaries why should he?

Not all villages of the Central region have such real or potential administrative difficulties. (And Bang Chan does not have them too frequently either, principally because the government does not initiate too many community service programs.) However, the basic organizational principle which admits them—that houses are grouped together as administrative "villages" on the basis of conceptual neatness rather than socially functional criteria—is a common feature of the administrative structure of the Central Plain.

The foregoing account describes some basic culture patterns which Bang Chan shares with other villages of either the region or the nation. In addition to these broader patterns, Bang Chan has certain traits which inevitably refer to local village conditions and contingencies. For example, the most active and viable social unit in Bang Chan beyond the familial level is the order of Buddhist monks associated with the monastery. It is the only organization within the village that has been successful in mobilizing community activity (Sharp *et al.* 1953), although much of this activity has

14 observed in 9% of the school children 7 to 14 years of age who were examined, and in about 6% of the males and 25% of the females over 15 years of age. Of 337 persons examined, however, 2 only, one child and one adult female, were found to have hemoglobin values under 9.75 g per 100 ml.

744 Modern sanitation was practically unknown in Bang Chan.
514 Few families had covered pit latrines or made any effort to
164 cover excreta. Intestinal parasitism was common. Garbage
364 might be fed to animals, but was frequently thrown into the canal or elsewhere about the compound. Provisions for protecting foods from contamination were meager.

When rain water was available, it was used for drinking, but several months each year water from the canals or fish ponds was used without prior treatment. For washing vegetables, cooking and washing dishes, canal and pond water was used throughout the year.

744 A few changes in sanitary practices, if they could be
751 brought about, might reduce some kinds of illness substantially. For example, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

758 Modern medicine will probably not be readily or
121 generally available to a majority of the residents of Bang Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

BANG CHAN

751 vaccinated but among school children the percentage is very high. During the survey period a health officer came to the Bang Chan elementary school to vaccinate children; and at that time at least one nearby resident, a school teacher's wife, brought her infant for vaccination.

164 Illnesses probably, in most cases certainly, of infectious origin, which were mentioned in the field notes, include the following, which are listed roughly in the order of frequency: skin disorders such as abscesses and boils, fever, respiratory disorders including colds and influenza, tuberculosis, "upset stomach," measles and diphtheria. Two cases of diphtheria with one death, occurred while the survey was in [744] progress. At this time health authorities came to the village to inoculate the children on a voluntary basis (Hanks et al. 1955). As already noted, malaria and typhoid (one case each), were mentioned as occurring during the year previous to the inquiry in Hamlet KY-7 (Hanks, 1954).

[759] [743] A number of references were made to history of cholera, smallpox and malaria, but these did not appear to be current threats. Two cases of severe diarrhea were called "cholera" but one was on the way to recovery the next day. The traditional practitioner who was asked to treat the other, urged that she be taken to the hospital, and himself accompanied the patient and family members. At the hospital, they were told that members of the family and neighbors should "get vaccinated and have their toilet covered."[1] No further mention of this case is made in the field notes, hence the correct diagnosis is not known to us.

Since a modern doctor was frequently not seen, diagnosis of disease was often uncertain. More often, major symptoms were described or the disorder was given a local name, for which there is no good English equivalent, such as various kinds of *saang* and *lom*.

Non-contagious disorders. - Among current non-contagious disorders mentioned in the field notes, in replies to questions on surveys, and in some cases observed by the physician, were the following, listed roughly in order of frequency: menstrual disorders, headaches, beriberi, cancer, asthma, eczema, nephritis, and rheumatism.

Accidents. - Accidents which were recorded in field notes include bites of dogs, spiders, leeches and snakes, falls from buffaloes and down ladders, burns, cuts, drowning and poison from drinking kerosene. Among the school children examined,

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1. Field notes, S.S., April 29, 1954.

251 One family stored cooked food in a basket which was hung from the ceiling. One homemaker frequently covered such foods with a basket, and in one instance a homemaker, who usually took no precautions to protect cooked foods, used a basin to cover food left on a table.

271 312 Source and Treatment of Water For Drinking and Culinary Purposes. - From the time the dietary survey was begun, on May 26, 1953, through January 18, 1954, all families used rain water for drinking.

Of the 14 survey days, spaced at about weekly intervals, between January 28, 1954 through May 8, 1954, canal water was used for drinking on 7 days, water from fish ponds on 4, and rain water on 3 days. No distinction was made in source of drinking water for children and adults.

312 744 [846] All families used canal water for washing vegetables, cooking, and washing dishes, on the survey days from May 26, 1953 through March 18, 1954. On the 6 survey days between March 24 and May 8, 1954, 4 families used water from the fish pond for these purposes. In no instance was the water treated in any way before being used, although alum is known to be used, at times, in the village, to settle or clear water, and boiled water is given mothers and infants to drink during the post partum rest period.

514 Disposal of Excreta. - Of 30 families from whom information was obtained, 20 had pits for toilet use, only one of which was equipped with a cover. One other family had a flush latrine. Of the 8 families who had no special place which was used for toilet purposes, 4 reported that family members urinated on the compound, 3 that they used the fields, and 1 that either compound or field might be used for urination. One reported that the compound was used for defecation as well as urination; the remaining 7 said they went to the field to defecate.

Six families with pit latrines covered feces in some way: 3 used earth, 2 ashes, and 1 either earth or ash. A majority of those who used either an uncovered pit or had no designated place, reported that no attempt was made to cover feces. From six families, no information was obtained on this point. Various materials were mentioned as being used in the manner in which western peoples use toilet paper. Cocoanut husks were mentioned most frequently (25 times), and other materials in this order: paper (newspaper 9 times, straw paper once), wood (4 times) and water (3 times).

From the information available, custom and convenience rather than sanitary considerations appear to determine practices that are followed. If improved practices are

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SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kan (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

• 75 An ill individual made a preliminary self-diagnosis to ascertain which was the pertinent specialist to consult. A quick cure occurred if the diagnosis were correct, because the specialist then had the exact curing agent and magic for that disorder. If the first mɔ̌ were unsuccessful, the patient moved on without embarrassment to another. In fact, a person might be a-curing with 2 or 3 mɔ̌ at once, and a modern doctor besides (cf. Hauck, 1958:37):

> "She goes to Mɔ̌ Suk who is good for spirits, and to Mɔ Plung at Lan Pakachet who is good for headaches and vomiting. Two years ago her child was sick with ŋan chak and was cured by Mɔ̌ Suk. First she took the child to Suk but a few days later went to Sawad at Lolae because she was afraid the child would die. Sawad gave tablets. She did not revisit either mɔ̌ because the child recovered. Mɔ̌ Suk helped most because he had experience in magic" (SS.).

[571] For reasons of convenience, however, people also developed lasting relationships with particular mɔ̌, usually the nearest, or a kinsman, to whom they turned first for medical help.

75. 816 Medicines cured either by direct rectification of deficiencies or excesses or on a principle of counter balance. Their effectiveness was increased by incantations. A rhinoceros in massive presence caused earth excess in the form of cholera (Bangkok Calendar, 1869:73), but a bit of its bone restored earth deficiency. Cobra was a direct ingredient for heat, but only sour tastes gave water element. A mɔ̌ described the medical theory behind curing techniques for the heat-rash, boils and fever sometimes suffered after childbirth:

> "If the body is hot, fire is in excess, by which the other elements are heated. Thus the blood cannot move freely, and cells are deprived of their normal blood supply. The cells die, thus creating a boil or abcess. If the fire element is higher, the water of the body is lowered to a deficiency. Drinking water alone will not restore the water level. Sour tastes must be given. If the patient is thirsty, the lung is hot."

Influences on Health

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In Bang Chan, a discussion of sickness and health merely in terms of element balance would be true but insufficient, or even superficial. After all, whether manipulated by oneself or by a professional curer, elements could only be controlled within certain limits. Far deeper questions were posed, probing the ultimate nature of health, life, and death. What determined the particular proportions of a person's 4 elements with which he had been born, and whether he had, say, a preponderance of wood from Jupiter or gold from Venus? The immediate answer of astrological confluences on the date of birth would be true, for each day had its own qualities and aspects, but it was not enough. Why had he been born on that date to that set of governing factors? In life, why did one person meet the circumstances that created illness, while another lived in glorious health? The answers to these questions must be sought in the Buddhist moral and cosmic beliefs.

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The Buddhist universe operated on a principle of immutable law. Each person received his just due, suffering for his own sins, enjoying reward for his virtue. There was no personified deity to help, forgive, or blame. Moreover, attachments were the cause of sorrow. Because existence was fraught with desires, all life was basically painful. Even flashes of happiness by their cessation caused sorrow.

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In this universe and on this earth, individuals, each a unique and independent entity, were born to live and die, over and over again, throughout eons of time. They bore no relation to each other. Separate and autonomous, each was in charge of his own destiny. All beings formed a single grand scale of existence from demons in hell, through such lowly creatures as worms and insects, upward through dogs, cats, buffaloes, and elephants to mankind, then on up to angels and gods in the last paradises before the peace of Nipphān (Nirvana).

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The insight of the Buddha showed the way to break the sorrowful eternal cycle of rebirth and reach Nipphān. The Buddha perceived that meritorious behavior caused one to progress up this ladder of existence toward freedom from incarnation. In each life merit (bun) could be accumulated by compassionate behavior: caring for priests, and being kind and generous to persons less able to care for themselves. With merit one's next life was happier and freer of restrictions. A dog had more merit than a worm, a buffalo than a dog.

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Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

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Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire. For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

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Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous magical protective needle.

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"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments, modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1955:185-186). It was sometimes better not to claim competence outside these customary lines. One man said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease.

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Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "women are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

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An old woman summed up significantly 2 attitudes saying, "In the old days people made more merit and so lived longer, but because we had no hospitals, the children died younger." The relation of good health and longevity to proper religious and moral behavior was fundamental in Bang Chan. If merit did not suffice, medical attention, traditional or modern, could not prolong life. Children, however, were tender (อ่อน) and easily prey to sickness.

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Traditional care could help them, but being delicate and tender like city people, children could also be helped by modern hospital care.

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Between the 2 systems people sensed little conflict, for each patient made a preliminary diagnosis of his symptoms and sought the type of assistance his diagnosis and convenience indicated. หมอ with some knowledge of both systems might offer their patients a choice of remedy. With the right diagnosis, magic, and medicines, a quick cure was expected. If not forth-coming, people were disappointed and moved to another specialist for his help. Modern medicine merely took its place as one more recourse.

The basic handicap of modern medicine was that it had no magical resources or holy water. "Its effectiveness is limited to the properties of the ingredients." Old medicine on the other hand had, in addition to these properties, "The strength of the หมอ's incantation plus the power of every person who learned and used that incantation, back to the time of its discovery, centuries ago." Thus where the medical schemes offered the same specialty, as in fevers, bone-setting, or obstetrics, the old appeared to offer more resources.

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Besides its deficiencies in magic and strength-making attributes, modern medical care had other drawbacks. First, it was not accessible. A trip to Bangkok for medical purposes involved far more time than a day. Minburi's Health Center was a feasible trip, even for a woman in labor (stays ranged from 6 to 24 hours). Home arrangements for tending children, feeding buffalo, and other chores were less demanding. Bang Chan's eagerness for local modern care was shown when a Bangkok physician visited Bang Chan for a few times as part of a nutrition study. He was besieged with private requests for medical advice. Secondly, modern medical care was expensive. In Bangkok, after the expense of getting there, taxis, food, and housing costs for accompanying relatives, hospital, and doctor's fees sometimes meant losing the family gold and even land. Minburi's costs were closer geared to farm income, but medicines appeared costly. "Modern drugs taste and act better, but the poor have to use the old." Third,

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743 Chan during a period of residence in Bangkok was delivered
844 at the Women's Hospital and at a later pregnancy at the
178 Mīnburī Center. With her last baby, however, she elected
[759] to be delivered at home by the local midwife as more convenient in order to assure from her bed supervision and proper care for her other children. One young woman of very high social and economic standing preferred to import a midwife from a community six kilometers down the canal, and bear her child in her own home rather than attempt getting to a hospital.

[845] Moreover, basically the Mīnburī Health Center was seen as a place for sick people, while normal childbirth was not a medical matter. To plan ahead for medical care there was to invite an abnormal delivery. The Center also suffered a poor reputation for success because difficult cases, hopelessly advanced, were the usual ones brought in. "At the Center are many ghosts," people said.

743 Some comments were genuinely favorable. The cleanli-
759 ness of the hospital was greatly appreciated. Anyone who
178 witnessed the skill of the doctor or nurse-midwife held it in respect.

• 75 Techniques of delivery were sometimes mistrusted,
844 sometimes admired. "They pull out the child with their
743 hands, which is dangerous." "The fecal pump is unneces-
178 sary." "One may not crawl during labor." A mɔ̄-midwife who witnessed the nurse-midwife at work said approvingly, "She can force a baby out, but our midwives can only press harder," and "The hospital knows when a baby will come." The stopping of the flow of birth fluids by an injection was resented as affecting strength adversely, yet the injection that "made the placenta come so fast I couldn't notice it," or "gave the mother strength when the baby was stronger than she" was liked. The pills for pain were enthusiastically received. The hospital's closed windows "protected the baby from wind element," but the journey home dangerously exposed it and the mother to cooling wind. The dietary recommendations during recovery appeared wrong: eggs, which were "too cooling," or fruit, which "gave no strength." The suggestion of a nurse that scissors be used to cut the cord was resented as uncomprehending of village living problems ("we haven't any!" and "scissors always rust") and also as unwise ("rust gives tetanus poisoning").

75 Another criticism was the lack of personal warmth and
844 pity manifested by modern physicians and nurses, unlike
178 the attentive, reassuring mɔ̄. By forbidding abdomen-pressing, they were accused of "not doing enough," even of

"not wanting to help." The mother and baby were seen as having to fend for themselves. The very confidence built up in modern medications led to a conviction that doctors maliciously withheld available, effective medicines. "She died at the Center because she needed medicine but was not given any." Personality factors sometimes were involved: one doctor was considered incompetent, fearful of complicated obstetrical cases, and brutally indifferent to a countryman's views and circumstances--("Since we have no room, why don't you charter a bus to take your parturient wife to Bangkok?"), whereas another was friendly and wise. Since doctors were part of the respected government hierarchy which enjoyed superior knowledge and status, and also of the supposedly compassionate medical tradition, they were expected to be competent, kind, and protecting. Those who failed in winning confidence undermined the status of modern medicine.

The midwives themselves thought of the Minburi Center not only as a recourse if a case were in deep trouble, but also as a personal convenience. One male midwife, who was also a headman, and carpenter-contractor, was often too busy to stay with a woman in prolonged labor. To turn her over to another midwife other than a kinsman would damage his reputation. Knowing Minburi well, he found the Center a convenient solution to his dilemma. He had respect for the nurse-mid wife's skills, which he had witnessed, and regarded the doctor as a colleague on his own level, a view probably not reciprocated. The women midwives, too, always considering themselves at bottom volunteers, when faced with pressing home chores and the "impossibility of turning a relative over to another midwife," utilized the impartial service of the nurse-midwife. One cloud impeded the female midwives from making full use of the occasion as an opportunity for observation and so instruction. They refused to identify themselves as midwives out of fear of legal sanctions. Having neither taken the course prescribed by the government for "ancient" midwives nor paid the fee, they were not licensed. Thus, they lived in dread of fines if their calling became known outside the community. They knew they were permitted to deliver babies within the family, but outside those rather hazy boundaries, they took refuge in an old view, "I am not a midwife. I only help out of pity."

All in all, the people of Bang Chan had fitted modern medicine into their broad medical scheme where it could be accepted on its merits, if not blocked off by inconvenience, high cost, and discourtesy.

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402 One is tempted to speculate about the significance of this relationship. One possibility deserves further investigation if the data were only available. If one important reason for incurring debts is to secure or to replace capital equipment, then those farmers more willing to make a capital investment, even though they incur a debt, are more likely to use the motor. Conversely, farmers unwilling or unable to contract debts for a basic improvement in their capital equipment might be the ones less likely to adopt an innovation such as the motor.

Other Factors

121 A number of other factors which conceivably might have been expected to differentiate those who tried out these innovations from those who never made an attempt to use them were investigated and proved to have no differentiating power. Factors such as age and family size, for example, were examined to see whether differential acceptance existed among younger compared with older age groups, or small as compared with large families. No such differences appeared. In the same way, the survey's rough measures of community integration and identification, certain religious beliefs and superstitions, certain personality traits, of knowledge of political figures, and willingness to perform industrial work likewise revealed no differential rates of acceptance when groups were compared.

*178 USE OF MODERN HEALTH FACILITIES
743 Improvements in agricultural production must certainly not be viewed as the only efforts worthy of attention to raise the level
• 75 of living in Bang Chan. Equally important are efforts to train the population to use modern health practices and facilities.

Hospitals have been available since the twenties in Bangkok and a clinic in Minburi since the thirties. Despite these facilities, much curing continues in the traditional way through priests or certain farmers of the locality who have learned from other practitioners to compound medicines, set bones, deliver babies and expel demons.

743 In the present survey the majority of respondents reported
[125] that they have sometimes in their lives used hospital or clinic facilities. To the question, "Have you ever been to a clinic or hospital?" 63 per cent answered affirmatively. Less than half of those who replied indicated having gone for their own treatment or hospitalization, the remainder for other reasons. The distribution of responses is given below.

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775 Man was higher on the scale than woman.[20] Progress toward
[562] Nippan was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phī) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good health and long life, a kindly personality, many fine children, wealth, high status, intelligence, and luck. Astrologically, he was born on a day
[775] of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death, deformities, unhappiness, poverty, and had a cruel nature.
[153] Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

• 751 The long-range protection against all illness was to
789 live virtuously and make merit. However, to guard against
[547] temporary supernatural intrusions, everyone possessed and
[782] usually wore Buddha lockets and other amulets. Some
[304] underwent tatooing, men having Cambodian or other figures, women, 2 small dots tatooed on the torso under the arm.

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20. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

843 [775] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phi tai thang klom, caused "the worst of all possible deaths." The phi krasu spirit,[25] entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). [753] The supernatural disease missile called "khun" might also strike. "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extra pain occurring just before the baby comes out." To protect themselves, women wore extra talismans or had 2 dots tattooed under the arm. [751] [304]

843 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 2 visible teeth, which indicated it was a non-human, yak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of women giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (McF.46). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb sat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

Lek watched over the baby, while Sâi turned towards DÛan. "One looks to the mother first, unless the baby needs help more." First Sâi gave DÛan medicine for the placenta. She rubbed her hands with alum and tried unsuccessfully to work down (klôm) the slippery placenta. Then she told DÛan to get on her hands and knees, and exert all the force she could. DÛan crept around the floor but it still did not come. Sâi then tried hitting DÛan's back 3 times with DÛan's own pillow. Finally she gave DÛan a leaf of betel pepper to chew, hoping to induce a wind-producing nausea and so push out the placenta. In the end DÛan resumed her sitting position and it was pressed out. So the baby would not get pimples, the placenta was cleaned carefully, then put into an old pot, mixed with 7 dishes of salt, and set aside.

While Lek sewed up the partially completed cushion, Sâi laid the baby along her legs, and washed him with soap. Sometimes she washed the baby before the cord was cut, if the placenta came quickly. She used salt to remove the greasy fat from his body, though would have preferred "fermented tamarind to protect him from pustules that enlarge to sores (rók phumphóng)." "Soft tissue like a stomach covering his head! What a good sign of progress and fortune!" she exclaimed. She powdered him with face powder (dinsôphóng), and painted his abdomen with turmeric,[34] "so wind will not make him cry." Covering him with a little piece of old cloth, she laid him on Lek's old winnowing tray (kradong).

It was the moment to winnow (rôn) the baby, and link it to home and family. While Lek got the holy unsun cord, others placed on the tray with the baby all manner of traditional things to influence the progress and well-being of the child during his lifetime. Sâi put on the phlai, the clod of soil, and the tapered bamboo she had used to cut the cord "because they will never be used again," but actually these things had a far deeper meaning to all present. Song laid on a school exercise book and pencil, so that his son would have knowledge and a good memory. Mî got a needle for sharp wit. If the baby had been a girl, the needle would have given sewing skills. When all was in readiness, DÛan had to decide on the ones to raise the child aloft, catch the tray as it was dropped, and bless him as the holy thread was tied on. She had to choose these persons carefully, for the child

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34. Other mixtures (used also on the mother) were lime-bergamot lemon; or phlai (if possible the one on which the cord was cut), wînnan (acorus calamus) (Textor:84-86) and nahâthing (asafoetida) with burned betel leaf. These were all to keep out wind.

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)dzeeseng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chaauun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol in this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

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One other aspect of (l)ngaan which should be mentioned
952 in connection with food and health is the opportunity for con-
796 tamination of food. The villagers did not associate sanitation
• 751 with health, hence the hazards of a community meal which many
751 persons helped to prepare were many. Two incidents observed the day before an ordination in early April, will illustrate. In the final stage of making Chinese noodles, rice flour paste was extruded through a perforated disk into an enormous pot of boiling water. When done, the product was removed with a fish net, and plunged into the canal to cool, after which women helpers spread it out on banana-leaf covered trays. Dishes were also washed before use in the canal, which was then too low for boats. Since, however, many people drank untreated canal water at this season (see p. 28), the added hazards for the participants caused by these procedures may have been slight.

262 In summary, food plays a major role in ceremonies and
792 festivities, which are concentrated in the 3 months' dry season. Proposals for dietary improvement in Bang Chan must take into account not only the possible effects of the (l)ngaan season on the total nutrient intake, and on opportunity for exposure to contaminated food, but also the importance of these affairs from the standpoint of merit and prestige, and the relatively great financial burdens which villagers therefore undertake because of them.

QUANTITATIVE DIETARY STUDY: FOODS EATEN AND ESTIMATED NUTRIENT INTAKE OF SELECTED FAMILIES IN BANG CHAN

Procedure

121 Selection of the Sample
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Medical inspection designed primarily to discover possible signs of nutritional deficiency was carried out in advance of the family dietary study. The suggestion of Grant (1948) that matched groups, of contrasting economic or other status be studied, appeared to be appropriate to the situation in Bang Chan. Our hope was to be able to select from the random sample of families given medical inspection (Hauck, 1956) a group of families (A) in each of which several members had clinical signs which might be evidence of malnutrition, and a group of families similar in age and sex distribution (B) in each of which the members were largely or wholly free from such signs.

125 When the medical inspection of the random sample was
146 complete, however, too few of the families were found to meet our criteria for inclusion in Group A, i.e. the group of apparently less well nourished families. Additional families for

854 278 medications were taken internally, sometimes being painted on the tongue with a feather; but two preparations were applied over the abdomen. Some of the medications were described as "stomach medicine" or "to prevent flatulence." Five different kinds of proprietary medicine were given to 18 infants. In 13 instances, the medicine given was clearly homemade and included as major ingredients items such as flattery fruit, (3)luug (1)yauau; cobra oil; horseshoe crab; and buffalo skin. The nature of the medicine, whether homemade or proprietary, was not clear in 8 instances. Usually medicine for infants was mixed with honey, but in 2 cases, alcoholic liquor was used as it customarily was for the mother.

Six newborn infants in this series were given no medicine. One of these was born at the Health Center. One of the other 2 infants delivered at the Health Center was given homemade medicine later, and no information was obtained on the third. Eye prophylaxis[1] was probably routine at the Health Center, as, in 2 of the 3 cases delivered there, informants knew that drops had been put in the infant's eyes. Traditional midwives, however, did nothing of this sort.

Water for Drinking and Bathing.

853 312 For the newborn infant as well as for the mother, water for drinking and bathing was boiled and was usually used while hot, often being kept warm in a vacuum bottle. Either rain water or canal water might be used depending on what was available at a given season. The water was dribbled from an adult's fingers into the infant's mouth. When the mother was no longer lying by the fire, boiled water was not considered essential for the infant. Nevertheless, over half the infants seen from this time up to 3 months of age were being given boiled water to drink. After 6 months of age this was rare.

853 855 312 In one instance, during the time when a younger sibling received boiled canal water, a 21-month old child was given boiled water also. At the time of a later visit both of these children were drinking unboiled canal water. In another case an orphaned boy's formula was made up with boiled water, although

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[744] [751] [731] 1. Vaccination for smallpox was the only modern preventive treatment which we knew to be used in Bang Chan in the absence of an epidemic. Since a severe epidemic of smallpox with many deaths ten years previously, health officers came to the Bang Chan elementary school once a year to vaccinate children, and other residents of the community could be vaccinated at this time. Four of the young children whom we visited periodically were vaccinated, at 4 months, 8 months, 1 and 2 years of age, respectively.

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14 observed in 9% of the school children 7 to 14 years of age who were examined, and in about 6% of the males and 25% of the females over 15 years of age. Of 337 persons examined, however, 2 only, one child and one adult female, were found to have hemoglobin values under 9.75 g per 100 ml.

744 Modern sanitation was practically unknown in Bang Chan. Few families had covered pit latrines or made any effort to 514 cover excreta. Intestinal parasitism was common. Garbage 164 might be fed to animals, but was frequently thrown into the 364 canal or elsewhere about the compound. Provisions for protecting foods from contamination were meager.

When rain water was available, it was used for drinking, but several months each year water from the canals or fish ponds was used without prior treatment. For washing vegetables, cooking and washing dishes, canal and pond water was used throughout the year.

744 A few changes in sanitary practices, if they could be brought about, might reduce some kinds of illness substan- 751 tially. For example, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

758 Modern medicine will probably not be readily or generally available to a majority of the residents of Bang 121 Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

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757 to a second-class doctor in Minburi, then to a nearby Muslim
759 masseuse, then to a local traditional practitioner who gave her some jaa tom (cooked medicine). Another instance, recorded in the field notes, is that of a school teacher's baby who had abscesses on her head. The mother took her child first to Minburi, where she was given an injection and a sulfa drug to be taken orally. The child did not get well immediately, and before all of the drug had been taken, the mother took the child to a local traditional practitioner who gave her a decoction of herbs which was to be given by mouth. Thus in some cases, modern doctors were consulted first, and local traditional practitioners later, if relief was not as speedy as was expected. The experience in this one hamlet suggested a willingness to try a variety of treatments, and the existence of a considerable degree of confidence in modern medicine.

758 According to Ralis (1955), 213 of 335 household repre-
743 sentatives interviewed had visited a clinic or hospital. Of these, 156 had gone to Minburi, and 135 to hospitals or clinics in Bangkok, some having gone to both places. Of 258 hospital or clinic visits, 125 were for treatment or hospitalization; the bulk of the rest were to accompany patients or to visit hospitalized relatives or friends. No significant difference in reports about seeking treatment or hospitalization was found between groups of persons differing in literacy, or in socio-economic level.

144 Infectious disease. - The principal evidences of infectious disease noted in the course of the clinical examination for assessment of nutritional status were trachoma and smallpox scars. Occasional cases of ringworm and other fungus infection, and of pediculosis were observed by the physician.

When the 233 school children and 148 additional persons included in the random sample of village households are considered together, i.e. a total of 381 persons or more than one-fifth of the total population of the village, only 3% were found to have trachoma. Eleven of 13 cases found were among 237 children 7 to 14 years of age, i.e. an incidence for this group of 4.6%. Zimmerman (1931) reported 119 cases or 4.3% of all persons examined in Central Thailand, and 277 cases or 2.9% of persons examined in the whole Kingdom. Among the school children examined, however, he reported an incidence of 12.6%.

Of 381 persons examined in Bang Chan, only 10, or fewer than 3% had smallpox scars. Two cases only were in adults, the remaining 8 being among children of school age. Our records do not show when the most recent cases occurred in the village.
• 751 According to Zimmerman (1931), 88% of over 2200 school children examined had been vaccinated. No information was obtained concerning the proportion of residents of Bang Chan who had been

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751 vaccinated but among school children the percentage is very high. During the survey period a health officer came to the Bang Chan elementary school to vaccinate children; and at that time at least one nearby resident, a school teacher's wife, brought her infant for vaccination.

164 Illnesses probably, in most cases certainly, of infectious origin, which were mentioned in the field notes, include the following, which are listed roughly in the order of frequency: skin disorders such as abscesses and boils, fever, respiratory disorders including colds and influenza, tuberculosis, "upset stomach," measles and diphtheria. Two cases of diphtheria with one death, occurred while the survey was in [744] progress. At this time health authorities came to the village to inoculate the children on a voluntary basis (Hanks et al. 1955). As already noted, malaria and typhoid (one case each), were mentioned as occurring during the year previous to the inquiry in Hamlet KY-7 (Hanks, 1954).

[759] [743] A number of references were made to history of cholera, smallpox and malaria, but these did not appear to be current threats. Two cases of severe diarrhea were called "cholera" but one was on the way to recovery the next day. The traditional practitioner who was asked to treat the other, urged that she be taken to the hospital, and himself accompanied the patient and family members. At the hospital, they were told that members of the family and neighbors should "get vaccinated and have their toilet covered."[1] No further mention of this case is made in the field notes, hence the correct diagnosis is not known to us.

Since a modern doctor was frequently not seen, diagnosis of disease was often uncertain. More often, major symptoms were described or the disorder was given a local name, for which there is no good English equivalent, such as various kinds of *saang* and *lom*.

Non-contagious disorders. - Among current non-contagious disorders mentioned in the field notes, in replies to questions on surveys, and in some cases observed by the physician, were the following, listed roughly in order of frequency: menstrual disorders, headaches, beriberi, cancer, asthma, eczema, nephritis, and rheumatism.

Accidents. - Accidents which were recorded in field notes include bites of dogs, spiders, leeches and snakes, falls from buffaloes and down ladders, burns, cuts, drowning and poison from drinking kerosene. Among the school children examined,

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1. Field notes, S.S., April 29, 1954.

As to the gross structure of the body, some persons learned about the skeleton when, in preparing corpses for cremation, the undertaker stripped the decaying flesh from the bones, usually in the presence of relatives and spectators of all ages. Occasional autopsies because of suspected sorcery, and surgical removal of a fetus from a deceased mother by caesarian section led to some knowledge of organs and blood vessels. Male and female masseurs of considerable competence were trained in the Chinese neuro-muscular system. A system of "origins," e.g. that the elbow-origin was in the arm pit, and the chest originated at the spine, might relate to the Chinese concept of linkage points on the body, in particular, acupuncture. In Bang Chan's popular conceptualization, the protecting skin which enclosed the body was thin at the top of the head and especially so at the stomach area. An old image also persisted that the body cavity itself was a relatively undivided space extending from neck to pelvis. Inside the cavity, food dropped from the top, faeces packed down at the bottom. Through the body curculated slowly the blood; several kinds of water (nâm) (Mcf. 453) e.g., the nâm khraan (refuse-water) (ibid. 453) in the abdomen; and several winds (lom) (ibid. 728) e.g., the pushing lom bêng (ibid. 487), and the pulling lom chawat (ibid. 287). The small hair-whorls noted on the head, hip, or shoulder were construed as minor vortices of these currents, or as souls (khwan).

Foremost in people s minds were the elemental constituents of the body. The human body, along with every animal, plant, or mineral in the world, was made up of 4 elements (thât): earth, fire, water, and wind (air).[10] This ancient four-fold view, also familiar to the Greeks, had mixed in Bang Chan with the traditional five-element Chinese system (metal, earth, fire, water, wood) because gold, iron, and wood were also spoken of as constitutional elements, and there may have been others. Some persons said that the proportions of the 4 major elements were the same for everyone, others, that they varied for different temperaments, which were also affected by the presence or absence of elements other than the basic 4.

10. "The body, comprising about a bushel of powdery earth-element, is held together by half a bushel of juicy water-element, and propped up by the windy-element. The fiery element digests what is eaten or drunk and preserves the body". (Visuddhi-Magga. [Warren.157-198]).

All food was also made up of the 4 elements. Here rice was of particular importance. The body was seen as built and maintained by rice. Flesh in fact was rice, an image probably derived from Buddhist scriptures.[11]

Each element carried with it its substantive aspect of heat, flowing, etc., and its astrological nature and relations. Elements could be compatible or incompatible with each other. Earth, water, wind, iron, and wood for instance were compatible. Gold "got along" with all elements. Fire, though, was incompatible with wind, water, and wood for it could destroy their proper proportion.

The effect of astral and planetary relationships at the moment of birth on one's constituent elements induced qualities of character.[12] Mind and body were a continuum. Because family members were born at different moments of time, intrafamilial temperamental differences were expected.[13] Persons made up of incompatible elements quarreled. Thus friction might occur between parents and children. For a husband and wife, who lived in especially close proximity, the constitutional elements were of special importance. Through marital relationships their elements were in physical contact. Consequently, in the old days, a couple contemplating marriage ascertained through their horoscopes the compatibility of their natal elements to determine whether they could live together without destroying each other. For instance, a girl with much fire in her make-up was easily angered and prone to fevers. She could not make a successful marriage with a boy with much wood.

Physiology

A single physiological process controlled the functioning of the body and the mind; i.e., the equilibrium of its elements. If the elements were in proper balance, proportion or harmony, a person was healthy; if an element were excessive or deficient,

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11. "This, my formed body, is composed of the 4 Elements, generated by Father and Mother, built up from rice, porridge and sour gruel," says the Buddha (Suriyabongse 1951:11).

12. Merit, the other determinant of character, is discussed in "Influences on Health" below.

13. Cf. the proverb "The joints (knots) on the same stem are nevertheless unequally spaced, so even brothers are of different minds," (Gerini 1904:10).

a condition which also affected the functioning of the others, he was ill or emotionally disturbed.[14] For example, dropsy, swelling, and yellow eyes came from excess water; cholera and constipation from earth mists. Wind and fire were the great trouble-makers.

Wind "was stronger than the other three elements." Either blowing wind or still air easily penetrated the skin and caused difficulties all the way from flatulence, stomach-ache and diarrhea to a minor head-ache and dizziness ("if wind whirls inside the body, the house swims around"); from incessant crying to serious interference with breathing, hence fainting and death. An accident, such as a cut or broken bone, disturbed, and might "let out," the air. Acute pain ensued if "rigidity" of earth, fire, or water interfered with the proper movements of the internal winds.

Anger and fever were both in the category of excess fire. Since fire was particularly implicated in disturbed social relations, coolness was emphasized as the desirable state of body and mind. The blessings for both sexes at birth and at the marriage ceremonies enjoined the individual to be "cool and happy." There was some evidence that cool natures were tender (on) natures. Since women by nature were assumed to be "tender," and men not, a difference in element constitution may have been sex-linked. However, everyone knew of women who were not tender. For persons abundantly endowed with fire, temper control through temperature control was a constant preoccupation, for the allowable margin of fluctuation was especially narrow.

Food occupied an especially important place in a person's welfare because food controlled the fire element.[15] The following material on diet is the background for some of the dietary injunctions during pregnancy and lactation.

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14. In view of Thailand's ancient Indian contacts, the parallels (and differences) between Bang Chan, and Hindu Ayurveda as described by Opler (1963:32-36), are noteworthy.

15. "What was drunk or eaten by its decaying created the fire element in the body" (Suriyabongse 1964:12).

261 262 753

Diet in Body Maintenance and Curing

Because food created fire, the daily diet could be a source of illness or a therapeutic means. Every food had known properties for heating or cooling, and for other effects as well. Guava fruit, alcohol, and turtle or cobra curry were heating. Eggs were cooling. Depending on the occasion, ice and iced concoctions were over-heating or over-cooling. They were always "dangerous during menstruation." Banana varied according to the variety: kluai hòm (fragrant banana) was undesirably cooling and caused either diarrhea or constipation (Hauck, 1959:27); kluai nam wâ was less deleterious (salaeng) while kluai khai was good for the sick or for parturients (Boonleng).

252 262 [758] [846]

Properties in food changed in cooking. Boiling made rice "ripe" (suk) and so available as nourishment (Anuman Rajadhon:77). Even the method of cooking varied the properties. For the sick and for parturients, the banana variety called kluai hak suk was good if baked, but not if cooked in syrup (Boonleng).

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Some foods were "incompatible" with, and so aggravated, certain illnesses. Air-borne food in the form of smell was incompatible with, and compounded, a condition of wind excess. Death or blindness ensued. On the other hand, asafetida might be tied to the wrist of a new-born baby so that the smell, an established carminative, might cure the excess wind in his stomach manifested as flatulence.

262 [774] [782]

Beneficial foods were encouraged. Of all these none surpassed rice, the main sustenance of the body, "the only true food" (Yong Chutima, in Hauck, 1959:27) and source of "strength" to the farmer. Rice was a safe food. It never disturbed elements. Eating rice, as compared with meat, had no overtone of taking life. One could eat one's fill without any sin. Most of all, rice nourished the human khwan, for each grain contained a part of the khwan of the divine Rice Mother. Furthermore, any food offered ritually to a spirit or to make merit acquired strengthening properties, and was afterwards given to priests, children, or to the sick.

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Foods with known dangers were avoided. "Kluai tâi" banana, a variety full of seeds, was never eaten because it contained a female ghost (phi)." Jackfruit was avoided by lactating women as a direct source of wind-excess. Fruit in general was not dangerous but "did not give enough strength for a rice farmer. It was all right for an orchardist."

People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauck, et al: 47-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny kluai nam, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" kluai nam wā. Here orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plus--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (wisāt:powerful) or natural (tām thammachāt) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "khun"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paroxysm, flatulence, convulsion,

16. Phillips (p. 65) reported that parents did not give their child a disliked medicine because "it offends him.... It is better not to give it to him than hurt his feelings."

17. This small skin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely pained (cf. Textor:116-127). Suspected khun was one of the few reasons why a family would authorize so grave a violation of the body of a deceased member as an autopsy.

828 or fainting, and also such localized trauma as abcesses.
753 Similar behavior followed the influence of malevolent magical amulets, incantations, and love magic. Natural intrusions may be exemplified by the seasonal influences of rain, which brought on too much water element; of heat, which increased fire; and of wind, which cooled too much or brought in certain fevers, e.g. north fever (khai nüa). An accident was a natural cause of disequilibrium. A cut might let out the air or a soul.

774 Any lost soul, if not restored, meant death. Souls were
[761] lost from falls or frights or from spirit attack, a condition
[953] recognized by persistent crying, hysteria, and unconsciousness. The exits were at the top of the head, the palms of the hands, and the soles of the feet, the latter 2 sometimes localized at the 2 thumbs and the 2 great toes. One of the old beliefs associated an element with one of the four čhĕttaphūt souls (Textor:130). When one of these souls was lost one whole element was gone. Loss of the khwan soul was more frequent than any other, especially during childhood. Its care
[844] throughout life was very much in mind. The khwan[18] played an especially prominent part during childbirth.

765 If a person were only slightly sick, he might first try
[262] to overcome his physical complaint by attention to diet.
[757] Very rarely did he by himself buy some medicine at a drug store. If it were a case of a child's lost khwan, women performed the rite for its recovery. When the khwan of an adult was affected, men performed a strengthening rite (thăm khwan), or a priest gave a holy water bath. If the person were very ill, holy cotton thread (săi sin) was tied at wrist, ankle, and neck so as to shut off the soul exits. An elder relative or spouse might also "bon," i.e. vow food or liquor in return for the help of supernatural beings; or, with Buddhist "sacred things" in mind, promise the ordination of the afflicted person, or oneself, or some interested relative. In this case, the relatives had long since turned for help from the arts of medicine.

278 The Arts of Medicine
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Medical knowledge comprised on the one hand a pharmacology of materia medica, and on the other, the far more important

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18. The conceptualization of this soul was Brahmanic in source, rather than Buddhist (cf. Martini's, 1952:370).

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775 Man was higher on the scale than woman.[20] Progress toward
[562] Nipphan was not assured but had to be earned. With sinful
behavior a person might be catapulted back to being a beast.
He who stole would "be born and die 500 times before he could
even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough
to be released for rebirth. The evil spirits (phī) that
wandered frighteningly in Bang Chan were part of the legions
whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritor-
ious person was healthy, happy, and successful in all under-
takings. He enjoyed good health and long life, a kindly
personality, many fine children, wealth, high status,
intelligence, and luck. Astrologically, he was born on a day
[775] of good confluences, of gold and auspicious signs. He who
lacked merit, because of sins committed perhaps many ages
ago, was born on an unfortunate day. He suffered early death,
deformities, unhappiness, poverty, and had a cruel nature.
[753] Illness, whether supernatural or natural, whether induced by
wind or sorcery or what, struck as part of the suffering
brought on by former sin. It was accepted in the conviction
that whoever suffered had brought it on himself. When merit
ran out, or when sin cancelled out and then exceeded one's
merit, suffering and premature death occurred, despite all
human efforts. Because of the prevalence of illness and of
life's difficulties, major and minor, no one, no matter how
outwardly fortunate and so evidently meritorious, had at
this earthly level of existence enough merit to escape some
suffering and frustration. By the same token, though, no
person was without hope. By making merit or by suffering in
this life, existence would be happier in the next. The mak-
ing of merit was in the forefront of daily conscious effort
and even conversations of the people of Bang Chan.

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780 The long-range protection against all illness was to
[577] live virtuously and make merit. However, to guard against
[782] temporary supernatural intrusions, everyone possessed and
[304] usually wore Buddha lockets and other amulets. Some
underwent tatooing, men having Cambodian or other figures,
women, 2 small dots tatooed on the torso under the arm.

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20. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

On the other hand, pregnancy was a period of uncertainty when a woman was easily upset emotionally. Because childbirth was "like a war" when a woman might die, "defeated by her pregnancy"(phaethong), she felt uneasy.[24] If she were frightened, her child's khwan would fly off in terror. The baby died in the womb if its khwan did not return. Because of increased sensitivity and vulnerability her elements and those of the baby were frequently thrown off balance. Wind easily entered through the thin skin of her stomach where she carried the unborn child. It caused pre-natal disorders all the way from queasiness and minor vomiting in early pregnancy to miscarriage and death. "A woman felt dizziness and numbness because of wind in the fetus. In a month she suffered a miscarriage."

A pre-natal pain that did not seem to be a labor-pain was diagnosed as the very dangerous naem, "a thick lump of blood and wind that moved quickly." As in other illnesses, element harmony was restored by medicines, holy water, and by modifications of diet.

Women knew of possible supernatural invasions of the womb during pregnancy. If a woman had beforehand lost a baby at birth or through miscarriage, and the body had not been properly buried, she might be seriously troubled by its restless ghost, fully as powerful, it must be remembered, as an adult's.

24. The image of battle was traditional (cf. Anuman Rajadhon: 108). Phaethong (McF: 599), a combination of food craving and vomiting (Anuman Rajadhon:115) paralleled the dola-duka of Ceylon (cf. Obeyesekere), but without the hostilities built in by the Sinhalese.

843 [795] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phī tai thang klom, caused "the worst of all possible deaths." The phi krasū spirit,[25] entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). The [753] supernatural disease missile called "khun" might also strike. "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extra pain [751] occurring just before the baby comes out." To protect themselves, women wore extra talismans or had 2 dots [304] tattooed under the arm.

843 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 2 visible teeth, which indicated it was a non-human, yak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of women giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (McF.46). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb sat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

the fire for her during the first day or so, lest in her straining, Dūan's womb "move to a new place," but Duan did it herself thereafter. The smoke was harder on others than for her for she was on the floor. She could leave the plank to bathe and to relieve herself through a crack in the floor. As soon as Chāi got over being frightened of her turmeric-yellow stomach, he often came and lay beside her on the plank, though it was a squeeze! She took her medicine and often sipped hot water, feeling very modern with her brand-new thermos bottle. Constantly turning her back or front to the fire, she poked or dripped water on the flames to make coals. Once she tossed on a dry palm leaf, and as it flared up, put a cloth over her head to trap the smoke and heat. Though a rash developed on her body, she was complimented by Lek on the care she was taking of the heating and drying process. Unfortunately, a neighbor who wanted to help brought in some of the wood one day. Not remembering that to make noise with the wood caused diseased red eyes in the baby, she dropped the bundle with a crash! Alas, "sang" disease, of course, came at once. So the near-by mō who always cared for them had to be called, but he used no medicine. "For eyes red from 'sang'," he said, "never use any eye-medicine as drops, or they will be permanently damaged or blind. Such eyes have not enough resistance to win over the strength of the medicine. A drop of mother's milk, any mother's, in the eyes is the cure."

Uterus pain was said to last one day for the first child, 2 days for the second, and so forth, increasingly. As Dūan seemed to be in considerable pain, Lek resorted to an old cure: she secretly took the bamboo knife and the phlai from the baby's tray and put them under Duan's plank bed without telling her. Slowly the pain diminshed.

If anyone spoke of uterus pain to her during the fire period, Dūan would suffer still more. If a visitor spoke of the hotness of the fire, little boils would appear on her body. The fire, being thus made too hot, would have to be put out, and Duan "would be weak for a long time." This was because actions or even words occurring beside the holy fire set a new and permanent pattern. Neighbor's children were kept away lest they inadvertently exclaim about the heat.

A few relatives with gifts of banana, turmeric, and face powder dropped in, but visitors mostly stayed away. "It is an ugly sight," said Dūan, "lying here with only a cloth over me, half naked and yellow, and I fear there might be an unpleasant smell."

The winnowing tray, with the baby on a pillow now covered with a plastic cloth, rested on a low table, the legs of which stood in bowls of water to keep away ants. At first an old dome-shaped fish trap had been set over it to prevent draft and

846 [789] Seven days after the end of the fire period, Dūan sent a message to the mɔ̄ to look in his book as to what direction from the house she should bury the phlai, the bamboo knife, and the pot with the now dried placenta and cord. She already knew some of the procedure: burying should take place on a Monday or a Friday; south was right during the first three months of the lunar calendar, November, December, January; and the full moon of the twelfth month (October) was especially good, for the moon waned thereafter. Chāi had been born in October, so north was right for him, but for a girl it would have been east. Song or Lek or anyone could bury the pot, but most mothers did it themselves. If it were buried in the wrong direction, the baby would die, and if not under a tree, he would leave them and their home, and roam. The instructions came. With the things in her hand, she walked toward a big jackfruit tree. Beside it was a sakēe. Either was good, so she chose the sakēe which, being nearer the house, might strengthen by that much the roots that would keep her boy at home. After burying the pot and all, she returned directly to the house, remembering to pick, as she came, a fruit, a vegetable, a leaf, and then a piece of wood, all useful things. In the house she added them to the usual household stores. By doing so, and by using them up shortly, she ensured that her new son would be a good worker, who on returning home would always bring something to add to the requirements and wealth of the household. Once buried, the placenta, "like ashes," was ignored and the spot forgotten.

846 262 [461] [753] [757] 862 Within a month after childbirth, Dūan was back at farm work, even to the back-straining pounding of rice in the big mortar. For three months she avoided fruits, particularly guava and jackfruit. Then, since the baby was thin, she gave up vegetables, especially gourds, corn, and the green plants that grew in the canal. One day, because she carelessly ate some salted field crabs, the baby got thrush on its tongue. They cured him by smearing the milky juice of a peel of klūai nɛ̄m banana on the cloth sheet covering his cushion, then wiping this on his tongue (cf. Anuman Rajadhon 1961:153). So the year passed, and then another. Not long after his third birthday, Dūan realized she was pregnant again, so took steps to wean him. She painted her nipples with "black medicine" (yā dam), a bitter and hot tasting ointment made from the boraphed rhizome (McF; 474). Then she sent the child over to her mother's older sister's house for four nights. To make quite sure, she followed an old ritual way, too. She boiled an egg hard and peeled it. Holding the egg behind her back, she turned her face away from her son, and handed it to him behind her so that she could not see his face. "Henceforth, you shall not nurse any more," she said. Without looking at him, she walked

846 789 372 [753] [755]

Even after the child was out, the pile of wood was still a drying womb to be treated carefully. It was also the wood for a consecrated fire. To drop a piece of this wood carelessly both injured and desecrated. If this happened a disease of the eyes "sang," came at once for which no male medical powers had any remedy. The only cure was in women's hands, that essence of maternity, "a drop of mother's milk--any mother's." The larger implications of this linking of fire and maternity are dealt with in the next section.

The Fire of Maturity

846 372 [885]

In the events surrounding the birth of the child, the significant step for the woman personally was the post-partum rest period by the fire (yū fai). Far more was at stake than just drying the uterus. The fire rest was one of the series of rites of the life-cycle which marked the course of an individual from birth to death. The others were the cutting of the umbilical cord, first head shaving, top-knot tonsure, ordination (for men), marriage, and cremation. Through the consecrated fire a woman formally achieved full maturity: she became suk (cooked, ripe, mature). Maturity did not come just by bearing a child. The fire brought about the transformation.[46]

562 [774]

How was mature womanhood viewed? What was the essential female role and office? Bang Chan saw a woman as one who "feeds and lengthens lives." As the custodian of growth she was, first, the guardian of the vital, essential khwan soul, and especially of the immature, flighty khwan of growing persons.

[827]

Secondly, a woman was a donor of nourishment (liang).[47] Her primary responsibility was to nurture children and other tender beings. She nourished the fetus with her blood. After

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46. "The fiery element digests what is eaten or drunk...and cooks the body and gives it its beauty of complexion. And the body thus cooked is kept free from decay" (Warren:157-158).

47. All the deities "concerned with the welfare of our bodies and our khwan" were maternal (Mae), e.g. Rice, Water, Earth, "Mother-Goddess" (Mae Sū), and several Mother-Princesses (Chao Mae). Fire, and maybe wind, were both female (mae) and male (phra) (Textor:485). To these deities, "higher" than ordinary spirits, Bang Chan "owed more." [776]

Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

753 178

Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire. For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

757 178 [755]

Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous magical protective needle.

75 178 [164]

"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments, modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1955:155-195). It was sometimes better not to claim competence outside these customary lines. One mō said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease.

75 829 178 377 756 758 846 178 184

Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "woman are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

262 curtailed. About half ate soupy rice rather than rice as
843 usually prepared. All ate fish, but over half ate salted
846 fish only, and about one-fourth ate fresh fish only. Rice and fish were apparently the only foods considered safe by all of these mothers. The only other food eaten by half or more of them was banana of the (4)nam-(4)waa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeaeng (1)liang, a broth made with dried fish, and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some. When asked what foods they considered good for a woman who had recently borne a child, no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the post-partum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

262 Fear of illness from eating incompatible foods after
846 child birth was rather strongly expressed by many informants,
753 even by some who knew of Chinese customs which were different
829 from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home in the village, were not forbidden at the government health and maternity center at Minburi.

126 The 45 mothers who were interviewed during lactation,
262 but after work had been resumed, ate more nearly the usual
846 diet than was the case during the post-partum rest period. As in pregnancy, the mothers apparently had no notion of special dietary needs during lactation, but foods considered undesirable during lactation were mentioned 27 times. The list included 12 kinds of food, and four attributes of food, i.e. sour and hot tastes, fermented foods and raw foods. No food was considered harmful by a majority of mothers, the one which occurred most frequently, jackfruit, being mentioned by 8 only of the 45 informants.

262 Reasons were seldom advanced for considering various
753 foods unsuitable for mothers or children. During pregnancy,
853 the hot-tasting foods, i.e. those made with chili, were said by one informant to injure the baby's complexion. When asked at what age a child could have adult food, mothers might say at one or two years, but often specified without giving a reason, that the child could have anything but the hot-tasting foods. A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby, 1 or 2 months old, ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana"[1] caused

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1. The type of banana most familiar to people in the United States.

262 constipation in infants, others that it caused diarrhea, whether
763 eaten directly by the infant or by the mother.
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The belief that eggs would cause dental caries, and should therefore be omitted from children's diets, was expressed by the mother in a poorly nourished family. The possibility that such ideas arose from unwillingness to spend much money on food for a child has already been noted (see p. 42).

262 Information on food suitable in illness was obtained
763 only incidentally. The Thai did not appear to have a consis-
758 tent theory as to the cause of disease (Sharp et al. 1956, p. 489), and residents of Bang Chan did not seem to associate any of their illnesses with contaminated food or water. Choice of food in illness was probably associated in some instances with the idea that the body is composed of the four elements: wind, water, fire and earth, and that sickness results from or is a symptom of imbalance in the proportions or arrangement of these elements. Thus the "fragrant banana" and eggs, because of their "cooling effect," were said to be forbidden in measles. A child who was getting measles was restricted to rice and dried fish. In contrast the small, [853] rather flavorless banana, designated (3)kluaj (4)nam-(4)[illegible]a, was said to have "no cooling effect" and was considered an acceptable food in illness, as well as for newborn infants.

262 In one instance, when a patient had been taken to the
758 hospital with severe diarrhea, a nurse instructed other family
784 members not to eat ices, syrup (see p. 36), or raw vegetables, nor to drink unboiled water. The informant who told us about this offered no reason for these precautions. These foods were simply "forbidden" to the family of a patient with severe diarrhea.

777 Notions as to what is fortunate or unfortunate may also
824 affect agricultural processes. The many ceremonies associated
245 with culture and use of rice have been mentioned (p. 42). The idea that a papaya tree growing near the house was "unlucky" was attributed to Thai by a young Thai Moslem in Bang Chan. When we commented on the papaya tree near his front door, he said the papaya tree dies easily and does not like water, but his was planted on high ground. According to this informant few villagers would be willing to grow papaya trees near the house. He considered the non-specific threat of harm as unreasonable, though he said that if specific harm were said to [777] result, he would be concerned about it. The midwife at Minburi Health Center said that she urged each woman who came there for delivery to have more banana, mango and papaya trees planted for home use. Before raising of papayas can be successfully encouraged, however, the idea that papaya trees bring back luck must be overcome.

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252 One other aspect of (l)ngaan which should be mentioned
796 in connection with food and health is the opportunity for con-
751 tamination of food. The villagers did not associate sanitation
[751 with health, hence the hazards of a community meal which many persons helped to prepare were many. Two incidents observed the day before an ordination in early April, will illustrate. In the final stage of making Chinese noodles, rice flour paste was extruded through a perforated disk into an enormous pot of boiling water. When done, the product was removed with a fish net, and plunged into the canal to cool, after which women helpers spread it out on banana-leaf covered trays. Dishes were also washed before use in the canal, which was then too low for boats. Since, however, many people drank untreated canal water at this season (see p. 28), the added hazards for the participants caused by these procedures may have been slight.

262 In summary, food plays a major role in ceremonies and
792 festivities, which are concentrated in the 3 months' dry season. Proposals for dietary improvement in Bang Chan must take into account not only the possible effects of the (l)ngaan season on the total nutrient intake, and on opportunity for exposure to contaminated food, but also the importance of these affairs from the standpoint of merit and prestige, and the relatively great financial burdens which villagers therefore undertake because of them.

QUANTITATIVE DIETARY STUDY: FOODS EATEN AND ESTIMATED NUTRIENT INTAKE OF SELECTED FAMILIES IN BANG CHAN

Procedure

121 Selection of the Sample
125
146 Medical inspection designed primarily to discover possible signs of nutritional deficiency was carried out in advance of the family dietary study. The suggestion of Grant (1948) that matched groups, of contrasting economic or other status be studied, appeared to be appropriate to the situation in Bang Chan. Our hope was to be able to select from the random sample of families given medical inspection (Hauck, 1956) a group of families (A) in each of which several members had clinical signs which might be evidence of malnutrition, and a group of families similar in age and sex distribution (B) in each of which the members were largely or wholly free from such signs.

125 When the medical inspection of the random sample was
146 complete, however, too few of the families were found to meet our criteria for inclusion in Group A, i.e. the group of apparently less well nourished families. Additional families for

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843 Reasons were seldom advanced for considering certain foods unsuitable for mothers or children. During pregnancy the hot-tasting foods, i.e. those made with chili, were said by one
262 informant to injure the baby's complexion. When asked at what
855 age a child could have adult food, mothers might say at one or two years but often specified, without giving a reason, that
953 they could have anything but the "hot-tasting" foods (foods seasoned with chili). Two mothers said the child could have "hot tastes" at one year, whereas one said not until the child was 3 years old. A majority did not specifically mention hot tasting foods either to include or to exclude them.

853 A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby 1 or 2 months old ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana", (3)kluaj (5)hauaum[1], caused constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

• 953 The belief that eggs would cause dental caries and should
262 therefore be omitted from children's diets was expressed by the
853 mother in a poorly nourished family of low economic status.
855

862 Opinions varied as to when children could be given "adult food". This was often, but not always, the age considered appropriate for weaning. As the question was worded it apparently implied that the child "could eat food as prepared for adults in the family" and did not necessarily exclude breast feeding, since children who "could have adult food" might still be nursing. The age at which a child could have adult food was sometimes related to stage of maturity as "when he can sit", "when he has teeth", or "when he can say (1)plaa (fish)".

262 Traditional and Modern Concepts of Rice Versus "With-Rice" in the Diet. - Rice is not only the basis of the adult diet in Thailand, but it has traditionally been regarded as the strength giving food par excellence. A portion of Chutima's (1939) description of the "old system" of diet follows:

> "Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal.

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1. The type of banana most familiar to people in the U.S.A.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

were at first a series of unrelated incidents—that is, the possible tenuousness of the links between parent and child first came to my attention with the occasional, but wholly unselfconscious, reports from informants on what to my Western ears seemed like rather turbulent childhoods: their frequent movement from family to family while they were still children and their own care, as adults, of friends' or relatives' children. (This suspicion was reinforced and partially verified later while recording life histories). Later it was noticed that, in sharp contrast to the West, villagers tend to be less concerned about the illness of children than the illness of adults; informants with whom this observation was discussed said either that they had not noticed or explained it by saying that since children recover so quickly from sickness there is less need to worry about them. Finally and perhaps most important, it became clear that the request of the villager who stopped me and asked me to take and rear her child was by no means idiosyncratic; the request was made on four separate occasions by different individuals, both within and without Bang Chan. The intent of these requests were difficult to ascertain. Since the requests tended to come up rather suddenly, in the presence of the child, and were always accompanied by laughter, they may well have been said in "jest" or as a threat to the child. On a few occasions the parent took pains to be sure the child understood what was being said, in which case the child responded with screaming. Also, Europeans have traditionally been used as bogey men in the disciplining of children. (I myself have occasionally been addressed as a malevolent spirit by youngsters.) On the other hand, because children of poor families have been known to be given to individuals of high status, and because Occidentals are automatically assigned such status, it is not altogether unlikely that the parent was sounding me out as a potential patron of the child.

The problem with all the above, however, is that it was unknown to what extent they represented typical or deviant attitudes and responses. The Sentence Completion item, *"We want to give our child to him because . . ."* was selected for use in the SCT administered to a larger, representative sample of villagers because, being an extreme phrasing of these attitudes, it might shed light on the villagers' general readiness to accept them as well as their justifications for them. Of the fifty-six informants who responded to the item, 79 percent accepted the premise and 21 percent rejected it, *i.e.*, "I do not want to give my child to anybody." Of the forty-five individuals who accepted the premise, nineteen said it was good for either the child or the parent, *i.e.*, "that person was good, and he wanted that person to teach his child to be good"; "I would get some money by giving it away"; "I could not stand the child anymore." And eighteen said it was justifiable, *i.e.*, "because of poverty"; "I did not have the means to rear the child."

826 [764] [763] [754] [752] [845]

As to the gross structure of the body, some persons learned about the skeleton when, in preparing corpses for cremation, the undertaker stripped the decaying flesh from the bones, usually in the presence of relatives and spectators of all ages. Occasional autopsies because of suspected sorcery, and surgical removal of a fetus from a deceased mother by caesarian section led to some knowledge of organs and blood vessels. Male and female masseurs of considerable competence were trained in the Chinese neuro-muscular system. A system of "origins," e.g. that the elbow-origin was in the arm pit, and the chest originated at the spine, might relate to the Chinese concept of linkage points on the body, in particular, acupuncture. In Bang Chan's popular conceptualization, the protecting skin which enclosed the body was thin at the top of the head and especially so at the stomach area. An old image also persisted that the body cavity itself was a relatively undivided space extending from neck to pelvis. Inside the cavity, food dropped from the top, faeces packed down at the bottom. Through the body curculated slowly the blood, several kinds of water (nām) (McF. 453) e.g., the nām khram (refuse-water) (ibid. 453) in the abdomen; and several winds (lom) (ibid. 428) e.g., the pushing lom bēng (ibid. 487), and the pulling lom chewat (ibid. 287). The small hair-whorls noted on the head, hip, or shoulder were construed as minor vortices of these currents, or as souls (khwan).

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Foremost in people's minds were the elemental constituents of the body. The human body, along with every animal, plant, or mineral in the world, was made up of 4 elements (thāt): earth, fire, water, and wind (air).[10] This ancient four-fold view, also familiar to the Greeks, had mixed in Bang Chan with the traditional five-element Chinese system (metal, earth, fire, water, wood) because gold, iron, and wood were also spoken of as constitutional elements, and there may have been others. Some persons said that the proportions of the 4 major elements were the same for everyone, others, that they varied for different temperaments, which were also affected by the presence or absence of elements other than the basic 4.

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10. "The body, comprising about a bushel of powdery earth-element, is held together by half a bushel of juicy water-element, and propped up by the windy-element. The fiery element digests what is eaten or drunk and preserves the body". (Visuddhi-Magga. [Warren:157-158]).

People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauck, et al: 42-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny kluai nam, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" kluai nam wā. Here orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plua--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (wiset:powerful) or natural (tām thammachāt) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "khun"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paroxysm, flatulence, convulsion,

16. Phillips (p. 55) reported that parents did not give their child a disliked medicine because "it offends him.... It is better not to give it to him than hurt his feelings."

17. This small skin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely pained (cf. Textor:118-127). Suspected khun was one of the few reasons why a family would authorize so grave a violation of the body of a deceased member as an autopsy.

Sometimes these aberrancies were viewed as desirable sources of supernatural power, but on other occasions, they were seen as a sign of demerit, caused embarrassment, and were suffocated at once (if alive), and buried. 845 847

If a woman died pregnant, her body was at once brought to the temple where the unborn child was removed surgically. The usual solacing sermon, rites "to lead the deceased to live in her right place in the next world," and cremation took place, with the fetus laid beside its mother so that it "would come out normally." The mother and child were separated to prevent a ghost which was double-powered. No prayers were chanted at home before exsection "lest they make the power of the spirit stronger." Moreover, any violent or premature death caused an angry ghost. The ghost of a premature child had a heavy load of sin, for its stay in purgatory, where sin was worked off, had been interrupted (Textor:262). An unscrupulous mɔ̄ was eager to get possession of any ghost for use in sorcery, and a double ghost was stronger than any other. Ghosts were obtained by plundering the mortuary chambers of the temple prior to cremation. By feeding (liang) it, a mɔ̄ controlled it. The ghost of a male infant was preferable because it was "stronger than that of a female." In the light of this situation, not only should the body of a pregnant woman never be left alone " so that no one can get at them (sic)," but a pregnant woman herself ought not to be alone.[26] The behavior towards the Rice Goddess, Mother Posop, who was "pregnant" when the grains in the stalk filled out, illuminated many of these attitudes: "Mae Posop feels weak, hungry, and uneasy. She is eager to taste sour and sweet foods. She is a woman and beautiful in her pregnancy." To allay her hunger the 845 766 [775] 845 775 754 775 843 782 [754] 843 782 776

26. In Cambodia, a pregnant woman might be murdered, even by her husband, so that the murderer might gain the malevolent power that possession of her now double soul would afford. (E.R.E. "Cambodia": p.159). This specific statement was not found in Bang Chan but might be part of the shadowy background to local reluctance to leave a pregnant woman alone. [171]

overlap at all. Magic was wielded by men to gain power over spirits, persons, elements, and forces. It had either social or personal benefits. The role of highest social benefit, corresponding to the liang di in women, was the khwan-specialist (mo khwan) who conducted the life-cycle, khwan-strengthening (tham khwan) (for persons and for the rice) and many other ceremonies for the mature khwan. This role demanded men of the highest qualifications in probity, erudition, and personal dedication. Men also had the formulae for curing, house- or boat-blessing, invoking guardian spirits (san phra phum), etc. Men could make protective amulets to render the wearers safe from bullets, knives, spirits, and all sorts of hostile forces in the world.

On the other hand men's magical objectives could be aggressive and hostile. The gamut of amulets, missiles, love-oil, and incantations (Textor:passim) showed the potential for attack and why the converse need for invulnerability was so strong. Men had a nurturing (liang) role, but only for non-human beings, e.g. buffalo, pet birds, and guardian spirits of house and land. Subverting this role for hostile ends, they obtained possession of the ghost of a recent corpse by gathering the drop of oil at the chin, and nourishing it (liang) for use in sorcery. For a man, nourishing something gave control.

All of the powers of men's magic were available to women on request for any purpose, hostile or not, but the "owner" had to be the mediating agent.

A woman's magical knowledge was linked exclusively to her female task. It did not give power over people. It could not be destructive. No female sorceress existed in Bang Chan. No woman feared the magic of another woman in childbirth nor at any time. A woman's magic was devoted solely to promoting the processes of growth and life. Thus it controlled the searing heat of the fire, invoked the Spirits of the 4 elements, and helped at various points in childbirth. It handled the soul of the Rice Goddess and of Mother Sy, guardian of children. It restored any frail and wandering khwan to its proper bodily abode. Such was a woman's magic.

To insure separateness the respective provinces of magical activity were ringed with sanctions. Contact with a woman's skirt, undergarments, or menstrual blood completely negated any of a man's protective amulets (re tattooing, cf. Textor: 102). Though this reflected the traditional avoidance between sexual phenomena and Buddhism, it might also indicate a tacit moral evaluation of the magical powers of men and women: the powers for growth were ultimately ascendant over those for power, for men had nothing that undid a woman's powers. Though women were easily prey to men's magical control, as by

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with men's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59]. On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mō, she could do everything a mō could do. Men were never mediums. Bang Chan's only medium was possessed by a male mō.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

[832] [156] [688] [626] [593] 59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasū as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "auk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasū's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

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established midwife who was a "close relative."

Sometimes the interest arose in young people. A girl started at 15 to accompany her mother, a midwife, as helper and delivered her first case alone (an emergency) at 20. A boy of 15 also helped his mother's sister, who was a midwife. Later, when married, he delivered some of his own children, but denied that he ever intended to take up the calling. One young man in his 30's, was seen going "as a team" with a well known old mɔ̄ who directed him in the manual operations but who did not ever touch the woman himself. He also assisted one of the female midwives, but had not yet delivered a baby alone.

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The first child delivered by anyone was always the child of a close kin. Only with success at this first delivery would a person even consider doing it again. The second case, and the next few were confined to the potential midwife's close relatives, children (lūk), grandchildren, and the children of siblings (lān). Thus, the skills were validated within the kin circle before a midwife felt ready to practice outside.[69]

With success, a person of developing skill might be willing to include non-kin in his clientele, i.e. become a professional. One resolved only to help relatives but her "fame spread." As another said, "seeing it was safe, I was encouraged to go on." By this time, magical formulae had been

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69. Daughters-in-law were within the validating circle if circumstances were "convenient"--i.e. if their own mothers did not deliver them and if they lived with their husband's people. No witchcraft was feared between women. A mɔ̄ in his specialty also had to validate his skills within his close kindred before non-kin would call on him. A reputation began at home.

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4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

152 571 ritualized, ways of expressing hostility. What is significant about these particular procedures is that their very formalism serves to keep the aggression controlled and within bounds. Thus, everybody knows precisely how to behave when a buffalo disappears in the middle of the night and an intermediary arrives the next day to arrange the price for its return. Similarly, the aggressor, his victim, and everyone else present knows what is meant when someone calls a dog by the name of a person who is within hearing range and claims it was simply a slip of the tongue. The victim might respond by stealing his antagonist's boat and returning it a few weeks later, after his adversary has suffered sufficient anxiety. Note that in all these cases a face-to-face confrontation is either avoided or concealed.

152 571 954 Related to the above is the use of magical aggression. Textor (1960) points out that magical aggression—from one *person* to another *person*—is on the wane in Bang Chan. Also, it is clear from his exhaustive inventory of the magical practices in the village that interpersonal aggression has a very minor part in what is otherwise an extremely elaborate belief and ritual system: there are no more than three or four supernatural "objects," out of more than one hundred and seventy, that even suggest witchcraft, and although these objects are considered highly potent, they are rarely used. Even in the most extreme case—a young man using the oil from the chin of a corpse to induce hysteria in a maiden who has rebuffed his advances[9]—the victim is held partially responsible for having succumbed to the magic, a consideration that diminishes the "magical" implications of the ritual.[10]

152 762 Finally, a word should be said about the most convoluted way of expressing aggression. This is suicide, a procedure which, obviously, is applicable to only a small number of people. Nevertheless, during the relatively brief period that I was in the field, three Bang Chaners (out of a population of 1,771) attempted to do away with themselves by hanging. They always selected a conspicuous place (a tree on the Minburi highway or over the main canal) and were always unsuccessful. The aggression here is convoluted not only because it is turned inward, but also because it is

[9] This blending of sex and aggression does not have the same meaning in Bang Chan as it has in the West. Although the young man is concerned with punishing the girl for not responding to him, he is more concerned with breaking down her defenses and equilibrium, the very factors which denied him access. In English terminology, he wants to "unhinge" her, with all the duality that such symbolism might imply.

[10] While magical aggression between people is relatively minor, magical means of averting aggression by non-human forces is not. In fact, the largest number of magical practices in Bang Chan relate to protecting the health and welfare of the organism from malevolent spirits, accidents, and dangerous animals. These data, of course, are quite consistent with the SCT data on "anxiety," presented in the preceding section.

828 753 or fainting, and also such localized trauma as abcesses. Similar behavior followed the influence of malevolent magical amulets, incantations, and love magic. Natural intrusions may be exemplified by the seasonal influences of rain, which brought on too much water element; of heat, which increased fire; and of wind, which cooled too much or brought in certain fevers, e.g. north fever (khai nüa). An accident was a natural cause of disequilibrium. A cut might let out the air or a soul.

774 [761] [753] Any lost soul, if not restored, meant death. Souls were lost from falls or frights or from spirit attack, a condition recognized by persistent crying, hysteria, and unconsciousness. The exits were at the top of the head, the palms of the hands, and the soles of the feet, the latter 2 sometimes localized at the 2 thumbs and the 2 great toes. One of the old beliefs associated an element with one of the four čhĕttaphūt souls (Textor:130). When one of these souls was lost one whole element was gone. Loss of the khwan soul was more frequent than any other, especially during childhood. Its care [844] throughout life was very much in mind. The khwan[18] played an especially prominent part during childbirth.

765 [762] [757] If a person were only slightly sick, he might first try to overcome his physical complaint by attention to diet. Very rarely did he by himself buy some medicine at a drug store. If it were a case of a child's lost khwan, women performed the rite for its recovery. When the khwan of an adult was affected, men performed a strengthening rite (tham khwan), or a priest gave a holy water bath. If the person were very ill, holy cotton thread (sāi sin) was tied at wrist, ankle, and neck so as to shut off the soul exits. An elder relative or spouse might also "bon," i.e. vow food or liquor in return for the help of supernatural beings; or, with Buddhist "sacred things" in mind, promise the ordination of the afflicted person, or oneself, or some interested relative. In this case, the relatives had long since turned for help from the arts of medicine.

278 755 The Arts of Medicine

Medical knowledge comprised on the one hand a pharmacology of materia medica, and on the other, the far more important

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18. The conceptualization of this soul was Brahmanic in source, rather than Buddhist (cf. Martinie, 1952:370).

magical formulae and incantations (khāthā cf. Textor 1960:80-98; 67-79). It was one of the branches of occultism (saiyasāt [Mcf. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khao (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khāo. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō raksā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyae). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.[19]

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

On the other hand, pregnancy was a period of uncertainty when a woman was easily upset emotionally. Because childbirth was "like a war" when a woman might die, "defeated by her pregnancy" (phaethong), she felt uneasy.[24] If she were frightened, her child's khwan would fly off in terror. The baby died in the womb if its khwan did not return. Because of increased sensitivity and vulnerability her elements and those of the baby were frequently thrown off balance. Wind easily entered through the thin skin of her stomach where she carried the unborn child. It caused pre-natal disorders all the way from queasiness and minor vomiting in early pregnancy to miscarriage and death. "A woman felt dizziness and numbness because of wind in the fetus. In a month she suffered a miscarriage."

A pre-natal pain that did not seem to be a labor-pain was diagnosed as the very dangerous naem, "a thick lump of blood and wind that moved quickly." As in other illnesses, element harmony was restored by medicines, holy water, and by modifications of diet.

Women knew of possible supernatural invasions of the womb during pregnancy. If a woman had beforehand lost a baby at birth or through miscarriage, and the body had not been properly buried, she might be seriously troubled by its restless ghost, fully as powerful, it must be remembered, as an adult's.

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24. The image of battle was traditional (cf. Anuman Rajadhon: 108). Phaethong (HcF: 599), a combination of food craving and vomiting (Anuman Rajadhon:115) paralleled the dola-duka of Ceylon (cf. Obeyesekere), but without the hostilities built in by the Sinhalese.

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the fire for her during the first day or so, lest in her straining, Dūan's womb "move to a new place," but Duan did it herself thereafter. The smoke was harder on others than for her for she was on the floor. She could leave the plank to bathe and to relieve herself through a crack in the floor. As soon as Chāi got over being frightened of her turmeric-yellow stomach, he often came and lay beside her on the plank, though it was a squeeze! She took her medicine and often sipped hot water, feeling very modern with her brand-new thermos bottle. Constantly turning her back or front to the fire, she poked or dripped water on the flames to make coals. Once she tossed on a dry palm leaf, and as it flared up, put a cloth over her head to trap the smoke and heat. Though a rash developed on her body, she was complimented by Lek on the care she was taking of the heating and drying process. Unfortunately, a neighbor who wanted to help brought in some of the wood one day. Not remembering that to make noise with the wood caused diseased red eyes in the baby, she dropped the bundle with a crash! Alas, "sang" disease, of course, came at once. So the near-by mō who always cared for them had to be called, but he used no medicine. "For eyes red from 'sang'," he said, "never use any eye-medicine as drops, or they will be permanently damaged or blind. Such eyes have not enough resistance to win over the strength of the medicine. A drop of mother's milk, any mother's, in the eyes is the cure."

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Uterus pain was said to last one day for the first child, 2 days for the second, and so forth, increasingly. As Dūan seemed to be in considerable pain, Lek resorted to an old cure: she secretly took the bamboo knife and the phlai from the baby's tray and put them under Duan's plank bed without telling her. Slowly the pain diminished.

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If anyone spoke of uterus pain to her during the fire period, Dūan would suffer still more. If a visitor spoke of the hotness of the fire, little boils would appear on her body. The fire, being thus made too hot, would have to be put out, and Duan "would be weak for a long time." This was because actions or even words occurring beside the holy fire set a new and permanent pattern. Neighbor's children were kept away lest they inadvertently exclaim about the heat.

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A few relatives with gifts of banana, turmeric, and face powder dropped in, but visitors mostly stayed away. "It is an ugly sight," said Dūan, "lying here with only a cloth over me, half naked and yellow, and I fear there might be an unpleasant smell."

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The winnowing tray, with the baby on a pillow now covered with a plastic cloth, rested on a low table, the legs of which stood in bowls of water to keep away ants. At first an old dome-shaped fish trap had been set over it to prevent draft and

wood was getting low. Friday (wan suk:day of happiness) was the best day of all to leave the fire, but for her, Friday happened to fall on the fourteenth day after delivery. It was better to come off on another day than to risk taking such an important step on an even-numbered day. Even numbers were always associated with the even corners of a coffin.

Usually the fire period went off safely, but not this time! One day, the heat "seemed to come up suddenly" and choke Dūan. She rose gasping and ran to the window for air. Horrified at the terrible danger of cool air, Lek hastened to get her back to the board. Then by accident Dūan dripped too much water on the fire and put it out! Later, Dūan was almost unconscious, felt unhappy (klum) and as if "the fire were burning inside her." Lek called both Sai and the mō. As the mō entered, Lek handed him the expected offering of incense, flowers, candle, and a baht and a half for his khwan khāo. He prayed to his teacher, then made holy water and a decoction both of which he gave Dūan to drink, saying, "The bad blood and the fish-water did not flow out well, a common trouble after childbirth. Since your body is not cold and the fire has not been out a half-day, you could start the fire up again. But as it is never good to put out the fire like this, I am taking you off it. Take a pot of salt, heat it well and wrap it in a cloth. Put that on your abdomen. Drink no cold water, or you will die."

Dūan was sad that she had to leave the fire early and on an even-numbered day, but one always wanted to obey a mō. All had gone so well when Chāi was born! That time she had taken the usual steps, choosing a Friday to come off the fire. Now she could not choose. Her formal leave of the fire was as before: The mō prepared earth holy water (nammon thoranisān), some of which she drank, and some he sprinkled on the fire. She then knelt down facing the fire and touched her forehead to the floor 3 times, asking the Mother of the Fire to bless her and her child, and to keep them well. She went outside to bathe, first with warm water to cleanse her body, then with holy water, and put on a clean skirt. Returning to the house she seated herself quietly, for she was not supposed to do anything for a time. Others in the family broke up the fireplace. The baby was taken off the winnowing tray. Warm water mixed with the holy water was dropped in his mouth. After being bathed in the holy water, he was laid in a little cradle made of a long cotton scarf, spread apart with sticks, and swung between 2 houseposts.

Now that the fire-period was over, they stopped all boiling of the water for the baby and Dūan. Rain water was substituted, but whenever the baby seemed sickly, boiled water was used. When their rain-water ran out, they got some at the temple. Both Dūan and the baby continued taking medicine for many weeks.

Even after the child was out, the pile of wood was still a drying womb to be treated carefully. It was also the wood for a consecrated fire. To drop a piece of this wood carelessly both injured and desecrated. If this happened a disease of the eyes "sang," came at once for which no male medical powers had any remedy. The only cure was in women's hands, that essence of maternity, "a drop of mother's milk--any mother's." The larger implications of this linking of fire and maternity are dealt with in the next section.

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The Fire of Maturity

In the events surrounding the birth of the child, the significant step for the woman personally was the post-partum rest period by the fire (yū fai). Far more was at stake than just drying the uterus. The fire rest was one of the series of rites of the life-cycle which marked the course of an individual from birth to death. The others were the cutting of the umbilical cord, first head shaving, top-knot tonsure, ordination (for men), marriage, and cremation. Through the consecrated fire a woman formally achieved full maturity: she became suk (cooked, ripe, mature). Maturity did not come just by bearing a child. The fire brought about the transformation.[46]

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How was mature womanhood viewed? What was the essential female role and office? Bang Chan saw a woman as one who "feeds and lengthens lives." As the custodian of growth she was, first, the guardian of the vital, essential khwan soul, and especially of the immature, flighty khwan of growing persons.

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Secondly, a woman was a donor of nourishment (liang).[47] Her primary responsibility was to nurture children and other tender beings. She nourished the fetus with her blood. After

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46. "The fiery element digests what is eaten or drunk...and cooks the body and gives it its beauty of complexion. And the body thus cooked is kept free from decay" (Warren:157-158).

47. All the deities "concerned with the welfare of our bodies and our khwan" were maternal (Mae), e.g. Rice, Water, Earth, "Mother-Goddess" (Mae Sū), and several Mother-Princesses (Chao Mae). Fire, and maybe wind, were both female (mae) and male (phra) (Textor:485). To these deities, "higher" than ordinary spirits, Bang Chan "owed more."

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Thus she performed several rites involving the maintenance of the immature khwan of children and of rice.[54]

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The acme of maternal virtues was manifested in the "good nourishers" (liang dī). These women had borne many children who "nursed and slept well, did not cry, and easily established good habits." They were liang dī not just because of the time spent by the fire, for that time could be matched by persons who had lost babies. They were special persons of more than usual capacities for success in nurture. Good to have around for their auspicious influence, they were called upon to inaugurate or help processes concerned with health and growth. They performed, or caught the child in the winnowing ceremony, or gave babies their first suck. They were the persons to whom a sickly child was brought so that his health might be improved by calling the soul and tying holy cord at wrist and ankle (riak khwan). [755] [774]

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54. If a child indfcated by continuous crying that he had lost his khwan, a mature (suk) woman had to be asked to call it back ritually and re-tie it into the body with sacred cord at wrist and ankle. There was no special magic. Her words suffice. Khwan-ladling, a more elaborate and compelling form of the same ceremony, used magical formulae (Textor:401-402). One of Phillips' sentence-completion tests was, "If one is frightened, the best thing to do is..." Of the respondents, 7 women, including one Muslim, would set to work to "call back the khwan" (Phillips:267-268). No man suggested the latter.

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In the agricultural rites, women handled the rice's khwan in basically the same way when it was immature: inviting the young Rice Goddess to stay and grow in the field, and transporting to the house the child-like seed that only next year would grow to maturity. For these rites a woman used an incantation if she knew one. That she could also handle the rice khwan by speaking "extemporaneously" (Textor:429), indicated that her mere words were enough. If no one else were available, a non-suk woman could call the khwan of a child or of the Rice Mother by reason of her in-born female potency, but could not "ladle" a khwan.

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When the khwan was mature (after a person was about age 10) men took over its care. In the men's thaw khwan (khwan-strengthening) rite, here, too, women were the ones to carry off the cloth-and-leaf covering of the bāisī (tiered offering) into which the khwan had flitted during the ceremony. The rice-ceremony at the threshing floor was a thaw khwan, so was performed by man.

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with men's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

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Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

753 178

Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire. For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

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Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous magical protective needle.

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"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments; modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1955:155-195). It was sometimes better not to claim competence outside these customary lines. One mo said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease.

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Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "woman are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

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An old woman summed up significantly 2 attitudes saying, "In the old days people made more merit and so lived longer, but because we had no hospitals, the children died younger." The relation of good health and longevity to proper religious and moral behavior was fundamental in Bang Chan. If merit did not suffice, medical attention, traditional or modern, could not prolong life. Children, however, were tender (ɔ̄n) and easily prey to sickness.

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Traditional care could help them, but being delicate and tender like city people, children could also be helped by modern hospital care.

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Between the 2 systems people sensed little conflict, for each patient made a preliminary diagnosis of his symptoms and sought the type of assistance his diagnosis and convenience indicated. Mɔ̄ with some knowledge of both systems might offer their patients a choice of remedy. With the right diagnosis, magic, and medicines, a quick cure was expected. if not forth-coming, people were disappointed and moved to another specialist for his help. Modern medicine merely took its place as one more recourse.

The basic handicap of modern medicine was that it had no magical resources or holy water. "Its effectiveness is limited to the properties of the ingredients." Old medicine on the other hand had, in addition to these properties, "The strength of the mɔ̄'s incantation plus the power of every person who learned and used that incantation, back to the time of its discovery, centuries ago." Thus where the medical schemes offered the same specialty, as in fevers, bone-setting, or obstetrics, the old appeared to offer more resources.

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Besides its deficiencies in magic and strength-making attributes, modern medical care had other drawbacks. First, it was not accessible. A trip to Bangkok for medical purposes involved far more time than a day. Minburī's Health Center was a feasible trip, even for a woman in labor (stays ranged from 6 to 24 hours). Home arrangements for tending children, feeding buffalo, and other chores were less demanding. Bang Chan's eagerness for local modern care was shown when a Bangkok physician visited Bang Chan for a few times as part of a nutrition study. He was besieged with private requests for medical advice. Secondly, modern medical care was expensive. In Bangkok, after the expense of getting there, taxis, food, and housing costs for accompanying relatives, hospital, and doctor's fees sometimes meant losing the family gold and even land. Minburī's costs were closer geared to farm income, but medicines appeared costly. "Modern drugs taste and act better, but the poor have to use the old." Third,

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)daeaeng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chauaun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chickwa, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

In Bang Chan when donations for a new school
264 building warranted buying the foundation materials, so that
476 volunteer labor was solicited for their installation, some of
546 the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

782 The spirit-offering, or the portions eaten by a partic-
264 ipant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests.
262 The pork was cut up and eaten with a hot sauce, or put into a
252 "with-rice" dish. It was especially appropriate with liquor.

242 The use of food ritually was not limited to the ceremon-
755 ial season nor to big events. The same purposes underlay the
852 use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

43 The benefits of a (l)ngaan accrued to every participant
554 down to the last worker and contributor according to the degree
796 of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

796 One assistance in the financing was that every invited
476 guest made a contribution, customarily 5 to 10 baht, which
435 helped defray the costs. In 1952, household heads reported these contributions as totalling from 30 to 1,000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (l)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

#128 511 crop year. Except for a few exceptional cases, no new item appeared during the few months that lapsed because rice farmers customarily make their major purchases during the dry season following harvesting time. Special expenses of the 96 continuing families during the period from March, 1948 to February, 1953 were shown in Table 57.

511 Some explanations are necessary for Table 57. In the first place, whereas ordinary household expenses are estimates based on experience of farm operators, these special expenses are actual amounts spent during the specified period of five years. [432] Most of the expenses on land purchases were down payments and subsequent partial payments. Of the four families reporting purchases of household equipment, three bought guns and one bought a sewing machine. [757] [755] All major repairs were for dwellings. The major medical expenses did not include small amounts of money regularly spent on drugs for headache and stomachache or even on delivery of babies which was done by traditional midwives whose fees were nominal. In fact, there were only three cases of major medical expenses. The largest one included [525] Bangkok hospital bills amounting to 14,000 baht. The 36,190 [484] baht of odd expenses included 3,000 baht on gambling(only [691] two operators reported expenses on this item, others admitted win and losses but did not give the amounts), 2,000 baht on purchases of government lotteries which are issued once a week and also on several other occasions, 500 baht on legal prosecution, 300 baht on reward for the

[TEXT CONTINUED ON PAGE 331]

magical formulae and incantations (khāthā cf. Textor 1960:80-88; 67-79). It was one of the branches of occultism (saiyasāt [Mcf. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khāo (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khāo. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō raksā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyae). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.[19]

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

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in the khwan khaō "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mō or to the Minburī Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

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Though living like other elder citizens of the community, in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mō was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (tham ăchīp [Mo.F. 990]) when others who had equal or more experience were not so considered?

The Role of the Mɔ̄

• 756 844 A mɔ̄ never delivered the baby and never even touched a woman in labor, for this was not part of his specialty. If labor were slow, or weakness were setting in, he came to give a decoction to raise the fire element within the body, speed up the winds and so strengthen the contractions. He also gave holy water for general strength and to clear out, if such there were, any obstructing spirit or magical disease object like khuh. Because of his experience, though, he might stand beside the midwife or other woman instructing; for instance, "Pull now!" "Watch out for the eyes!" His advice was more often sought after childbirth if fever or swollen body were in evidence, for these were the results of "inadequate outflow of blood and fishy-water." Because they were called in case of debility, the mɔ̄ were the ones who suggested when it was advisable to send a parturient to the Minburi Health Center.

756 84 No priest-mɔ̄ was ever called for childbirth because of the contact with a woman's genital area, though they were consulted on menstrual and pre-natal irregularities.

759 The Specialty of the Midwife

[192] Midwives were called mɔ̄ tamyaa (doctor-expert-in-occultism; pounding, as in a mortar [McF. 365] crouching, [McF. 682]). There were 4 or 5 women, both Buddhist and Muslim, and 2 or 3 Buddhist men, who had delivered 100 or so babies apiece. They ranged in age from 50 to 70. Dozens of women had delivered babies one or more times but were not accorded the title of midwife.

759 845 The foundation of their specialty was a greater than usual manual skill, developed over long experience. "We have only our hands," said one woman. The more expert could handle certain mal-positions, and did not hesitate, but only with permission, to put the hand into the vagina to turn the baby or "unstop the blood." They were better judges of the progress of labor, whether normal or slow, and of the symptoms of debility. They were more likely to keep calm in the face of extreme suffering where the parturient's relatives, over-eager in their desire to help, sometimes inflicted

sacred books were inherited by males.

In the light of this definition, only the 2 or 3 males were true professional midwives. They gave elaborate annual ceremonies of homage to their teachers (wai khrŭ) attended by all the persons who had profited from the teacher's magic that year. However, all the male midwives were also fully qualified mɔ̌. Their ceremonies were large because they were dedicated to the teachers of their curing powers as well as midwifery.

The male midwives, then, were in a somewhat different category than the females. They were mɔ̌ who had, in addition, trained their hands for midwifery as an "extra specialty." Midwifery seems to have been one of the few areas where skilled hands were considered of greater importance than magic. "We have no magic for delivery," said one male midwife, knowing that nothing but merit could guarantee success. Because they had access to the incantations for element and spirit control, and could make holy water, the midwife-mɔ̌ could spare the parturient the necessity of getting in an outside mɔ̌, if such were needed. However, one part of the midwife's job the man could not do. To protect their male powers of invulnerability they were forbidden to wash the woman's clothing. A woman or a female midwife always had to do this. Men also could not provide the female "mystique" particularly related to the khwan and to growth.

However, the community did not adhere to this narrow definition of professionalism, for several of the experienced and competent women, Buddhist and Muslim, behaved as professionals and were accorded the title of mɔ̌ tamyaa. Their magical formulae, being congruent with their female office of promoters of growth and life, were especially effective. Like a mɔ̌ they received the ritual gift of the khwan khăn, hallmark of the possession of occult formulae, which the patient presented to assure the benefits of magical knowledge.[88]

88. This ritual bowl of rice and offerings was never excused even between the closest kin. If forgotten or misused, the "teacher" punished the midwife with pains, and had to be mollified with a food offering. The magical benefits could not be withheld once the khwan khăn had been accepted. It was not accepted if the patient were too near death to be assisted. If the patient died, the whole gift, cash, rice, and all, was given at once to the temple to make merit.

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established midwife who was a "close relative."

Sometimes the interest arose in young people. A girl started at 15 to accompany her mother, a midwife, as helper and delivered her first case alone (an emergency) at 20. A boy of 15 also helped his mother's sister, who was a midwife. Later, when married, he delivered some of his own children, but denied that he ever intended to take up the calling. One young man in his 30's, was seen going "as a team" with a well known old mɔ̄ who directed him in the manual operations but who did not ever touch the woman himself. He also assisted one of the female midwives, but had not yet delivered a baby alone.

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The first child delivered by anyone was always the child of a close kin. Only with success at this first delivery would a person even consider doing it again. The second case, and the next few were confined to the potential midwife's close relatives, children (lūk), grandchildren, and the children of siblings (lān). Thus, the skills were validated within the kin circle before a midwife felt ready to practice outside.[59]

With success, a person of developing skill might be willing to include non-kin in his clientele, i.e. become a professional. One resolved only to help relatives but her "fame spread." As another said, "seeing it was safe, I was encouraged to go on." By this time, magical formulas had been

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59. Daughters-in-law were within the validating circle if circumstances were "convenient"--i.e. if their own mothers did not deliver them and if they lived with their husband's people. No witchcraft was feared between women. A mɔ̄ in his specialty also had to validate his skills within his close kindred before non-kin would call on him. A reputation began at home. [606] [764] [756]

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mɔ̄, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mɔ̄ gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mɔ̄. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the tham khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauck, et al: 42-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny kluai nam, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" kluai nam wā. Here orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plus--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (wisāt:powerful) or natural (tām thammachāt) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "khun"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paroxysm, flatulence, convulsion,

16. Phillips (p. 65) reported that parents did not give their child a disliked medicine because "it offends him.... It is better not to give it to him than hurt his feelings."

17. This small skin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely pained (cf. Textor:116-127). Suspected khun was one of the few reasons why a family would authorize so grave a violation of the body of a deceased member as an autopsy.

828 753 or fainting, and also such localized trauma as abcesses. Similar behavior followed the influence of malevolent magical amulets, incantations, and love magic. Natural intrusions may be exemplified by the seasonal influences of rain, which brought on too much water element; of heat, which increased fire; and of wind, which cooled too much or brought in certain fevers, e.g. north fever (khai nūa). An accident was a natural cause of disequilibrium. A cut might let out the air or a soul.

774 [761] [753] Any lost soul, if not restored, meant death. Souls were lost from falls or frights or from spirit attack, a condition recognized by persistent crying, hysteria, and unconsciousness. The exits were at the top of the head, the palms of the hands, and the soles of the feet, the latter 2 sometimes localized at the 2 thumbs and the 2 great toes. One of the old beliefs associated an element with one of the four čhĕttaphūt souls (Textor:130). When one of these souls was lost one whole element was gone. Loss of the khwan soul was more frequent than any other, especially during childhood. Its care throughout life was very much in mind. The khwan[18] played an [844] especially prominent part during childbirth.

755 [262] [757] If a person were only slightly sick, he might first try to overcome his physical complaint by attention to diet. Very rarely did he by himself buy some medicine at a drug store. If it were a case of a child's lost khwan, women performed the rite for its recovery. When the khwan of an adult was affected, men performed a strengthening rite (tham khwan), or a priest gave a holy water bath. If the person were very ill, holy cotton thread (sāi sin) was tied at wrist, ankle, and neck so as to shut off the soul exits. An elder relative or spouse might also "hon," i.e, vow food or liquor in return for the help of supernatural beings; or, with Buddhist "sacred things" in mind, promise the ordination of the afflicted person, or oneself, or some interested relative. In this case, the relatives had long since turned for help from the arts of medicine.

278 755 The Arts of Medicine

Medical knowledge comprised on the one hand a pharmacology of materia medica, and on the other, the far more important

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18. The conceptualization of this soul was Brahmanic in source, rather than Buddhist (cf. Martinie, 1952:370).

On the other hand, pregnancy was a period of uncertainty when a woman was easily upset emotionally. Because childbirth was "like a war" when a woman might die, "defeated by her pregnancy" (phaethong), she felt uneasy.[24] If she were frightened, her child's khwan would fly off in terror. The baby died in the womb if its khwan did not return. Because of increased sensitivity and vulnerability her elements and those of the baby were frequently thrown off balance. Wind easily entered through the thin skin of her stomach where she carried the unborn child. It caused pre-natal disorders all the way from queasiness and minor vomiting in early pregnancy to miscarriage and death. "A woman felt dizziness and numbness because of wind in the fetus. In a month she suffered a miscarriage."

A pre-natal pain that did not seem to be a labor-pain was diagnosed as the very dangerous naem, "a thick lump of blood and wind that moved quickly." As in other illnesses, element harmony was restored by medicines, holy water, and by modifications of diet.

Women knew of possible supernatural invasions of the womb during pregnancy. If a woman had beforehand lost a baby at birth or through miscarriage, and the body had not been properly buried, she might be seriously troubled by its restless ghost, fully as powerful, it must be remembered, as an adult's.

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24. The image of battle was traditional (cf. Anuman Rajadhon: 108). Phaethong (McF: 599), a combination of food craving and vomiting (Anuman Rajadhon:115) paralleled the dola-duka of Ceylon (cf. Obeyesekere), but without the hostilities built in by the Sinhalese.

844 fast enough to break the amniotic sac. Sāi made her a
[278] medicine of mung bean and sugar, both of which wet the uterus, and murmured some magic words to help. Later she worked with her hands at the vagina, twisting the sac a bit to break it. Suddenly the sac ruptured.

Now the child was almost there. The head showed well. Sāi sat down directly in front of Dūan to do the pressing herself. With one hand she held or gently pulled on the
[789] baby, with the other she pressed on the abdomen with every contraction. As she started in, she said magic words. She worked for an hour--no midwife would press more than that--until at last the child was out. A little boy! With her finger Sāi removed the blood from his mouth, and pucked out the lips. Breathing was slow in coming, so she shook him vigorously, then laid him down. Quickly she chewed up an onion and spit it over his body. "Ah-h-h!" A cry, though not very strong! Seeing the new baby appear, Chai, who up to then had been constantly near his mother, rushed precipitously from the house, and refused to come in for hours, in spite of Song and Lek's coaxing.

[787] Everyone had observed an auspicious circumstance: the cord was looped around the baby's neck! This imitation of the holy cord (mongkhon) placed around head and neck in Brahman rites of passage was a rare and good sign. "A cord looped thus could never kill a baby," someone said.

Since the placenta was slow in coming, Sāi prepared to cut the cord while Dūan rested and sipped the fiery snake brand medicine. Depending on circumstances she might cut it
[278] before or after the placenta was out. Taking a rhizome of phlai (Mcf. 604), a traditional healing root she laid it on a clod of soil brought in from outside. From one of the
[412] old bamboo house beams, someone had sliced with a knife a sharp-edged, tapering sliver to serve as a cutter. The cord was stroked 3 times, starting near the baby's stomach "to remove the dirt." Then "something that is in the umbilical cord" was pushed back towards the baby's stomach "to prevent
[778] a flow of blood." She measured the cord from the baby's abdomen to his knee, and tied off 2 places in it with the holy unspun cotton cord used ordinarily in rituals. Laying the part between the 2 knots on the phlai on its bed of soil, and saying her magic "w'nvān a sam pa nō," she cut
[757] the cord with the bamboo cutter. With a chicken feather which had to come "from the mother's yard," she collected a few spider webs from the rafters, mixed them with coconut oil, and painted them around and on the cord-stump, also "to stop the blood-flow." While doing this, Sāi said, "One midwife I know severs the cord by tying it with the thread at 3 places, then burns it with a flame."

846 789 782 Now that the fire was going nicely and Dūan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sāi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dūan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaichiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dūan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

846 [757] [853] As Dūan was resting quietly, Sāi made three "taping fruits" (lūk prakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dūan's legs to cure the birth wound (phlāe). The other two were set aside for use on subsequent days. Sāi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dūan, on the side away from the fire.

787 827 With satisfaction of a job well done, Sāi and Lek sat together for a quiet chew of betel. "Lek," said Sāi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that best

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[273] [262] 36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

[263] [776] 37. The deities addressed were māe phra phlōeng and māe phra phai. Another Pali-Thai magic formula to control fire was: "Phra Mōk Khan Lā Nō will extinguish the fire from hell, na mō phut thā ya." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mō...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Textor 1960:483-485).

846 [514]

the fire for her during the first day or so, lest in her straining, Dūan's womb "move to a new place," but Duan did it herself thereafter. The smoke was harder on others than for her for she was on the floor. She could leave the plank to bathe and to relieve herself through a crack in the floor. As soon as Chāi got over being frightened of her turmeric-yellow stomach, he often came and lay beside her on the plank, though it was a squeeze! She took her medicine and often sipped hot water, feeling very modern with her brand-new thermos bottle. Constantly turning her back or front to the fire, she poked or dripped water on the flames to make coals. Once she tossed on a dry palm leaf, and as it flared up, put a cloth over her head to trap the smoke and heat. Though a rash developed on her body, she was complimented by Lek on the care she was taking of the heating and drying process. Unfortunately, a neighbor who wanted to help brought in some of the wood one day. Not remembering that to make noise with the wood caused diseased red eyes in the baby, she dropped the bundle with a crash! Alas, "sang" disease, of course, came at once. So the near-by mō who always cared for them had to be called, but he used no medicine. "For eyes red from 'sang'," he said, "never use any eye-medicine as drops, or they will be permanently damaged or blind. Such eyes have not enough resistance to win over the strength of the medicine. A drop of mother's milk, any mother's, in the eyes is the cure." [753] [757]

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Uterus pain was said to last one day for the first child, 2 days for the second, and so forth, increasingly. As Dūan seemed to be in considerable pain, Lek resorted to an old cure: she secretly took the bamboo knife and the phlai from the baby's tray and put them under Duan's plank bed without telling her. Slowly the pain diminshed.

846 789

If anyone spoke of uterus pain to her during the fire period, Dūan would suffer still more. If a visitor spoke of the hotness of the fire, little boils would appear on her body. The fire, being thus made too hot, would have to be put out, and Duan "would be weak for a long time." This was because actions or even words occurring beside the holy fire set a new and permanent pattern. Neighbor's children were kept away lest they inadvertently exclaim about the heat.

846 574

A few relatives with gifts of banana, turmeric, and face powder dropped in, but visitors mostly stayed away. "It is an ugly sight," said Dūan, "lying here with only a cloth over me, half naked and yellow, and I fear there might be an unpleasant smell."

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The winnowing tray, with the baby on a pillow now covered with a plastic cloth, rested on a low table, the legs of which stood in bowls of water to keep away ants. At first an old dome-shaped fish trap had been set over it to prevent draft and

846 [789] Seven days after the end of the fire period, Dūan sent a message to the mō to look in his book as to what direction from the house she should bury the phlai, the bamboo knife, and the pot with the now dried placenta and cord. She already knew some of the procedure: burying should take place on a Monday or a Friday; south was right during the first three months of the lunar calendar, November, December, January; and the full moon of the twelfth month (October) was especially good, for the moon waned thereafter. Chāi had been born in October, so north was right for him, but for a girl it would have been east. Song or Lek or anyone could bury the pot, but most mothers did it themselves. If it were buried in the wrong direction, the baby would die, and if not under a tree, he would leave them and their home, and roam. The instructions came. With the things in her hand, she walked toward a big jackfruit tree. Beside it was a sakāe. Either was good, so she chose the sakāe which, being nearer the house, might strengthen by that much the roots that would keep her boy at home. After burying the pot and all, she returned directly to the house, remembering to pick, as she came, a fruit, a vegetable, a leaf, and then a piece of wood, all useful things. In the house she added them to the usual household stores. By doing so, and by using them up shortly, she ensured that her new son would be a good worker, who on returning home would always bring something to add to the requirements and wealth of the household. Once buried, the placenta, "like ashes," was ignored and the spot forgotten.

846 262 [461] [753] [757] 862 Within a month after childbirth, Dūan was back at farm work, even to the back-straining pounding of rice in the big mortar. For three months she avoided fruits, particularly guava and jackfruit. Then, since the baby was thin, she gave up vegetables, especially gourds, corn, and the green plants that grew in the canal. One day, because she carelessly ate some salted field crabs, the baby got thrush on its tongue. They cured him by smearing the milky juice of a peel of kluāi nam banana on the cloth sheet covering his cushion, then wiping this on his tongue (cf. Anuman Rajadhon 1961:153). So the year passed, and then another. Not long after his third birthday, Dūan realized she was pregnant again, so took steps to wean him. She painted her nipples with "black medicine" (yā dam), a bitter and hot tasting ointment made from the boraphed rhizome (McF; 474). Then she sent the child over to her mother's older sister's house for four nights. To make quite sure, she followed an old ritual way, too. She boiled an egg hard and peeled it. Holding the egg behind her back, she turned her face away from her son, and handed it to him behind her so that she could not see his face. "Henceforth, you shall not nurse any more," she said. Without looking at him, she walked

Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire. For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous magical protective needle.

"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments; modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1955:155-195). It was sometimes better not to claim competence outside these customary lines. One mō said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease.

Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "woman are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

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178 An old woman summed up significantly 2 attitudes saying, "In the old days people made more merit and so lived
812 longer, but because we had no hospitals, the children died
782 younger." The relation of good health and longevity to proper religious and moral behavior was fundamental in Bang Chan. If merit did not suffice, medical attention, traditional or modern, could not prolong life. Children,
855 however, were tender (ɔ̄n) and easily prey to sickness.
958 Traditional care could help them, but being delicate and
178 tender like city people, children could also be helped by modern hospital care.

757 Between the 2 systems people sensed little conflict, for each patient made a preliminary diagnosis of his symptoms and sought the type of assistance his diagnosis and
755 convenience indicated. Mɔ̄ with some knowledge of both
178 systems might offer their patients a choice of remedy. With the right diagnosis, magic, and medicines, a quick cure was expected. if not forth-coming, people were disappointed and moved to another specialist for his help. Modern medicine merely took its place as one more recourse.

The basic handicap of modern medicine was that it had no magical resources or holy water. "Its effectiveness is limited to the properties of the ingredients." Old medicine on the other hand had, in addition to these properties, "The strength of the mɔ̄'s incantation plus the power of every person who learned and used that incantation, back to the time of its discovery, centuries ago." Thus where the medical schemes offered the same specialty, as in fevers, bone-setting, or obstetrics, the old appeared to offer more resources.

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758 Besides its deficiencies in magic and strength-making
178 attributes, modern medical care had other drawbacks. First, it was not accessible. A trip to Bangkok for medical purposes involved far more time than a day. Minburī's Health Center was a feasible trip, even for a woman in labor (stays ranged from 6 to 24 hours). Home arrangements for tending children, feeding buffalo, and other chores were less demanding. Bang Chan's eagerness for local modern care was shown when a Bangkok physician visited Bang Chan for a few times as part of a nutrition study. He was besieged with private requests for medical advice. Secondly, modern medical care was expensive. In Bangkok, after the expense of getting there, taxis, food, and housing costs for accompanying relatives, hospital, and doctor's fees sometimes meant losing the family gold and even land. Minburī's costs were closer geared to farm income, but medicines appeared costly. "Modern drugs taste and act better, but the poor have to use the old." Third,

Chapter VIII

CHANGES

In studying change in the customs surrounding childbirth in Bang Chan, we have D.B. Bradley's description of birth in Bankok in 1865 as a base-line on which to project our findings. Since most of the population of Bang Chan (Thai, with a few Laotians, Mon, Muslims, and Chinese) stems from Bangkok, we may reasonably assume that the parallels derive from a true historical connection. Bradley's description fitted Bang Chan as if written today:

> "Siamese theory in regard to the part which external and internal fire plays in the functions of life and health is made to work powerfully...There is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which, if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child...[Thus a woman lies by the fire]... exposing all parts of her body, and more particularly her abdomen, to that drying process, so that the uterus shall be forced to shrink up quickly to its normal dimensions, and the sanguineous streams which had been diverted to support the child before birth, shall, by fire, be driven backward to their more usual limitations, all which is...a sine qua non to a sound constitution and good health in the future..." (Bangkok Calendar, 1865:78-84).

Bradley showed that some behavior one might call "change" today was a recognized alternative in 1865. For instance, in Bang Chan a few women "are made too unhappy (klum) by the fire so cannot use it. They should take extra amounts of pickled medicine" (yā dong). Bradley wrote, "a few delicate females...who cannot endure [this] usual treatment, are compelled, against all their ...fears of the consequences, and all the importunities of their

friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of ...medicines" (p. 81).[74]

The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: fai chut) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Mīnburī Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered net-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (suk) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a mō did the same (with the possible exception of the sponging with tepid water), that as a mō-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorization, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calendar, 1871:107-109).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1920's.

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164 Considering deciduous tooth only, in a group of 173 children, 93 boys and 80 girls who had deciduous tooth, 56% of the boys and 50% of the girls were free from caries. The average number of carious deciduous teeth per child was 1.4 and 1.5 for boys and girls respectively. For those with caries experience, the number of carious deciduous tooth per child was 3.2 for both boys and girls.

In the entire group of 226 children, 76% of 116 boys and 60% of 110 girls were free from caries of permanent teeth. The average number of carious permanent teeth per child was 0.5 for boys and 0.9 for girls. For children with caries experience, the figures were 1.9 and 2.3 for boys and girls respectively. None of the 30 boys with caries of permanent teeth had more than 4 such teeth, whereas 5 of 43 girls had more than 4 carious permanent teeth.

164 171 Data for children aged 12 to 14 in Galesburg, Illinois and Colorado Springs (Dean et al. 1942) have been chosen for comparison of caries experience in permanent teeth, with that in Bang Chan. In these cities, the fluoride content of the water is conducive to low caries incidence, yet the percentage of children aged 12 to 14 having caries experience was 72.2 and 71.5 for Galesburg and Colorado Springs, respectively as compared to 41% for Bang Chan, and the number of DMF[1] permanent teeth per child was 2.36 and 2.46 as compared to 0.88 carious permanent teeth per child in Bang Chan.

The reason for the relatively low incidence of caries among children in Bang Chan cannot be stated with certainty. Similarly low or even lower caries incidence has been reported for certain age groups of children in various parts of the world, for example in North China (Afonsky, 1951), in the northern islands of Samoa where the people had little access to store foods (Losee, 1952) and in a small isolated village in Greece [146] (Phillipas, 1955). One thing which residents of Bang Chan appeared to have in common with such other populations which are relatively caries free, was low intake of sugar[2], particularly in a form which would be apt to adhere to the teeth.

• 757 Restoration of Decayed and Missing Teeth. - None of the children examined had any filled teeth. Up to 44 years of age, the adults examined had retained almost all of their teeth, and [145] no evidence of restoration, other than crowning was noted. Decline in average number of teeth was marked after age 55.

Of 92 adults with teeth, at least 7 men and 6 women had been to a dentist as evidenced by the presence of crowned teeth

1. DMF denotes decayed, missing and filled. Children in Bang Chan had no filled teeth.

2. Sudsaneh (1956) found the average per capita intake of sugar in 11 families to be only 6 grams per day.

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757 in their mouths. More than half of the teeth crowned were said to have been sound, and no crowned molars were noted. The services of a dentist appear to have been sought more for their cosmetic value than for dental care as such.

276 164 Betel Chewing and Dental Health. - Betel chewing was not habitual with any of the adults under 25 years of age who were examined. Among adults above this age in the random sample, 13 of 29 men, or 45%, and 34 of 40 women, or 85% chewed betel. The group of adults from 25 to 44 years of age was singled out for study of caries incidence in relation to betel chewing, since adults retained most of their teeth up to this age. Among 19 betel chewers, 3 persons had 5 defective teeth whereas among 19 non-betel chewers, 7 persons had 46 defective teeth. Others (Gerry et al. 1952; Shouric, 1948) have reported a lower incidence of caries among betel chewers than non-chewers. Caution must be used in interpreting our observations, however, because the sample is small, and the teeth were not cleaned before counting caries. Stain and calculus may have obscured small caries in betel chewers.

The impression was gained by casual observation that protruding incisors were common among habitual betel chewers, and that the teeth of some betel chewers appeared to be loose. Since such protruding incisors were not noted among the school children, nor among non-chewers, we associated them with habitual betel chewing. Both Gerry et al. (1952) and Balendra (1949) noted a higher incidence of gingivitis among betel chewers than non-chewers. Since most of the older persons in our sample chewed betel, our data offered no clue as to the possible effect of betel chewing on the loosening and loss of teeth among older persons. Another item of possible importance, and on which we have no data, is the extent to which tobacco is used as an ingredient of the mixture which is spread on betel leaves.

276 146 Platt (1945) considered betel chewing as a potential source of calcium in the diet. He stated that the amount and utilization of calcium ingested with 6 betel leaves was similar to that from 10 ounces of cow's milk.[1]

The amount of calcium ingested in this way doubtless varies not only with the frequency of betel chewing, but also with the amount of juice swallowed. In Bang Chan, spitting out the juice appeared to be more customary than swallowing it.

276 Further research is needed to decide whether the potential disadvantages of betel chewing outweigh its potential benefits. Moreover in any attempt to decrease the practice of betel

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1. Platt, 1945. Footnote, p. 21.

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344 mats on the floor as most of them would have done at home.
[743] Relatives were welcome; indeed they were supposed to come and help.

164 Nature and Incidence of Illness and Injury, and Treat-
12 ments Sought by Residents of Bang Chan. - Evidence concerning the nature of illness and injury in Bang Chan was obtained in connection with the clinical examination of school children and persons in the random sample of village households; from questions in two types of structured interviews with household heads: 1) in the entire village, and 2) in one hamlet, KY-7; and from the field notes of workers associated with the Cornell Thailand Project.

164 In connection with the clinical examination, information was obtained from heads of 30 of the 31 households whose members were examined (See schedule in Appendix A).[3] In this group, none reported any accident or injury, and 26 said that no member had been ill within the year. Illness was reported as occurring in 4 households only. In one of these, a 49-year old man reported loss of sensation over the extremities and other symptoms which led the physician in the research group to conclude that he had beriberi. As treatment, this man had used an herb recommended by a priest, a native medicine given him by a neighbor and had gone to a private clinic at Minburi where he received an injection.[1] In another family, a 39-year old man who had asthma, took an advertised remedy which he purchased from a drugstore. Two children in the third family had fever for 8 days, for which a traditional practitioner prescribed herbs. In the fourth family, a 1-year old child with eczema was taken first to a traditional practitioner, then to a private clinic in Minburi where he was given an injection.

164 On the basis of other observations, however, we believe
128 that illness and injury are more common in Bang Chan than is suggested by the replies to this particular inquiry. For example, no mention was made in one of the households surveyed of a baby who had been too ill to be weighed and measured, when team members called, and who recovered in a day or two without outside help. Coming as they did at the end of the clinical examination which was new to most of these people, perhaps the questions asked seemed relatively unimportant. No attempt was made to probe beyond the person's reply to the questions as stated.

164 Replies to questions in connection with an intensive

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1. From casual observation, one is led to believe that the villagers have considerable confidence in "injections," although the nature of the injection received or desired, is not usually specified.

[3] [see p.51-Analyst]

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164 survey made in one hamlet, KY-7, give a rather different picture of the extent of illness and injury in Bang Chan, if the situation in this hamlet is at all representative of the whole. Hanks (1954), found that serious illness had occurred within the previous year in 17 of 38 households[1] in the hamlet KY-7. Twenty-four persons of various ages were involved, and the illnesses were described as lasting from a few days to 3 years. Specific diseases were mentioned in 7 cases: diphtheria, typhoid fever, pneumonia (2 cases), malaria and beriberi (2 cases). In the majority of instances, however, symptoms rather than diseases were mentioned, i.e. fever, diarrhea, pain in chest, disorder of throat, lung complaint, swollen foot, and the like. One case, described as a wound in a 5-year old child, might have been due to accident.

•757 In all, the 24 ill persons obtained a total of 40 "treatments,"[2] from one to four types of treatment per patient. Treatment by modern doctors was used more frequently than other means of help (Table 15) although such treatment is not available within the community of Bang Chan. Fifteen of the 24 persons who were seriously ill had treatment by modern doctors, several patients receiving treatment from more than one. Thirteen patients had one type of treatment only (as that from either traditional practitioner or modern doctor), 7 used 2 types, 3 used 3 types, and 1 had 4 types of treatment from 5 individuals. The latter case was that of a child who was described as sick for 60 days with pneumonia, neck swelling and fever, and was treated by a traditional practitioner, two priests who were also traditional practitioners, and a medium, all in Bang Chan, and a second-class doctor in Minburi. Another child who was sick with lom sandan (faintness, weakness or loss of consciousness) for three days was treated by 4 local traditional practitioners and a second-class doctor at Minburi. One child with saang (a disease of young children, said to be caused by the loss of the soul or spirit) was treated by the modern doctor at Minburi, only.

757 As a rule, local practitioners of one sort or another
757 were visited or called first, those in Minburi next, and those in Bangkok, only after nearby help had been consulted. This order was not invariable however. For example, in the Hamlet KY-7 series (Hanks, 1954) was one woman who was sick with beriberi for about 8 months after childbirth. She went first

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1. Interviews were not obtained with 3 of 41 household heads in the hamlet.

2. Each type of practitioner, as traditional practitioner or modern doctor, was counted as a separate "treatment."

[TEXT CONTINUED ON PAGE 37]

A [See p.36-Analyst].

Table 15

Treatment Used For Serious Illness by 24 Persons in 17 Households, Hamlet KY-7

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Specified Treatment	Locality			No. of Persons Treated
	Bang Chan or adjoining area	Minburi	Elsewhere[2]	
Persons consulted:[1]				
Modern doctor[3]		18(21)	4(7)	19
Traditional practitioner	11(14)		3	11
Priests	3 (4)		1	4
Muslim masseuse	1			1
Medium	1			1
Medicines used without advice of practitioner:				
Purchased from market			1	1
Obtained from neighbors	1			1
Home remedies	2			2
Total	19(23)	18(21)	9(12)	40

1. Figures indicate the number of persons who had the specified type of treatment, not the number of visits or treatments. The higher numbers in parenthesis indicate that in some cases a patient consulted more than one person in a category, i.e. more than one traditional practitioner or modern doctor.

2. Modern doctors in Bangkok and Tonburi, and at Don Muang; traditional practitioners at Chachoengsao, Bangkok and in the rural area near Bang Chan.

3. Doctors most often visited in Minburi were "second-class," i.e. not graduates of medical schools, but persons with a limited amount of training in modern medicine.

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757 to a second-class doctor in Minburi, then to a nearby Muslim
759 masseuse, then to a local traditional practitioner who gave her some jaa tom (cooked medicine). Another instance, recorded in the field notes, is that of a school teacher's baby who had abscesses on her head. The mother took her child first to Minburi, where she was given an injection and a sulfa drug to be taken orally. The child did not get well immediately, and before all of the drug had been taken, the mother took the child to a local traditional practitioner who gave her a decoction of herbs which was to be given by mouth. Thus in some cases, modern doctors were consulted first, and local traditional practitioners later, if relief was not as speedy as was expected. The experience in this one hamlet suggested a willingness to try a variety of treatments, and the existence of a considerable degree of confidence in modern medicine.

758 According to Ralis (1955), 213 of 335 household repre-
743 sentatives interviewed had visited a clinic or hospital. Of these, 156 had gone to Minburi, and 135 to hospitals or clinics in Bangkok, some having gone to both places. Of 258 hospital or clinic visits, 125 were for treatment or hospitalization; the bulk of the rest were to accompany patients or to visit hospitalized relatives or friends. No significant difference in reports about seeking treatment or hospitalization was found between groups of persons differing in literacy, or in socio-economic level.

144 Infectious disease. - The principal evidences of infectious disease noted in the course of the clinical examination for assessment of nutritional status were trachoma and smallpox scars. Occasional cases of ringworm and other fungus infection, and of pediculosis were observed by the physician.

When the 233 school children and 148 additional persons included in the random sample of village households are considered together, i.e. a total of 381 persons or more than one-fifth of the total population of the village, only 3% were found to have trachoma. Eleven of 13 cases found were among 237 children 7 to 14 years of age, i.e. an incidence for this group of 4.6%. Zimmerman (1931) reported 119 cases or 4.3% of all persons examined in Central Thailand, and 277 cases or 2.9% of persons examined in the whole Kingdom. Among the school children examined, however, he reported an incidence of 12.6%.

Of 381 persons examined in Bang Chan, only 10, or fewer than 3% had smallpox scars. Two cases only were in adults, the remaining 8 being among children of school age. Our records do not show when the most recent cases occurred in the village.
751 According to Zimmerman (1931), 88% of over 2200 school children examined had been vaccinated. No information was obtained concerning the proportion of residents of Bang Chan who had been

121 I recall seeing portable motors stored in some Bang Chan houses and
[243] can still picture many threshing floors with neatly layered heaps
[244] of rice straw where the mushrooms grew. A few of these apparently "progressive" farmers had special ponds to which they proudly invited me to watch the feeding of the tilapia fish. Occasionally one of them seized the opportunity of my visit to inquire about sending a sick kinsman to a Bangkok hospital. Without Dr. Goldsen's analysis I might easily have been lured to generalize that certain farmers were "innovation minded."

*177 The survey's evidence against a general "innovation mindedness"
*178 cautioned me to reconsider my impressions. I realized that it would
121 be an oversimplification of the social network in Bang Chan to
621 think of it as containing a group of "progressives" who sought avidly each new agricultural wrinkle and who pitted themselves against another group of "conservatives" who resisted change. Instead I was led to see some farmers interested in certain new things, others indifferent to these but interested in other things. Bang Chan looked more like a mosaic of small groups, each fitting or rejecting the new according to its circumstance.

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*178 Instead of thinking simply of a group of highly motivated,
243 wealthy farmers who assumed the responsibility of trying out the
244 new for the benefit of their less affluent neighbors, I was alerted to recognize a variety of kinds of innovation. Innovation in growing rice, where one might employ a motor or fertilizer, differed considerably from earning extra cash during the dry season by growing mushrooms. The analysis of the survey evidence made me sensitive to the realization that mushroom culture was clearly a seasonal activity requiring little investment and open to any family, rich or poor, that needed cash. Certainly no genuine rice farmer would permit this extra work to interfere when the rains called time for ploughing. The finding that no correlation existed between acceptance of motors and growing mushrooms seemed in retrospect clear, almost self-evident.

*177 The survey analysis indicating that owning a motor, despite
182 my initial impressions, bears no relation to use of modern medical
244 facilities, made me reexamine my initial impressions. My own studies had made me aware that making a living is a positive
• 767 action among Bang Chan farmers: it requires forethought and will. Health, however, for Bang Chan is a kind of negative entity to be taken for granted until sickness arrives. Bang Chan has no vitamin pills nor tonics to maintain health, though all work actively to relieve sickness. Growing mushrooms and using modern medical facilities are phenomenally different undertakings. Certainly the survey analysis in this regard bore out and corroborated this "thematic" analysis.

#128 511 crop year. Except for a few exceptional cases, no new item appeared during the few months that lapsed because rice farmers customarily make their major purchases during the dry season following harvesting time. Special expenses of the 96 continuing families during the period from March, 1948 to February, 1953 were shown in Table 57.

511 Some explanations are necessary for Table 57. In the first place, whereas ordinary household expenses are estimates based on experience of farm operators, these special expenses are actual amounts spent during the specified period of five years. [432] Most of the expenses on land purchases were down payments and subsequent partial payments. Of the four families reporting purchases of household equipment, three bought guns and one bought a sewing machine. [759] [755] All major repairs were for dwellings. The major medical expenses did not include small amounts of money regularly spent on drugs for headache and stomachache or even on delivery of babies which was done by traditional midwives whose fees were nominal. In fact, there were only three cases of major medical expenses. The largest one included [525] Bangkok hospital bills amounting to 14,000 baht. The 36,190 [484] baht of odd expenses included 3,000 baht on gambling(only [691] two operators reported expenses on this item, others admitted win and losses but did not give the amounts), 2,000 baht on purchases of government lotteries which are issued once a week and also on several other occasions, 500 baht on legal prosecution, 300 baht on reward for the

[TEXT CONTINUED ON PAGE 331]

Diet in Body Maintenance and Curing

261 262 753 Because food created fire, the daily diet could be a source of illness or a therapeutic means. Every food had known properties for heating or cooling, and for other effects as well. Guava fruit, alcohol, and turtle or cobra curry were heating. Eggs were cooling. Depending on the occasion, ice and iced concoctions were over-heating or over-cooling. They were always "dangerous during menstruation." Banana varied according to the variety: kluai hom (fragrant banana) was undesirably cooling and caused either diarrhea or constipation (Hauck, 1959:27); kluai nam wa was less deleterious (salaeng) while kluai nam was good for the sick or for parturients (Boonlong).

252 262 Properties in food changed in cooking. Boiling made rice "ripe" (suk) and so available as nourishment (Anuman Rajadhon:77). Even the method of cooking varied the properties. For the sick and for parturients, the banana variety called kluai hak suk was good if baked, but not if cooked in syrup (Boonlong).

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262 753 827 Some foods were "incompatible" with, and so aggravated, certain illnesses. Air-borne food in the form of smell was incompatible with, and compounded, a condition of wind excess. Death or blindness ensued. On the other hand, asafetida might be tied to the wrist of a new-born baby so that the smell, an established carminative, might cure the excess wind in his stomach manifested as flatulence.

262 Beneficial foods were encouraged. Of all these none surpassed rice, the main sustenance of the body, "the only true food" (Yong Chutima, in Hauck, 1959:27) and source of "strength" to the farmer. Rice was a safe food. It never disturbed elements. Eating rice, as compared with meat, had no overtone of taking life. One could eat one's fill without any sin. Most of all, rice nourished the human khwan, for each grain contained a part of the khwan of the divine Rice Mother. Furthermore, any food offered ritually to a spirit or to make merit acquired strengthening properties, and was afterwards given to priests, children, or to the sick.

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[776] Foods with known dangers were avoided. "Kluai tani banana, a variety full of seeds, was never eaten because it contained a female ghost (phi)." Jackfruit was avoided by lactating women as a direct source of wind-excess. Fruit in general was not dangerous but "did not give enough strength for a rice farmer. It was all right for an orchardist."

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speeded up with heat to the point of blasts. The strength of the contractions of labor was in direct proportion to the speed of the winds' circulation. The great pushes of the expulsive lom beng "broke down" the sac with the amniotic fluid (nam thun hua: water-that-supports-the-head-of-the-child), and forced out the child, water, and the placenta.

After the child was out, the mother was cold, weak, and exhausted. Her uterus was full of harmful fluids. Heat was needed more than ever not only to warm her but to give the winds "the power and push" to drive out three undesirable birth-waters: "The blood that looks like ordinary blood but is bad,"; the amniotic and abdominal body water (nam khram:refuse water); and the pale, viscous, repugnant "fish-water" (nam khao pla). Therefore, a hot fire was built, close to which the mother lay (yu fai), turning all sides of her body towards the flame. She bathed in or drank hot or warm boiled water (nam suk: cooked, or ripe, water). She ate safe foods like rice and dried fish,[31] and kluai nam bananas, continued to take alcoholic medicines of the hottest sort, such as Snake Brand, and occasionally might be given cobra or other hot curries to eat. For a first-born, a woman stayed eleven or nine days by the fire (always an odd number), with stays shorter for each successive child, but never less than five days.

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Complications sometimes developed because of inadequate control of the heat. A "headache and a hot body" indicating "stagnation of the blood and the fishy-smelling-water," was cured by a heat-producing decoction. Rashes often occurred, causing small boils that might develop into sores. To soothe these, turmeric was painted on. In the most dangerous cases the heat "drove the bad blood to the heart, to the face or belly" where it was recognized by serious swelling, with resulting madness or death. In fact, one mo felt that the

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31. The reasons for rejecting fresh fish during pregnancy ("lest a creature of hell be born") would not hold after parturition. Yet fresh fish was rejected then too "as bad for the womb." One suspects that the less odorous dried fish was substituted so that the odor of fresh fish, like air-borne, incompatible food, would not affect adversely the "fish-smelling" post-partum discharge (nam khao pla). In Hauck's list of foods "bad for mother during the post-partum rest," the reasons are apparent: Sour tastes did not dry out the body, but built up water; egg was too cooling; jackfruit brought in wind; glutinous rice and the sugar of sweets "wet the uterus;" fruits did not give strength and were excessively cooling (cf. Hauck,1959:15).

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heat could be better controlled by medicine alone, saying "I do not prohibit a fire, but if called because of difficulties such as a temporary paralysis, I always take the patient off the fire and prescribe a decoction, or recommend more pickled medicine (yā dong)." "Damage to the thigh ligaments," treated by a masseur, was said to result from insufficient rest by the fire. If the baby died, the mother did not curtail her fire-rest but finished it out as planned. As will be seen later, the fire-rest had far deeper meaning than just physiological restoration.

wood was getting low. Friday (wan suk:day of happiness) was the best day of all to leave the fire, but for her, Friday happened to fall on the fourteenth day after delivery. It was better to come off on another day than to risk taking such an important step on an even-numbered day. Even numbers were always associated with the even corners of a coffin.

Usually the fire period went off safely, but not this time! One day, the heat "seemed to come up suddenly" and choke Dūan. She rose gasping and ran to the window for air. Horrified at the terrible danger of cool air, Lek hastened to get her back to the board. Then by accident Dūan dripped too much water on the fire and put it out! Later, Dūan was almost unconscious, felt unhappy (klum) and as if "the fire were burning inside her." Lek called both Sai and the mō. As the mō entered, Lek handed him the expected offering of incense, flowers, candle, and a baht and a half for his khwan khāo. He prayed to his teacher, then made holy water and a decoction both of which he gave Dūan to drink, saying, "The bad blood and the fish-water did not flow out well, a common trouble after childbirth. Since your body is not cold and the fire has not been out a half-day, you could start the fire up again. But as it is never good to put out the fire like this, I am taking you off it. Take a pot of salt, heat it well and wrap it in a cloth. Put that on your abdomen. Drink no cold water, or you will die."

Dūan was sad that she had to leave the fire early and on an even-numbered day, but one always wanted to obey a mō. All had gone so well when Chāi was born! That time she had taken the usual steps, choosing a Friday to come off the fire. Now she could not choose. Her formal leave of the fire was as before: The mō prepared earth holy water (nammon thoranisān), some of which she drank, and some he sprinkled on the fire. She then knelt down facing the fire and touched her forehead to the floor 3 times, asking the Mother of the Fire to bless her and her child, and to keep them well. She went outside to bathe, first with warm water to cleanse her body, then with holy water, and put on a clean skirt. Returning to the house she seated herself quietly, for she was not supposed to do anything for a time. Others in the family broke up the fireplace. The baby was taken off the winnowing tray. Warm water mixed with the holy water was dropped in his mouth. After being bathed in the holy water, he was laid in a little cradle made of a long cotton scarf, spread apart with sticks, and swung between 2 houseposts.

Now that the fire-period was over, they stopped all boiling of the water for the baby and Dūan. Rain water was substituted, but whenever the baby seemed sickly, boiled water was used. When their rain-water ran out, they got some at the temple. Both Dūan and the baby continued taking medicine for many weeks.

Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

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Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

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Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous magical protective needle.

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"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments, modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1955:155-195). It was sometimes better not to claim competence outside these customary lines. One mō said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease.

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Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "woman are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

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An old woman summed up significantly 2 attitudes saying, "In the old days people made more merit and so lived longer, but because we had no hospitals, the children died younger." The relation of good health and longevity to proper religious and moral behavior was fundamental in Bang Chan. If merit did not suffice, medical attention, traditional or modern, could not prolong life. Children, however, were tender (ɔ̀n) and easily prey to sickness. Traditional care could help them, but being delicate and tender like city people, children could also be helped by modern hospital care.

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Between the 2 systems people sensed little conflict, for each patient made a preliminary diagnosis of his symptoms and sought the type of assistance his diagnosis and convenience indicated. Mɔ̌ with some knowledge of both systems might offer their patients a choice of remedy. With the right diagnosis, magic, and medicines, a quick cure was expected. If not forth-coming, people were disappointed and moved to another specialist for his help. Modern medicine merely took its place as one more recourse.

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The basic handicap of modern medicine was that it had no magical resources or holy water. "Its effectiveness is limited to the properties of the ingredients." Old medicine on the other hand had, in addition to these properties, "The strength of the mɔ̌'s incantation plus the power of every person who learned and used that incantation, back to the time of its discovery, centuries ago." Thus where the medical schemes offered the same specialty, as in fevers, bone-setting, or obstetrics, the old appeared to offer more resources.

Besides its deficiencies in magic and strength-making attributes, modern medical care had other drawbacks. First, it was not accessible. A trip to Bangkok for medical purposes involved far more time than a day. Minburi's Health Center was a feasible trip, even for a woman in labor (stays ranged from 6 to 24 hours). Home arrangements for tending children, feeding buffalo, and other chores were less demanding. Bang Chan's eagerness for local modern care was shown when a Bangkok physician visited Bang Chan for a few times as part of a nutrition study. He was besieged with private requests for medical advice. Secondly, modern medical care was expensive. In Bangkok, after the expense of getting there, taxis, food, and housing costs for accompanying relatives, hospital, and doctor's fees sometimes meant losing the family gold and even land. Minburi's costs were closer geared to farm income, but medicines appeared costly. "Modern drugs taste and act better, but the poor have to use the old." Third,

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to make use of modern facilities one suffered confusing and unhappy experiences. Bangkok traffic was dizzying, even if one knew just where to go. Hospitals had beds, not mats, and the personnel were strangers. Foods were often unfamiliar or violated traditional injunctions concerning heating and cooling. People were brusque, impersonal, and overbearing to country people. One woman complained, "I am afraid of the doctor there. She scolds me and does not treat me like city people. She will not explain what the sickness is." Minburī's clinic was small, set up in more familiar terms, and the staff known personally to many villagers.

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Finally, there was the problem of finding an experienced escort, i.e. someone who "knew the way." More was involved than just convenience. In all walks of Bang Chan's life, no one ever presented himself to a school, to a household, anywhere, without a personal introduction from someone who had been there before, and so was accustomed (khoei) to it. It was not hard to find someone who had been to the Minburī Health Center, but it was difficult to find one who had been to a hospital in Bangkok, knew what to do, and had the time, money, and inclination to act as escort. The latter was always a relative by blood or marriage or the sick person's mō himself (Hanks and Hanks, 1955: 160). Actually, five or ten persons might accompany an ill person, only one of which was acting as the recognized go-between. Many of those who had been to a hospital or clinic as patients had previously accompanied others merely as escort, or to visit (Goldsen and Ralis 1955:31).

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Who had actually tried modern medicine for one reason or another? About a third of the household heads had used some modern clinic or hospital for treatment or hospitalization (Goldsen and Ralis 1955:31). Use was more frequent among (1) the literate, (2) those exposed to the mass media of radio and movies, (3) those accepting certain urban ways, and (4) those having greater contacts with the city in the way of visits, but users were not of a noticeably higher economic level (ibid:37). Women went no more frequently than men (ibid:32). No figures indicated how many of these occasions were for childbirth, but our interviews point to a small number. Taking the will for the deed, two women teachers who appeared to be the first to plan ahead to be delivered at the Minburī Health Center--but who did not get there because labor was too quick--seemed to be viewing the use of modern methods as a means to higher status.

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Why was modern obstetrics so largely eschewed? What had been Bang Chan's experience, unfavorable or favorable, that colored their attitudes? First, home was the most convenient place for care. Bangkok was ruled out categorically as too far. In fact, Minburī might be too far if labor manifested its normal celerity as the case of the two teachers showed, or if complications had developed. Furthermore, a Chinese resident of Bang

• 758
743 Chan during a period of residence in Bangkok was delivered
844 at the Women's Hospital and at a later pregnancy at the
178 Minburi Center. With her last baby, however, she elected
[759] to be delivered at home by the local midwife as more convenient in order to assure from her bed supervision and proper care for her other children. One young woman of very high social and economic standing preferred to import a midwife from a community six kilometers down the canal, and bear her child in her own home rather than attempt getting to a hospital.

Moreover, basically the Minburi Health Center was seen
[845] as a place for sick people, while normal childbirth was not a medical matter. To plan ahead for medical care there was to invite an abnormal delivery. The Center also suffered a poor reputation for success because difficult cases, hopelessly advanced, were the usual ones brought in. "At the Center are many ghosts," people said.

743 Some comments were genuinely favorable. The cleanli-
759 ness of the hospital was greatly appreciated. Anyone who
178 witnessed the skill of the doctor or nurse-midwife held it in respect.

Techniques of delivery were sometimes mistrusted,
75 sometimes admired. "They pull out the child with their
844 hands, which is dangerous." "The fecal pump is unneces-
743 sary." "One may not crawl during labor." A mō-midwife
178 who witnessed the nurse-midwife at work said approvingly, "She can force a baby out, but our midwives can only press harder," and "The hospital knows when a baby will come." The stopping of the flow of birth fluids by an injection was resented as affecting strength adversely, yet the injection that "made the placenta come so fast I couldn't notice it," or "gave the mother strength when the baby was stronger than she" was liked. The pills for pain were enthusiastically received. The hospital's closed windows "protected the baby from wind element," but the journey home dangerously exposed it and the mother to cooling wind. The dietary recommendations during recovery appeared wrong: eggs, which were "too cooling," or fruit, which "gave no strength." The suggestion of a nurse that scissors be used to cut the cord was resented as uncomprehending of village living problems ("we haven't any!" and "scissors always rust") and also as unwise ("rust gives tetanus poisoning").

75 Another criticism was the lack of personal warmth and
844 pity manifested by modern physicians and nurses, unlike
178 the attentive, reassuring mō. By forbidding abdomen-pressing, they were accused of "not doing enough," even of

"not wanting to help." The mother and baby were seen as having to fend for themselves. The very confidence built up in modern medications led to a conviction that doctors maliciously withheld available, effective medicines. "She died at the Center because she needed medicine but was not given any." Personality factors sometimes were involved: one doctor was considered incompetent, fearful of complicated obstetrical cases, and brutally indifferent to a countryman's views and circumstances--("Since we have no room, why don't you charter a bus to take your parturient wife to Bangkok?"), whereas another was friendly and wise. Since doctors were part of the respected government hierarchy which enjoyed superior knowledge and status, and also of the supposedly compassionate medical tradition, they were expected to be competent, kind, and protecting. Those who failed in winning confidence undermined the status of modern medicine.

The midwives themselves thought of the Minburi Center not only as a recourse if a case were in deep trouble, but also as a personal convenience. One male midwife, who was also a headman, monk and carpenter-contractor, was often too busy to stay with a woman in prolonged labor. To turn her over to another midwife other than a kinsman would damage his reputation. Knowing Minburi well, he found the Center a convenient solution to his dilemma. He had respect for the nurse-mid wife's skills, which he had witnessed, and regarded the doctor as a colleague on his own level, a view probably not reciprocated. The women midwives, too, always considering themselves at bottom volunteers, when faced with pressing home chores and the "impossibility of turning a relative over to another midwife," utilized the impartial service of the nurse-midwife. One cloud impeded the female midwives from making full use of the occasion as an opportunity for observation and so instruction. They refused to identify themselves as midwives out of fear of legal sanctions. Having neither taken the course prescribed by the government for "ancient" midwives nor paid the fee, they were not licensed. Thus, they lived in dread of fines if their calling became known outside the community. They knew they were permitted to deliver babies within the family, but outside those rather hazy boundaries, they took refuge in an old view, "I am not a midwife. I only help out of pity."

All in all, the people of Bang Chan had fitted modern medicine into their broad medical scheme where it could be accepted on its merits, if not blocked off by inconvenience, high cost, and discourtesy.

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friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of ...medicines" (p. 81).[74]

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The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: fai chut) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Minburi Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered net-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

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Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (auk) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a mō did the same (with the possible exception of the sponging with tepid water), that as a mō-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorization, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calendar, 1871:107-109).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1920's.

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home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

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To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Minburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 7 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccessibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grew up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

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In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Minburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

262 753 853 constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

The belief that eggs would cause dental caries, and should therefore be omitted from children's diets, was expressed by the mother in a poorly nourished family. The possibility that such ideas arose from unwillingness to spend much money on food for a child has already been noted (see p. 42).

262 753 758 Information on food suitable in illness was obtained only incidentally. The Thai did not appear to have a consistent theory as to the cause of disease (Sharp et al. 1956, p. 489), and residents of Bang Chan did not seem to associate any of their illnesses with contaminated food or water. Choice of food in illness was probably associated in some instances with the idea that the body is composed of the four elements: wind, water, fire and earth, and that sickness results from or is a symptom of imbalance in the proportions or arrangement of these elements. Thus the "fragrant banana" and eggs, because of their "cooling effect," were said to be forbidden in measles. A child who was getting measles was restricted to rice and dried fish. In contrast the small, [853] rather flavorless banana, designated (3)kluaj (4)nam-(4)waa, was said to have "no cooling effect" and was considered an acceptable food in illness, as well as for newborn infants.

262 758 784 In one instance, when a patient had been taken to the hospital with severe diarrhea, a nurse instructed other family members not to eat ices, syrup (see p. 36), or raw vegetables, nor to drink unboiled water. The informant who told us about this offered no reason for these precautions. These foods were simply "forbidden" to the family of a patient with severe diarrhea.

717 824 245 Notions as to what is fortunate or unfortunate may also affect agricultural processes. The many ceremonies associated with culture and use of rice have been mentioned (p. 42). The idea that a papaya tree growing near the house was "unlucky" was attributed to Thai by a young Thai Moslem in Bang Chan. When we commented on the papaya tree near his front door, he said the papaya tree dies easily and does not like water, but his was planted on high ground. According to this informant few villagers would be willing to grow papaya trees near the house. He considered the non-specific threat of harm as unreasonable, though he said that if specific harm were said to [717] result, he would be concerned about it. The midwife at Minburi Health Center said that she urged each woman who came there for delivery to have more banana, mango and papaya trees planted for home use. Before raising of papayas can be successfully encouraged, however, the idea that papaya trees bring back luck must be overcome.

BANG CHAN

14 observed in 9% of the school children 7 to 14 years of age who were examined, and in about 6% of the males and 25% of the females over 15 years of age. Of 337 persons examined, however, 2 only, one child and one adult female, were found to have hemoglobin values under 9.75 g per 100 ml.

744 Modern sanitation was practically unknown in Bang Chan. Few families had covered pit latrines or made any effort to [514] cover excreta. Intestinal parasitism was common. Garbage [164] might be fed to animals, but was frequently thrown into the [364] canal or elsewhere about the compound. Provisions for protecting foods from contamination were meager.

When rain water was available, it was used for drinking, but several months each year water from the canals or fish ponds was used without prior treatment. For washing vegetables, cooking and washing dishes, canal and pond water was used throughout the year.

744 A few changes in sanitary practices, if they could be
751 brought about, might reduce some kinds of illness substantially. For example, if the villagers would adopt the practice of boiling pond or canal water whenever it is to be used for drinking, contamination from this source would be materially reduced.

Use of boiled water for bathing babies and all persons with abrasions or open wounds would probably reduce the incidence of skin infections, and enable those which do occur to heal more quickly.

Infantile tetanus could be largely if not entirely prevented if the local midwives were taught to use sterile scissors for cutting the cord, and to avoid contact of the cord with soil.

• 758 Modern medicine will probably not be readily or
121 generally available to a majority of the residents of Bang Chan for many years to come. The first step toward better health in a village such as Bang Chan appears to be to teach the people, through their local leaders and practitioners, to adopt improved health practices. To be effective, such teaching must be based not only on a knowledge of what the people do, but on an understanding of the way they think and feel about customary practices.

757 to a second-class doctor in Minburi, then to a nearby Muslim
759 masseuse, then to a local traditional practitioner who gave her some jaa tom (cooked medicine). Another instance, recorded in the field notes, is that of a school teacher's baby who had abscesses on her head. The mother took her child first to Minburi, where she was given an injection and a sulfa drug to be taken orally. The child did not get well immediately, and before all of the drug had been taken, the mother took the child to a local traditional practitioner who gave her a decoction of herbs which was to be given by mouth. Thus in some cases, modern doctors were consulted first, and local traditional practitioners later, if relief was not as speedy as was expected. The experience in this one hamlet suggested a willingness to try a variety of treatments, and the existence of a considerable degree of confidence in modern medicine.

• 738 According to Ralis (1955), 213 of 335 household repre-
743 sentatives interviewed had visited a clinic or hospital. Of these, 156 had gone to Minburi, and 135 to hospitals or clinics in Bangkok, some having gone to both places. Of 258 hospital or clinic visits, 125 were for treatment or hospitalization; the bulk of the rest were to accompany patients or to visit hospitalized relatives or friends. No significant difference in reports about seeking treatment or hospitalization was found between groups of persons differing in literacy, or in socio-economic level.

144 Infectious disease. - The principal evidences of infectious disease noted in the course of the clinical examination for assessment of nutritional status were trachoma and smallpox scars. Occasional cases of ringworm and other fungus infection, and of pediculosis were observed by the physician.

When the 233 school children and 148 additional persons included in the random sample of village households are considered together, i.e. a total of 381 persons or more than one-fifth of the total population of the village, only 3% were found to have trachoma. Eleven of 13 cases found were among 237 children 7 to 14 years of age, i.e. an incidence for this group of 4.6%. Zimmerman (1931) reported 119 cases or 4.3% of all persons examined in Central Thailand, and 277 cases or 2.9% of persons examined in the whole Kingdom. Among the school children examined, however, he reported an incidence of 12.6%.

Of 381 persons examined in Bang Chan, only 10, or fewer than 3% had smallpox scars. Two cases only were in adults, the remaining 8 being among children of school age. Our records do not show when the most recent cases occurred in the village.
751 According to Zimmerman (1931), 88% of over 2200 school children examined had been vaccinated. No information was obtained concerning the proportion of residents of Bang Chan who had been

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Modern Medical Resources

Since no modern doctor or midwife lived in Bang Chan nor visited regularly or on call, the nearest modern medical assistance was at the Health Center[3] in Minburi. This was an out-patient clinic and small hospital established by the Ministry of Public Health to give modern care, instruction, and occasional free issues of such items as dried milk and cod-liver oil. It was conveniently located on the big Saensaeb Canal, near smaller canals and a foot-road, and only a few hundred yards from the bus terminal at the end of the auto road. The staff comprised a first-class doctor, a nurse-midwife (whom we shall call "the nurse"), a dental hygienist and a sanitarian. The main building had offices and pleasant waiting-rooms, with living quarters upstairs for the staff. Adjacent was a well-built and well-ventilated smaller building, with two good-sized rooms, one for general, and the other for maternity cases. The maternity half was divided again into a small room for labor and delivery, and a larger room for recovery with space for 2 persons. Beds were not used; patients were comfortable on the floor with mats. Relatives provided and cooked the food for each patient on their own portable charcoal braziers in a special area. Room and delivery were free, but a charge was made for medicines.

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In Bangkok, 20 miles away, on the northern edge of the city nearest to the community, was the fine new Women's Hospital to which one wife had gone for delivery before she became a Bang Chan resident. The other hospitals of the city were occasionally used for other medical or surgical reasons by Bang Chan residents, but not for maternity cases.

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In Minburi were also a few "second-class practitioners." These were not graduates of Thailand's recognized medical schools, but they had some modern medical knowledge. A former medical orderly in the army, for instance, utilized his training to set up a practice. These practitioners used both traditional and modern systems. They would on rare occasions come to a Bang Chan farm house on call. They enjoyed the confidence and patronage of the most educated, progressive, and affluent element in Bang Chan's population, such as the teachers and many of the leaders, both young and old, who, in their patronage, saw themselves as less old-fashioned. Their large practice was lucrative, fees of 1000 baht for a course of injections being cited. Though consulted for maladies of pregnancy, to our knowledge they did no obstetrical work.

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3. In 1957 a new building with expanded facilities was opened in Minburi. All our data refer to the old arrangements.

food, seed, and chicken feed were met, 38 per cent of the crop remained to be sold off for cash (Janlekha 1965:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 16 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand [Kingshill 1960:7]).

Besides the work in rice-fields, women dug and cleaned

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 50 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygynous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap.V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

magical formulae and incantations (khāthā cf. Textor 1960:80-98; 67-79). It was one of the branches of occultism (saiyasāt [Mcf. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khāo (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khāo. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō raksā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyae). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.19

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

843 278 many kinds she hardly knew which to choose. He also had all-purpose kits for mother and baby, even one with 14 different kinds of medicine "to control the body's temperature and keep the organs functioning"(H.M.H.). She decided on one of the favorites, pickled medicine (ยาดองเหล้า), and from then on took a spoonful twice a day. She avoided all peppery-hot foods which would "damage the delicate complexion of the infant in the womb, burn off its hair, and maybe even kill it." 843 262 Some women said they craved sweet, hot, or sour foods, but Dūan did not. A friend who had never eaten cobra curry so longed for its hot taste during her pregnancy that her mother gave her a small dish. She could not resist secretly finishing the whole pot! What heat and sleeplessness! To cool herself, she had sat in the canal. The baby, saved only because its mother drank the water from a young coconut fruit, "could resist the cobra heat because it was 6 months along, but even so, it shed its skin at birth." But another woman, pregnant 7 months with her third child, also craved cobra curry, ate a lot, and said she did not feel hot. Nothing at all happened! The second woman was nearer to delivery, so stood the heat better, but more important, each individual was different. Because of virtue and sin in former lives each woman--and man, too--was born under different astral confluences and had lived and suffered differently.

843 759 About the seventh month, Dūan pondered who should help her at her delivery. Some of her friends were delivered by their own mothers, but Lek had undertaken the delivery of another daughter's child, and the baby had died in an hour. Dūan suspected that her mother, therefore, would prefer not to do it, and knew that she herself would feel uneasy. So she decided for safety's sake to ask a midwife. She and Song could well afford the ceremonial offering with its customary 20 or so baht, even though the midwife said it was "as you please." A great many women never consulted with a midwife beforehand at all, but just sent word to the nearest one when the pains started or when trouble was encountered. Midwives varied in their capabilities, however, and Dūan wanted not only a good one but someone she knew well. Muslim midwives were said to be skilled, but they happened to live too far from her. Dūan decided to ask her elder aunt, Sāi, who was a well known midwife. Everything was right about Sāi. She had experienced hands, a true desire to help, and effective magic; and she was a relative. Best of all, her own babies had eaten and slept well, had cried little, and now were grown to maturity. With such proof of merit, capabilities, and fortunate relations with supernatural powers, what better person to help Dūan start her baby on its earthly existence? Actually, if something happened, and Sāi could not come, Dūan knew she would not be alone or unassisted. Almost every woman, and quite a few men, had

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seen childbirth not once, but many times, so willing hands abounded. So, one day, Dūan went to Sāi. "Will you help me, and come when I call you? Please do not go far at that time." Sāi agreed, knowing in her heart she had expected to care for Dūan. No day could be calculated because the baby decided when to be born. Dūan came home very fast, for doing so would help ensure a fast delivery.

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As the weeks passed, Song, the new child's father, collected outside the house a great cone of sakae firewood from their land. This wood was for the post-partum fire beside which Dūan would lie for many days. As the fire had to be very hot, a great deal of wood was needed, all to be collected beforehand. Song also covered the outside of the pile with thorny woods to keep away evil spirits. On her part, Dūan knew that everything needed for delivery was ready in the house as part of the regular household staples or utensils. Nothing need be bought except possibly a little Borneo camphor to mix with lemon grass for faintness, and alum. The midwife should never bring anything with her because it was essential to use what was in the house. Anything lacking could be quickly borrowed after the pains started. The little cushion on which the baby was to lie was cut, and half-filled with kapok. It was not sewn up, lest it induce by example a closed-up exit from the womb, or suggest a mal-placed or deformed baby which had to be delivered onto a pillow. No one wanted to prepare for such an unhappy event. No clothing was bought for the child ahead of time for then the child might die, and all would have to be destroyed.

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Dūan felt at ease and yet somewhat frightened at the prospect of the pain ahead. At an ordination she attended one night she listened again to the chant she had heard many times:

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> "In childbirth a woman has pain all over her body...She is losing her soul and feels so frightened, despairing, and suffering that she throws herself up and down from time to time as if her mind were terribly wounded by the poisonous arrow of a hunter. She is uneasy and moans loudly as if a big mountain had fallen down upon her, and she is supposed to wait for death. She does not recover even if massaged by someone. She does not think of her pain, but tries to save the child's life, when, after the pushing wind comes, he is born" (S.S.).

On other occasions she pondered the deep satisfaction of her maternal role, then laughed in recalling a crafty woman who

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A midwife or doctor could not be blamed, unless it was felt they did not help as much as they could have.

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A child lacking in merit died. Such individuals, for some reason, did enough at their own birth. Words of comfort to a surviving mother were, "your baby did not have enough merit to live." If particularly sinful, it died after making delivery unusually painful. "Once a child was born dead, but it teased the midwife by moving its legs a bit. Consequently, its death was not the fault of the midwife." The child's lack of merit was proved by its death and its maliciousness. There was no hostility towards any child born in a hard delivery, for if both mother and child survived, the demerit that caused the suffering was the mother's.

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On the other hand, a meritorious woman with a meritorious baby had a short, easy delivery. Such a child was considerate: "he will not hurt his mother, will help her to bear him easily, and will live."

A woman who safely came through childbirth felt deep satisfaction and new security. Bearing a child in itself did not bring any merit, though it was an act of merey. Merit could come later with the ordination of a son. However, why one woman had successful or short labor, and another not, was unequivocally clear and accepted. If delivery were normal, she was confident of her and her child's store of merit. If not, she bore the anguish, convinced that she had brought it on herself in some previous life. Since sins were worked off with pain, every thrust made her future lives happier. Fear was minimized, for if death came, it was merit-determined.

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156 (riak khwan). Theirs was an augmented personal potency[55] in nurture not unlike the mana so widespread in the Asian-Pacific area.[56] The best midwives were liang di, though not all liang
• [159] di were midwives. This societal peak was not an unattainable ideal. In the community, certain women were pointed out as liang di and some of them recognized in themselves the validity of this title.

562 The association of rice, motherhood, and khwan now stands
774 clear. Rice made suk by cooking over a fire, was the essential
776 food not only for the body but for the khwan. Growth and life
262 depended on the nourished khwan. Rice came from a maternal figure, the Rice Goddess, Mae Phosop (cf. J.R. Hanks, 1960). Human mothers, too, when made suk, gave suk nourishment: the milk of the breast was merely transformed rice. Whenever rice was eaten throughout human adulthood, the Rice Mother continued her nourishment, for in each grain was a bit of her khwan, nourishing to the human khwan. The rice-bowl and ladle, used in many a ceremony, stood for the maternal care given a human khwan, and by extension, personal care throughout life. Whenever the rice bowl with offerings (khwan khao: soul-[of]-rice) [182] was presented by a parturient or by a sick person, loving care comparable to maternal care was being requested.

182 The idea of re-birth, of a fresh start within the pure
885 area encircled by the holy cord, with auspicious words and
846 consecrated fire, was deep in every life-cycle rite. The
562 particular circumstance of the fire of parturition was a
372 forthright cooking to bring out and increase a woman's essential femaleness, to transform her from a youthful, partial giver into a complete, mature donor of nourishment. Such was the satisfaction of women in this female role that many said they would like to be reborn as women. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:375) for a quick run-down on a definition of mana.

Chapter VI

MIDWIFE AND MŌ

1759 In Bang Chan it was easy to ask, "Who has delivered babies?" The answer would run into dozens of names. To respond to "Who are the midwives?" an informant would give the names of 6 or 8 persons, then add, "Some people call them professional midwives but some do not. X is not a midwife but she knows how. Y delivers babies, but only out of pity. Z has delivered 30 babies or more, but she is not a midwife." If asked, "Are there doctors among those who deliver babies? " he would say, "Mō (doctors) never deliver babies."

Before a definition of a midwife is given, a general picture of midwifery in Bang Chan is needed.

844 ### The Practice of Midwifery

Normal childbirth, a cooperative venture between mother and child, was not an illness. It called only for the help of kin or neighbors. Anyone who had seen or experienced childbirth at least once before was considered a possible, though not necessarily competent, "deliverer" of a child. [593] The husband was supposed to be present to assist; failing whom a father or brother should attend. Consequently a good many men had witnessed birth. The spectacle was disliked, however. Anyone, though, young or old, male or female, kin or not, might offer or be asked to help. Private magic was [774] not essential, though it was necessary for someone with incense, flowers, and a candle in hand to inform (bōk), the Lord Buddha, the ancestors, and the ordinary protective spirits of the land and home and so enlist their help. The customary post-partum rituals and blessings were not esoteric. Enough popular astrological knowledge was known, or quickly and freely available from a priest at the temple, to orient the woman in labor. Consequently, many a woman was delivered by her mother or other kin. One poor farmer and masseur, with the assistance of his sister, delivered all but one of his own children. On another occasion, a visiting kinsman, by chance a medical orderly in the Royal Thai [759] Navy, safely delivered a relative. In all these cases the cost or "gift" was less, or non-existent, and the convenience

greater, for relatives were at hand. Some of these ordinary persons developed skills of considerable consequence. 844

If difficulties developed, then a more experienced person, perferably a midwife, was needed. But many a midwife assisted at normal births. Because difficulties might arise from a deficiency of merit either in the mother or the child (one could never know which), many women preferred to have in attendance, for peace of mind, either a midwife or an experienced person to insure the presence of expert help. Sometimes they were engaged in advance, more often just sent for "as pain is increasing," it being not always certain whether the case was normal or not. 844 759

A few women were delivered at the Mīnburī Health Center. These were rarely normal cases. The Center was turned to as a last resort in dire circumstances, with the result that sometimes the woman died in the boat on the way. A few persons of rather more modern outlook, such as wealthy farmers, teachers, and traders, had been delivered there and recognized its usefulness. 844 743 845 847

The midwives lived in all parts of the community, with 3 in the populous central temple area. No one was more than a half-hour's paddle, or an hour's walk from the home of some midwife. What was desired, however, was a particular person, even though he might not be the most accessible one. 759

Since midwives were all heads of large families their clientele was mostly their kinsmen. They also took care of non-kin who lived in their locality. A daughter or other close relative who had married out would be attended wherever she was, if she did not return home for confinement. 759 571 602

In choosing a midwife, a parturient sought out not only skill but favored a kinsman over a non-kinsman, a close relative over a distant one, a near person over a far.[63] Occasionally, to sustain an image of progressiveness, social superiority or of wealth display, a midwife from outside Bang Chan was imported. Sometimes proximity, convenience, and

63. A male and 2 female kinsmen-midwives were called by the man's sister to deliver her, and all came. He did not deliver her because she was "too close a relative," but he said a brother "could deliver a sister."

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affection overrode kinship.[64] Thus affinal relatives and non-kin neighbors were also requested to assist. Buddhists attended Muslims and vice-versa, (though Muslim women preferred female assistance).

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In emergencies the professional midwives' area was the whole community. They travelled long distances to attend women who were not close kin. No parturient, however, even in an emergency, was ever attended by a complete stranger. In all likelihood, every adult in the community knew the midwives at least by sight.

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As to the size of the practices, reported activities ranged from the Muslim midwife's estimate of 10 per year, down to 2 or 3 per year.[65] The 2 men and the most competent female midwife reported about 4 per year, a figure probably weighted on the side of the difficult cases per year. It is noteworthy that the men, in spite of being as we shall see both mɔ̄ and midwife, did not have larger [462] practices than the women. It was considered basically a woman's skill.

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None of the midwives derived much income from their practices, nor did they expect it to be significant. Their main income came from rice-growing from which, however, the women and one of the males had largely retired because of age. The other male midwife was exceptionally busy as a labor contractor, builder of houses, land-owner, and headman as well. The midwives found the 5 to 30 baht offered

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64. Two teachers who were in the kinship category of granddaughter (lān) to the 3 best midwives, and lived only a few hundred yards from them, were delivered by a woman who was mother-in-law to one and husband's older sister to the other and who was "not a midwife but knows how." Since labor was quick and normal, no higher help was necessary. On the other hand, all 3 of these midwives turned up to help at the confinement of another cherished "granddaughter." Only one of them actually delivered the infant but other functions were diplomatically divided up by the young mother.

65. Hauck studied 46 babies, aged up to 3 and so not all born in one year. Thirty-one were delivered by 4 of the professional female midwives (12,9,7,3 respectively); a male midwife and an "experienced" person had done 2 each; 11 women, one each (Hauck, 1959:61). A few of the latter 11 [502 [571] were ordinary kin, not midwives.

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in the khwan khāo "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mō or to the Mīnburī Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

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Though living like other elder citizens of the community, in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mō was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (tham ākhīp [Mc.F. 990]) when others who had equal or more experience were not so considered?

The Role of the Mɔ̄

756 844 A mɔ̄ never delivered the baby and never even touched a woman in labor, for this was not part of his specialty. If labor were slow, or weakness were setting in, he came to give a decoction to raise the fire element within the body, speed up the winds and so strengthen the contractions. He also gave holy water for general strength and to clear out, if such there were, any obstructing spirit or magical disease object like khun. Because of his experience, though, he might stand beside the midwife or other woman instructing; for instance, "Pull now!" "Watch out for the eyes!" His advice was more often sought after childbirth if fever or swollen body were in evidence, for these were the results of "inadequate outflow of blood and fishy-water." Because they were called in case of debility, the mɔ̄ were the ones who suggested when it was advisable to send a parturient to the Minburī Health Center.

756 84 No priest-mɔ̄ was ever called for childbirth because of the contact with a woman's genital area, though they were consulted on menstrual and pre-natal irregularities.

• 759 The Specialty of the Midwife

Midwives were called mɔ̄ tamyāā (doctor-expert-in-occultism; pounding, as in a mortar [McF. 365] crouching, [McF. 682]). There were 4 or 6 women, both Buddhist and Muslim, and 2 or 3 Buddhist men, who had delivered 100 or so babies apiece. They ranged in age from 50 to 70. Dozens of women had delivered babies one or more times but were not accorded the title of midwife. [192]

759 845 The foundation of their specialty was a greater than usual manual skill, developed over long experience. "We have only our hands," said one woman. The more expert could handle certain mal-positions, and did not hesitate, but only with permission, to put the hand into the vagina to turn the baby or "unstop the blood." They were better judges of the progress of labor, whether normal or slow, and of the symptoms of debility. They were more likely to keep calm in the face of extreme suffering where the parturient's relatives, over-eager in their desire to help, sometimes inflicted

severe injury, such as bruising by excessive pressing, or even in hysteria pulling the child to pieces in their effort to get it out.[66]

Secondly, a midwife offered success, not only as proof of competence, but as a substantive asset. It will be remembered that the initial shape of an event set the invariable pattern for its subsequent occurrences. Thus a parturient was virtually certain of successful childbirth if she called on a person who had the habit (khoei) of success. It could not turn out otherwise. We have also seen that these successful midwives were good nourishers (liang dii). A new mother wanted to associate herself with such a fortunate sequence. Once established, a midwife's reputation was not unduly tarnished by the loss occasionally of a mother or baby. She might explain, "The woman did not do as I said," or "I was not given permission to do what I could have done, for her family feared she would be even more hurt by my putting my hand into the vagina." Death was, of course, only due to the running-out of the deceased's merit.

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66. To give something of the measure of their skill: if the feet of the baby appeared first, one man "straightened the legs by hand inside, held the chin carefully as the head came through," while another said, "Do not press or reach into the vagina. Let the baby come naturally." If an arm came first, or it were a breech presentation ("the baby is turned over"), the procedure was to "pull and press lightly," but it was conceded that neither the mother nor child could be saved. Expulsion of the placenta was frequently difficult. "It may take 2 hours or stay in 2 days or more. Some die when it is left in, but some do not." The technique of removal was to give a medicine, press, pull with the hands rubbed with alum for a better grip, with the woman in a crawling position. Some reached into the vagina to locate it. One woman had analyzed her practice so as to know when to expect trouble: namely, in the later pregnancies and childbirths, i.e. the sixth and seventh, say, rather than in the early ones during a woman's younger years.

As to mortality, one "professional" man estimated 30 deaths of babies out of 238 deliveries in 50 years. Hauck (1956) reported 90.6% live births (pp. 32-33), 7% of the babies dying in the first month, 11% within the first year (pp. 39-41). One should remember that the professionals had a greater proportion of difficult cases. One woman had delivered over 100 babies and "all lived."

759 In these 2 qualifications of skill and success, some of the explicitly non-professional old ladies were recognized as easily matching the professionals. What then was the definition of a professional midwife?

759 What the professional midwives alone did was to deliver
789 non-kin, for which they had to have magical formulae and reliable celestial knowledge. The incantations gave a midwife the right to be called a mō tamyān, for he or she was using to a greater or lesser extent the sacred wisdom of occultism (saiyasāt). Here midwifery was like any other craft or endeavor. One could cure, sing, and build a boat without magic, but with it, the chances of success and effectiveness were increased. The incantations could "ease delivery," "get a baby out that had died inside"(for this baby could no longer do his part), "prevent the poison of the fire from burning the mother," and give other special help. That this magic was the crucial difference between the professional and non-professional was illustrated by the old lady who had delivered 30 babies, but vehemently[67] denied being a midwife. "I am not a professional. I have no magic. I only pray to the Lord Buddha and think of sacred things each time."

759 A professional also had more detailed astrological
787 knowledge of the orientations of relevant celestial beings so that delivery would be "helped and not obstructed." This knowledge was in no way a professional secret, but if complications during childbirth were evident, it was necessary to have accuracy, and convenient that the midwife had it.

759 To certain villagers the designation "professional"
562 could not be applied to women because, never having been
212 ordained, they had not learned to read, as men supposedly had, not only Thai but Pali and Cambodian, the languages of
191 medical and magical lore. "A professional midwife has a
778 book. No woman can become professional because she cannot read." The idea was that incantations were correct only if taken from the sacred texts at the temple, though in fact the formulae were taught orally. One male midwife had a sacred book in his private possession, which was proper, for

sacred books were inherited by males.

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67. Her vehemence may reflect either pride in being so successful without magic--a true liang dī--fear of being reported as unlicensed (see below, p. 145); or consternation lest she be accused of using magic to which she was not entitled.

sacred books were inherited by males.

In the light of this definition, only the 2 or 3 males were true professional midwives. They gave elaborate annual ceremonies of homage to their teachers (wai khrŭ) attended by all the persons who had profited from the teacher's magic that year. However, all the male midwives were also fully qualified mɔ̄. Their ceremonies were large because they were dedicated to the teachers of their curing powers as well as midwifery.

The male midwives, then, were in a somewhat different category than the females. They were mɔ̄ who had, in addition, trained their hands for midwifery as an "extra specialty." Midwifery seems to have been one of the few areas where skilled hands were considered of greater importance than magic. "We have no magic for delivery," said one male midwife, knowing that nothing but merit could guarantee success. Because they had access to the incantations for element and spirit control, and could make holy water, the midwife-mɔ̄ could spare the parturient the necessity of getting in an outside mɔ̄, if such were needed. However, one part of the midwife's job the men could not do. To protect their male powers of invulnerability they were forbidden to wash the woman's clothing. A woman or a female midwife always had to do this. Men also could not provide the female "mystique" particularly related to the khwan and to growth.

However, the community did not adhere to this narrow definition of professionalism, for several of the experienced and competent women, Buddhist and Muslim, behaved as professionals and were accorded the title of mɔ̄ tamyaa. Their magical formulae, being congruent with their female office of promoters of growth and life, were especially effective. Like a mɔ̄ they received the ritual gift of the khwan khaw, hallmark of the possession of occult formulae, which the patient presented to assure the benefits of magical knowledge.[68]

68. This ritual bowl of rice and offerings was never excused even between the closest kin. If forgotten or misused, the "teacher" punished the midwife with pains, and had to be mollified with a food offering. The magical benefits could not be withheld once the khwan khaw had been accepted. It was not accepted if the patient were too near death to be assisted. If the patient died, the whole gift, cash, rice, and all, was given at once to the temple to make merit.

759 [465] Although as to fees, they said, "It is as you please," these women received as a rule the higher honoraria of 10, 20, and 30 baht. They did not have a separate teacher-rite but paid their respects during regular temple events, such as offering a pig's head and the other items during someone's ordination, though the Muslim midwife had her modified teacher-rite in a separate home ceremony, not at the mosque (cf. Appendix:Muslim Customs). [212] [214] It was even said of the best female midwife that "she had a book." She was literate in Thai. Even if her book were a popular astrological guide, it carried the reverence accorded all books. Whatever it was, its possession increased her aura of reliability. [789] Though the woman did not receive their magic at the temple but rather from a kinsman in the maternal line, their incantations, which appeared to be in the Pali-Thai tradition, were no less effective.

759 The professional midwives, both man and woman, saw themselves as individual custodians of sacred knowledge and competent in a technique. They were not only interested and ready, but obligated to give expert care to anyone, anywhere it was needed.

The non-professional midwives always thought of themselves as voluntary helpers of kinsmen, acting "out of pity," and carrying on their female responsibility for new life as [562] elder women helping their younger relatives. The idea of giving nurture and assistance was so deeply ingrained in the female office that the professional midwives saw themselves fundamentally as volunteers.

Learning Midwifery

The decision to deliver a daughter or a wife was not momentous. One did not have to be "suk" to deliver a baby. The same practical and compassionate motives that led a mother or husband to do this led some of these people to seek out professional techniques so that they might "help more." One woman, bearing her own child at 25 with intense suffering, became angry (chep chai) because "the midwife did nothing to help, but just sat and chewed betel while others did all the work." In desperation she called in her own mother to deliver her. She also "felt she had many relatives who would need her help." Another was asked by her mother's brother, a midwife, to accompany him as he was getting too old. He then gave her his magic. A man took up the specialty after his first child, a son, died at birth from ineptness, he thought, of the midwife. Another man, though, took it up as a "minor extra" to his career as a mo. All learned the skill by accompanying and helping an

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established midwife who was a "close relative."

Sometimes the interest arose in young people. A girl started at 15 to accompany her mother, a midwife, as helper and delivered her first case alone (an emergency) at 20. A boy of 15 also helped his mother's sister, who was a midwife. Later, when married, he delivered some of his own children, but denied that he ever intended to take up the calling. One young man in his 30's, was seen going "as a team" with a well known old mɔ̄ who directed him in the manual operations but who did not ever touch the woman himself. He also assisted one of the female midwives, but had not yet delivered a baby alone.

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The first child delivered by anyone was always the child of a close kin. Only with success at this first delivery would a person even consider doing it again. The second case, and the next few were confined to the potential midwife's close relatives, children (lūk), grandchildren, and the children of siblings (lān). Thus, the skills were validated within the kin circle before a midwife felt ready to practice outside.[59]

With success, a person of developing skill might be willing to include non-kin in his clientele, i.e. become a professional. One resolved only to help relatives but her "fame spread." As another said, "seeing it was safe, I was encouraged to go on." By this time, magical formulae had been

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59. Daughters-in-law were within the validating circle if circumstances were "convenient"--i.e. if their own mothers did not deliver them and if they lived with their husband's people. No witchcraft was feared between women. A mɔ̄ in his specialty also had to validate his skills within his close kindred before non-kin would call on him. A reputation began at home.

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759 571 602 sought, ritually requested of some relative who was a midwife.[70] Some persons though continued to limit themselves to delivering their relatives, and never sought magic at all.

Two Worlds: The Natural and the Supernatural

759 772 To deliver a baby as a midwife or even as an unskilled kinsman, embraced 2 aspects: a manual or technical, and a magical. These aspects corresponded to Bang Chan's 2 great worlds of knowledge and experience: the natural and the supernatural.

Midwifery was not alone in embracing both of these categories. Every activity, bus-driving, dancing, printing, or other, had its incorporated magical means to augment the probability of success. Though with the manual or technical skills of the natural world alone one could come through all right with even a modicum of supernatural help, success was greater. No one wanted to take the responsibility and risks of "going it alone" especially when the resources of the supernatural world were so freely and easily accessible to everyone. At the very least, one could start an enterprise on Friday (Wan Suk: Happy Day). The closer an enterprise was to the margin of life and death, however, the larger the supernatural element. In farming, curing, and midwifery, for instance, the ritual component was strong.

[874] Since these 2 worlds were qualitatively different, each required a different method of learning. The supernatural world, immaterial, royal and sacred, was learned

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[789] 70. Three women had recieved theirs from their mother, mother's mother, and mother's older brother, respectively. A retired midwife planned to give hers "to the daughter or grandchild ("lan":sex not specified) who was interested enough to ask for it." One man had received his from his father's father. Childbirth magic would hardly be a suitable topic of conversation between priests, but it might have been passed down there, too. The midwife whom one accompanied while learning probably was the source of one's magic. Women's magic was passed down the maternal line only, whereas men could get theirs both from kinsmen and at the temple.

by instruction from a ritually[71] approached teacher. "One cannot accidentally learn. One has to ask to be taught." As a practitioner in this field, the title "mɔ̄" signalized expertise; where teaching was involved, the title was khrū (teacher [McF. 183]) or ācān (professor [McF.996]). Speech was the key to this tradition, in spite of sacred books and wall-carvings in the temples.[72] Modern education, being book-and-teacher based, shared in this aura. There, even today, listening is more comfortable than reading.

Techniques of the practical, natural world were learned not by teaching but pragmatically by observation, example and experience. Eyes were the key. "I know because I saw," said a midwife. At the highest level of achievement in the natural world one was expert (nak), e.g. convict (nak thōt, an expert in being punished) a tourist (nak thīao, an expert in roaming around).[73] Within the natural world, an intense pragmatism reigned always emphasizing visual phenomena. People were keenly

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71. To speak ritually one held in the hand the trio of incense, flowers, and a candle. This was the way to cross over from the profane to the sacred world, to inform (bɔ̄k) or make a request of, a sacred being (a teacher, priest, king, or deity). The tiny flame of the offering invoked holy fire, and so had the effect of making one's words compelling, for no one could gainsay a request under such circumstances. A husband about to deliver his wife held incense, flower, and candle in hand as he requested the help of ancestors and spirits. (Bishop Pallegoix saved the existence of his mission by thus approaching the King [Pallegoix, Vol. 1:201]). The trio of offerings, whether at the 4 corners of the lying-in fire-floor, or in "hat phlī krathong" at a "thām khwan" rite, or even in an ordinary khwan khao made all actions and words compelling.

72. Because words, immaterial and invisable, lay at the base of occultism, words as continuous agents of power permeated Bang Chan's ordinary daily life. This was why words, verbal play, and punning initiated action: pregnant women attended the monks' "coming out of retreat" (ɔ̄k phansā) so that the child would "come out" (ɔ̄k) easily.

73. It should not be forgotten that most activities in the supernatural world had their technical sides, and the term "nak" was used there too. A curer had to learn his herbs; a dancer, his steps; and a master of ceremonies, the words of the chants.

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aware of what they observed and interested in experimentation. One woman, observing a mother who did not take any medicine, and even ate jackfruit, commented that she was "quite strong." Another watched what happened to a parturient who had no one to boil water for her, so used canal water. "She is healthy!" she exclaimed. Another decided to test whether not burning up all the wood made a child unable to finish his work and found the maxim untrue.

Just as supernatural knowledge was individually transmitted from a teacher to a pupil, so knowledge learned by observation was personal, even idiosyncratic. The actual observer of a phenomenon might change his ways accordingly, if he wished, but no one else would do so unless he too "saw it with his own eyes." The habits of one did not become the habits of another unless the same visual experience had been shared.

Because of the separation of the occult and the practical, the old midwives of Bang Chan would find it inconceivable that technical aspects which should be visually transmitted could be taught from a book.

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743 Chan during a period of residence in Bangkok was delivered
844 at the Women's Hospital and at a later pregnancy at the
178 Minburī Center. With her last baby, however, she elected
to be delivered at home by the local midwife as more con-
* [759] venient in order to assure from her bed supervision and
proper care for her other children. One young woman of
very high social and economic standing preferred to import
a midwife from a community six kilometers down the canal,
and bear her child in her own home rather than attempt
getting to a hospital.

Moreover, basically the Minburī Health Center was seen
[845] as a place for sick people, while normal childbirth was not
a medical matter. To plan ahead for medical care there was
to invite an abnormal delivery. The Center also suffered
a poor reputation for success because difficult cases, hope-
lessly advanced, were the usual ones brought in. "At the
Center are many ghosts," people said.

743 Some comments were genuinely favorable. The cleanli-
759 ness of the hospital was greatly appreciated. Anyone who
178 witnessed the skill of the doctor or nurse-midwife held it
in respect.

Techniques of delivery were sometimes mistrusted,
75 sometimes admired. "They pull out the child with their
844 hands, which is dangerous." "The fecal pump is unneces-
743 sary." "One may not crawl during labor." A mō-midwife
178 who witnessed the nurse-midwife at work said approvingly,
"She can force a baby out, but our midwives can only press
harder," and "The hospital knows when a baby will come."
The stopping of the flow of birth fluids by an injection
was resented as affecting strength adversely, yet the in-
jection that "made the placenta come so fast I couldn't
notice it," or "gave the mother strength when the baby
was stronger than she" was liked. The pills for pain were
enthusiastically received. The hospital's closed windows
"protected the baby from wind element," but the journey
home dangerously exposed it and the mother to cooling wind.
The dietary recommendations during recovery appeared
wrong: eggs, which were "too cooling," or fruit, which
"gave no strength." The suggestion of a nurse that scis-
sors be used to cut the cord was resented as uncomprehend-
ing of village living problems ("we haven't any!" and
"scissors always rust") and also as unwise ("rust gives
tetanus poisoning").

75 Another criticism was the lack of personal warmth and
844 pity manifested by modern physicians and nurses, unlike
178 the attentive, reassuring mō. By forbidding abdomen-
pressing, they were accused of "not doing enough," even of

"not wanting to help." The mother and baby were seen as having to fend for themselves. The very confidence built up in modern medications led to a conviction that doctors maliciously withheld available, effective medicines. "She died at the Center because she needed medicine but was not given any." Personality factors sometimes were involved: one doctor was considered incompetent, fearful of complicated obstetrical cases, and brutally indifferent to a countryman's views and circumstances--("Since we have no room, why don't you charter a bus to take your parturient wife to Bangkok?"), whereas another was friendly and wise. Since doctors were part of the respected government hierarchy which enjoyed superior knowledge and status, and also of the supposedly compassionate medical tradition, they were expected to be competent, kind, and protecting. Those who failed in winning confidence undermined the status of modern medicine.

The midwives themselves thought of the Mīnburī Center not only as a recourse if a case were in deep trouble, but also as a personal convenience. One male midwife, who was also a headman, and carpenter-contractor, was often too busy to stay with a woman in prolonged labor. To turn her over to another midwife other than a kinsman would damage his reputation. Knowing Mīnburī well, he found the Center a convenient solution to his dilemma. He had respect for the nurse-mid wife's skills, which he had witnessed, and regarded the doctor as a colleague on his own level, a view probably not reciprocated. The women midwives, too, always considering themselves at bottom volunteers, when faced with pressing home chores and the "impossibility of turning a relative over to another midwife," utilized the impartial service of the nurse-midwife. One cloud impeded the female midwives from making full use of the occasion as an opportunity for observation and so instruction. They refused to identify themselves as midwives out of fear of legal sanctions. Having neither taken the course prescribed by the government for "ancient" midwives nor paid the fee, they were not licensed. Thus, they lived in dread of fines if their calling became known outside the community. They knew they were permitted to deliver babies within the family, but outside those rather hazy boundaries, they took refuge in an old view, "I am not a midwife. I only help out of pity."

All in all, the people of Bang Chan had fitted modern medicine into their broad medical scheme where it could be accepted on its merits, if not blocked off by inconvenience, high cost, and discourtesy.

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friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of ...medicines" (p. 81).[74]

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The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: fai chuut) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Minburi Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered net-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

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Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (auk) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a mɔ̄ did the same (with the possible exception of the sponging with tepid water), that as a mɔ̄-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorization, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calendar, 1871:107-109).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1920's.

1: Hanks E-5 (1953-1954) 1964 AQ7 Central Thai AQ7

Chapter IX

GUIDES FOR THE INTRODUCTION OF CHANGES

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The government of Thailand provides in Bangkok and in other centers of the country up-to-date facilities for training in modern midwifery. It has also created in some places special opportunities for the traditional midwives to upgrade their skills. One of the objectives of the Minburi Health Center was to carry on a certain amount of instruction in modern views. For reasons that have been explained, no one in Bang Chan ever had or even sought modern instruction. The midwives of whom we have spoken grew up entirely in the folk tradition.

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On the basis of the material presented at length in the previous pages, a few suggestions are here advanced which may be of help to these public programs in maternal and child health.

1. Build a program around the idea that it will help women in their age-old role of caring for, raising, and nourishing (liang) children. Emphasize that through new techniques they may increase their strength and care better for themselves and the babies.

2. Change existing practices as little as possible.

3. When a change is offered, ask that the midwife, mother, or whoever observed it watch for certain results which allow them to judge it in relation to the old. The idea is strong that aspects of the natural world can be analyzed and considered pragmatically, then legitimately utilized as a basis for modifying customary behavior.

4. Pay special attention to the places where the old and the new come into conflict and seek ways to resolve these conflicts.

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As an example, let us consider these points in relation to cutting the umbilical cord. Modern instruction recommends the use of scissors--neat, sterilizable, handy--to avoid infection while cutting the cord. People in Bang Chan wish to avoid this infection, too, but for them scissors are unsatisfactory for several reasons: they are scarce, they rust--and

Hospital Delivery

If modern obstetrical method is demonstrably more effective and easier, let the midwives, mɔ̄, and relatives see it! If amiably received by the doctor or nurse, they will bring in patients, and accompany their relatives. The midwives--and many non-midwives--know the practical difficulties, and will be keen and interested observers. In so far as possible any persons accompanying a patient should be permitted actually to assist in some way. Perhaps the country midwife could be allowed to deliver the baby with nurse or doctor alongside to instruct and comment. Such experience is more effective than a dozen travelling demonstrations-with-a-doll. 006

Discussions with the (non-midwife) mɔ̄ who must handle prenatal disorders and abnormal childbirth should be conducted by the doctor, not the nurse, for doctors are viewed as colleagues on the same level. [959 924]

In sum, everything modern should not be expected to be better than the traditional. The complete rationale underlying some modern behavior cannot be grasped at once. Explanation must be given as the second class doctors do it: in terms that can be understood. The foundation for cooperation between modern and traditional medicine is solid It is the common objective of healthy mothers and children.

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APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mɔ̄, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mɔ̄ gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mɔ̄. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the thaa khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The woman easily
844 entered into reciprocal courtesies. The Muslim woman knew
591 the steps in the Buddhist winnowing ceremony and performed
[852] them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khăo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
[774] "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist,
[782] meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the
[177] poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 Completely Muslim was the stress on physical and
[783] moral purification as an objective of every rite, and
[304] conversely, the prevalence of the idea of defilement.
[764] "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate pro-
[831] cedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before
[834] burial," implying thorough measures beyond his ordinary
[562] experience. Procreation was viewed as dangerous and contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (făk thong: to deposit gold). On returning home, she went as
[273] fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim mid-
795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclos-
[562] ed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khăo contained "7

The Muslim khwan khao contained 7 items"--a young (or ripe) coconut with its water; thread or "a skein of yarn"(used not to tie in the khwan but "for the teacher"); 7 pieces or areca nut; 7 betel pepper leaves; one "heavy" (15 gram) yellow wax candle; one "bag" of incense; rice; and 30 bàht in money.[78] The khwan khăo was not offered with the idea of its reaching phrá In (Indra) ultimately, but rather the local princely spirits of the land, chao thī, chao thān, and Mae Thoranī (Mother Earth). It was waved 3 times by the midwife over the abdomen of the woman in labor with the prayer: "Spirits of the land, Mother Earth, may the delivery be easy!" The khwan khăo was then placed at the mother's head. The woodpile was knocked over so as to point to Mecca, which was west, a direction avoided by the Buddhists. "When nearly ready to deliver, a Muslim midwife turns the mother's face in the direction where the family's hens hatch their chicks. If they have no chicken, then in any direction."[79] If delivery were slow, a Buddhist mō was called to "shift the mother to new places" until the baby came out.

795 782 844 789 759

Muslim women lay post-partum by a fire for the usual physiological reasons. In making up the fireplace, instead of a cluster of incense, flowers, and a candle, this purely Hindu-Brahman-Buddhist trio, they sprinkled salt "to keep away evil spirits" on the dirt at the corners. Salt, oil, or alcohol was spewed over the fire and the woman's body, or only magic was recited, "to control the poison of the fire." "Of these, salt is best," said a Muslim midwife, but "whichever a midwife used first has to be continued for the rest of her life as her way of doing things, because the habit has been started that way." The Muslim magic for controlling the fire was "ōm ming ōm (ūn ōm fai sawā hai." "So be it, stove, rocks (or mountains), fire, be cool, may a blessing rest to you," though "ōm" is the Pali-Buddhist "mystical word." The placenta was not put in a pot beside the fire, but was washed by the midwife several times until perfectly clean, then was mixed with salt and buried in the dirt directly under the fire. When the fire was finally destroyed, the placenta was dug up, washed again, and immediately buried (not in a pot), with the

795 846 372 789 [759]

795 844

78. There was some evidence that the thread and incense were included only when a Muslim midwife was delivering a Buddhist woman.

79. To the Muslims this was an act of imitative magic. The Buddhists saw the action of a setting hen as a quick source of information for the parturient's orientation. The hen always avoided the direction of the phī lūang (Textor:378).

795 844 795 304 852 851 795 853 608 phlai and bamboo cutter under the house "so the child would not roam away from home." The circumcision (akiko) performed up to the eleventh year, allied a child to a human group. "Circumcision is to accept the new-born baby into the status of human beings" In a corresponding ceremony for girls, the To Iman "cut a little piece of the labia." However, some Muslims had the full winnowing ceremony performed. If it were not, the child was raised aloft in the midwife's hands with the words, "Mother Sī, Mother Sāk, may this child be cool and happy!" The new-born baby was then laid in a cloth cradle. Fruits were hung over the tray or cradle. If a lactating Muslim mother accepted another's child to nurse, the 2 babies had to be of the same sex "lest later in life they marry, in which case theirs would be an incestuous, brother-sister marriage." The Buddhists entertained no such idea, so nursed babies of either sex as needed. A Muslim view of colostrum as "like pus from a sore" carried a more negative overtone than the Buddhist's statement: "At first the mother's milk is too dilute to be useful."

795 759 At the annual homage of a Muslim midwife to her teacher each of her patients of the year sent a kilogram of sugar, one coconut, one or 2 liters of glutinous rice, and a hen (if a baby girl had been born) or a rooster (if a boy). The chicken was killed by the midwife and made into curries for mosque officials (men) invited to the ceremony. The incense and candles were burned "while she thinks of her teacher."

90 to 100% unbroken grains, are used. To benefit rice farmers, enrichment should either be done at the nearby mills, or premix sold locally, and farmers taught to mix it with their own rice. Because the premix used and marketed by the Thai Rice Company contains riboflavin as well as thiamine, niacin and iron, the treated grains can be readily distinguished from ordinary rice. Enrichment at the mill would be convenient, but would probably entail some government supervision and would not automatically ensure a better nutrient intake unless people learned the value of the conspicuous yellow grains. From this standpoint, separate purchase of premix might have advantage, at least in the initial stages of the program.

As far as we know, use of rice polishings in preparing "with-rice" dishes has not been explored in Thailand. Incorporation of rice polishings into a variety of soups and other "with-rice" dishes which would be acceptable to the Thai palate should not be difficult for the Thai home economist interested in experimental cookery. Nutrients usually lost in milling could thus be returned to the human diet. If adopted this procedure could be effective even in families that cling to the customary method of cooking rice in excess water. One old lady with beriberi, whose doctor had prescribed rice polishings, said she found them tasty. Information on the health value of rice polishings would probably be received more favorably if homemakers were shown acceptable ways of using them. A watery extract of the polishings might be used as a stop-gap preventive of thiamine deficiency while the slow process of changing food habits is going on. Such an extract could be used as a strengthening medicine for women during pregnancy and lactation, for infants and young children, and for those doing heavy field work, i.e. for vulnerable groups. The "second class doctors" at Minburi, the priests who practice healing, other traditional practitioners and midwives, because of their basic desire to help, would provide natural centers of information for this purpose.

Efforts being made by Thai government agencies to encourage eating more "with-rice" and less rice should be continued. A Thai co-worker suggested that "an educational program enjoining less peppery forms of with-rice would have the effect of encouraging consumption of a larger proportion of with-rice" (Sharp et al. 1953, p. 278). Various food items including those with a hot taste, were sometimes said to be bad for children, pregnant women, sick persons, etc., but seldom was any food mentioned as being good to eat under these circumstances. The concept that hot tasting foods are not healthful might be coupled with the idea that more generous amounts of mild dishes, especially those including green and yellow vegetables, should be used instead. The most widely used vegetables in Bang Chan were the wild swamp cabbage, and (2)phag (2)ka-(2)cheed, both leafy aquatic plants. Planting more (2)phag (2)ka-(2)cheed, and liberal use of both of these plants while they are available should be encouraged.

had 2 to 4 children. In each case, the information obtained related to the most recent delivery.

Delivery. - In Bang Chan delivery usually took place at home. Four of the mothers we interviewed went to the home of a relative or relative-in-law. In two of these instances the relative was also the midwife; in the others the mother was apparently seeking a place where she could be more satisfactorily looked after than at home.

Three women went to the Health Center at Minburi, about 3 miles from the center of the Bang Chan community, to have their babies. Two of these mothers expected to be delivered at home but were taken to the Health Center when labor proved long. All 3 returned home either on the day of delivery or the next day and lay by the fire. Two others, both school teachers, told us in advance that they expected or hoped to go to the Health Center, but when labor began they were unable to do so because their babies came so quickly. Aside from the 3 who went to the Minburi Health Center, only one of those interviewed went outside the community to have her baby. Informants usually considered the delivery uncomplicated; although, as noted, some labors were long.

Traditional midwives, who were not professionally trained but had learned from other traditional midwives before them, attended most of the mothers. One woman who was alone delivered the baby herself, one said she had no midwife but did not specify other help, and 2 had the help of women who did not ordinarily practice midwifery. The 3 women who were delivered at the Health Center had professionally trained help. Obstetrics as practiced in Bang Chan has been described by Hanks (1959).

Care of Mother During Postpartum Rest Period. - Traditional behavior during the postpartum rest period has been described by Hanks (1959).

Lying by the fire. - The ancient custom of (2)juu (1)fai[1] (literally to be by the fire) after childbirth was still observed by most women in Bang Chan. The chief difference between the practice as we observed it and as it was described in the Bangkok Calendar[2] for 1865 was in the length of the period. In former times this was as much as a month after the birth of the first child, with shorter periods for successive

1. See Appendix, p. 51 for glossary of Thai terms.

2. The unsigned article entitled "Siamese Obstetrics" was presumably written by the Rev. Dan Beach Bradley, M.D., a Protestant missionary who compiled the Calendar.

had lived outside the village and returned to the home of her mother, a traditional midwife, for delivery. Eight other women who were delivered by the same midwife observed (2)juu (1)faj. Two of these 5 women who, by using a hot ashes chamber, ventured to take a step away from the tradional practice were non-Thai (Chinese and Mon). Another, a woman aged 40, was having her 12th child. When we interviewed this woman during pregnancy she said she expected to lie by the fire, but when we visited her after the baby was born she was using a hot ashes chamber. The wife of one of the school teachers, who had observed the traditional (2)juu (1)faj with her first 5 children, said she found "the new way" more convenient; but by using it she had incurred the displeasure of some of the older women, especially her grandmother.

Activity and bathing. - Activity appeared to be rather limited during the postpartum period, but the respondents said they could move about to get some things for themselves, to eliminate, etc. We saw women sit up on the plank which served as bed to nurse the baby, change the cloths under it, and help to weigh and measure it (i.e. to assist us). Because of the warmth of the fire, and to avoid the smoke, the women turned from side to side frequently.

Bathing was customary during the postpartum rest period. For the first three days this was one of the midwife's responsibilities in care of the mother (Hanks, 1959).

Medications. - The 46 women who told us about medications used after childbirth had a total of 63 medicines; i.e., many used more than one kind. With one exception these were taken internally, and all preparations taken internally were mixed with alcoholic liquor (28% alcohol). Of the medications used, only one was prescribed from the Health Center, 4 were home remedies, and the remainder commercial preparations.[1] Two popular brands, snake brand and (1)jaa (1)dauaung, accounted for 60 per cent of the total.

Milk stimulation. - As already noted, lying by the fire was thought to be favorable to milk secretion. One woman commented that, since she was not a good milk producer, she must lie by the fire more than 7 days. Six women spoke of the hot water which they drank during the postpartum rest period as good for milk production. A large majority of the women mentioned taking (1)kaaeng (1)liang, a broth made with dried

1. According to the label, some of these were supposed to be useful for menstrual and other complaints, as well as for childbirth. Some were even recommended for treatment of various disorders in men as well as women.

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among children in Bang Chan is not known. One thing which residents of Bang Chan appeared to have in common with other populations which have been reported to be relatively caries free, was low intake of sugar, particularly in a form which would be apt to adhere to the teeth.

Adults up to 44 years of age, in the random sample, retained most of their teeth. A few adults in Bang Chan have had missing teeth crowned. More sound than missing teeth were found to be crowned, however, i.e. in this community a crowned tooth appears to have cosmetic value.

A variety of serious illnesses were found to occur among residents of Bang Chan. As a rule, local traditional practitioners were consulted first, but most persons reported to have been seriously ill eventually received treatment by outside practitioners with some training in modern medicine.

The majority of mothers in childbirth were attended by local traditional midwives, but a few difficult cases were taken to the government Health Center in the nearby town of Minburi, where a trained midwife was in attendance.

Of 438 pregnancies reported by 84 mothers, over 90% resulted in live births. Of the 397 living children born to these women, 81% survived at the time of interview. Within the first month of life, 7% had died, and a total of 11% died within the first year. Tetanus was prominent among causes of death of infants under one month of age. Infantile beriberi caused some deaths among older infants. In a majority of cases, the cause of death of infants could not be clearly identified, but fever, debility and convulsions were the symptoms most commonly described.

Almost half of the persons examined for possible signs of nutritional deficiency, 46% of the school children and 47% of the family sample, were free of such signs. The remainder, slightly more than one half of persons examined, had from 1 to 7 signs each. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Signs most often noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine in the diet. The only clearly defined deficiency disease observed among residents of Bang Chan during the field study was beriberi.

Hemoglobin values of 11.5 g or less per 100 ml. were

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Table 14

163 Relation of Live Births to Total Pregnancies as Reported by 84 Women in Bang Chan

	Number of mothers	Total cases	Percentage of total pregnancies
Pregnancies	84	438	100
Miscarriages	23	33	7.5
Deaths in utero	4	4	0.9
Stillbirths	3	4	0.9
Live births	84	397	90.6

Illness and Injury

• 759 Medical Services Available to Residents of Bang Chan. - Within the community of Bang Chan, about 8 traditional "doctors" and 15 traditional midwives practiced their skills. Three of the traditional practitioners were Buddhist priests. The others earned their living chiefly by farming. In addition, two or three persons who were skilled at massage, and at least one medium had some reputation for success in treating sick persons.

743 The nearest source of trained medical assistance was Minburi, the market town about 3 miles from Bang Chan. The staff of the Minburi Health Center, which was under Thai government auspices, included a first-class doctor, a dentist and a nurse-midwife. One or two beds were available for the use of critically ill patients until they could be taken to a hospital in Bangkok. For less critical illnesses, the second-class doctors who operated private clinics in Minburi seemed to get more patronage from residents of Bang Chan than did the doctor at the Health Center.

844 The majority of women in Bang Chan were delivered at home, by the traditional midwives. During 1952-53 we learned of two pregnant women who planned to go to the Minburi Health Center for delivery, but time did not permit them to carry out their plans. Some cases of prolonged or difficult labor were, [743] however, brought from Bang Chan to the Health Center, where a labor room and a delivery room were available in a separate wooden building. Facilities were very simple. Patients lay on

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164 survey made in one hamlet, KY-7, give a rather different picture of the extent of illness and injury in Bang Chan, if the situation in this hamlet is at all representative of the whole. Hanks (1954), found that serious illness had occurred within the previous year in 17 of 38 households[1] in the hamlet KY-7. Twenty-four persons of various ages were involved, and the illnesses were described as lasting from a few days to 3 years. Specific diseases were mentioned in 7 cases: diphtheria, typhoid fever, pneumonia (2 cases), malaria and beriberi (2 cases). In the majority of instances, however, symptoms rather than diseases were mentioned, i.e. fever, diarrhea, pain in chest, disorder of throat, lung complaint, swollen feet, and the like. One case, described as a wound in a 5-year old child, might have been due to accident.

757 In all, the 24 ill persons obtained a total of 40 "treatments,"[2] from one to four types of treatment per patient. Treatment by modern doctors was used more frequently than other means of help (Table 15) although such treatment is not available within the community of Bang Chan. Fifteen of the 24 persons who were seriously ill had treatment by modern doctors, several patients receiving treatment from more than one. Thirteen patients had one type of treatment only (as that from either traditional practitioner or modern doctor), 7 used 2 types, 3 used 3 types, and 1 had 4 types of treatment from 5 individuals. The latter case was that of a child who was described as sick for 60 days with pneumonia, neck swelling and fever, and was treated by a traditional practitioner, two priests who were also traditional practitioners, and a medium, all in Bang Chan, and a second-class doctor in Minburi. Another child who was sick with lom sandan (faintness, weakness or loss of consciousness) for three days was treated by 4 local traditional practitioners and a second-class doctor at Minburi. One child with saang (a disease of young children, said to be caused by the loss of the soul or spirit) was treated by the modern doctor at Minburi, only.

757 As a rule, local practitioners of one sort or another
• 759 were visited or called first, those in Minburi next, and those in Bangkok, only after nearby help had been consulted. This order was not invariable however. For example, in the Hamlet KY-7 series (Hanks, 1954) was one woman who was sick with beriberi for about 8 months after childbirth. She went first

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1. Interviews were not obtained with 3 of 41 household heads in the hamlet.

2. Each type of practitioner, as traditional practitioner or modern doctor, was counted as a separate "treatment."

[TEXT CONTINUED ON PAGE 37]

A [see p.36-Analyst].

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Table 15

Treatment Used For Serious Illness by 24 Persons in 17 Households, Hamlet KY-7

757 - 759

Specified Treatment	Locality			No. of Persons Treated
	Bang Chan or adjoining area	Minburi	Elsewhere[2]	
Persons consulted:[1]				
Modern doctor[3]		18(21)	4(7)	19
Traditional practitioner	11(14)		3	11
Priests	3 (4)		1	4
Muslim masseuse	1			1
Medium	1			1
Medicines used without advice of practitioner:				
Purchased from market			1	1
Obtained from neighbors	1			1
Home remedies	2			2
Total	19(23)	18(21)	9(12)	40

1. Figures indicate the number of persons who had the specified type of treatment, not the number of visits or treatments. The higher numbers in parenthesis indicate that in some cases a patient consulted more than one person in a category, i.e. more than one traditional practitioner or modern doctor.

2. Modern doctors in Bangkok and Tonburi, and at Don Muang; traditional practitioners at Chachoengsao, Bangkok and in the rural area near Bang Chan.

3. Doctors most often visited in Minburi were "second-class," i.e. not graduates of medical schools, but persons with a limited amount of training in modern medicine.

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757 to a second-class doctor in Minburi, then to a nearby Muslim
• 759 masseuse, then to a local traditional practitioner who gave her some jaa tom (cooked medicine). Another instance, recorded in the field notes, is that of a school teacher's baby who had abscesses on her head. The mother took her child first to Minburi, where she was given an injection and a sulfa drug to be taken orally. The child did not get well immediately, and before all of the drug had been taken, the mother took the child to a local traditional practitioner who gave her a decoction of herbs which was to be given by mouth. Thus in some cases, modern doctors were consulted first, and local traditional practitioners later, if relief was not as speedy as was expected. The experience in this one hamlet suggested a willingness to try a variety of treatments, and the existence of a considerable degree of confidence in modern medicine.

758 According to Ralis (1955), 213 of 335 household repre-
743 sentatives interviewed had visited a clinic or hospital. Of these, 156 had gone to Minburi, and 135 to hospitals or clinics in Bangkok, some having gone to both places. Of 250 hospital or clinic visits, 125 were for treatment or hospitalization; the bulk of the rest were to accompany patients or to visit hospitalized relatives or friends. No significant difference in reports about seeking treatment or hospitalization was found between groups of persons differing in literacy, or in socio-economic level.

164 Infectious disease. - The principal evidences of infectious disease noted in the course of the clinical examination for assessment of nutritional status were trachoma and smallpox scars. Occasional cases of ringworm and other fungus infection, and of pediculosis were observed by the physician.

When the 233 school children and 148 additional persons included in the random sample of village households are considered together, i.e. a total of 381 persons or more than one-fifth of the total population of the village, only 3% were found to have trachoma. Eleven of 13 cases found were among 237 children 7 to 14 years of age, i.e. an incidence for this group of 4.6%. Zimmerman (1931) reported 119 cases or 4.3% of all persons examined in Central Thailand, and 277 cases or 2.9% of persons examined in the whole Kingdom. Among the school children examined, however, he reported an incidence of 12.6%.

Of 381 persons examined in Bang Chan, only 10, or fewer than 3% had smallpox scars. Two cases only were in adults, the remaining 8 being among children of school age. Our records do not show when the most recent cases occurred in the village.
751 According to Zimmerman (1931), 88% of over 2200 school children examined had been vaccinated. No information was obtained concerning the proportion of residents of Bang Chan who had been

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751 vaccinated but among school children the percentage is very high. During the survey period a health officer came to the Bang Chan elementary school to vaccinate children; and at that time at least one nearby resident, a school teacher's wife, brought her infant for vaccination.

164 Illnesses probably, in most cases certainly, of infectious origin, which were mentioned in the field notes, include the following, which are listed roughly in the order of frequency: skin disorders such as abscesses and boils, fever, respiratory disorders including colds and influenza, tuberculosis, "upset stomach," measles and diphtheria. Two cases of diphtheria with one death, occurred while the survey was in [744] progress. At this time health authorities came to the village to inoculate the children on a voluntary basis (Hanks et al. 1955). As already noted, malaria and typhoid (one case each), were mentioned as occurring during the year previous to the inquiry in Hamlet KY-7 (Hanks, 1954).

• [759] [743] A number of references were made to history of cholera, smallpox and malaria, but these did not appear to be current threats. Two cases of severe diarrhea were called "cholera" but one was on the way to recovery the next day. The traditional practitioner who was asked to treat the other, urged that she be taken to the hospital, and himself accompanied the patient and family members. At the hospital, they were told that members of the family and neighbors should "get vaccinated and have their toilet covered."[1] No further mention of this case is made in the field notes, hence the correct diagnosis is not known to us.

Since a modern doctor was frequently not seen, diagnosis of disease was often uncertain. More often, major symptoms were described or the disorder was given a local name, for which there is no good English equivalent, such as various kinds of *saang* and *lom*.

Non-contagious disorders. - Among current non-contagious disorders mentioned in the field notes, in replies to questions on surveys, and in some cases observed by the physician, were the following, listed roughly in order of frequency: menstrual disorders, headaches, boribori, cancer, asthma, eczema, nephritis, and rheumatism.

Accidents. - Accidents which were recorded in field notes include bites of dogs, spiders, leeches and snakes, falls from buffaloes and down ladders, burns, cuts, drowning and poison from drinking kerosene. Among the school children examined,

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1. Field notes, S.S., April 29, 1954.

828 753 or fainting, and also such localized trauma as abcesses. Similar behavior followed the influence of malevolent magical amulets, incantations, and love magic. Natural intrusions may be exemplified by the seasonal influences of rain, which brought on too much water element; of heat, which increased fire; and of wind, which cooled too much or brought in certain fevers, e.g. north fever (khai nüa). An accident was a natural cause of disequilibrium. A cut might let out the air or a soul.

774 [76] [753] Any lost soul, if not restored, meant death. Souls were lost from falls or frights or from spirit attack, a condition recognized by persistent crying, hysteria, and unconsciousness. The exits were at the top of the head, the palms of the hands, and the soles of the feet, the latter 2 sometimes localized at the 2 thumbs and the 2 great toes. One of the old beliefs associated an element with one of the four chĕttaphŭt souls (Textor:130). When one of these souls was lost one whole element was gone. Loss of the khwan soul was more frequent than any other, especially during childhood. Its care [844] throughout life was very much in mind. The khwan[18] played an especially prominent part during childbirth.

755 [762] [757] If a person were only slightly sick, he might first try to overcome his physical complaint by attention to diet. Very rarely did he by himself buy some medicine at a drug store. If it were a case of a child's lost khwan, women performed the rite for its recovery. When the khwan of an adult was affected, man performed a strengthening rite (thăm khwan), or a priest gave a holy water bath. If the person were very ill, holy cotton thread (săi sin) was tied at wrist, ankle, and neck so as to shut off the soul exits. An elder relative or spouse might also "hon," i.e. vow food or liquor in return for the help of supernatural beings; or, with Buddhist "sacred things" in mind, promise the ordination of the afflicted person, or oneself, or some interested relative. In this case, the relatives had long since turned for help from the arts of medicine.

278 755 The Arts of Medicine

Medical knowledge comprised on the one hand a pharmacology of materia medica, and on the other, the far more important

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18. The conceptualization of this soul was Brahmanic in source, rather than Buddhist (cf. Martinie, 1952:370).

844 In view of the stake of a child in the successful outcome of his own birth,[39] under what circumstances might a child not be helpful? This was explained by merit (bun) and habit (khoei).

Merit

782 828 761 844 Since merit, gained through virtuous behavior, determined a person's character, circumstances, health, and longevity, the merit of mother and child set the course of childbirth. It will be recalled that persons who lacked merit because of previous sins were cruel, lived short lives, and had to endure suffering, while meritorious persons enjoyed success, kindly natures, and long life. Yet an outwardly fortunate person might be at the point of merit-exhaustion, when suffering commenced. Any mother who suffered greatly lacked merit. In one case, "7 babies of a woman died young while the eighth and subsequent ones lived, proving she had to suffer greatly to work off some misdeed in former existences. She was given the trouble of bearing and feeding the child, and the child did not have enough merit to grow up, and so to feed her in return." Her punishment was to bear non-meritorious children who could not live. A woman's premature[40] death in childbirth was caused only by her own lack of merit.

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[171] 39. By way of contrast, consider how parturition is pictured in the United States. The active role is played by the midwife or doctor, or some other outsider, who "delivers," i.e. "liberates," the child from the womb, or frees the mother and baby from one another. "A child is born" presents the child as completely passive; in "to have a baby" the mother is relatively so. The most active English renderings are "to bear a child" and "to give birth to a child." It is noteworthy that modern anaesthetics have tended to increase the passivity of the mother.

40. The idea of a natural term of life was described in the Visuddhi-Magga: "The Karma that caused conception has ripened to a termination, although the dependence for continuing the series constituting the term of life be not exhausted. Death by the exhaustion of the natural term of life occurs when the span of life, the nutritive powers,... proper to any given grade of existence come to an end..." (Warren:252).

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A midwife or doctor could not be blamed, unless it was felt they did not help as much as they could have.

761 782 845

A child lacking in merit died. Such individuals, for some reason, did enough at their own birth. Words of comfort to a surviving mother were, "your baby did not have enough merit to live." If particularly sinful, it died after making delivery unusually painful. "Once a child was born dead, but it teased the midwife by moving its legs a bit. Consequently, its death was not the fault of the midwife." The child's lack of merit was proved by its death and its maliciousness. There was no hostility towards any child born in a hard delivery, for if both mother and child survived, the demerit that caused the suffering was the mother's.

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On the other hand, a meritorious woman with a meritorious baby had a short, easy delivery. Such a child was considerate: "he will not hurt his mother, will help her to bear him easily, and will live."

A woman who safely came through childbirth felt deep satisfaction and new security. Bearing a child in itself did not bring any merit, though it was an act of mercy. Merit could come later with the ordination of a son. However, why one woman had successful or short labor, and another not, was unequivocally clear and accepted. If delivery were normal, she was confident of her and her child's store of merit. If not, she bore the anguish, convinced that she had brought it on herself in some previous life. Since sins were worked off with pain, every thrust made her future lives happier. Fear was minimized, for if death came, it was merit-determined.

[154] [761]

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844 Moreover, her life would some day begin again. Whether birth was rapid or slow, the experience of the suffering deepened her sense of compassion and, as will be shown, brought her closer to fulfillment of her life role.[1]

Habit

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[761] If mutual help organized relationships, habit (khoei) stabilized them. Khoei means "to be used to, accustomed to, habituated." A first occurrence was an example and set the pattern for all subsequent occurrences. With one performance one was accustomed to an action. For instance, shortly after the temple was built 2 people died, deaths in Bang Chan "always occurred in pairs;" it was the temple's "habit." Moverover, "the head priest could never expel a priest because he had never done so." Again, a few women saw to it that during this period their babies were given a few grains of rice (even though they were far too young to be offered raw rice regularly), so that "later on, if they got sick,
[171] they could always at least eat rice," for "they would be used to it." "Glutinous rice was not good for babies in Bang Chan, but in North Thailand [where it was a staple] it could be eaten because people were used to it." Someone had set the example which started the custom.

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114 41. Bang Chan's Buddhist phrasing of the meaning of pain and death in childbirth seems to indicate that childbirth occurred under psycho-cultural conditions that induced relaxation and reduced fear and pain. An "easy" delivery lasted 2 hours. According to a modern medical theory, ©Dick-Read: Childbirth Without Fear, passim) lack of fear of childbirth leads to mental and physical relaxation which in turn reduces pain and labor. Dr. Dan Bradley observed that labor was shorter among Siamese women than among non-Siamese. "Facts seem to prove that parturition is both shorter and easier to Siamese mothers than is usual to Europeans and Americans" (Bradley, 1865:79). We accept his first-hand observation because he had 40 or more years of experience in delivering babies, both Thai and non-Thai (missionary wives, etc.), and suggest that it may be taken as proof of mental and physical relaxation derived from lack of fear. Although the missionary women may have been frightened because they were in a far country, Dick-Read argues that fear of childbirth has long been present among American women and this fear has the effect of longer, harder labor.

retreat (ōk phansā) in order that her child would come out (ōk) more easily. Here none sought to divide the worlds of the natural and the supernatural, or to mark off "imitative magic" from the "learning by example of the natural world." A stronger influence came from more powerful agents, so that the effects of the Buddhist temple carried greater effect than the actions of a mere neighbor. Yet any like influence was of aid, especially in a verbal similarity. Thus, an event occurring on a Friday was apt to be auspicious because the Thai name for Friday contains an element identical in sound (though etymologically different) to the word for happiness (wansuk=Friday; suk=happiness), and for the fortunate status of true adulthood (suk=mature, ripe).

Stability in a Floating World

In explaining why some children were "born easily and were easy to raise" (liang ngāi) certain persons simply said, "They were born into the right family. Those born to the wrong family usually die." In defining the "right" family, merit, habituation, and helpfulness converge.

Most families were thought to live together as a group in life after life. In view of the separateness of souls, how was this brought about? The key lay in the conviction that people who made merit together met in future lives. Since most merit-making was undertaken as an enterprise of the nuclear family, sometimes with close kinsmen and friends, they would find each other. Some of the eagerness of friends to help (chuai ngān) with cash or labor was in order to meet in later lives. These persons were used to each other, used to helping each other, and so might marry. Thus, if they lived rightly, the nuclear family, maybe with an infusion of beloved old friends, expected to carry on in the next existence. Although a family's prosperity proved its merit, and its wealth facilitated making more merit, continuity in time was not limited to the wealthy. Proof that a couple had been married in a previous life lay in the birth of a boy as first born. Such a couple was known as a "khū" (pair), and divorce was held to be highly unlikely.

How did a child find its "right" family? After whatever necessary stay in purgatory, the khwan soul of a deceased member roosted in a tree near to its old home, then flew into an accustomed womb. One recalls the start of the blessing (p.48), "Come, khwan! Come my own child!" A woman hoped that the khwan was one previously born to her. "A couple lost its first child. Later the wife was fearing for the life of their sickly second-born." The husband said, "It is according to your sin and merit. If the child is your own child, he will live with you. If not, he cannot."

761 Since only meritorious children were born into the
775 "right family," they were helpful and so easy to raise. The
593 easiest to raise were reincarnations of babies deceased in
829 the mother's present life. "A girl of three died. Her father
782 dreamed he was at her coffin. She asked for water which he gave her, then brought her home. Months later a boy was born, so easily raised up that people knew it was a reincarnation of that girl." Here amiability and the change to male sex demonstrated merit. In another tale, "a woman lost many babies at birth. Her husband, thinking it was the same child trying to be born to that mother, marked the forehead of the last deceased baby. His surmise proved correct, because the next baby born had this mark on its forehead."

This assumption that a woman's children were born to her over and over led to a measure of control over the cooperativeness of the child in the womb. A child trained to "good habits" became a meritorious adult who, when reborn, would of course "help" his mother in childbirth. It was advisable to set one's own child into paths of proper behavior, for he could be born again to a descendent, and in all likelihood to oneself.

On the other hand, families were not closed groups. "Like a leech that sticks in one place, then goes to stick somewhere else, so a deceased person may be reborn somewhere else," said a priest. The marriage blessing stated, "May angels, not criminals or beggars, reincarnate as your children." Thus was explained why upright parents might have a disobedient, roaming child. He had roamed into a new family which perhaps he had met during a pleasant casual visit to them in another life. If he did not stay home to make merit with his present family, a wayward child would roam out of it as easily as he came in. Here was the ultimate danger in visiting around too much.

761 Because all individuals lacking in merit died off at
593 birth, some of whom because they got into the wrong family,
782 a selective process continuously weeded out the extremely non-meritorious so that those who were born usually survived. In fact, Hauck's figure of 90.6 live births
[163] (1956:33), the percentage of total pregnancies shows how many meritorious babies were born to the right family!

852 The Winnowing Ceremony
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774 This ceremony, described in Dûan's tale, was usually performed shortly after delivery, though it might occur anytime during the first three days of a baby's life. The child, placed on the tray (twins were laid together or separately) was claimed by the mother or the father, who

severe injury, such as bruising by excessive pressing, or even in hysteria pulling the child to pieces in their effort to get it out.[66]

Secondly, a midwife offered success, not only as proof of competence, but as a substantive asset. It will be remembered that the initial shape of an event set the invariable pattern for its subsequent occurrences. Thus a parturient was virtually certain of successful childbirth if she called on a person who had the habit (khōəi) of success. It could not turn out otherwise. We have also seen that these successful midwives were good nourishers (liang dī). A new mother wanted to associate herself with such a fortunate sequence. Once established, a midwife's reputation was not unduly tarnished by the loss occasionally of a mother or baby. She might explain, "The woman did not do as I said," or "I was not given permission to do what I could have done, for her family feared she would be even more hurt by my putting my hand into the vagina." Death was, of course, only due to the running-out of the deceased's merit.

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66. To give something of the measure of their skill: if the feet of the baby appeared first, one man "straightened the legs by hand inside, held the chin carefully as the head came through," while another said, "Do not press or reach into the vagina. Let the baby come naturally." If an arm came first, or it were a breech presentation ("the baby is turned over"), the procedure was to "pull and press lightly," but it was conceded that neither the mother nor child could be saved. Expulsion of the placenta was frequently difficult. "It may take 2 hours or stay in 2 days or more. Some die when it is left in, but some do not." The technique of removal was to give a medicine, press, pull with the hands rubbed with alum for a better grip, with the woman in a crawling position. Some reached into the vagina to locate it. One woman had analysed her practice so as to know when to expect trouble: namely, in the later pregnancies and childbirths, i.e. the sixth and seventh, say, rather than in the early ones during a woman's younger years.

As to mortality, one "professional" man estimated 30 deaths of babies out of 230 deliveries in 50 years. Haanuk (1956) reported 90.6% live births (pp. 32-33), 7% of the babies dying in the first month, 11% within the first year (pp. 39-41). One should remember that the professionals had a greater proportion of difficult cases. One woman had delivered over 100 babies and "all lived."

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An old woman summed up significantly 2 attitudes saying, "In the old days people made more merit and so lived longer, but because we had no hospitals, the children died younger." The relation of good health and longevity to proper religious and moral behavior was fundamental in Bang Chan. If merit did not suffice, medical attention, traditional or modern, could not prolong life. Children, however, were tender (ɔ̃n) and easily prey to sickness.

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Traditional care could help them, but being delicate and tender like city people, children could also be helped by modern hospital care.

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Between the 2 systems people sensed little conflict, for each patient made a preliminary diagnosis of his symptoms and sought the type of assistance his diagnosis and convenience indicated. Mɔ̃ with some knowledge of both systems might offer their patients a choice of remedy. With the right diagnosis, magic, and medicines, a quick cure was expected. If not forth-coming, people were disappointed and moved to another specialist for his help. Modern medicine merely took its place as one more recourse.

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The basic handicap of modern medicine was that it had no magical resources or holy water. "Its effectiveness is limited to the properties of the ingredients." Old medicine on the other hand had, in addition to these properties, "The strength of the mɔ̃'s incantation plus the power of every person who learned and used that incantation, back to the time of its discovery, centuries ago." Thus where the medical schemes offered the same specialty, as in fevers, bone-setting, or obstetrics, the old appeared to offer more resources.

Besides its deficiencies in magic and strength-making attributes, modern medical care had other drawbacks. First, it was not accessible. A trip to Bangkok for medical purposes involved far more time than a day. Mīnburī's Health Center was a feasible trip, even for a woman in labor (stays ranged from 6 to 24 hours). Home arrangements for tending children, feeding buffalo, and other chores were less demanding. Bang Chan's eagerness for local modern care was shown when a Bangkok physician visited Bang Chan for a few times as part of a nutrition study. He was besieged with private requests for medical advice. Secondly, modern medical care was expensive. In Bangkok, after the expense of getting there, taxis, food, and housing costs for accompanying relatives, hospital, and doctor's fees sometimes meant losing the family gold and even land. Mīnburī's costs were closer geared to farm income, but medicines appeared costly. "Modern drugs taste and act better, but the poor have to use the old." Third,

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

152 571 ritualized, ways of expressing hostility. What is significant about these particular procedures is that their very formalism serves to keep the aggression controlled and within bounds. Thus, everybody knows precisely how to behave when a buffalo disappears in the middle of the night and an intermediary arrives the next day to arrange the price for its return. Similarly, the aggressor, his victim, and everyone else present knows what is meant when someone calls a dog by the name of a person who is within hearing range and claims it was simply a slip of the tongue. The victim might respond by stealing his antagonist's boat and returning it a few weeks later, after his adversary has suffered sufficient anxiety. Note that in all these cases a face-to-face confrontation is either avoided or concealed.

152 571 754 Related to the above is the use of magical aggression. Textor (1960) points out that magical aggression—from one *person* to another *person*—is on the wane in Bang Chan. Also, it is clear from his exhaustive inventory of the magical practices in the village that interpersonal aggression has a very minor part in what is otherwise an extremely elaborate belief and ritual system: there are no more than three or four supernatural "objects," out of more than one hundred and seventy, that even suggest witchcraft, and although these objects are considered highly potent, they are rarely used. Even in the most extreme case—a young man using the oil from the chin of a corpse to induce hysteria in a maiden who has rebuffed his advances[9]—the victim is held partially responsible for having succumbed to the magic, a consideration that diminishes the "magical" implications of the ritual.[10]

152 762 Finally, a word should be said about the most convoluted way of expressing aggression. This is suicide, a procedure which, obviously, is applicable to only a small number of people. Nevertheless, during the relatively brief period that I was in the field, three Bang Chaners (out of a population of 1,771) attempted to do away with themselves by hanging. They always selected a conspicuous place (a tree on the Minburi highway or over the main canal) and were always unsuccessful. The aggression here is convoluted not only because it is turned inward, but also because it is

[9] This blending of sex and aggression does not have the same meaning in Bang Chan as it has in the West. Although the young man is concerned with punishing the girl for not responding to him, he is more concerned with breaking down her defenses and equilibrium, the very factors which denied him access. In English terminology, he wants to "unhinge" her, with all the duality that such symbolism might imply.

[10] While magical aggression between people is relatively minor, magical means of averting aggression by non-human forces is not. In fact, the largest number of magical practices in Bang Chan relate to protecting the health and welfare of the organism from malevolent spirits, accidents, and dangerous animals. These data, of course, are quite consistent with the SCT data on "anxiety," presented in the preceding section.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

intended to hurt others. The explicit justification in all three suicide attempts was to make a spouse feel "sorry and unhappy." [152] [762]

What is perhaps most intriguing about all these naturalistic ways of expressing aggression (even the last, which, despite its drama, is attempted, not actual, suicide) is that in their formalism and indirection they are actually quite flaccid. An obvious question, therefore, is whether the villagers' aggressive tendencies are, at bottom, quite weak, or whether they are simply bottled up, never to emerge in any but controlled and disguised ways. The answer to this question seems to be "both," depending upon one's analytic perspective. On the one hand, the villagers are so attentive in their relationships to shutting off aggression before it gets up a head of steam, that these relationships provide little basis—in an objective, realistic sense—for the development of aggressive feelings. When a potentially hostile act does not even take place, there is simply no reason to feel angry, other than perhaps to be angered because one's anticipations have been frustrated. However, the likelihood that overt hostility will be suppressed is itself so expectable that such secondary anger, if present, is minimal. Further, the villagers' self-concern is so great that they simply do not have that much to gain, psycho-dynamically, from being intensely angry at others. An act of interpersonal aggression assumes emotional investment in others (or obversely, that others provide the self with major emotional satisfaction). If such investment is hesitant, guarded, or otherwise weakened—as almost all of our materials have indicated—the aggression that normally accompanies that investment, or is allowed by it, will also be weakened. Simply stated: it is difficult for a person to be angry at people with whom he does not have much of an emotional relationship. [156]*

On the other hand, the great attention that villagers give to the control of aggression indicates that they are by no means at peace with these feelings. In fact, what is most impressive about aggression in Bang Chan is not its absence, but the amount and kinds of control that are exercised over it. This very process of control probably intensifies whatever "realistically derived" aggressive feelings they already harbor. Thus, although their overt social behavior does not provide a basis for the development of aggressive feelings, their covert behavior—vis-à-vis themselves—certainly does. [156]*

The fundamental issue, of course, is why villagers should be so concerned with controlling their aggressions in the first instance. This is not an easy question to answer. However, there are at least three considerations which, if taken together, might account for it. First, much of their aggression control might derive from the more generalized fear of losing equilibrium—of "falling apart" or becoming psychically disassembled; of

826 [764] [763] [754] [752] [845]

As to the gross structure of the body, some persons learned about the skeleton when, in preparing corpses for cremation, the undertaker stripped the decaying flesh from the bones, usually in the presence of relatives and spectators of all ages. Occasional autopsies because of suspected sorcery, and surgical removal of a fetus from a deceased mother by caesarian section led to some knowledge of organs and blood vessels. Male and female masseurs of considerable competence were trained in the Chinese neuro-muscular system. A system of "origins," e.g. that the elbow-origin was in the arm pit, and the chest originated at the spine, might relate to the Chinese concept of linkage points on the body, in particular, acupuncture. In Bang Chan's popular conceptualization, the protecting skin which enclosed the body was thin at the top of the head and especially so at the stomach area. An old image also persisted that the body cavity itself was a relatively undivided space extending from neck to pelvis. Inside the cavity, food dropped from the top, faeces packed down at the bottom. Through the body curculated slowly the blood; several kinds of water (nāa) (McF. 453) e.g., the nâm khraam (refuse-water) (ibid. 453) in the abdomen; and several winds (lom) (ibid. 728) e.g., the pushing lom bēng (ibid. 487), and the pulling lom chawaa (ibid. 287). The small hair-whorls noted on the head, hip, or shoulder were construed as minor vortices of these currents, or as souls (khwan).

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Foremost in people's minds were the elemental constituents of the body. The human body, along with every animal, plant, or mineral in the world, was made up of 4 elements (thāt): earth, fire, water, and wind (air).[10] This ancient four-fold view, also familiar to the Greeks, had mixed in Bang Chan with the traditional five-element Chinese system (metal, earth, fire, water, wood) because gold, iron, and wood were also spoken of as constitutional elements, and there may have been others. Some persons said that the proportions of the 4 major elements were the same for everyone; others, that they varied for different temperaments, which were also affected by the presence or absence of elements other than the basic 4.

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10. "The body, comprising about a bushel of powdery earth-element, is held together by half a bushel of juicy water-element, and propped up by the windy-element. The fiery element digests what is eaten or drunk and preserves the body". (Visuddhi-Magga. [Warren:157-158]).

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sacred books were inherited by males.

In the light of this definition, only the 2 or 3 males were true professional midwives. They gave elaborate annual ceremonies of homage to their teachers (wai khrū) attended by all the persons who had profited from the teacher's magic that year. However, all the male midwives were also fully qualified mɔ̄. Their ceremonies were large because they were dedicated to the teachers of their curing powers as well as midwifery.

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The male midwives, then, were in a somewhat different category than the females. They were mɔ̄ who had, in addition, trained their hands for midwifery as an "extra specialty." Midwifery seems to have been one of the few areas where skilled hands were considered of greater importance than magic. "We have no magic for delivery," said one male midwife, knowing that nothing but merit could guarantee success. Because they had access to the incantations for element and spirit control, and could make holy water, the midwife-mɔ̄ could spare the parturient the necessity of getting in an outside mɔ̄, if such were needed. However, one part of the midwife's job the men could not do. To protect their male powers of invulnerability they were forbidden to wash the woman's clothing. A woman or a female midwife always had to do this. Men also could not provide the female "mystique" particularly related to the khwan and to growth.

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However, the community did not adhere to this narrow definition of professionalism, for several of the experienced and competent women, Buddhist and Muslim, behaved as professionals and were accorded the title of mɔ̄ tamyaa. Their magical formulae, being congruent with their female office of promoters of growth and life, were especially effective. Like a mɔ̄ they received the ritual gift of the khwan khaw, hallmark of the possession of occult formulae, which the patient presented to assure the benefits of magical knowledge.[68]

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68. This ritual bowl of rice and offerings was never excused even between the closest kin. If forgotten or misused, the "teacher" punished the midwife with pains, and had to be mollified with a food offering. The magical benefits could not be withheld once the khwan khaw had been accepted. It was not accepted if the patient were too near death to be assisted. If the patient died, the whole gift, cash, rice, and all, was given at once to the temple to make merit.

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826 [764] [763] [754] [752] [845]

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827 [792]

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10. "The body, comprising about a bushel of powdery earth-element, is held together by half a bushel of juicy water-element, and propped up by the windy-element. The fiery element digests what is eaten or drunk and preserves the body". (Visuddhi-Magga. [Warren:157-158]).

the slight differences in ministrations. "The Muslim midwife massages more than the Buddhist." The women easily entered into reciprocal courtesies. The Muslim woman knew the steps in the Buddhist winnowing ceremony and performed them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khăo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

Certain fundamental ideas of the Muslims led to reinterpretations of familiar Buddhist terms and activities. "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist, meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

Completely Muslim was the stress on physical and moral purification as an objective of every rite, and conversely, the prevalence of the idea of defilement. "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate procedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

The events surrounding childbirth illustrated the differing viewpoints between Muslim and Buddhist. In the seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (făk thong: to deposit gold). On returning home, she went as fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim midwife prescribed large doses of liquor before and during parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclosed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khăo contained "7

796 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A big cremation might require planning in detail for years ahead: invitations to priests and relatives in distant parts of the country; hiring an orchestra and obtaining ceremonial gear. For the largest events, when the guest lists ranged upward to 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person, usually one of the "professional" cooks of the village. The day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

262 The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an 262 annual homage-to-the-teacher rite. It is the nearest approxi- 796 mation to a quantitative record of food for a ceremony that 815 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either 956 at 7 a.m. or 11 a.m., or both, always at least in part by the 992 host, who sat and chatted with them. No one else ate until

435 Some information as to the cost in baht of the larger
796 ceremonies held in 1954, and their scale, was obtained from
[126] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[764] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000.
[582] Guests gave 2300.
B: Rite of forgiveness after elopement:
[184] a meal, with 5 bottles of liquor.
C: Moslem: 2 buffalo slaughtered.
400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
[583] sugar cane, fruits, sweetmeats and other things. At more
modest weddings and the rite of forgiveness for a couple who
had eloped, food might differ from the usual fare only by in-
cluding the three essentials of a wedding: pork, chicken and
alcohol.

273 Increased consumption of alcoholic beverages during the
796 ceremonial season was indicated by the sales of one local
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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[574] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

125 Question 16.d. (Cont'd)

431 Construction activities (Cont'd)

651
- To the Wat (to repair Wat, construction in Wat, fixing walls) 27
- Contribution for building materials (buy cement, concrete floor, wood and tin, for new cement sidewalks, water tank) 21
- To Surao (general fund, repair) 9
- To build a bridge 8
- To buy a generator 6
- To build priest's house bathroom 5
- To build preaching hall 3

Ceremonials

[796]
- For ceremonies, unspecified 12

[764]
- To guild the golden leaf 27
- To cremation (to build crematorium; to cremate father, people without relatives; to build corpse go-down; priest's funeral) 12
- To Wat fair 10
- Other (to Katlia, to revise the Buddhist sacred book, to ordain priest, for building Buddha figure, to New Year festival, for dancing girls) 11
- To Surao fair 4

Food and related donations
- Gave rice, unspecified 5
- Gave rice (food) for Wat, priests 18
- Gave rice for Wat fair 7
- To buy utensils (including cooking utensils) for Wat 6
- To buy utensils for Surao 6
- Gave food to Surao 1

243 needs at least two work suits in each rice season, one
291 during the field preparation and another during the har-
511 vesting season.

372 Kerosine is used every day for lighting purposes.
226 We do not include in this category kerosine which is used
511 in the farm work; but that used with the pressure lamp in fishing by spearing during the night is included in the ordinary household expenses, for we do not consider fishing as a farm enterprise but as a routine activity participated in by all Bangchan residents, farmers and non-farmers alike.

431 Contributions to neighbors is a necessary item of
476 expense in the village. These are cash gifts made by in-
796 vited guests to the sponsor of such rituals as ordination,
511 cremation, marriage, topnotch-cutting, and teacher worship.
[792] These rituals usually take place during the dry season fol-
[764] lowing harvesting when cash is abundant in the village and
[535] are always followed by feasts, not uncommonly in a series of two or three days. Since all these rituals necessitate the participation of the priests, they have to be arranged in consultation with the temple to avoid conflicting schedules. Although few rituals have been noted to be in conflict with one another, usually they are spread throughout the dry season and most people are able to attend rituals to which they are invited. In cases where they cannot attend in person, they are obliged by conventional requirement to send in their cash contributions. The standard cash contribution is 5 - 10 baht. Usually, a

Sometimes these aberrancies were viewed as desirable sources of supernatural power, but on other occasions, they were seen as a sign of demerit, caused embarrassment, and were suffocated at once (if alive), and buried.

If a woman died pregnant, her body was at once brought to the temple where the unborn child was removed surgically. The usual solacing sermon, rites "to lead the deceased to live in her right place in the next world," and cremation took place, with the fetus laid beside its mother so that it "would come out normally." The mother and child were separated to prevent a ghost which was double-powered. No prayers were chanted at home before exsection "lest they make the power of the spirit stronger." Moreover, any violent or premature death caused an angry ghost. The ghost of a premature child had a heavy load of sin, for its stay in purgatory, where sin was worked off, had been interrupted (Textor:262). An unscrupulous mɔ̄ was eager to get possession of any ghost for use in sorcery, and a double ghost was stronger than any other. Ghosts were obtained by plundering the mortuary chambers of the temple prior to cremation. By feeding (liang) it, a mɔ̄ controlled it. The ghost of a male infant was preferable because it was "stronger than that of a female." In the light of this situation, not only should the body of a pregnant woman never be left alone - so that no one can get at them (sic)," but a pregnant woman herself ought not to be alone.[28] The behavior towards the Rice Goddess, Mother Posop, who was "pregnant" when the grains in the stalk filled out, illuminated many of these attitudes: "Mae Posop feels weak, hungry, and uneasy. She is eager to taste sour and sweet foods. She is a woman and beautiful in her pregnancy." To allay her hunger the

28. In Cambodia, a pregnant woman might be murdered, even by her husband, so that the murderer might gain the malevolent power that possession of her now double soul would afford. (E.R.E. "Cambodia": p.159). This specific statement was not found in Bang Chan but might be part of the shadowy background to local reluctance to leave a pregnant woman alone.

Chapter II

MAN AND WORLD

771 Bang Chan had for years heard preaching from Buddhist scriptures. Co-existing with these teachings were Hindu elements referring to Brahma, Shiva, and others. People also believed in an animistic lore concerning frightening ghosts and spirits (phī), protecting deities (thēwadā), maternal goddesses, princely spirit-lords, and other supernatural guardians of a more or less benevolent nature. To these beliefs were added special bodies of knowledge, such as sacred literature from India and traditions of astrology from both China[8] and India. Other elements might be traced to Muslim influence, just as Muslims shared some of the foregoing references with their Buddhist neighbors. Bang Chan shaped its views of nature and man from all these sources. However, we shall not try in what follows to specify the sources of its beliefs.

The Human Body

826 774 184 192 The body of flesh, blood, bones, and other materials, harbored the noncorporeal aspects, in particular a person's merit story (kam; Skr: karma) and his several souls, viz., the khwan, the winyan, and the four chētsaphūt (cf. J.R. Hanks, 1959). Views of the human body formed no unitary system, but were as varied as their origins. Thus, sometimes villagers distinguished the material from the non-material: "a human being is composed of two aspects: rūp (body) and arūp (non-body)." Sometimes learned persons referred to the Hindu-Buddhist concept of 32 parts of the body, one of which, the winyan-soul, was the "organizer" of the others.

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8. No trace was discovered of the Chinese concept of Yin as female, dark, cold, and evil, etc., and Yang as its opposite.

[115] 9. Ming (Mc.F. 838) was once given as a term for "soul" by a Muslim informant, but without further information.

Influences on Health

In Bang Chan, a discussion of sickness and health merely in terms of element balance would be true but insufficient, or even superficial. After all, whether manipulated by oneself or by a professional curer, elements could only be controlled within certain limits. Far deeper questions were posed, probing the ultimate nature of health, life, and death. What determined the particular proportions of a person's 4 elements with which he had been born, and whether he had, say, a preponderance of wood from Jupiter or gold from Venus? The immediate answer of astrological confluences on the date of birth would be true, for each day had its own qualities and aspects, but it was not enough. Why had he been born on that date to that set of governing factors? In life, why did one person meet the circumstances that created illness, while another lived in glorious health? The answers to these questions must be sought in the Buddhist moral and cosmic beliefs.

The Buddhist universe operated on a principle of immutable law. Each person received his just due, suffering for his own sins, enjoying reward for his virtue. There was no personified deity to help, forgive, or blame. Moreover, attachments were the cause of sorrow. Because existence was fraught with desires, all life was basically painful. Even flashes of happiness by their cessation caused sorrow.

In this universe and on this earth, individuals, each a unique and independent entity, were born to live and die, over and over again, throughout eons of time. They bore no relation to each other. Separate and autonomous, each was in charge of his own destiny. All beings formed a single grand scale of existence from demons in hell, through such lowly creatures as worms and insects, upward through dogs, cats, buffaloes, and elephants to mankind, then on up to angels and gods in the last paradises before the peace of Nipphān (Nirvanà).

The insight of the Buddha showed the way to break the sorrowful eternal cycle of rebirth and reach Nipphān. The Buddha perceived that meritorious behavior caused one to progress up this ladder of existence toward freedom from incarnation. In each life merit (bun) could be accumulated by compassionate behavior: caring for priests, and being kind and generous to persons less able to care for themselves. With merit one's next life was happier and freer of restrictions. A dog had more merit than a worm, a buffalo than a dog.

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775 Man was higher on the scale than woman.[28] Progress toward
[562] Nippban was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phī) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good health and long life, a kindly personality, many fine children, wealth, high status, intelligence, and luck. Astrologically, he was born on a day
[775] of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death, deformities, unhappiness, poverty, and had a cruel nature.
[153] Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

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784 The long-range protection against all illness was to
[577] live virtuously and make merit. However, to guard against temporary supernatural intrusions, everyone possessed and
[782] usually wore Buddha lockets and other amulets. Some
[304] underwent tatooing, men having Cambodian or other figures, women, 2 small dots tatooed on the torso under the arm.

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28. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

843 [775] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phi tai thang klom, caused "the worst of all possible deaths." The phi krasu spirit,[25] entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). [753] The supernatural disease missile called "khun" might also strike. "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extra pain occurring just before the baby comes out." To protect themselves, women wore extra talismans or had 7 dots tattooed under the arm. [751] [304]

843 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 7 visible teeth, which indicated it was a non-human, yak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of woman giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (McF.46). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb sat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

4:Phillips E-4,5 (1956-1957) 1966
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bringing them into the world; of helping siblings because of the kind things they have done; of loving children so that they will care for them when they are old [11]—but they do condition how and when such sentiments will be expressed. It is difficult to recall any instance of a Bang Chaner being caught in a situation of which *he was aware of* a conflict between satisfying his own desires and fulfilling his obligations to kin, so it is difficult to say which sentiment would ordinarily take precedence in his own mind; but to an observer, it would seem that the former would most likely have priority. (See Hanks and Phillips 1961 for evidence in support of this point.) [12] Actually, most villagers seem eminently successful in keeping the sentiments apart, which helps to account in part for the "centripetal" forms of kinship arrangement referred to earlier. Self-interest is of course not the same as selfishness, and when circumstances and inclinations permit, Bang Chaners can become among the most generous and hospitable of people (and in no sense paradoxically). Rarely have I seen, for example, people derive so much genuine pleasure from doing favors for others. In fact, these are among the first things that one notices about them: free agents helping others—but also ignoring them—when they see fit.

[11] This phrasing here in terms of *reciprocal benefits* is in the villagers' idiom, not mine.

[12] It is not insignificant that nowhere in Thai folklore does one find a recognition of possible conflict between the motives of self-interest and family obligation or of any moral lesson to be drawn from it; that is, there are no stories of a parent sacrificing himself for his children, or of children for their parents or, for that matter, of any moral value at all in self-sacrifice. On the other hand, one does find stories of individuals in conflict over which of two self-satisfying alternatives to select. In *Khun Chang and Khun Phaen*, for example, Wan Thong, the inconstant lover, could not make up her mind between love and wealth, and eventually was slain because of her indecision, the moral being that the person who cannot make up his mind deserves nothing.

On a more realistic level, one rarely finds anyone in Bang Chan being condemned for self-interest—the mother who abandons her children or the gallivanting husband—although one very frequently does encounter sympathy for those who suffer, the sympathy being elicited by the person or the fact of suffering, not the cause. The majority of Bang Chaners generally consider the motives of the self-interested party as the person's own business. This concern with sympathy (*soyaam*) for those in difficulty, and simultaneous indifference to the source of their problem has deep roots in Buddhist doctrine and should not be glossed over.

To have compassion (*mettaa* and *karunaa*) is among the noblest of Buddhist virtues. It is at one time a kindly expression of concern with others and a recognition of—or coming to terms with—what is considered intrinsic to the human situation. "Life is suffering" is the first of Buddhism's Four Noble Truths. However, since such suffering is intrinsic, there is little to be gained by assigning blame for it. Equally important, villagers assume that a person who suffers may well have brought it upon himself. The other person, acting in his own natural self-interest, may have simply been an agent or catalyst. His motives are his own business because they will eventually contribute, for better or worse, to his own denouement. The dynamics of these attitudes are discussed in detail in the next chapter.

4:Phillips E-4,5 (1956-1957) 1966
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lying configuration.) However, from the point of view of their etiology in the individual, it is clear that the villagers' tendencies toward loose relationships are related to early childhood experiences. A second source is their philosophical notions concerning the nature of the individual. These notions are largely cultural derivatives of Buddhist doctrine, although at the behavioral level they function simply as unstated premises which guide and tacitly define behavior.[20]

Reference was made earlier to the basic assumptions governing the socialization of the Bang Chan child. When the child enters the world of human beings, he is already a partially formed and psychologically independent individual, with his own *?upanisaj* (ingrained character) and *khwaan* (soul-stuff), not to mention his stock of accumulated merit and demerit from countless previous lives which predetermines his character. The effect of these definitions is not only to award to the child a sense of psychic individuality that is partially[21] independent of any social environment to which he is exposed, but to assign to him a fundamental sense of psychological equality. We are not speaking here of social equality. The

[20] From a strict analytic point of view, it would probably be best to consider Buddhist doctrine as an abstract, codified representation of these premises rather than consider the premises as explicit, logically coherent deductions from Buddhist doctrine. To be sure, many Bang Chaners often explain and justify their actions by pointing directly to Buddhist doctrine, sometimes applying its tenets correctly, and sometimes not. But for most, Buddhism is a diffuse, ubiquitous *Weltanschauung*, the precise effects and applications of which the villagers are typically unconscious. It would probably not be incorrect to think of most religious "traditions," particularly the "Great" codified ones, as functioning in this way.

[21] The term "partially" is inserted here to indicate that despite these ontological notions, few villagers, as J. R. Hanks (1959) points out, ever consider "any human child so marvelously endowed . . . from previous existences that training is unnecessary." The child's *?upanisaj*, *khwaan*, merit and demerit, as well as his *winjaan* (psychological motive power), *caj* (heart), and *phroomlikhid* ("the lines of his destiny as established by Brahma") are all crucial predeterminants of his character. But few Bang Chaners ever think of a person's character as due solely to the uncontrolled emergence of these pre-natal forces. Rather, they represent the basic psychological raw material with which parents and other socializing agents must work, and set the limits of these agents' enculturating efforts. What is important is that the limits—the "degrees of freedom" permitted the parents—tend to be narrowly defined. Intensive probing of informants indicates that there is no general agreement on whether these cosmological forces are more or less influential than parental training in shaping a child, although they tend to be invoked more frequently as explanations of negative characteristics and of unusual happenings, positive as well as negative, in the lives of individuals. Also, villagers are inclined to think of them as the reasons behind *particular* characteristics and events, assigning to parental training a more diffuse influence in the development of the child. Thus, when asked why a particular individual grew up to be a *nagkleeng* (an aggressive, daring, sometimes bullying type of person) and how one of their fellow Bang Chaners had grown up to become an admiral in the Thai Navy, informants attributed the character and success of these individuals respectively to their *?upanisaj* and *kam*. (*Kam*, the Thai derivative of *karma*, is the proportion of merit to demerit that a person may have at any particular moment in

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 80 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. Age also age and religious piety bring respect. But social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People rarely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771].

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[825]

759 sought, ritually requested of some relative who was a mid-
571 wife.[70] Some persons though continued to limit themselves
602 to delivering their relatives, and never sought magic at all.

Two Worlds: The Natural and the Supernatural

759 To deliver a baby as a midwife or even as an unskill-
• 772 ed kinsman, embraced 2 aspects: a manual or technical, and a magical. These aspects corresponded to Bang Chan's 2 great worlds of knowledge and experience: the natural and the supernatural.

Midwifery was not alone in embracing both of those categories. Every activity, bus-driving, dancing, printing, or other, had its incorporated magical means to augment the probability of success. Though with the manual or technical skills of the natural world alone one could come through all right with even a modicum of supernatural help, success was greater. No one wanted to take the responsibility and risks of "going it alone" especially when the resources of the supernatural world were so freely and easily accessible to everyone. At the very least, one could start an enterprise on Friday (Wan Suk: Happy Day). The closer an enterprise was to the margin of life and death, however, the larger the supernatural element. In farming, curing, and midwifery, for instance, the ritual component was strong.

[874] Since these 2 worlds were qualitatively different, each required a different method of learning. The supernatural world, immaterial, royal and sacred, was learned

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[789] 70. Three women had recieved theirs from their mother, mother's mother, and mother's older brother, respectively. A retired midwife planned to give hers "to the daughter or grandchild ("lan":sex not specified) who was interested enough to ask for it." One man had received his from his father's father. Childbirth magic would hardly be a suitable topic of conversation between priests, but it might have been passed down there, too. The midwife whom one accompanied while learning probably was the source of one's magic. Women's magic was passed down the maternal line only, whereas men could get theirs both from kinsmen and at the temple.

by instruction from a ritually[71] approached teacher. "One cannot accidentally learn. One has to ask to be taught." As a practitioner in this field, the title "mɔ̄" signalized expertise; where teaching was involved, the title was khrū (teacher [McF. 183]) or ājhān (professor [McF.998]). Speech was the key to this tradition, in spite of sacred books and wall-carvings in the temples.[72] Modern education, being book-and-teacher based, shared in this aura. There, even today, listening is more comfortable than reading.

Techniques of the practical, natural world were learned not by teaching but pragmatically by observation, example and experience. Eyes were the key. "I know because I saw," said a midwife. At the highest level of achievement in the natural world one was expert (nak), e.g. convict (nak thōt, an expert in being punished) a tourist (nak thīao, an expert in roaming around).[73] Within the natural world, an intense pragmatism reigned always emphasizing visual phenomena. People were keenly

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71. To speak ritually one held in the hand the trio of incense, flowers, and a candle. This was the way to cross over from the profane to the sacred world, to inform (bɔ̄k) or make a request of, a sacred being (a teacher, priest, king, or deity). The tiny flame of the offering invoked holy fire, and so had the effect of making one's words compelling, for no one could gainsay a request under such circumstances. A husband about to deliver his wife held incense, flower, and candle in hand as he requested the help of ancestors and spirits. (Bishop Pallegoix saved the existence of his mission by thus approaching the King [Pallegoix, Vol. 2:201]). The trio of offerings, whether at the 4 corners of the lying-in fire-floor, or in "hat phlī krathong" at a "thaa khwan" rite, or even in an ordinary khwan thao made all actions and words compelling.

72. Because words, immaterial and invisable, lay at the base of occultism, words as continuous agents of power permeated Bang Chan's ordinary daily life. This was why words, verbal play, and punning initiated action: pregnant women attended the monks' "coming out of retreat" (ɔ̀k phansā) so that the child would "come out" (ɔ̀k) easily.

73. It should not be forgotten that most activities in the supernatural world had their technical sides, and the term "nak" was used there too. A curer had to learn his herbs; a dancer, his steps; and a master of ceremonies, the words of the chants.

4:Phillips E-4,5 (1956-1957) 1966
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whole, depends in large part on one's frame of reference.[2] In the most general terms, the people of Bang Chan are like almost all ethnic Thai peasants (excepting on some counts Thai Moslems and some of the economically disenfranchised people of the Northeast) in that they have a keen sense of membership in the nation-state with a deep loyalty to the Crown, speak the Thai language, are Therevada Buddhists, are outwardly highly deferential to the authority of the Central government, and have a conception of the good life that stresses fun, physical comfort and security, intellectual simplicity and practicality, and a moral (as contrasted with a natural) ordering of the universe. Too, like the vast majority of their rural compatriots,[3] they are engaged in the production of rice, an activity which to them is not only an economic operation (Ingram 1955, Janlekha 1955) but almost a way of life, being bound up with their social structure, dietary habits, religious practices, and even their philosophical (J. R. Hanks 1961) and aesthetic conceptions.

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[2] For readers unfamiliar with Thailand, the nation-state, it should be noted that the country is predominantly rural; 84 percent of the total national labor force is in agriculture and there are only ten towns with populations of 20,000 people or more, in which 6 percent of the national population (1947 census) live. Although Bangkok has a population of approximately 1,200,000, the second largest city, Chiengmai, has only 60,000 (1957 estimate).

The nation also has a high degree of ethnic homogeneity, 82 percent of the population considering themselves native Thai (1957 estimate). The largest ethnic minority group is the overseas Chinese, comprising 11.3 percent of the population (1953 estimate, from Skinner 1957), the balance being Malays, Cambodians, and Indians; the so-called tribal groups number in toto only about 150,000 people.

The religious composition of the country is 94.1 percent Buddhist, 3.9 percent Moslem, 0.5 percent Christian, and 1.5 percent "others," many of whom are tribal animists. Thai Buddhism is of the Southern (Therevada, Hinayana, or "Lesser Vehicle") variety and as practiced by most Thai, has syncretized within it many Brahmanic and traditional Southeast Asian animistic elements (see the chapter on "Religion" in Sharp *et al.* 1956, and Textor 1960). The largest minority religion, Islam, is practiced by ethnic Malay living in the four southernmost provinces of Thailand, as well as by some ethnic Thai—many of them descendants of former Malay slaves or war prisoners—scattered through the areas north and east of Bangkok, including Bang Chan, where they comprise 9.8 percent of the local population. Relationships between Buddhists and Moslems, at least in Bang Chan, are quite amicable and except for ideal prohibitions against intermarriage and occasional offhand remarks such as "Moslem women are loose" or "Moslems kill animals," there is little overt hostility between the two groups. Certainly few Bang Chaners ever distinguish between their Buddhist and Moslem neighbors when arranging a work group, selecting a drinking partner, or even compiling a guest list for a son's ordination.

[3] Janlekha (in Sharp *et al.* 1953: 110) indicates that 55 percent of the total national labor force is involved *solely* in the cultivation of rice—which occupies approximately 90 percent of the total cultivated land area—and as many as 92 percent of all agricultural households are rice households. The 55 percent figure excludes all those people who are involved in the transportation, milling, storing, and distribution of rice. Eighty-five percent of the population of Bang Chan (1953) are rice farmers.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

These assumptions about the indeterminate nature of the universe and human actions are so integral to the villagers' cognitive orientations that Bang Chaners often hesitate to make even the most elementary kinds of prediction. Thus, in asking a village lad how he felt about his older brother's forthcoming ordination, I was told, "I don't know." The tone of his reply indicated that he was not evading the question, so I pursued the matter further: "Well, do you feel happy about it? Do you wish you were being ordained together with him?" He answered: "The ordination is not for another three days. I do not know how I will feel at that time. But when that time comes I will know." In another case, I was going up the canal with a villager to attend a "Kathin" being held at the monastery. (A "Kathin" is a fiesta-like merit making ceremony sponsored by a person or group of persons from outside the village at which new robes are presented to the monastery monks. It involves the sponsors, their local hosts, and all villagers who wish to attend.) Although not necessarily an annual event, "Kathins" are held often enough at Monastery Bang Chan so that this villager, who was also a member of the monastery lay committee, was thoroughly familiar with every aspect of them. Simply to make conversation, I asked him: "What is the 'Kathin' going to be like today?" to which he replied, "I do not know. I have not been to the monastery yet today." Assuming that his past experience with "Kathins" provided him with some knowledge of the goings-on, I went on: "Well, do you think there will be many people?" His answer: "I do not know. You never know what a situation is like until you meet it. I have not met this one yet today."

The point of these various illustrations is that they represent a psychological universe of uncertainty and unpredictability. And in this kind of universe—where one hesitates to build up sharply defined expectations and where one is forever aware of the mutability and frailty of the environment—it is not unusual that there should also be a high tolerance for interpersonal nonconformity. What the actual limits are, theoretical or empirical, to this tendency to nonconformity are uncertain. Much of the nonconformity is undoubtedly made possible, in the first instance, by the sociologically simple and relatively undifferentiated nature of Bang Chan society; that is, the actual number of functionally specific tasks and roles—those that require special competencies—are few, and any number of different individuals can perform them. Thus, when a Bang Chan employee walks out on his boss or when a wife walks out on her husband, their actions do not from a functional point of view disable the system. Since the requirements of the role of house servant or farmhand are characteristically simple and understood by all, the departing employee can usually be replaced by another individual. Similarly, since any adult—aunt, grandparents, older sibling—can and often does rear another's children, and

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

[P. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

84 A soul desiring rebirth flew into the womb of a woman at [775] conception. By care and imitative magical practices, both [774] parents helped the fetus grow but the mother gave the baby its [789] body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of 846 several days was taken beside a hot fire, the purpose of which 398 was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman. The comparable ceremony of maturation for men, when they too 193 were changed from "raw" to mature, compassionate, and strong 788 males for their calling of fatherhood and leadership, was 562 ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to nurturing purposes, and could never be destructive. The [688] respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

844 This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

128 The understanding of, and the attitudes toward, modern 844 medicine are given along with findings accounting for 846 acceptance or rejection of modern hospital care for parturients. 369 Accepting the changes that were observed in the practices 178 surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire reportedly had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

Chapter II

MAN AND WORLD

771 Bang Chan had for years heard preaching from Buddhist scriptures. Co-existing with these teachings were Hindu elements referring to Brahma, Shiva, and others. People also believed in an animistic lore concerning frightening [192] ghosts and spirits (phī), protecting deities (thēwadā), maternal goddesses, princely spirit-lords, and other supernatural guardians of a more or less benevolent nature. To these beliefs were added special bodies of knowledge, such as sacred literature from India and traditions of astrology from both China[8] and India. Other elements might be traced to Muslim influence, just as Muslims shared some of the foregoing references with their Buddhist neighbors. Bang Chan shaped its views of nature and man from all these sources. However, we shall not try in what follows to specify the sources of its beliefs.

826 ### The Human Body

774 The body of flesh, blood, bones, and other materials, 184 harbored the noncorporeal aspects, in particular a person's 192 merit story (kam; Skr: karma) and his several souls, viz., the Khwan, the winyan, and the four chēttaphūt (cf.J.R. Manks, 1959). Views of the human body formed no unitary system, but were as varied as their origins. Thus, sometimes villagers distinguished the material from the non-material: "a human being is composed of two aspects: rūp (body) and arūp (non-body)." Sometimes learned persons referred to the Hindu-Buddhist concept of 32 parts of the body, one of which, the winyan-soul, was the "organizer" of the others.

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8. No trace was discovered of the Chinese concept of Yin as female, dark, cold, and evil, etc., and Yang as its opposite.

[115] 9. Ming (Mc.F. 880) was once given as a term for "soul" by a Muslim informant, but without further information.

Diet in Body Maintenance and Curing

261 262 753 Because food created fire, the daily diet could be a source of illness or a therapeutic means. Every food had known properties for heating or cooling, and for other effects as well. Guava fruit, alcohol, and turtle or cobra curry were heating. Eggs were cooling. Depending on the occasion, ice and iced concoctions were over-heating or over-cooling. They were always "dangerous during menstruation." Banana varied according to the variety: kluai hŏm (fragrant banana) was undesirably cooling and caused either diarrhea or constipation (Hauck, 1958:27); kluai nam wâ was less deleterious (salâeng) while kluai nâm was good for the sick or for parturients (Boonlong).

252 262 [758] [846] Properties in food changed in cooking. Boiling made rice "ripe" (nuk) and so available as nourishment (Anuman Rajadhon:77). Even the method of cooking varied the properties. For the sick and for parturients, the banana variety called kluai hak nuk was good if baked, but not if cooked in syrup (Boonlong).

262 753 827 Some foods were "incompatible" with, and so aggravated, certain illnesses. Air-borne food in the form of smell was incompatible with, and compounded, a condition of wind excess. Death or blindness ensued. On the other hand, asafetida might be tied to the wrist of a new-born baby so that the smell, an established carminative, might cure the excess wind in his stomach manifested as flatulence.

262 [774] [782] Beneficial foods were encouraged. Of all these none surpassed rice, the main sustenance of the body, "the only true food" (Yong Chutima, in Hauck, 1958:27) and source of "strength" to the farmer. Rice was a safe food. It never disturbed elements. Eating rice, as compared with meat, had no overtone of taking life. One could eat one's fill without any sin. Most of all, rice nourished the human khwan, for each grain contained a part of the khwan of the divine Rice Mother. Furthermore, any food offered ritually to a spirit or to make merit acquired strengthening properties, and was afterwards given to priests, children, or to the sick.

[776] Foods with known dangers were avoided. "Kluai tâi banana, a variety full of seeds, was never eaten because it contained a female ghost (phi)." Jackfruit was avoided by lactating women as a direct source of wind-excess. Fruit in general was not dangerous but "did not give enough strength for a rice farmer. It was all right for an orchardist."

828 753 or fainting, and also such localised trauma as abscesses. Similar behavior followed the influence of malevolent magical amulets, incantations, and love magic. Natural intrusions may be exemplified by the seasonal influences of rain, which brought on too much water element; of heat, which increased fire; and of wind, which cooled too much or brought in certain fevers, e.g. north fever (khai nŵa). An accident was a natural cause of disequilibrium. A cut might let out the air or a soul.

• 774 [762] [953] Any lost soul, if not restored, meant death. Souls were lost from falls or frights or from spirit attack, a condition recognised by persistent crying, hysteria, and unconsciousness. The exits were at the top of the head, the palms of the hands, and the soles of the feet, the latter 2 sometimes localised at the 2 thumbs and the 2 great toes. One of the old beliefs associated an element with one of the four phŭttaphôt souls (Textor:136). When one of these souls was lost one whole element was gone. Loss of the khwan soul was more frequent than any other, especially during childhood. Its care [844] throughout life was very much in mind. The khwan[18] played an especially prominent part during childbirth.

755 [762] [757] If a person were only slightly sick, he might first try to overcome his physical complaint by attention to diet. Very rarely did he by himself buy some medicine at a drug store. If it were a case of a child's lost khwan, women performed the rite for its recovery. When the khwan of an adult was affected, man performed a strengthening rite (thăa khwan), or a priest gave a holy water bath. If the person were very ill, holy cotton thread (săi sin) was tied at wrist, ankle, and neck so as to shut off the soul exits. An elder relative or spouse might also "hon," i.e. vow food or liquor in return for the help of supernatural beings; or, with Buddhist "sacred things" in mind, promise the ordination of the afflicted person, or oneself, or some interested relative. In this case, the relatives had long since turned for help from the arts of medicine.

278 755 The Arts of Medicine

Medical knowledge comprised on the one hand a pharmacology of materia medica, and on the other, the far more important

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18. The conceptualisation of this soul was Brahmanic in source, rather than Buddhist (cf. Martinie, 1952:378).

The Pre-natal Baby

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The baby's body "started as a hair." After conception it was necessary that the father, with his semen during intercourse 843
"strengthen" the baby. There was less, if any, intercourse in the last weeks of pregnancy, though no prohibition against it. [833]
Food eaten by the mother, "transformed into blood," built the baby's body. For the first 3 months the child was a "clump of blood." By the third month the mother felt a shaking (ran) at the clump. This was the "khwan soul flitting in and out of the [774]
baby's heart." The picture of pre-natal growth was expressed by the chant at the tonsuring ceremony:

> "The body of a child inside its mother's womb grows gradually like droplets of oil coagulating at the end of the yak's hair. The 5 apertures appear, the nose, 2 ears, and 2 eyes; and then the hair, hands and feet. The infant's hands embrace its placenta from which it sucks water day and night. There it sits on its mother's faeces while her newly eaten foods pack closely on its head. Its chin rests upon its knees, its face is turned toward the mother's back as it leans back against her belly. It looks like a monkey in the rain, sitting, waiting, trying to warm itself in a hole at the foot of a tree" (S.S.).

Before birth (and after), the baby was weak and tender (ɔn), [826]
with especially soft, thin skin.

The Pregnant Woman

In pregnancy, a woman saw herself as moving toward the fulfillment of her long adumbrated female office[23] of nurturer. The essence of her femaleness, to be "soft and yielding, to lengthen life by nourishing others" was heightened.

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23. To paraphrase Fortes: "office," subsuming both status and role, means "calling, occupation, or life-task." It serves "instrumental or utilitarian ends," yet also has the "other dimension of duty and responsibility enjoined, sanctioned and above all symbolised in ceremonial or ritual forms placing it in the moral order" (Fortes:62).

844 989 852 would later manifest their characteristics. Much as Dūan loved her own mother, Lek ought not to winnow the child because she had had the misfortune to lose 3 babies in infancy. An older person was desirable, for longevity, too, indicated virtue, and the child would then also live long. Of all the women present, besides her mother, Sāi was the one Dūan trusted and respected most, and Sāi had raised healthy babies. Dūan turned to her. "Please winnow and bless the baby." She wanted, as every mother did, to catch and so claim the child for herself.

Sāi seated herself close to Duan, picked up and raised high the tray with the little boy and the auspicious items. Waving the tray in a circular motion slowly from left to [539] right, clockwise, she recited the old words: "Three days a spirit child; on the fourth day, a human child! Whose child is this? Is this the child of a female pot? Of a jar? Come, take this child!" Three times Sāi chanted these old words and on the third, Dūan cried out, "Mine!" The tray with the child was gently tossed in her direction. She caught it as it slid toward her. Then Sāi took the [774] holy thread and tied some around each of the child's wrists and ankles to seize and "welcome" its soul (kānraphkhwan), giving the while the traditional blessing. "Come, khwan! [539] Come my own child! Stay well and eat well! Do not get sick or have fever! Be cool and happy! Feed your father and mother until they are old. Hold the walking stick with the gold head, or the stick with jewels on its top! Stay at home like the bottom of the house post! Watch the house like a cat! Eat and stay here! Never go roaming! Be fat as the golden ash pumpkin, heavy as the long melon, strong as an elephant in must! Be the head priest when ordained and the leader of men when you leave the priesthood! Come, khwan!"[35] Thus Dūan claimed the child for herself and for her family, to nourish and raise. Because such a fine person as Sāi had started this son on its life-habits, and Dūan was already sparing no efforts in assuring his progress, he would be a good boy, and reciprocate her pain and effort.

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[539] 35. Another version added the words, "Have the strength of Hanuman! Hold the stick with the iron head! Be a student." For a girl, "If you have a family, keep cool and happy! Earn your livelihood (thammā hā kin)! Have enough to use and eat! Do not lower (ram) your face, or eyes," i.e. "don't be poorer than your friend." A China-born Thai woman's blessing was "Mother, nourish, and care for this child. Do not let it be hurt or have fever."

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The genetic connections of those who did not help in cash, or labor at, say, cremations or cooperative work-parties were forgotten. Degree of help was a measure of kinship solidarity, and even marked the outer boundaries of kinship.

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The word "help" turned up over and over again in the context of childbirth. Birth came about because a married couple, already steeped in the knowledge that they had been so helped by their parents, "helped another individual to new life" through the mingling of semen and blood. The midwife's role was merely to "help." When a woman engaged a midwife, her words were, "Will you come to help me?" A baby having trouble breathing right after delivery "had to be helped for half an hour." Most important, only through the reciprocal help of mother and child was rebirth to earthly life implemented at all. Parturition was an active, cooperative venture between 2 autonomous beings. The child set the time for labor to start by "deciding to be born" when his 32 parts were "complete,"[38] and he had worked off sufficient sin in purgatory to permit rebirth. The mother by her labor "helped the child to be born," but she could not succeed unless he actively "helped," too. Though other assistance to her was desirable, such as persons to support her back and press out the infant, only his help was essential. Without it she had a hard or unsuccessful labor. A woman who gave birth successfully without outside help created no stir because it was evident that the baby had been helpful.

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38. Informants were not uniform in opinion here. Some said the khwan (or winyan) was the first "part" to establish itself--arriving at the moment of conception--others that it was the last (Textor:262). In either case it was highly volatile during pregnancy, and the trapping by winnowing at birth was the major means of rooting it in the person. During pregnancy, medicine for wind in the fetus was given "which was not effective if there were no khwan," but whether the khwan was the mother's or the child's was not certain.

retreat (ōk phansā) in order that her child would come out (ōk) more easily. Here none sought to divide the worlds of the natural and the supernatural, or to mark off "imitative magic" from the "learning by example of the natural world." A stronger influence came from more powerful agents, so that the effects of the Buddhist temple carried greater effect than the actions of a mere neighbor. Yet any like influence was of aid, especially in a verbal similarity. Thus, an event occurring on a Friday was apt to be auspicious because the Thai name for Friday contains an element identical in sound (though etymologically different) to the word for happiness (wansuk=Friday; suk=happiness), and for the fortunate status of true adulthood (suk=mature, ripe).

Stability in a Floating World

In explaining why some children were "born easily and were easy to raise" (liang ngai) certain persons simply said, "They were born into the right family. Those born to the wrong family usually die." In defining the "right" family, merit, habituation, and helpfulness converge.

Most families were thought to live together as a group in life after life. In view of the separateness of souls, how was this brought about? The key lay in the conviction that people who made merit together met in future lives. Since most merit-making was undertaken as an enterprise of the nuclear family, sometimes with close kinsmen and friends, they would find each other. Some of the eagerness of friends to help (chuai ngan) with cash or labor was in order to meet in later lives. These persons were used to each other, used to helping each other, and so might marry. Thus, if they lived rightly, the nuclear family, maybe with an infusion of beloved old friends, expected to carry on in the next existence. Although a family's prosperity proved its merit, and its wealth facilitated making more merit, continuity in time was not limited to the wealthy. Proof that a couple had been married in a previous life lay in the birth of a boy as first born. Such a couple was known as a "khū" (pair), and divorce was held to be highly unlikely.

How did a child find its "right" family? After whatever necessary stay in purgatory, the khwan soul of a deceased member roosted in a tree near to its old home, then flew into an accustomed womb. One recalls the start of the blessing (p.48), "Come, khwan! Come my own child!" A woman hoped that the khwan was one previously born to her. "A couple lost its first child. Later the wife was fearing for the life of their sickly second-born." The husband said, "It is according to your sin and merit. If the child is your own child, he will live with you. If not, he cannot."

761 Since only meritorious children were born into the
775 "right family," they were helpful and so easy to raise. The
593 easiest to raise were reincarnations of babies deceased in
829 the mother's present life. "A girl of three died. Her father
782 dreamed he was at her coffin. She asked for water which he gave her, then brought her home. Months later a boy was born, so easily raised up that people knew it was a reincarnation of that girl." Here amiability and the change to male sex demonstrated merit. In another tale, "a woman lost many babies at birth. Her husband, thinking it was the same child trying to be born to that mother, marked the forehead of the last deceased baby. His surmise proved correct, because the next baby born had this mark on its forehead."

This assumption that a woman's children were born to her over and over led to a measure of control over the cooperativeness of the child in the womb. A child trained to "good habits" became a meritorious adult who, when reborn, would of course "help" his mother in childbirth. It was advisable to set one's own child into paths of proper behavior, for he could be born again to a descendent, and in all likelihood to oneself.

On the other hand, families were not closed groups. "Like a leech that sticks in one place, then goes to stick somewhere else, so a deceased person may be reborn somewhere else," said a priest. The marriage blessing stated, "May angels, not criminals or beggars, reincarnate as your children." Thus was explained why upright parents might have a disobedient, roaming child. He had roamed into a new family which perhaps he had met during a pleasant casual visit to them in another life. If he did not stay home to make merit with his present family, a wayward child would roam out of it as easily as he came in. Here was the ultimate danger in visiting around too much.

761 Because all individuals lacking in merit died off at
593 birth, some of whom because they got into the wrong family,
782 a selective process continuously weeded out the extremely non-meritorious so that those who were born usually survived. In fact, Hauck's figure of 90.6 live births [163] (1956:33), the percentage of total pregnancies shows how many meritorious babies were born to the right family!

859 The Winnowing Ceremony

844 This ceremony, described in Dūan's tale, was usually
774 performed shortly after delivery, though it might occur anytime during the first three days of a baby's life. The child, placed on the tray (twins were laid together or separately) was claimed by the mother or the father, who

852 844 774 [608]

called out "Mine!" ("khǭng chan" [female speaking] or "phom" [male speaking]). Never did a parent say "ours!"[44] Sometimes the mother might ask a relative or friend present to claim the child, and so become a godparent.

As the first human step to control the volatile khwan, the first objective of winnowing a baby was to seize it (kan rap khwan) and so "complete" the child's person.[45] By tying holy thread at the wrist and ankle soul-exits, the khwan which had flitted in and out of the womb was given root. It was still flighty, but now it had a life-long home.

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Secondly, the child was given membership in a human family. Connection through blood and semen did not establish kinship. At first, the child hovered between corporeal and non-corporeal existence. "The child is not fully human for the first 3 days." This period was under the supernatural control of Mother Sǖ, for babies "never died during the first 3 days after birth. They might be born dead or they died 6 or 7 days later." The shock of dropping the child on the tray "made him forget his life as a spirit." When someone cried "mine!" the child finally cut his relationship with the spirit-world. As an old woman explained, "The ties are the important part [of the ceremony]. They show that the child belongs to someone. Once a tie fell off one wrist. The child cried and cried until it was restored," fearing its lost khwan would attach itself elsewhere. The claiming set up kinship as a contract before witnesses. Whoever announced responsibility for the child's care, and this was usually the mother, deserved reciprocal care in old age. Other relatives would also help to bring him through to maturity. He would not be so frightened of an evil spirit because of family support, nor of the "ghost of an ancestor" who would be recognized as a relative.

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Third, the ceremony strengthened the child. By giving him through the ties a stable khwan, he "grew better, cried less, and did not get sick."

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The incorporation of as many auspicious elements as possible into the ritual was customary. Since the child took

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44. A winnowing tray (basket) had the capacity to "trap" spirits. It could seize or trap not only the khwan soul, but, at New Year's, one of the fun ghosts (Textor:371).

45. There is no convenient way of expressing "ours" in Thai in this restricted sense (id.).

852 856 789 after whoever claimed him, a mother might ask a "wealthy person, of polite, calm, and good character" to do this. The baby also started an association with whatever items were placed on his tray with him. Besides the most common ones mentioned in Dûan's tale were ink and books (which induced learning); gold, rings, jewelry, money (wealth); bergamot thorn, a tin of kaffir lime (sharp wit); and a razor (a good wood-cutter for the fire; said to be a Muslim custom). When the baby was finally transferred from tray to cradle these items were returned to household use. The bamboo cutter, rhizome of phlai, and earth associated with cutting the cord were taken off the tray and buried with the placenta. Their significance lay as part of a binding ritual. The phlai and earth might be taken off ahead of time.

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Binding Rituals

829 774 Because Bang Chan accorded autonomy to every individual, whatever his age, everyone had the free choice to go wherever his advantage lay. In infancy and childhood, the khwan soul might flee at any time, and could only be recaptured by a khwan-calling or khwan-ladling rite (Textor: 396-411). After about the age of 8, a tham khwan ceremony helped to bind in and strengthen the khwan soul. In daily life, the fear that a loved one, whatever his age, would withdraw or run away if unhappy, frightened, or overburdened dogged people their whole lives. Casual episodes were sometimes viewed with alarm. Once a boy of 10 on his own initiative went off to live a few days with his grandmother only 10 minutes away by boat. His mother complained that he had wandered (pai thîeo) and feared it would become a habit. Parents dreaded that grown children would find work away from the village; that daughters would elope; that adopted children or spouses run away; or even that their child, at marriage, would elect to go live with his in-laws. At any time a husband might go into the priesthood leaving his wife and children to fend for themselves, though here the wife had to give her permission and the motive was sympathetically viewed.

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A traditional jesting threat was to "go away to the jungle-forest" (pai pâ).

The economic and social base for this fear of losing a child to the world was that children were a parental investment with an anticipated return: for the trouble of bearing and raising them, children should work for the family until their marriage. Furthermore, a boy was to bring his parents merit by being ordained, while a girl was to care for them in their old age. If a child moved away

Even after the child was out, the pile of wood was still a drying womb to be treated carefully. It was also the wood for a consecrated fire. To drop a piece of this wood carelessly both injured and desecrated. If this happened a disease of the eyes "sang," came at once for which no male medical powers had any remedy. The only cure was in women's hands, that essence of maternity, "a drop of mother's milk--any mother's." The larger implications of this linking of fire and maternity are dealt with in the next section.

The Fire of Maturity

In the events surrounding the birth of the child, the significant step for the woman personally was the post-partum rest period by the fire (yū fai). Far more was at stake than just drying the uterus. The fire rest was one of the series of rites of the life-cycle which marked the course of an individual from birth to death. The others were the cutting of the umbilical cord, first head shaving, top-knot tonsure, ordination (for men), marriage, and cremation. Through the consecrated fire a woman formally achieved full maturity: she became suk (cooked, ripe, mature). Maturity did not come just by bearing a child. The fire brought about the transformation.[46]

How was mature womanhood viewed? What was the essential female role and office? Bang Chan saw a woman as one who "feeds and lengthens lives." As the custodian of growth she was, first, the guardian of the vital, essential khwan soul, and especially of the immature, flighty khwan of growing persons.

Secondly, a woman was a donor of nourishment (liang).[47] Her primary responsibility was to nurture children and other tender beings. She nourished the fetus with her blood. After

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46. "The fiery element digests what is eaten or drunk...and cooks the body and gives it its beauty of complexion. And the body thus cooked is kept free from decay" (Warren:157-158).

47. All the deities "concerned with the welfare of our bodies and our khwan" were maternal (mae), e.g. Rice, Water, Earth, "Mother-Goddess" (Mae Sū), and several Mother-Princesses (Chao Mae). Fire, and maybe wind, were both female (mae) and male (phra) (Textor:485). To these deities, "higher" than ordinary spirits, Bang Chan "owed more."

In addition, strengthening foods like rice and fish, the staples for stout farmers, were stressed. Fruit, "which gave no strength," and vegetables (except for the nursing curry mentioned below) were avoided.

The holy fire also transformed a woman into a better nourisher. It gave her new, lasting beneficial nursing habits. As one man explained, "the very nature of water is changed by boiling over a fire. It becomes suk (ripe)." Similarly, a woman's body, her very nature, was permanently changed to suk by the fire's heating. The fire, in fact, made suk all the food she ate beside it. Since this food was turned into milk, her breast milk became suk and so more nourishing, and did not disturb elements.[52] "Food eaten while lying by the fire, when eaten later on (during lactation) by the mother, does not cause diarrhea in the baby." Jackfruit ordinarily caused wind-trouble during lactation, but one woman ate it during the fire-rest, and at once "got used to it, so she could eat it all the time." To make themselves better nourishers, some women spoke of the desirability of "eating a bit of every kind of food." The "nursing curry" (kaeng 'Lang) was a mixture of vegetables.

Finally, the consecrated fire strengthened a woman's own khwan. She could better withstand convulsion if attacked by a spirit.[53] She was able thereby to handle a khwan even without the special magic that existed for it.

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52. To be nourishing even the daily rice had to be made suk by boiling (Anuman Rajadhon:77). It may be that no food was considered nourishing unless suk, either naturally (like ripe fruit) or by cooking.

53. "...when 'involuntarily' entered by ghosts...maidens in the 17-25 age bracket tend to convulse more violently than do women of more advanced years"(Textor:406). "Maidens" were presumably not married and so not suk.

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Thus she performed several rites involving the maintenance of the immature khwan of children and of rice.[54]

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The acme of maternal virtues was manifested in the "good nourishers" (lfang dī). These women had borne many children who "nursed and slept well, did not cry, and easily established good habits." They were lfang dī not just because of the time spent by the fire, for that time could be matched by persons who had lost babies. They were special persons of more than usual capacities for success in nurture. Good to have around for their auspicious influence, they were called upon to inaugurate or help processes concerned with health and growth. They performed, or caught the child in the winnowing ceremony, or gave babies their first suck. They were the persons to whom a sickly child was brought so that his health might be improved by calling the soul and tying holy cord at wrist and ankle (riak khwan). [755] [774]

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562 774 789

54. If a child indfcated by continuous crying that he had lost his khwan, a mature (suk) woman had to be asked to call it back ritually and re-tie it into the body with sacred cord at wrist and ankle. There was no special magic. Her words suffice. Khwan-ladling, a more elaborate and compelling form of the same ceremony, used magical formulae (Textor:401-402). One of Phillips' sentence-completion tests was, "If one is frightened, the best thing to do is..." Of the respondents, 7 women, including one Muslim, would set to work to "call back the khwan" (Phillips:267-268). No man suggested the latter.

562 243 789

In the agricultural rites, women handled the rice's khwan in basically the same way when it was immature: inviting the young Rice Goddess to stay and grow in the field, and transporting to the house the child-like seed that only next year would grow to maturity. For these rites a woman used an incantation if she knew one. That she could also handle the rice khwan by speaking "extemporaneously" (Textor:429), indicated that her mere words were enough. If no one else were available, a non-suk woman could call the khwan of a child or of the Rice Mother by reason of her in-born female potency, but could not "ladle" a khwan.

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When the khwan was mature (after a person was about age 10) men took over its care. In the men's thaw khwan (khwan-strengthening) rite, here, too, women were the ones to carry off the cloth-and-leaf covering of the baisī (tiered offering) into which the khwan had flitted during the ceremony. The rice-ceremony at the threshing floor was a thaw khwan, so was performed by men.

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156 (riak khwan). Theirs was an augmented personal potency[55] in nurture not unlike the mana so widespread in the Asian-Pacific area.[56] The best midwives were liang di, though not all liang di were midwives. This societal peak was not an unattainable ideal. In the community, certain women were pointed out as liang di and some of them recognized in themselves the validity of this title.

562 The association of rice, motherhood, and khwan now stands
774 clear. Rice made suk by cooking over a fire, was the essential
776 food not only for the body but for the khwan. Growth and life
262 depended on the nourished khwan. Rice came from a maternal figure, the Rice Goddess, Mae Phosop (cf. J.R. Hanks, 1960). Human mothers, too, when made suk, gave suk nourishment: the milk of the breast was merely transformed rice. Whenever rice was eaten throughout human adulthood, the Rice Mother continued her nourishment, for in each grain was a bit of her khwan, nourishing to the human khwan. The rice-bowl and ladle, used in many a ceremony, stood for the maternal care given a human khwan, and by extension, personal care throughout life. Whenever the rice bowl with offerings (khwan khao: soul-[of]-rice) was presented by a parturient or by a sick person, loving care comparable to maternal care was being requested.

182 The idea of re-birth, of a fresh start within the pure
885 area encircled by the holy cord, with auspicious words and
846 consecrated fire, was deep in every life-cycle rite. The
562 particular circumstance of the fire of parturition was a
372 forthright cooking to bring out and increase a woman's essential femaleness, to transform her from a youthful, partial giver into a complete, mature donor of nourishment. Such was the satisfaction of women in this female role that many said they would like to be reborn as women. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:375) for a quick run-down on a definition of mana.

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
57 the steps in the Buddhist winnowing ceremony and performed
[852] them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khāo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
[774] "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist, meant charitable giving in the sense of tithes, for Islam [782] prescribed that a portion of one's income be given to the poor. On the other hand, the Muslims had taken over many [177] Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 Completely Muslim was the stress on physical and
[783] moral purification as an objective of every rite, and conversely, the prevalence of the idea of defilement.
[304] "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate pro-
[764] cedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before burial," implying thorough measures beyond his ordinary [831] experience. Procreation was viewed as dangerous and contaminating. The behavior that hid sexual phenomena at [834] the same time by constant prescriptions kept sexuality much more in mind. Muslims separated males from females, [562] for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (fāk thong: to deposit gold). On returning home, she went as [273] fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim mid-
795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclos-
[562] ed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khāo contained "7

4:Phillips E-4,5 (1956-1957) 1966
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career. From an epistemological point of view, there is of course nothing strange about such an approach. What is perhaps somewhat unique, however, is that the villagers actually use it as the point of departure in their treatment of the child.

The practical consequences of these equalitarian notions are manifold. For one thing, with the child defined as a separate and equal soul, the relationship between parent and child takes on a highly instrumental flavor; that is, rather than expressing love toward the child as an end in itself or otherwise treating him in ways that require no further justification (it is assumed that love is characteristically an absolute sentiment, not a means to any other satisfaction) villagers explicitly see the relationship between parent and child in contractual terms. Thus villagers say that they "are going to the trouble" of bringing up their children and "doing good things for them" (just as their own parents "went to the trouble" of bringing them up and "doing good things" for them) so that they will have someone to care for them in their old age and make merit for them when they die. Similarly, they say they love their parents because they are indebted to them for bringing them into the world. The language of the "contract" is poignantly explicit: "When I think of my mother, I think of the debt I owe her for bringing me into the world and feeding me so I would survive"; "Parents who do not teach their children how to *waj* [exhibit respect to the parents] get nothing from them. I did many *bunkhuns* [good things requiring reciprocation] for my daughter, so now she gives me everything"; "When I was three my father gave me to my uncle who fed me and trained me, so I loved my uncle more" (cf. pp. 64–66, L. M. Hanks 1959c, and Phillips 1959 for further documentation of this point).

In and of themselves there is nothing strange about these "contractual" criteria. However, they do reflect a fundamental recognition of the independence of parent and child and of the fact that parent and child have the *option* of fulfilling each other's needs. More specifically, they are expressions of the assumption that there is nothing intrinsic to the parent-child relationship that requires the two persons to be linked together. The relationship clearly is not fortuitous, but neither is it absolute. It functions primarily for the instrumental and symbiotic satisfactions that its participants can gain from it.[28] Lacking the absolute elements of an ultimate

[28] In his paper on "Changes in Family Life" in Bang Chan (1959c) L. M. Hanks notes: "At birth a parent ceremonially formally accepts obligations to an unknown infant soul lightly bound to its body; to this point the new-born one without relation to its parent has been under the protection of a spirit mother. This phrasing contrasts sharply with the Occidental concept of 'flesh and blood.'" In another place in the manuscript, Hanks also comments: ". . . but every case [every kinship tie] is reducible, if one presses the question, to benefits of an older or richer or stronger for the

4:Phillips E-4,5 (1956-1957) 1966
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human beings. In fact, the absence of any reference to other human beings, especially parents, is striking.

Of the seventeen persons who ask for supernatural help, seven, all women, explicitly say that they would call their *khwaan* (or "soul-stuff") back. Since this is a distinctively Thai concept, it merits a few words of explanation. Thai ontology holds that every individual is inhabited by a *khwaan*, who during childhood (when the individual is unstable and immature) or during a crisis can escape the body through an invisible hole in the head. One of the major functions of the top-knot worn by half the children of Bang Chan is to cover the invisible hole so that the *khwaan*

TABLE 21

If one is frightened, the best thing to do is . . .
If raw is frightened, the best thing raw ought to do is (namely) . . .

EQUANIMITY:	40%	to keep his heart calm.
		to pull yourself together (to try to compose yourself). Sometimes, just run away.
		to control oneself.
		to control your emotions until they are better.
		to stay *chəəj-chəəj*.
DEPENDENCY:	31%	to exclaim, "Lord help me!"
		to call one's soul-stuff back; call upon God, Allah.
		to think of Lord Buddha, his teaching, and his priests.
		to sometimes exclaim, *"phra chuaj"* ("Lord Buddha, or Buddhism, or monks—help me.")
FLIGHT:	8%	to avoid the situation: to run away.

cannot escape; also most life-cycle ceremonies have a special ritual devoted to "calling the *khwaan*," who although obviously not absent from the individual at the time, is called to reaffirm the necessity of his being in his place when the individual needs him most. At the same time, the formal ritual of "calling the *khwaan*" memorializes the fact that the *khwaan* is in his proper place, thus indicating that the individual in whom he resides has had the internal stability to reach the point in life that he has in fact reached. The "calling of the *khwaan*" is usually, although not always, performed by women, which might explain why all the villagers who give this response are female. The *khwaan* has four crucial attributes: (1) although he is of the self, he does have an independent existence of his own; (2) he is that part of the self that gives the self stability, and from an analytic point of view, is really an objectification of human stability; (3) he

4:Phillips E-4,5 (1956-1957) 1966
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774 is recognized to be capricious; and (4) his departure from the body is both cause and effect of the loss of one's wits, steadiness, and equilibrium. If the *khwaan* stays away too long, the individual may become deranged and may die.

*125 *128 152 181 828 In these terms, the seven individuals who say that when they are frightened they would call back their "soul-stuff" seem to be expressing two related needs: a recognition of their ultimate dependence on supernatural forces and, very much like the majority group of informants, a preoccupation with psychological stability. There is in fact implicit to these responses almost an assumption that one of the marks of an adult, civilized "human being" (in its basic ontological sense) is the achievement of stability, orderliness, and stoicism in a universe—both inner and outer—that at any time may regress to a more primitive, chaotic state. The great attention that villagers give to being *riab-rɔɔj* (neat, clean, well-organized in appearance, demeanor, and speech); the fact that they often distinguish between adults and children in terms of the disorganization and randomness of the latter's behavior; the very fact that an individual's *khwaan* is most wayward during childhood; the high value that is placed upon being *chɔɔj* and the negative value that is placed on having a "hot heart" (*caj rɔɔn*) are all expressive of this assumption.

*125 *128 152 There are a few other categories of response to the above item that should be mentioned, although none is held by more than 8 percent of the sample. Four villagers say that the best thing to do when frightened is to run away; three villagers assert that they are never frightened; three do say that they would investigate the cause of the fright, indicating that this response is not completely lacking in Bang Chan; two say that they would comfort themselves; two are simply afraid; and two more have no idea of what to do under the circumstances.

To the item, *"When something worried him, he usually . . ."* 45 percent of the sample responds by saying that they would feel anxious, uneasy, uncomfortable, or unhappy. In essence, they seek no solution to their hypothetical problem, but simply accept the state of anxiety that has been created. For a few of them, the anxiety is extreme: they say they "could not eat, could not sleep, could not work," a response that I have heard several times in Bang Chan from villagers who were actually worrying through a problem. The other major response, held by 40 percent of the sample, is to perseverate over the problem: to keep thinking about it, to think about it constantly, or, as one villager expresses it, *"When something worried him, he usually . . .* thought about it. Sometimes he dreamt of it too."

The major theme of both the above responses is, of course, that although villagers handle their worries in an emotionally meaningful way,

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779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

84 A soul desiring rebirth flew into the womb of a woman at
[775] conception. By care and imitative magical practices, both
[774] parents helped the fetus grow but the mother gave the baby its
[789] body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of
846 several days was taken beside a hot fire, the purpose of which
392 was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman.
793 The comparable ceremony of maturation for men, when they too
789 were changed from "raw" to mature, compassionate, and strong
562 males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to
[688] nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

844 This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

128 The understanding of, and the attitudes toward, modern
844 medicine are given along with findings accounting for
846 acceptance or rejection of modern hospital care for parturients.
369 Accepting the changes that were observed in the practices
178 surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

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This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

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Marriage

As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Minburi to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

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Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.[4] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:62) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

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4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

Influences on Health

In Bang Chan, a discussion of sickness and health merely in terms of element balance would be true but insufficient, or even superficial. After all, whether manipulated by oneself or by a professional curer, elements could only be controlled within certain limits. Far deeper questions were posed, probing the ultimate nature of health, life, and death. What determined the particular proportions of a person's 4 elements with which he had been born, and whether he had, say, a preponderance of wood from Jupiter or gold from Venus? The immediate answer of astrological confluences on the date of birth would be true, for each day had its own qualities and aspects, but it was not enough. Why had he been born on that date to that set of governing factors? In life, why did one person meet the circumstances that created illness, while another lived in glorious health? The answers to these questions must be sought in the Buddhist moral and cosmic beliefs.

The Buddhist universe operated on a principle of immutable law. Each person received his just due, suffering for his own sins, enjoying reward for his virtue. There was no personified deity to help, forgive, or blame. Moreover, attachments were the cause of sorrow. Because existence was fraught with desires, all life was basically painful. Even flashes of happiness by their cessation caused sorrow.

In this universe and on this earth, individuals, each a unique and independent entity, were born to live and die, over and over again, throughout eons of time. They bore no relation to each other. Separate and autonomous, each was in charge of his own destiny. All beings formed a single grand scale of existence from demons in hell, through such lowly creatures as worms and insects, upward through dogs, cats, buffaloes, and elephants to mankind, then on up to angels and gods in the last paradises before the peace of Nipphān (Nirvana).

The insight of the Buddha showed the way to break the sorrowful eternal cycle of rebirth and reach Nipphān. The Buddha perceived that meritorious behavior caused one to progress up this ladder of existence toward freedom from incarnation. In each life merit (bun) could be accumulated by compassionate behavior: caring for priests, and being kind and generous to persons less able to care for themselves. With merit one's next life was happier and freer of restrictions. A dog had more merit than a worm, a buffalo than a dog. [825]

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775 Man was higher on the scale than woman.[20] Progress toward
[562] Nipphan was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phī) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good wealth and long life, a kindly personality, many fine children, wealth, high status, intelligence, and luck. Astrologically, he was born on a day
[775] of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death,
[763] deformities, unhappiness, poverty, and had a cruel nature. Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

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784 The long-range protection against all illness was to
[577] live virtuously and make merit. However, to guard against
[782] temporary supernatural intrusions, everyone possessed and
[304] usually wore Buddha lockets and other amulets. Some underwent tatooing, men having Cambodian or other figures, women, 3 small dots tatooed on the torso under the arm.

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20. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

Chapter III

PREGNANCY AND PARTURITION

842 **Conception**

Conception occurred when a khwan-soul flew into the womb of a woman during sexual intercourse. "A father and a mother are equally important because there is no birth in the world without both. An infant is the product of both sexes," said a priest in a Bang Chan sermon.[21]

842 775 [782] [828] The little being in the womb from the moment of conception was a specific individual who had lived many times before, maritful or sinful according to its previous actions. Desire for rebirth was in itself evidence of inadequate merit to effect release from incarnation. Though this life was to some extent a fresh start, his character (nisai) and heart (jhai) were already largely formed through his store of merit and ingrained habit from former existences.[22]

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[779] 21. The teachings of the Buddha state: "Rebirth takes place when a father and a mother come together, and it is the mother's period, and the one to be born is present" (Suriyabongse:20).

22. He bore with him the last ideas spoken to him at his most recent death. The Visuddhi-Magga tells how this carry-over occurs. One of the categories of karma, was the "close at hand, karma remembered at the point of death [which] springs up with [a person] in rebirth" (Warren:246). As King Mongkut lay dying, everyone in the room called out "arahat!" in his ear incessantly so that by "remembering it at the point of death" he might be reborn an Arahat (E.R.E. "Siam": 487). Another pertinent category of karma was the "habitual": "karma that has become habitual through frequent repetition. This brings on rebirth when [other] forms are absent" (Warren:246). Here is the basis for the inborn character, heart and ingrained habit (cf. J.R. Hanks, 1959, and the section below on "Habit" (khoei).

On the other hand, pregnancy was a period of uncertainty when a woman was easily upset emotionally. Because childbirth was "like a war" when a woman might die, "defeated by her pregnancy"(phaethong), she felt uneasy.[24] If she were frightened, her child's khwan would fly off in terror. The baby died in the womb if its khwan did not return. Because of increased sensitivity and vulnerability her elements and those of the baby were frequently thrown off balance. Wind easily entered through the thin skin of her stomach where she carried the unborn child. It caused pre-natal disorders all the way from queasiness and minor vomiting in early pregnancy to miscarriage and death. "A woman felt dizziness and numbness because of wind in the fetus. In a month she suffered a miscarriage."

A pre natal pain that did not seem to be a labor-pain was diagnosed as the very dangerous neam, "a thick lump of blood and wind that moved quickly." As in other illnesses, element harmony was restored by medicines, holy water, and by modifications of diet.

Women knew of possible supernatural invasions of the womb during pregnancy. If a woman had beforehand lost a baby at birth or through miscarriage, and the body had not been properly buried, she might be seriously troubled by its restless ghost, fully as powerful, it must be remembered, as an adult's.

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24. The image of battle was traditional (cf. Anuman Rajadhon: 108). Phaethong (McF: 599), a combination of food craving and vomiting (Anuman Rajadhon:115) paralleled the dola-duka of Ceylon (cf. Obeyesekere), but without the hostilities built in by the Sinhalese.

843 [775] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phī tai thang klom, caused "the worst of all possible deaths." The phi krasū spirit,[25] entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). The [753] supernatural disease missile called "khun" might also strike. "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extra pain [751] occurring just before the baby comes out." To protect themselves, women wore extra talismans or had 2 dots [304] tattooed under the arm.

843 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 2 visible teeth, which indicated it was a non-human, iak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of women giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (McF.48). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb sat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

Sometimes these aberrancies were viewed as desirable sources of supernatural power, but on other occasions, they were seen as a sign of demerit, caused embarrassment, and were suffocated at once (if alive), and buried.

If a woman died pregnant, her body was at once brought to the temple where the unborn child was removed surgically. The usual solacing sermon, rites "to lead the deceased to live in her right place in the next world," and cremation took place, with the fetus laid beside its mother so that it "would come out normally." The mother and child were separated to prevent a ghost which was double-powered. No prayers were chanted at home before exsection "lest they make the power of the spirit stronger." Moreover, any violent or premature death caused an angry ghost. The ghost of a premature child had a heavy load of sin, for its stay in purgatory, where sin was worked off, had been interrupted (Textor:262). An unscrupulous mɔ̄ was eager to get possession of any ghost for use in sorcery, and a double ghost was stronger than any other. Ghosts were obtained by plundering the mortuary chambers of the temple prior to cremation. By feeding (liang) it, a mɔ̄ controlled it. The ghost of a male infant was preferable because it was "stronger than that of a female." In the light of this situation, not only should the body of a pregnant woman never be left alone " so that no one can get at them (sic)," but a pregnant woman herself ought not to be alone.[26] The behavior towards the Rice Goddess, Mother Posop, who was "pregnant" when the grains in the stalk filled out, illuminated many of these attitudes: "Mae Posop feels weak, hungry, and uneasy. She is eager to taste sour and sweet foods. She is a woman and beautiful in her pregnancy." To allay her hunger the

845 847 845 766 [775] 845 775 754 775 843 782 [754] 843 782 776

26. In Cambodia, a pregnant woman might be murdered, even by her husband, so that the murderer might gain the malevolent power that possession of her now double soul would afford. (E.R.E. "Cambodia": p.159). This specific statement was not found in Bang Chan but might be part of the shadowy background to local reluctance to leave a pregnant woman alone. [171]

761
775 Moreover, her life would some day begin again. Whether birth
844 was rapid or slow, the experience of the suffering deepened her sense of compassion and, as will be shown, brought her closer to fulfillment of her life role.[41]

Habit

153 If mutual help organized relationships, habit (khōei)
82 stabilized them. Khōei means "to be used to, accustomed to,
853 habituated." A first occurrence was an example and set the pattern for all subsequent occurrences. With one performance
[761] one was accustomed to an action. For instance, shortly after the temple was built 2 people died, deaths in Bang Chan "always occurred in pairs;" it was the temple's "habit." Moverover, "the head priest could never expel a priest because he had never done so." Again, a few women saw to it that during this period their babies were given a few grains of rice (even though they were far too young to be offered any rice regularly), so that "later on, if they got sick,
[171] they could always at least eat rice," for "they would be used to it." "Glutinous rice was not good for babies in Bang Chan, but in North Thailand [where it was a staple] it could be eaten because people were used to it." Someone had set the example which started the custom.

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844 41. Bang Chan's Buddhist phrasing of the meaning of pain and
154 death in childbirth seems to indicate that childbirth occurred
171 under psycho-cultural conditions that induced relaxation and
114 reduced fear and pain. An "easy" delivery lasted 2 hours. According to a modern medical theory, (Dick-Read: Childbirth Without Fear, passim) lack of fear of childbirth leads to mental and physical relaxation which in turn reduces pain and labor. Dr. Dan Bradley observed that labor was shorter among Siamese women than among non-Siamese. "Facts seem to prove that parturition is both shorter and easier to Siamese mothers than is usual to Europeans and Americans" (Bradley, 1865:79). We accept his first-hand observation because he had 40 or more years of experience in delivering babies, both Thai and non-Thai (missionary wives, etc.), and suggest that it may be taken as proof of mental and physical relaxation derived from lack of fear. Although the missionary women may have been frightened because they were in a far country, Dick-Read argues that fear of childbirth has long been present among American women and this fear has the effect of longer, harder labor.

retreat (ōk phansā) in order that her child would come out (ōk) more easily. Here none sought to divide the worlds of the natural and the supernatural, or to mark off "imitative magic" from the "learning by example of the natural world." A stronger influence came from more powerful agents, so that the effects of the Buddhist temple carried greater effect than the actions of a mere neighbor. Yet any like influence was of aid, especially in a verbal similarity. Thus, an event occurring on a Friday was apt to be auspicious because the Thai name for Friday contains an element identical in sound (though etymologically different) to the word for happiness (wansuk=Friday; suk=happiness), and for the fortunate status of true adulthood (suk=mature, ripe).

Stability in a Floating World

In explaining why some children were "born easily and were easy to raise" (liang ngaī) certain persons simply said, "They were born into the right family. Those born to the wrong family usually die." In defining the "right" family, merit, habituation, and helpfulness converge.

Most families were thought to live together as a group in life after life. In view of the separateness of souls, how was this brought about? The key lay in the conviction that people who made merit together met in future lives. Since most merit-making was undertaken as an enterprise of the nuclear family, sometimes with close kinsmen and friends, they would find each other. Some of the eagerness of friends to help (chuāi ngān) with cash or labor was in order to meet in later lives. These persons were used to each other, used to helping each other, and so might marry. Thus, if they lived rightly, the nuclear family, maybe with an infusion of beloved old friends, expected to carry on in the next existence. Although a family's prosperity proved its merit, and its wealth facilitated making more merit, continuity in time was not limited to the wealthy. Proof that a couple had been married in a previous life lay in the birth of a boy as first born. Such a couple was known as a "khū" (pair), and divorce was held to be highly unlikely.

How did a child find its "right" family? After whatever necessary stay in purgatory, the khwan soul of a deceased member roosted in a tree near to its old home, then flew into an accustomed womb. One recalls the start of the blessing (p.48), "Come, khwan! Come my own child!" A woman hoped that the khwan was one previously born to her. "A couple lost its first child. Later the wife was fearing for the life of their sickly second-born." The husband said, "It is according to your sin and merit. If the child is your own child, he will live with you. If not, he cannot."

761 Since only meritorious children were born into the
775 "right family," they were helpful and so easy to raise. The
593 easiest to raise were reincarnations of babies deceased in
829 the mother's present life. "A girl of three died. Her father
782 dreamed he was at her coffin. She asked for water which he gave her, then brought her home. Months later a boy was born, so easily raised up that people knew it was a reincarnation of that girl." Here amiability and the change to male sex demonstrated merit. In another tale, "a woman lost many babies at birth. Her husband, thinking it was the same child trying to be born to that mother, marked the forehead of the last deceased baby. His surmise proved correct, because the next baby born had this mark on its forehead."

This assumption that a woman's children were born to her over and over led to a measure of control over the cooperativeness of the child in the womb. A child trained to "good habits" became a meritorious adult who, when reborn, would of course "help" his mother in childbirth. It was advisable to set one's own child into paths of proper behavior, for he could be born again to a descendent, and in all likelihood to oneself.

On the other hand, families were not closed groups. "Like a leech that sticks in one place, then goes to stick somewhere else, so a deceased person may be reborn somewhere else," said a priest. The marriage blessing stated, "May angels, not criminals or beggars, reincarnate as your children." Thus was explained why upright parents might have a disobedient, roaming child. He had roamed into a new family which perhaps he had met during a pleasant casual visit to them in another life. If he did not stay home to make merit with his present family, a wayward child would roam out of it as easily as he came in. Here was the ultimate danger in visiting around too much.

761 Because all individuals lacking in merit died off at
593 birth, some of whom because they got into the wrong family,
782 a selective process continuously weeded out the extremely non-meritorious so that those who were born usually survived. In fact, Hauck's figure of 90.6 live births
[163] (1956:33), the percentage of total pregnancies shows how many meritorious babies were born to the right family!

852 The Winnowing Ceremony

844 This ceremony, described in Dũan's tale, was usually
774 performed shortly after delivery, though it might occur anytime during the first three days of a baby's life. The child, placed on the tray (twins were laid together or separately) was claimed by the mother or the father, who

4:Phillips E-4,5 (1956-1957) 1966
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lying configuration.) However, from the point of view of their etiology in the individual, it is clear that the villagers' tendencies toward loose relationships are related to early childhood experiences. A second source is their philosophical notions concerning the nature of the individual. These notions are largely cultural derivatives of Buddhist doctrine, although at the behavioral level they function simply as unstated premises which guide and tacitly define behavior.[28]

Reference was made earlier to the basic assumptions governing the socialization of the Bang Chan child. When the child enters the world of human beings, he is already a partially formed and psychologically independent individual, with his own *ʔupanidsaj* (ingrained character) and *khwaan* (soul-stuff), not to mention his stock of accumulated merit and demerit from countless previous lives which predetermines his character. The effect of these definitions is not only to award to the child a sense of psychic individuality that is partially[29] independent of any social environment to which he is exposed, but to assign to him a fundamental sense of psychological equality. We are not speaking here of *social* equality. The

[28] From a strict analytic point of view, it would probably be best to consider Buddhist doctrine as an abstract, codified representation of these premises rather than consider the premises as explicit, logically coherent deductions from Buddhist doctrine. To be sure, many Bang Chaners often explain and justify their actions by pointing directly to Buddhist doctrine, sometimes applying its tenets correctly, and sometimes not. But for most, Buddhism is a diffuse, ubiquitous *Weltanschauung*, the precise effects and applications of which the villagers are typically unconscious. It would probably not be incorrect to think of most religious "traditions," particularly the "Great" codified ones, as functioning in this way.

[29] The term "partially" is inserted here to indicate that despite these ontological notions, few villagers, as J. R. Hanks (1959) points out, ever consider "any human child so marvelously endowed . . . from previous existences that training is unnecessary." The child's *ʔupanidsaj*, *khwaan*, merit and demerit, as well as his *winjaan* (psychological motive power), *caj* (heart), and *phroomlikhid* ("the lines of his destiny as established by Brahma") are all crucial predeterminants of his character. But few Bang Chaners ever think of a person's character as due solely to the uncontrolled emergence of these pre-natal forces. Rather, they represent the basic psychological raw material with which parents and other socializing agents must work, and set the limits of these agents' enculturating efforts. What is important is that the limits—the "degrees of freedom" permitted the parents—tend to be narrowly defined. Intensive probing of informants indicates that there is no general agreement on whether these cosmological forces are more or less influential than parental training in shaping a child, although they tend to be invoked more frequently as explanations of negative characteristics and of unusual happenings, positive as well as negative, in the lives of individuals. Also, villagers are inclined to think of them as the reasons behind *particular* characteristics and events, assigning to parental training a more diffuse influence in the development of the child. Thus, when asked why a particular individual grew up to be a *nagkleeng* (an aggressive, daring, sometimes bullying type of person) and how one of their fellow Bang Chaners had grown up to become an admiral in the Thai Navy, informants attributed the character and success of these individuals respectively to their *ʔupanidsaj* and *kam*. (*Kam*, the Thai derivative of *karma*, is the proportion of merit to demerit that a person may have at any particular moment in

4:Phillips E-4,5 (1956-1957) 1966
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TABLE 19

He was most afraid of . . .
The thing raw is most afraid of is (namely) . . .

THREATS TO PHYSICAL WELL-BEING:	61%	poverty. If he had enough, he would not be afraid.
		having nothing to eat. I mean when there is a flood, and all the paddy is lost, and we will starve because there is no rice to eat.
		not having enough to eat.
		having fever; getting sick and having no money.
		fire, because when a house catches fire it is a great loss.
		death.
		snakes. He is not afraid of ghosts. He can walk in the dark. But snakes are dangerous. He does not like to go anywhere after dark.
ACTIONS OF OTHERS:	20%	people. When she had money, she was afraid she would be robbed. When she did not have any, she was in difficulty.
		her father beating her.
MALEVOLENT SPIRITS:	10%	ghosts; but if there were no choice (no place to go, no way to get out of the situation), then she could manage.
		death; of ghosts haunting him. If the ghosts don't haunt him, he is not afraid.

topics) it was noted that, "uneasiness, when it occurs, is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality." The data here would tend to reinforce that conclusion. At the same time, however, it must be remembered that 20 percent of the informants do give what is at least symbolic expression to their fear of others, and it would, therefore, be most inappropriate to go to the other extreme and assert that villagers have no anxiety about interpersonal relationships. I also noted in the earlier discussion that "the nervousness that is betrayed indicates some of the internal strain that villagers undergo in having to maintain a constant front of politeness." This appears to be a case of their simply accepting—without worry, shame, or any other secondary anxiety—their own shortcomings. The anxiety that is experienced is just not *felt* as a psychological burden.

One of the responses above, although idiosyncratic, merits attention. This is the response of the villager, age 52, who says that she is frightened by her *karma*: "it depends on *raw's* mind [or heart]. Some people are afraid of ghosts. They see things and they believe that they see ghosts. That is not right. They see falling leaves and they think that is a ghost. There is nothing when they approach. The most frightening thing is bad *karma*. It

4:Phillips E-4,5 (1956-1957) 1966
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*125 *128 152 828 • [775] follows you. If you kill a living thing in this life, a living thing will kill you in the next life." What is surprising is that there are not more responses of this type, especially from older villagers. The psychological significance of this kind of response is of course most difficult to assess. Although on the surface it is an expression of personal inadequacy—an expression that the informant has not done as well for herself as she could have—its essentially timeless and unpredictable quality (one never knows when the product of bad *kam* will issue) almost takes it out of the sphere of direct emotional import. It is in fact an inordinately intellectualized response, probably just as expressive of the informant's sense of psychological security as it is expressive of her anxiety. Although bad *kam* is an omnipresent and unavoidable anxiety, the fact that one can make merit to reduce such *kam* and the possibility that one might in fact have less bad *kam* than one's anxiety would lead one to believe (one never knows) is a source of considerable psychological comfort.

*125 *128 152 The next item, *"His greatest problem was . . ."* is somewhat more cerebral and reflective than the preceding one. Villagers are asked to indicate not what frightens them, but what worries and generally concerns them. Thus, although their responses are in many ways similar to those given on the previous item, they are also considerably less extreme. All reference to malevolent spirits, for example, is missing here. Again, the majority of villagers (57 percent) describe as their greatest problem their well-being and survival. Their responses, however, lack the sense of trepidation that colored their earlier replies. Here, twelve villagers phrase their replies in terms of worrying about obtaining money, being rich, having money to spend, and the like, rather than in the more plaintive terms of being anxious about poverty, a response given by only one villager. Thirteen informants also say that they are worried about "making a living" or their "work," responses that are more ambiguous than the above in that it is difficult to determine whether villagers are worried about having sufficient income from the work or are disturbed by difficulties involved in the work itself (how their rice crop is coming along). Nine informants say that they are worried about starving, not having enough to eat; one is worried about illness; one about floods; and none about death or poisonous snakes. The reappearance of the food response should not of course be overlooked.

The second major category, encompassing the responses of 24 percent of the sample, relates to worrying about other people. However, almost half these responses (11 percent of the total) are protective and succoring responses, where ego is concerned with preventing harm to his family. The other 13 percent describe ego's concern about getting along with other people. Two of these responses refer explicitly to the informant's worry over the words he chooses in relating to others or that he speak sensibly.

125
[789]

22. Have you consulted with a medium frequently, occasionally, seldom, or never?

1. Frequently	7
2. Occasionally	4
3. Seldom	66
4. Never	856

[775] 23. Have you been disturbed by a ghost frequently, occasionally, seldom, or never?

5. Frequently	6
6. Occasionally	8
7. Seldom	55
8. Never	864

[641] 24.a. Excuse me, could you tell me, who is now the prime minister of Thailand? If you know, could you please tell me his name?

1. Correct answer	193
2. Incorrect answer	89
3. DK, cannot recall	111

b. Excuse me, could you tell me, who is now the chief of police of Thailand? If you know, could you please tell me his name?

4. Correct answer	167
5. Incorrect answer	24
6. DK, cannot recall	142

25.a. IF R LIVES IN BC COMMUNE: Who is the district officer in Minburi? If you know, could you please tell me his name?

1. DA, as from Bangkapi	194
2. Correct name of present DO	9
3. Correct name of past DO	—
4. Incorrect name	16
5. DK, cannot recall	111
— No Answer	3

b. IF R LIVES IN KY COMMUNE: Who is the district officer in Bangkapi? If you know, could you please tell me his name?

6. DA, as from Minburi	141
7. Correct name of DO	10
8. Incorrect name	—
9. DK, cannot recall	154
— No Answer	28

[434] [829] [556] 26.a. Throughout the world and here in Bang Chan-Khanno Yao too, it is common among men that there must be some who are rich and some who are poor and some who are neither rich nor poor. How about you yourself? Are you rich, or poor or neither rich nor poor?

1. Rich	2
2. Poor	68
3. Neither	863

b. IF POOR: Here in BC-KY, do you think there are many or few people who are poorer than you?

5. Many	30
6. Few	31
7. Unascertainable	7

125 42.c. IF DISAGREE: For what various reasons do you disagree?

[369]
[829] If Disagreement (See code at end)

[793] 43. Do you agree or disagree that all priests are honest and
[792] moral men?

X.	Agree	197
Y.	Disagree	90
0.	Undecided	40
—	No Answer	6

[829] 44. Do you think it is right or wrong for a Thai to marry a Chinese?

1.	Right	55
2.	Wrong	182
3.	Unascertainable	91
—	No Answer	5

[775] 45. Do you believe that ghosts bother people? Strongly, somewhat, or not at all?

4.	Strongly	40
5.	Somewhat	136
6.	Not at all	124
7.	Unascertainable	28
—	No Answer	5

[653] 46.a. During the past year, have there been any activities for the public welfare in BC Mat, or not, to which you contributed labor?

1.	Yes	231
2.	No	102

b. IF YES: For what various activities did you contribute labor?

_____

_____

c. During the past year or so, have there been any activities for the public welfare in the wat, or not, to which you contributed money or goods?

1.	Yes	264
2.	No	69
—	No Answer	6

[651] d. IF YES: For what various activities did you contribute money or goods?

_____

_____

47.a. How about activities not connected with the wat or with religious ceremonies in the home. During the past year, have there been any such activities for the public welfare in BC-KY, to which you contributed labor, or not?

1.	Yes	94
2.	No	232
3.	Unascertainable	7

Diet in Body Maintenance and Curing

261 262 753 Because food created fire, the daily diet could be a source of illness or a therapeutic means. Every food had known properties for heating or cooling, and for other effects as well. Guava fruit, alcohol, and turtle or cobra curry were heating. Eggs were cooling. Depending on the occasion, ice and iced concoctions were over-heating or over-cooling. They were always "dangerous during menstruation." Banana varied according to the variety: kluai hōm (fragrant banana) was undesirably cooling and caused either diarrhea or constipation (Hauck, 1959:27); kluai nam wā was less deleterious (salāeng) while kluai nam was good for the sick or for parturients (Boonlong).

252 262 [758] [846] Properties in food changed in cooking. Boiling made rice "ripe" (suk) and so available as nourishment (Anuman Rajadhon:77). Even the method of cooking varied the properties. For the sick and for parturients, the banana variety called kluai hak muk was good if baked, but not if cooked in syrup (Boonlong).

262 753 827 Some foods were "incompatible" with, and so aggravated, certain illnesses. Air-borne food in the form of smell was incompatible with, and compounded, a condition of wind excess. Death or blindness ensued. On the other hand, asafetida might be tied to the wrist of a new-born baby so that the smell, an established carminative, might cure the excess wind in his stomach manifested as flatulence.

262 [774] [782] Beneficial foods were encouraged. Of all these none surpassed rice, the main sustenance of the body, "the only true food" (Yong Chutima, in Hauck, 1959:27) and source of "strength" to the farmer. Rice was a safe food. It never disturbed elements. Eating rice, as compared with meat, had no overtone of taking life. One could eat one's fill without any sin. Most of all, rice nourished the human khwan, for each grain contained a part of the khwan of the divine Rice Mother. Furthermore, any food offered ritually to a spirit or to make merit acquired strengthening properties, and was afterwards given to priests, children, or to the sick.

[776] Foods with known dangers were avoided. "Kluai tānī banana, a variety full of seeds, was never eaten because it contained a female ghost (phī)." Jackfruit was avoided by lactating women as a direct source of wind-excess. Fruit in general was not dangerous but "did not give enough strength for a rice farmer. It was all right for an orchardist."

771
775 Man was higher on the scale than woman.[20] Progress toward
[562] Nipphan was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phī) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good health and long life, a kindly personality, many fine children, wealth, high status,
[775] intelligence, and luck. Astrologically, he was born on a day of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death,
[753] deformities, unhappiness, poverty, and had a cruel nature. Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

751
789 The long-range protection against all illness was to live virtuously and make merit. However, to guard against
[577] temporary supernatural intrusions, everyone possessed and usually wore Buddha lockets and other amulets. Some
[782] underwent tatooing, men having Cambodian or other figures,
[304] women, 2 small dots tatooed on the torso under the arm.

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20. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

Sometimes these aberrancies were viewed as desirable sources of supernatural power, but on other occasions, they were seen as a sign of demerit, caused embarrassment, and were suffocated at once (if alive), and buried.

If a woman died pregnant, her body was at once brought to the temple where the unborn child was removed surgically. The usual solacing sermon, rites "to lead the deceased to live in her right place in the next world," and cremation took place, with the fetus laid beside its mother so that it "would come out normally." The mother and child were separated to prevent a ghost which was double-powered. No prayers were chanted at home before exsection "lest they make the power of the spirit stronger." Moreover, any violent or premature death caused an angry ghost. The ghost of a premature child had a heavy load of sin, for its stay in purgatory, where sin was worked off, had been interrupted (Textor:262). An unscrupulous mɔ̄ was eager to get possession of any ghost for use in sorcery, and a double ghost was stronger than any other. Ghosts were obtained by plundering the mortuary chambers of the temple prior to cremation. By feeding (liang) it, a mɔ̄ controlled it. The ghost of a male infant was preferable because it was "stronger than that of a female." In the light of this situation, not only should the body of a pregnant woman never be left alone " so that no one can get at them (sic)," but a pregnant woman herself ought not to be alone.[26] The behavior towards the Rice Goddess, Mother Posop, who was "pregnant" when the grains in the stalk filled out, illuminated many of these attitudes: "Mae Posop feels weak, hungry, and uneasy. She is eager to taste sour and sweet foods. She is a woman and beautiful in her pregnancy." To allay her hunger the

845 847 845 766 [775] 845 775 754 775 843 782 [754] 843 782 776

26. In Cambodia, a pregnant woman might be murdered, even by her husband, so that the murderer might gain the malevolent power that possession of her now double soul would afford. (E.R.E. "Cambodia": p.159). This specific statement was not found in Bang Chan but might be part of the shadowy background to local reluctance to leave a pregnant woman alone.

[171]

843 farmers brought to the fields an offering of two kinds of
782 bananas (kluai hōm and kluai namwā), sugar cane, taro,
• 776 young coconut and cakes; and "fresh earth burned and offered with oranges and other kinds of fruit."[27] She was also given the things "dear to women": new clothing, perfume, face-powder, hair lotion and a mirror. In the
843 annual harvest ritual, when some woman (never a man)
776 escorted the Goddess from the field to the rice bin,
784 participation was forbidden to a pregnant woman because "the Goddess-Mother might be jealous of the woman's heightened beauty" and so be malevolent. Also, "being now emotionally weak and easily upset, a woman might be frightened by seeing the Goddess, who, after all, is close to being a spirit (phī)."

843 The prominence of food cravings in this traditional
262 description leads to a consideration of diet in pregnancy.

Diet in Pregnancy[28]

As long as everything went well, pregnant women "ate as usual." The underlying premise was that each woman early in childhood had established a regular diet suitable to her individual make-up of elements, and eliminated foods that because they did not agree with her or were disliked, were judged "not compatible." A woman could eat as usual because the ordinary daily foods, rice, coconut, etc., were "safe." The modifications introduced to beautify and protect the mother and baby were made on the basis of the properties and

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27. The goddess was following traditional "defeated by one's pregnancy" (phaethōng [Mc.F: 599]) symptoms of desiring "sour, salty, or strange things such as burnt earth." Like any woman, her craving for sweets indicated that a heavenly creature was to be born; for fruits, that she would bring forth an animal; for burnt earth, that the god Brahma would be born (Anuman Rajadhon 1961:115-116).

[114] 28. This section does not purport to present a dietary study in modern nutritional terms. Hauck's study (1959) of maternal and child health gives information on foods eaten, craved, disliked, or viewed as "good for" or "not good for" women during child-bearing, and also on illnesses found among pregnant women, including beri-beri, nausea, cramps, and fainting. The data here add to her information on behavior and stress traditional views as to the purpose of the dietary injunctions.

Now that the fire was going nicely and Dūan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sāi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dūan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaichiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dūan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

As Dūan was resting quietly, Sāi made three "taping fruits" (lūk prakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dūan's legs to cure the birth wound (phlāe). The other two were set aside for use on subsequent days. Sāi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dūan, on the side away from the fire.

With satisfaction of a job well done, Sāi and Lek sat together for a quiet chew of betel. "Lek," said Sāi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that best

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36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

37. The deities addressed were māe phra phlōeng and māe phra phai. Another Pali-Thai magic formula to control fire was: "Phra Mōk Khan Lā Nō will extinguish the fire from hell, na mō phut tha ya." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mō...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Textor 1960:483-485).

called out "Mine!" ("khǭng chan" [female speaking] or "phom" [male speaking]). Never did a parent say "ours!"[44] Sometimes the mother might ask a relative or friend present to claim the child, and so become a godparent.

As the first human step to control the volatile khwan, the first objective of winnowing a baby was to seize it (kan rap khwan) and so "complete" the child's person.[45] By tying holy thread at the wrist and ankle soul-exits, the khwan which had flitted in and out of the womb was given root. It was still flighty, but now it had a life-long home.

Secondly, the child was given membership in a human family. Connection through blood and semen did not establish kinship. At first, the child hovered between corporeal and non-corporeal existence. "The child is not fully human for the first 3 days." This period was under the supernatural control of Mother Sǭ, for babies "never died during the first 3 days after birth. They might be born dead or they died 6 or 7 days later." The shock of dropping the child on the tray "made him forget his life as a spirit." When someone cried "mine!" the child finally cut his relationship with the spirit-world. As an old woman explained, "The ties are the important part [of the ceremony]. They show that the child belongs to someone. Once a tie fell off one wrist. The child cried and cried until it was restored," fearing its lost khwan would attach itself elsewhere. The claiming set up kinship as a contract before witnesses. Whoever announced responsibility for the child's care, and this was usually the mother, deserved reciprocal care in old age. Other relatives would also help to bring him through to maturity. He would not be so frightened of an evil spirit because of family support, nor of the "ghost of an ancestor" who would be recognized as a relative.

Third, the ceremony strengthened the child. By giving him through the ties a stable khwan, he "grew better, cried less, and did not get sick."

The incorporation of as many auspicious elements as possible into the ritual was customary. Since the child took

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44. A winnowing tray (basket) had the capacity to "trap" spirits. It could seize or trap not only the khwan soul, but, at New Year's, one of the fun ghosts (Textor:371).

45. There is no convenient way of expressing "ours" in Thai in this restricted sense (id.).

Even after the child was out, the pile of wood was still a drying womb to be treated carefully. It was also the wood for a consecrated fire. To drop a piece of this wood carelessly both injured and desecrated. If this happened a disease of the eyes "sang," came at once for which no male medical powers had any remedy. The only cure was in women's hands, that essence of maternity, "a drop of mother's milk--any mother's." The larger implications of this linking of fire and maternity are dealt with in the next section.

846 789 372 [753] [755]

The Fire of Maturity

In the events surrounding the birth of the child, the significant step for the woman personally was the post-partum rest period by the fire (yū fai). Far more was at stake than just drying the uterus. The fire rest was one of the series of rites of the life-cycle which marked the course of an individual from birth to death. The others were the cutting of the umbilical cord, first head shaving, top-knot tonsure, ordination (for men), marriage, and cremation. Through the consecrated fire a woman formally achieved full maturity: she became suk (cooked, ripe, mature). Maturity did not come just by bearing a child. The fire brought about the transformation.[46]

846 372 [885]

How was mature womanhood viewed? What was the essential female role and office? Bang Chan saw a woman as one who "feeds and lengthens lives." As the custodian of growth she was, first, the guardian of the vital, essential khwan soul, and especially of the immature, flighty khwan of growing persons.

562 [774]

Secondly, a woman was a donor of nourishment (liang).[47] Her primary responsibility was to nurture children and other tender beings. She nourished the fetus with her blood. After

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46. "The fiery element digests what is eaten or drunk...and cooks the body and gives it its beauty of complexion. And the body thus cooked is kept free from decay" (Warren:157-158).

47. All the deities "concerned with the welfare of our bodies and our khwan" were maternal (mae), e.g. Rice, Water, Earth, "Mother-Goddess" (Mae Sū), and several Mother-Princesses (Chao Mae). Fire, and maybe wind, were both female (mae) and male (phra) (Textor:485). To these deities, "higher" than ordinary spirits, Bang Chan "owed more."

[776]

Only when the youngster was satiated did she gobble the remainder.[50] Parents often commented that girls in general were obedient and good, but boys were not. Everyone spoke, however, of exceptions. The capacity to play the female role grew with the child. It was not completed with the physiological maturity of first menstruation but only with ritual maturity.

The rituals to fit a woman for her office, described as "directly related to the welfare of the child," had 4 specific purposes. They perfected her as a compassionate being; restored and strengthened her body; improved her capacities as a nourisher; and strengthened her own khwan. The key to each of these aims was the holy fire.[51] Because actions taken by the fire were immediately and permanently effective, every effort was made to induce auspicious happenings. Words spoken by the fire had compelling effect so even ordinary speech became magical. Speaking of the fire's hotness so raised its heat that a mother was burned. For this reason, uninformed or careless visitors like children or foreigners were a danger.

According to Buddhist thinking, suffering developed compassion. Through the discomfort of pregnancy, followed by the anguish of childbirth and the heat of the fire, a woman became compassionate and so achieved the guide-line for moral behavior. Then a woman was sure to be touched with pity for the younger or less fortunate. One teacher despite the inconvenience went home twice a day from school to nurse her new baby because she "pitied" him too much to hire a wet-nurse. It was "pitiful" to see a child at another woman's breast for it implied that its mother was either unwilling or unable to nurse it. Thus, babies were rarely nursed by others than their own mothers.

The fire also strengthened a woman by ridding her of bad blood and foul fluids. Wind and fire, the 2 spirit guardians of the elements necessary to the occasion, were invoked to assist in the drying of the uterus. In addition, strengthening

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50. Boys too fed their younger siblings but their purpose was a power-play: "to assure obedience in the future" (cf. Hanks and Phillips:648).

51. This fire was kept entirely separate from the one for cooking and boiling of water. It was ritually lit and ritually extinguished at the end of the fire-rest.

In addition, strengthening foods like rice and fish, the staples for stout farmers, were stressed. Fruit, "which gave no strength," and vegetables (except for the nursing curry mentioned below) were avoided.

The holy fire also transformed a woman into a better nourisher. It gave her new, lasting beneficial nursing habits. As one man explained, "the very nature of water is changed by boiling over a fire. It becomes suk (ripe)." Similarly, a woman's body, her very nature, was permanently changed to suk by the fire's heating. The fire, in fact, made suk all the food she ate beside it. Since this food was turned into milk, her breast milk became suk and so more nourishing, and did not disturb elements.[52] "Food eaten while lying by the fire, when eaten later on (during lactation) by the mother, does not cause diarrhea in the baby." Jackfruit ordinarily caused wind-trouble during lactation, but one woman ate it during the fire-rest, and at once "got used to it, so she could eat it all the time." To make themselves better nourishers, some women spoke of the desirability of "eating a bit of every kind of food." The "nursing curry" (kaeng liang) was a mixture of vegetables.

Finally, the consecrated fire strengthened a woman's own khwan. She could better withstand convulsion if attacked by a spirit.[53] She was able thereby to handle a khwan even without the special magic that existed for it.

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52. To be nourishing even the daily rice had to be made suk by boiling (Anuman Rajadhon:77). It may be that no food was considered nourishing unless suk, either naturally (like ripe fruit) or by cooking.

53. "...when 'involuntarily' entered by ghosts...maidens in the 17-25 age bracket tend to convulse more violently than do women of more advanced years"(Textor:406). "Maidens" were presumably not married and so not suk.

562
156 (riak khwan). Theirs was an augmented personal potency[55] in nurture not unlike the mana so widespread in the Asian-Pacific area.[56] The best midwives were liang dī, though not all liang
[159] dī were midwives. This societal peak was not an unattainable ideal. In the community, certain women were pointed out as liang dī and some of them recognized in themselves the validity of this title.

562 The association of rice, motherhood, and khwan now stands
774 clear. Rice made suk by cooking over a fire, was the essential
• 776 food not only for the body but for the khwan. Growth and life
262 depended on the nourished khwan. Rice came from a maternal figure, the Rice Goddess, Mae Phosop (cf. J.R. Hanks, 1960). Human mothers, too, when made suk, gave suk nourishment: the milk of the breast was merely transformed rice. Whenever rice was eaten throughout human adulthood, the Rice Mother continued her nourishment, for in each grain was a bit of her khwan, nourishing to the human khwan. The rice-bowl and ladle, used in many a ceremony, stood for the maternal care given a human
[182] khwan, and by extension, personal care throughout life. Whenever the rice bowl with offerings (khwan khao: soul-[of]-rice) was presented by a parturient or by a sick person, loving care comparable to maternal care was being requested.

182 The idea of re-birth, of a fresh start within the pure
885 area encircled by the holy cord, with auspicious words and
846 consecrated fire, was deep in every life-cycle rite. The
562 particular circumstance of the fire of parturition was a
372 forthright cooking to bring out and increase a woman's essential femaleness, to transform her from a youthful, partial giver into a complete, mature donor of nourishment. Such was the satisfaction of women in this female role that many said they would like to be reborn as women. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:375) for a quick run-down on a definition of mana.

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with men's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mō, she could do everything a mō could do. Men were never mediums. Bang Chan's only medium was possessed by a male mō.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

[832] [156] [688] [626] [593]

59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasū as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "suk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasū's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

Chapter VI

MIDWIFE AND MŌ

759 In Bang Chan it was easy to ask, "Who has delivered babies?" The answer would run into dozens of names. To respond to "Who are the midwives?" an informant would give the names of 6 or 8 persons, then add, "Some people call them professional midwives but some do not. X is not a midwife but she knows how. Y delivers babies, but only out of pity. Z has delivered 30 babies or more, but she is not a midwife." If asked, "Are there doctors among those who deliver babies? " he would say, "Mō (doctors) never deliver babies."

Before a definition of a midwife is given, a general picture of midwifery in Bang Chan is needed.

844 ### The Practice of Midwifery

Normal childbirth, a cooperative venture between mother and child, was not an illness. It called only for the help of kin or neighbors. Anyone who had seen or experienced childbirth at least once before was considered a possible, though not necessarily competent, "deliverer" of a child. [593] The husband was supposed to be present to assist; failing whom a father or brother should attend. Consequently a good many men had witnessed birth. The spectacle was disliked, however. Anyone, though, young or old, male or female, kin or not, might offer or be asked to help. Private magic was • [776] not essential, though it was necessary for someone with incense, flowers, and a candle in hand to inform (bōk), the Lord Buddha, the ancestors, and the ordinary protective spirits of the land and home and so enlist their help. The customary post-partum rituals and blessings were not esoteric. Enough popular astrological knowledge was known, or quickly and freely available from a priest at the temple, to orient the woman in labor. Consequently, many a woman was delivered by her mother or other kin. One poor farmer and masseur, with the assistance of his sister, delivered all but one of his own children. On another occasion, a visiting kinsman, by chance a medical orderly in the Royal Thai [759] Navy, safely delivered a relative. In all these cases the cost or "gift" was less, or non-existent, and the convenience

4:Phillips E-4,5 (1956-1957) 1966
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114 * 156 171 571 status differences and the looseness of social ties loom considerably in Bang Chan probably makes for some other structural variations.[22] However, as stated below, Foster's formulation applies almost perfectly to Bang Chan (1173–1176):

> The model appears to account for the nature of interaction between people of the same socio-economic status, between people of different statuses, between fellow villagers, between villagers and outsiders, and perhaps between man and supernatural beings as well. Although my analysis deals only with Tzintzuntzan, I think the model will prove useful for other societies with similar structural features . . .
>
> Briefly it is hypothesized that every adult organizes his social contacts . . . by means of a special form of contractual relationship. These contracts are informal, or implicit, since they lack ritual or legal basis. [This is not completely true for Bang Chan. There is, for example, a special "Teachers' Day," sanctioned by the national government, set aside for honoring teachers, and thus providing ritualistic reinforcement to the contract.] They are not based on any idea of law, and they are unenforceable through authority; *they exist only at the pleasure of the contractants.* The contracts are dyadic in that they occur only between two people; three or more individuals are not brought together. The contracts are noncorporate, since social units such as villages, *barrios,* or extended families cannot truly be said to enter contractual relations with other families, although spouses often honor the obligations inherent in each other's contracts.
>
> The implicit dyadic contract is made between members of a family as close as siblings [and in Bang Chan, as close as husband and wife, and parents and children] . . . ; and it unites neighbors and friends. Contracts are found between social and economic equals within Tzintzuntzan or with similar people in other communities. And they are found between people (or beings) of different status and category, as on those few occasions when outside political leaders or economic patrons have ties with villagers and when a villager invokes the aid of the Virgin Mary or a saint. [In Bang Chan, a functional equivalent of the latter would be when villagers propitiate the *caw,* or Spirit Lord, who resides in the *San Phra Phuum,* or house of the Guardian Spirit of the home. This is a replica of a house, about the size of a bird cage, located in every house lot in Bang Chan. The offering of rice and flowers to the *caw* is explicitly a form of payment to him for the use

[776] [782] [778] [782]

[22] A second paper on Tzintzuntzan (Foster 1963) indicates that there are some crucial motivational differences as well, viz., Bang Chaners enter into dyadic contracts with a much greater sense of freedom than do Tzintzuntzeños. Their attitude is both more cavalier and cold-blooded than the Mexican peasant who feels that if he is to exist, he has no choice but to enter into these contracts. The Bang Chaner is animated by a sense of personal advantage; the Tzintzuntzeño by a sense of passive participation in a system he cannot change.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

last instance, we know that the fanciful fear often serves the vital function of binding what might otherwise be extremely painful free-floating anxiety.[6] We also know from American culture that there are many objective sources of threat existing in the environment which are rarely identified as objects of anxiety, unless directly or imminently encountered, *e.g.*, being struck by an automobile. Finally, we know that there are objects or sources of anxiety that may be denied as such because of the cultural values associated with being fearful or brave: it is possible for a teen-ager to admit anxiety over an examination or an important "date," but usually not when he is asked to perform a daring deed by a group of his peers.

The point of these remarks is that despite our familiarity with the various forms and functions of anxiety, we are still hard put in most instances to identify the precise psychodynamic role of an anxiety response when it is expressed by individuals in our own culture. The problem is compounded immeasurably when we attempt to do this with members of another culture. It is for this reason that the responses below will be accepted as those things which actually frighten or worry the villagers of Bang Chan, and will not be examined for any intrapsychic functions that they may serve. The few interpretive excursions of this type that we took earlier in the text (e.g., the villagers' concern about a superior feeding them well) were sanctioned principally by the context in which the responses were made. Here, informants are asked to indicate their anxieties under a completely unspecified set of conditions.

Actually, most of the responses given below are, in terms of the villagers' culturally constituted reality, of a highly reasonable nature, suggesting that informants are reacting in terms of their genuine existential concerns. Being bitten by a cobra is a dangerous (although not a likely) possibility, and although a few villagers may hesitate *on direct questioning* to declare their belief in malevolent spirits (translated below as "ghosts"), all know about such spirits and at one time or another have performed acts to propitiate them, indicating considerable psychic investment in their reality. Although in some cases one might wonder about the motivations behind them, the responses make complete sense.

The responses to the first item, "*He was most afraid of . . .*" fall into three major categories. The vast majority of villagers (61 percent) are frightened by experiences, actually *possibilities* (and again, in their unpredictable world, the possible is psychologically critical) which threaten

[6] The major analytic difference between *anxiety* and *fear* is, in fact, that the latter is "bound" anxiety, *i.e.*, the anxiety has assumed a concrete, objective representation which the individual at least can deal with: by avoidance, doing battle with it, laughing over it, and the like.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

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1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

262 753 853 constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

The belief that eggs would cause dental caries, and should therefore be omitted from children's diets, was expressed by the mother in a poorly nourished family. The possibility that such ideas arose from unwillingness to spend much money on food for a child has already been noted (see p. 42).

262 753 758 [853] Information on food suitable in illness was obtained only incidentally. The Thai did not appear to have a consistent theory as to the cause of disease (Sharp et al. 1956, p. 489), and residents of Bang Chan did not seem to associate any of their illnesses with contaminated food or water. Choice of food in illness was probably associated in some instances with the idea that the body is composed of the four elements: wind, water, fire and earth, and that sickness results from or is a symptom of imbalance in the proportions or arrangement of these elements. Thus the "fragrant banana" and eggs, because of their "cooling effect," were said to be forbidden in measles. A child who was getting measles was restricted to rice and dried fish. In contrast the small, rather flavorless banana, designated (3)kluaj (4)nam-(4)waa, was said to have "no cooling effect" and was considered an acceptable food in illness, as well as for newborn infants.

262 753 784 In one instance, when a patient had been taken to the hospital with severe diarrhea, a nurse instructed other family members not to eat ices, syrup (see p. 36), or raw vegetables, nor to drink unboiled water. The informant who told us about this offered no reason for these precautions. These foods were simply "forbidden" to the family of a patient with severe diarrhea.

777 824 245 [777] Notions as to what is fortunate or unfortunate may also affect agricultural processes. The many ceremonies associated with culture and use of rice have been mentioned (p. 42). The idea that a papaya tree growing near the house was "unlucky" was attributed to Thai by a young Thai Moslem in Bang Chan. When we commented on the papaya tree near his front door, he said the papaya tree dies easily and does not like water, but his was planted on high ground. According to this informant few villagers would be willing to grow papaya trees near the house. He considered the *non*-specific threat of harm as unreasonable, though he said that if specific harm were said to result, he would be concerned about it. The midwife at Minburi Health Center said that she urged each woman who came there for delivery to have more banana, mango and papaya trees planted for home use. Before raising of papayas can be successfully encouraged, however, the idea that papaya trees bring back luck must be overcome.

000 Growing other kinds of green and yellow vegetables should be fostered. Although vitamin A value and riboflavin content appear to be critical, in choosing vegetables to be stressed, specialists in agriculture should consider greens [262] with high calcium and low oxalic acid content also. A variety of edible leaves of trees were used by a few families; some used sweet basil as a vegetable rather than just a seasoning; pumpkin and sweet potato were familiar, but less often used than would be desirable. More green or yellow vegetables which mature when canals are low and aquatic plants no longer available, would be especially good. If increased production by most households[1] is not practicable, a few of the more successful gardeners might be persuaded to produce vegetables and fruits which would help to bridge the gap between rainy seasons. Mushrooms, which can be grown readily, would provide a good source of ribo- [246] flavin when leafy vegetables are in short supply. The boom-and-bust experience in mushroom culture (See Appendix A, pp. 101-102) might, however, make its revival as a source of healthful food for home use more difficult than if the villagers did not think of mushrooms as a cash crop for which the market failed.

Eating more fruit would help to tide over the dry 262 season. Fruits were commonly used as snacks, not at meal- [264] time, hence snacks of fruit should be encouraged for adults as well as children. Bananas grew in all gardens and were available the year round. The (4)nam (4)waa variety, which was used in ceremonies, and considered safe for all, should 000 be stressed. More families could grow pineapple, which is [777] relished both raw and in curries. Mango and papaya, fruits of outstanding value for both vitamin A and ascorbic acid, would be excellent, but the idea that growing papayas is "unlucky" must be taken into account. If a few of the more thoughtful and forward-looking farmers could be persuaded to start papaya trees, even though they were not willing to plant them near the house, the practice might spread in time.

146 On the average, the Bang Chan diet did not seem to be [644] very deficient in protein, but distribution is not proportional to need, and protein deficiency may be in part responsible for periods of weight loss, or failure to gain, so 000 common among infants and children. The presence of other [134] essential nutrients in animal foods is important also. If, the local supply of fish is indeed diminishing, efforts to [228] increase it through pond culture should be continued. Abandonment of tilapia culture in Bang Chan, after about one-third of the families had tried it, (Appendix A, p. 101) suggests that not enough of the right kind of help was given

1. Tenant farmers may not be permitted to enlarge gardens by mounding at the expense of rice fields.

844 [278] fast enough to break the amniotic sac. Sāi made her a medicine of mung bean and sugar, both of which wet the uterus, and murmured some magic words to help. Later she worked with her hands at the vagina, twisting the sac a bit to break it. Suddenly the sac ruptured.

Now the child was almost there. The head showed well. Sāi sat down directly in front of Dūan to do the pressing herself. With one hand she held or gently pulled on the baby, with the other she pressed on the abdomen with every [789] contraction. As she started in, she said magic words. She worked for an hour--no midwife would press more than that--until at last the child was out. A little boy! With her finger Sāi removed the blood from his mouth, and pucked out the lips. Breathing was slow in coming, so she shook him vigorously, then laid him down. Quickly she chewed up an onion and spit it over his body. "Ah-h-h!" A cry, though not very strong! Seeing the new baby appear, Chāi, who up to then had been constantly near his mother, rushed precipitously from the house, and refused to come in for hours, in spite of Song and Lek's coaxing

[787] Everyone had observed an auspicious circumstance: the cord was looped around the baby's neck! This imitation of the holy cord (nongkhon) placed around head and neck in Brahman rites of passage was a rare and good sign. "A cord looped thus could never kill a baby," someone said.

Since the placenta was slow in coming, Sāi prepared to cut the cord while Dūan rested and sipped the fiery snake brand medicine. Depending on circumstances she might cut it [278] before or after the placenta was out. Taking a rhizome of phlai (McF. 604), a traditional healing root, she laid it [412] on a clod of soil brought in from outside. From one of the old bamboo house beams, someone had sliced with a knife a sharp-edged, tapering sliver to serve as a cutter. The cord was stroked 3 times, starting near the baby's stomach "to remove the dirt." Then "something that is in the umbilical cord" was pushed back towards the baby's stomach "to prevent [778] a flow of blood." She measured the cord from the baby's abdomen to his knee, and tied off 2 places in it with the holy unspun cotton cord used ordinarily in rituals. Laying the part between the 2 knots on the phlai on its bed of soil, and saying her magic "w'nyān a ŋam pa nō," she cut [757] the cord with the bamboo cutter. With a chicken feather which had to come "from the mother's yard," she collected a few spider webs from the rafters, mixed them with coconut oil, and painted them around and on the cord-stump, also "to stop the blood-flow." While doing this, Sāi said, "One midwife I know severs the cord by tying it with the thread at 3 places, then burns it with a flame."

885 deprived a man of his masculine strength but was expected to
793 change him into a kind and merciful being.[58] It took at least
562 a three month season (phansā) in the priesthood to make a man
785 mature, responsible, and effective. That this moral fitness
(778) was not obtained overnight was given vivid illustration: if a
Buddha Amulet, designed for invulnerability, failed to be effective when tested by having a gun fired at it, it was "sometimes
789 jokingly dismissed as a monk (phra) who has just been ordained
885 (bŭat mai)" (Textor:529). This interesting episode illuminates one other important result achieved by both men and women in their respective maturation rites: authorization to handle magic.

Magic and Maturity

In Bang Chan, magic was powerful. Whatever the purpose, whether beneficial or nefarious, it was effective if all conditions were met. Lest such power fall into unscrupulous hands, the community limited its availability and use to those who had gained the moral qualities and fitness to handle it wisely. Only the ritually mature could be counted on to be compassionate, strong, responsible adults, and so were permitted access to occult powers. Whether by ordination or the fire-rest, to be suk was an absolute prerequisite to magical knowledge. It did not give magical power, but qualified one to seek it out. Since no career in medicine was possible without magic, no man could be a mǫ who had not been previously ordained.

789 The uses of magic by men had entirely different objectives
562 from those of women. Their respective fields did not

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58. "A monk was changed...to be meek and mild." By seeking his morning alms he "show(s) mercy towards creatures" (prŏt sat) (Anuman Rajadhon:76-77). Women's tenderness in their maternal function was not associated with shyness. A compassionate woman with a strong winyān soul (which projected the quality of the heart) was enterprising and effective (cf. J.R. Hanks, 1959). Where sexual characteristics were confused, instability in behavior appeared. The cultural expectation was that children and women were delicate (ɔ̃n), older people and men were hard (khaeng). "A male who is easily induced to convulse is one who had a 'soft' heart (čhai ɔ̃n). ...and also a 'soft' khwan (khwan ɔ̃n).....Such a young man is excitable rather than predictable and dependable, and hence is cause for parental anxiety" (Textor:405).

759 In these 2 qualifications of skill and success, some of the explicitly non-professional old ladies were recognized as easily matching the professionals. What then was the definition of a professional midwife?

759 789 What the professional midwives alone did was to deliver non-kin, for which they had to have magical formulae and reliable celestial knowledge. The incantations gave a midwife the right to be called a mɔ̄ tamyaa, for he or she was using to a greater or lesser extent the sacred wisdom of occultism (saivasāt). Here midwifery was like any other craft or endeavor. One could cure, sing, and build a boat without magic, but with it, the chances of success and effectiveness were increased. The incantations could "ease delivery," "get a baby out that had died inside"(for this baby could no longer do his part), "prevent the poison of the fire from burning the mother," and give other special help. That this magic was the crucial difference between the professional and non-professional was illustrated by the old lady who had delivered 30 babies, but vehemently[67] denied being a midwife. "I am not a professional. I have no magic. I only pray to the Lord Buddha and think of sacred things each time."

759 787 A professional also had more detailed astrological knowledge of the orientations of relevant celestial beings so that delivery would be "helped and not obstructed." This knowledge was in no way a professional secret, but if complications during childbirth were evident, it was necessary to have accuracy, and convenient that the midwife had it.

759 562 212 191 778 To certain villagers the designation "professional" could not be applied to women because, never having been ordained, they had not learned to read, as men supposedly had, not only Thai but Pali and Cambodian, the languages of medical and magical lore. "A professional midwife has a book. No woman can become professional because she cannot read." The idea was that incantations were correct only if taken from the sacred texts at the temple, though in fact the formulae were taught orally. One male midwife had a sacred book in his private possession, which was proper, for sacred books were inherited by males.

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67. Her vehemence may reflect either pride in being so successful without magic--a true liaang dī--fear of being reported as unlicensed (see below, p. 145); or consternation lest she be accused of using magic to which she was not entitled.

262 people did not want to spend much on a baby, therefore they
261 said that if a child ate too much "with-rice" he would be potbellied but thin in the upper part of the body, and that eating eggs would cause dental caries. This grandfather said he believed the truth to be just the opposite, but that goods things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice," one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

262 Secondly, Chutima suggests that particular foods were associated with, or suitable for, particular age levels, and a given sex. Data obtained in Bang Chan indicate that certain foods were associated with conditions such as pregnancy, lactation, and the puerperium, with occupation, and even
653 socio-economic levels. For infants, breast milk was considered most suitable. The newborn infant was not usually put to the mother's breast for about 3 days after birth, and if a relative or neighbor did not nurse the infant, the small banana called (3)kluaj (4)nam-(4)waa (see p. 46), raw or baked, was crushed and fed to him before his mother's milk was available. This banana and rice, as (3)khaaw (3)tom and (3)khaaw (2)piag (two watery preparations), sometimes crushed with (3)kluaj (4)nam-(4)waa, were always the first solid foods introduced while the infant was breast fed. No other foods were introduced early. Some infants received fish and egg by 6 months of age, and a majority ate these foods by the time they were a year old. Some two year olds had not yet been given vegetables, and very few infants ate them before they were one year old.

855 Giving of "holy food"[1] to children suggests concern for
[778] strengthening children through dietary as well as other ritual means.

262 At the other end of life, as old age approached, the
888 diet was supposed to change, ideally to a completely vegetarian one. Since one was soon to face death, one gave up eating meat and even fish, if possible, so as to avoid taking life. It was considered pitiful or wrong for an old person to fish. Being able to go without food was associated with merit. Those who stayed overnight at the temple on the Buddhist holy day went without solid food from before noon until the next morning as the priests did. One elderly woman remarked that when she stayed overnight at the temple she did not feel hungry, and did not eat anything at night, but other women, feeling hungry, drank coffee or milk at night. She

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1. See p. 50.

4:Phillips E-4,5 (1956-1957) 1966
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status differences and the looseness of social ties loom considerably in Bang Chan probably makes for some other structural variations.[22] However, as stated below, Foster's formulation applies almost perfectly to Bang Chan (1173–1176):

> The model appears to account for the nature of interaction between people of the same socio-economic status, between people of different statuses, between fellow villagers, between villagers and outsiders, and perhaps between man and supernatural beings as well. Although my analysis deals only with Tzintzuntzan, I think the model will prove useful for other societies with similar structural features . . .
>
> Briefly it is hypothesized that every adult organizes his social contacts . . . by means of a special form of contractual relationship. These contracts are informal, or implicit, since they lack ritual or legal basis. [This is not completely true for Bang Chan. There is, for example, a special "Teachers' Day," sanctioned by the national government, set aside for honoring teachers, and thus providing ritualistic reinforcement to the contract.] They are not based on any idea of law, and they are unenforceable through authority; *they exist only at the pleasure of the contractants.* The contracts are dyadic in that they occur only between two people; three or more individuals are not brought together. The contracts are noncorporate, since social units such as villages, *barrios,* or extended families cannot truly be said to enter contractual relations with other families, although spouses often honor the obligations inherent in each other's contracts.
>
> The implicit dyadic contract is made between members of a family as close as siblings [and in Bang Chan, as close as husband and wife, and parents and children] . . . , and it unites neighbors and friends. Contracts are found between social and economic equals within Tzintzuntzan or with similar people in other communities. And they are found between people (or beings) of different status and category, as on those few occasions when outside political leaders or economic patrons have ties with villagers and when a villager invokes the aid of the Virgin Mary or a saint. [In Bang Chan, a functional equivalent of the latter would be when villagers propitiate the *caw,* or Spirit Lord, who resides in the *San Phra Phuum,* or house of the Guardian Spirit of the home. This is a replica of a house, about the size of a bird cage, located in every house lot in Bang Chan. The offering of rice and flowers to the *caw* is explicitly a form of payment to him for the use

[22] A second paper on Tzintzuntzan (Foster 1963) indicates that there are some crucial motivational differences as well, viz., Bang Chaners enter into dyadic contracts with a much greater sense of freedom than do Tzintzuntzeños. Their attitude is both more cavalier and cold-blooded than the Mexican peasant who feels that if he is to exist, he has no choice but to enter into these contracts. The Bang Chaner is animated by a sense of personal advantage; the Tzintzuntzeño by a sense of passive participation in a system he cannot change.

[p. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

84 A soul desiring rebirth flew into the womb of a woman at
[775] conception. By care and imitative magical practices, both
parents helped the fetus grow but the mother gave the baby its
[774] body. Parturition was a joint effort of mother and child, the
[789] course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not
846 wander from home throughout life. A post-partum rest of
392 several days was taken beside a hot fire, the purpose of which was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman.
793 The comparable ceremony of maturation for men, when they too
789 were changed from "raw" to mature, compassionate, and strong
562 males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to
[688] nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

844 This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

128 The understanding of, and the attitudes toward, modern
844 medicine are given along with findings accounting for
846 acceptance or rejection of modern hospital care for parturients. Accepting the changes that were observed in the practices
369 surrounding childbirth proved to be a means of expressing
178 partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

597 Adoption was fairly common, though not always of lasting satisfaction. On the other hand, in this watery domain, the 842 trouble (lamhāk) in raising children, mostly involving 855 ceaseless tending, was such that a childless woman was accorded a little surface envy as one who had missed or avoided a lot of trouble. The attitude towards twins was 845 ambivalent. "Twins are unlucky because there are more mouths to feed, more labour, trouble, and not enough milk. With twins, a poor family will never rise again." "No one will marry a twin for fear of begetting twins." "If twins are of a different sex, one must die." Yet others considered twins lucky "because they could be nursed at the same time, and given the same things."

855 Wealth differences also affected these attitudes, 842 especially if babies came in close succession. Comments 184 heard were: "Why do poor people have more children than the rich?" "Many visitors come bringing gifts to a rich parturient because she is respected. No one likes to talk to a poor person." "Those who have a baby oftener than every 3 years will never be rich. Fortunately, 4 of my 7 children died." The increasing cost of raising children was a concern. In one of the few families that had plans for their children's education, the father underwent a vasectomy after his 9 fine children were born, because he "feared he would not be able to feed them all." His wife, reassured that the operation had not "hurt" her husband, "was glad he had done so."

847 Abortifacients and Contraceptives

Episodes concerning abortifacients were whispered about [779] both Muslims and Buddhists. A Buddhist who induced abortion was seen as impeding an individual's rebirth and disobeying a religious prohibition on taking life, tenets which did not obtain among the Muslims. Abortifacient medicines to be used with abdomen-pressing were quietly sold by Muslims.[6] "Unmarried Muslim girls use them mostly," reported one Buddhist, "and they almost die in the process." A Buddhist curer had similar expensive medicine, but "unlike the Muslims, he will 842 not destroy the baby." Chinese boat-vendors also carried contraceptive medicines (ya) which were secretly discussed by wives. A husband reported his wife as saying, "Old ways

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6. Fraser (193) reports that in the Muslim village of Rusembilan, abortions were openly practiced, (as if part of a Muslim cultural heritage).

Chapter III

PREGNANCY AND PARTURITION

Conception

Conception occurred when a khwan-soul flew into the womb of a woman during sexual intercourse. "A father and a mother are equally important because there is no birth in the world without both. An infant is the product of both sexes," said a priest in a Bang Chan sermon.[21]

The little being in the womb from the moment of conception was a specific individual who had lived many times before, meritful or sinful according to its previous actions. Desire for rebirth was in itself evidence of inadequate merit to effect release from incarnation. Though this life was to some extent a fresh start, his character (niasi) and heart (cha.i) were already largely formed through his store of merit and ingrained habit from former existences.[22]

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21. The teachings of the Buddha state: "Rebirth takes place when a father and a mother come together, and it is the mother's period, and the one to be born is present" (Suriyabongse:20).

22. He bore with him the last ideas spoken to him at his most recent death. The Visuddhi-Magga tells how this carry-over occurs. One of the categories of karma, was the "close at hand, karma remembered at the point of death [which] springs up with [a person] in rebirth" (Warren:246). As King Mongkut lay dying, everyone in the room called out "arahat!" in his ear incessantly so that by "remembering it at the point of death" he might be reborn an arahat (E.R.E. "Siam": 487). Another pertinent category of karma was the "habitual": "karma that has become habitual through frequent repetition. This brings on rebirth when [other] forms are absent" (Warren:246). Here is the basis for the inborn character, heart and ingrained habit (cf. J.R. Hanks, 1959, and the section below on "Habit" (khoei).

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
57 the steps in the Buddhist winnowing ceremony and performed
852 them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khăo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
774 "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist, meant charitable giving in the sense of tithes, for Islam
782 prescribed that a portion of one's income be given to the
177 poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 Completely Muslim was the stress on physical and
783 moral purification as an objective of every rite, and
304 conversely, the prevalence of the idea of defilement.
764 "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate procedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before
831 burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and
834 contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality
562 much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (fàk
273 thong: to deposit gold). On returning home, she went as fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim mid-
795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclosed room, if there were one, while in the Buddhist house-
562 hold "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khăo contained "7

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

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593 155 #156 [125] None of the above is meant to imply that 79 percent of the adults of Bang Chan would in fact give away their children. But the relatively high frequency of agreement they exhibited in admitting to such a possibility and the fact that as many as 65 percent agreed that it was either good or justifiable reveals something of the psychological environment within which the Bang Chan child is reared and where he learns his basic orientations toward other persons. The responses to this single stimulus must of course be seen in the context of the more naturalistic, behavioral materials presented earlier. The point of all these illustrations, however, is that they indicate there is nothing sacrosanct about any human tie in Bang Chan, even that which exists between parent and child. If necessity or personal predilection requires, then this tie too may be broken. What is perhaps most significant here, from a developmental point of view, is that the breaking of the tie always exists as a realistic potentiality in the life of the child. Reared in an environment where he learns that no human tie need be permanent or sustaining, the developing child inevitably takes on some of these same patterns of expectation in his own dealings with others. Thus the villager who abandons his spouse or the employee who with little warning leaves his employer are acting in terms of patterns the prototypes of which they either actually experienced as children or came to expect as part of the realities of interpersonal relations in Bang Chan.

593 155 #156 571

• 779 #156 The second major source of the villagers' loose relationships lacks the developmental reference of the above. To a certain extent it is not even social relational in nature, although our concern with it stems from its having crucial consequences to the social orientations of individuals. I am referring here to the Buddhist emphasis on the primacy of individual action and individual responsibility. Without going into a lengthy discussion of the subtleties of Buddhist doctrine, it is imperative to point out that the principal tenet of Hinayana Buddhism is the complete psychological freedom, isolation, and responsibility of every person. This is not the Occidental idea of "free will," but rather the notion that every person is a free agent, responsible only to and for himself, and that he inevitably reaps the fruits of his own conduct. Buddhist canonical literature is replete with references stressing the centrality of this doctrine. The last words of the Lord Buddha before he left this world to achieve the sublime state of *nibphaan* (nirvana) are said to have been: "Work out your own salvation with diligence." A frequently quoted passage of the *Dhamapada* reads: "By oneself is evil done; By oneself one suffers; By oneself evil is left undone; By oneself one is purified." The whole complex cosmology relating to the accumulation of merit and demerit is phrased in terms of the individual's lonely journey through cycles of interminable existences working out his own moral destiny. Who his progenitors were, what kind of environment he was born

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and reared in, what social advantages or disadvantages he was exposed to, are considered all secondary, and in some cases even insignificant, in influencing what he is and what he does. The life and career of Gautama himself is perfect testament to the essential irrelevance of these factors. (On the other hand, the attention given to these considerations in Western ontology is a perfect expression of our "sociological bias." In our system, even our original moral state is determined by what someone else—Adam and Eve—did.) In Therevada Buddhism, an individual's worldly and cosmological condition—the former essentially a temporary, special case of the latter—is for the most part self-generative, although because one never knows *when* the effects of one's *kam* may emerge it is also unpredictable.

These formulations translate and function on the level of workaday behavior in an extremely subtle manner. Every time a Bang Chaner is about to do something he does not ask himself whether it is in his own best moral interest. Similarly, every time he ignores another's expectations about how he will behave he does not justify his actions in terms of the Buddhist doctrine of enlightened self-interest. However, these formulations do impart a fundamental legitimacy to the pursuit of individualistic self-concern. More important, they establish—in a diffuse, unreflective, but nonetheless highly meaningful way—a definition of social reality that assumes the ultimate reference of every person's act is himself. In these terms, social relationships become defined as either artifacts of, or media for, the attainment of one's own ends. People need and use each other to satisfy their own purposes. (This is not to say that social relationships do not have many other functions. Our concern here is with the way *villagers* view the aims of their social relations.) What keeps the social system running relatively smoothly is the assumption that every person is acting on precisely the same bases, and the realization that one's own purposes are best served by acts of reciprocation. The basis of the system, however, is the continuous satisfaction of each participant's individual needs, for should such satisfactions not be forthcoming, there is always complete freedom and sanction to withdraw. Villagers typically define benefits gained from reciprocal acts to be materialistic (the food or gifts a parent gives a child or an employer gives an employee); psychological (the respect a subordinate awards to a superordinate or the security the latter provides the former); and spiritual (the merit parents gain when their son enters the monkhood, the merit being repayment for their having gone to the trouble of rearing him).

Translated into theoretical terms, Buddhist doctrine functions here in two ways. First, it represents a codification of certain *assumptions* about the nature of human responsibilities, an articulation of what Wallace (1961*b*: 94) calls "primitive predicates," or the frames of reference that provide the

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primitive categories into which people code their experience. From a psychodynamic point of view, the predicates do not *require* codification; people think and act in terms of "primitive" (tacit, axiomatic) categories many of which are never explicated in the propositions of their formal religious, ethnophilosophical, or mythological systems. Why certain categories are selected for codification and others are not is beyond the scope of this book. However, it is clear that a major function of Buddhist thought—like that of any articulate symbolic or ideological system—is to *objectify* and *clarify* some of the more important experiential assumptions of its adherents. This is the cognitive essence of all belief systems. As a belief system, Buddhist doctrine also takes on a special value of its own. This is in fact its second major function; that is, the tenets of Buddhism not only serve to objectify through philosophical elaboration that which is already accepted but also to act as standards in assessing the value, propriety, and significance of human actions. In this sense, Buddhism (again like any coherent ideological system) provides a corpus of knowledge for rationalizing and *sanctioning* certain types of behavior and for disapproving of others. The very belief system that codifies aspects of reality for its adherents assumes the normative function of reinforcing and promoting those activities that are in conformity with it. This is the motivational essence of all belief systems. Needless to say, we are speaking here of activities that are subjectively felt to be valuable and proper, irrespective of the social psychological dysfunctions that may follow from them. Thus, returning to our major theme, most villagers would agree that the Bang Chaner who without saying a word leaves his spouse in order to avoid an embarrassing or rancorous confrontation over some difficulty is behaving in a manner thoroughly consonant with "doing evil by himself; suffering by himself; leaving evil undone by himself; and becoming purified by himself." How the wife responds to his actions is her problem. Her *kam* may well have been the reason for this happening to her. (Note that I say ". . . for this happening to her," *not* ". . . for his doing this to her." This is the typical village way of perceiving such events. Again, the interactional dimension is secondary: it is what happens *to* individuals, not what happens *between* them, that counts.) How *explicitly* villagers would apply Buddhist doctrine to this particular situation is problematic. Applications of Buddhist thought usually emerge only after villagers have been asked to think actively about and articulate justifications for the actions of people. Their comments are typically *post hoc* explanations that appear only when there is a necessity either to understand or ethically evaluate an individual's actions.

The above discussion was concerned with detailing some of the sources and supports of the loosely structured relationships that are found in Bang

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findings of the previous item, as is the fact that the majority structure it in terms of survival issues. The relative differences between the two items in the percentage of individuals holding these views (20 percent vs. 13 percent regarding interpersonal anxieties; 61 percent vs. 57 percent regarding survival anxieties) are obviously not significant.

The remaining responses on this item resist easy categorization. Eight percent of the villagers speak in general terms about their greatest problem being their desire for happiness, a response whose major significance is probably the fact that it is given by such a small number of persons. This is not to suggest that the majority of villagers are either happy or unhappy; it is simply to indicate that few have the need to articulate a general sense of unhappiness. (Indeed, from a few of the items in the "Dominant Drives and Wishes" section, it is clear that a sizable minority of villagers feel that given the possibilities of this world, they are in fact quite content. See particularly the item, *"He wishes he were. . . ."*) A few villagers here, both young males, also speak about the uncertainty of their futures as sources of worry. One villager says that her greatest problem is that she wants too much, suggesting a desire on her part for greater self-control.

The remaining items in this section are of a different order from the above. They ask villagers to describe how they would react to frightening or worrisome situations. The items are, *"If one is frightened, the best thing to do is . . ."* and *"When something worried him, he usually. . . ."* One of the more interesting attributes of the responses to both items is the sense of familiarity with these situations that they reveal. The responses are pointed, emotionally loaded (although not excessively so), and unembarrassed, suggesting again the villagers' tolerance of their own existential limitations. Their emotional tone also suggests that my assistant was originally correct when he said that it was "easy" for villagers to express their feelings of fear. In both cases, the responses tend to follow a bi-modal distribution, although the two modes are clearly related to each other psychologically.

To *"If one is frightened, the best thing to do is . . ."* 40 percent of the informants respond by saying that they would keep cool, calm, and *chəəj*. However, what is intriguing is that this is all that they would do. Their aim is to get their emotions back under control, their personal stability being paramount to any other consideration, such as discovering what caused the fright, how they might deal with the cause, or fighting that cause. The other major response, held by 31 percent of the villagers, is to express dependency. However, what is most important here is that this is a metaphorical dependency, involving seeking help from the Lord Buddha or from Allah (for Moslems) or from one's "soul-stuff," rather than from other human beings.

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premise of the item in order to express their satisfaction over their present and traditional state is not without significance. It is important to note that were we to deduct the six "competent worker" responses from the previous category, this category would then represent the majority.

The third major response, given by 20 percent of the sample, describes being a "good," "respected," and "non-trouble-making" individual as the principal wish of the informant. A few of these villagers want to be "good

TABLE 26

He wishes he were . . .
Raw *wants to be . . .*

STATUS:	40%	a rich man. Then he could do anything he wanted.
		a teacher, in order to teach children so that they will have knowledge and be good children.
		an army officer.
		a person who has a lot of money and paddy fields, because I have many children. I have ten *raj* (four acres) of land now. What will the children do when they grow up? It worries me.
		a good worker, growing a lot of paddy.
STASIS:	25%	he does not want to be anything.
		he never wishes anything, because his status compels him to be what he is.
		he is quite content to remain a farmer.
GOOD PERSON:	20%	a man who behaves well and has goodness, virture, and honesty.
		a good person, not a *nagkleeng;* one who does not *thiawtree* (go out, enjoy oneself. leave the family).

citizens," a response which, although small in number, reflects the importance that villagers attach to being members of the nation-state. (Considering all the different things that they might wish to be, how many Americans would complete the item, *"He wishes he were . . ."* with the statement: ". . . a good American"?) More than half these informants, however, build an interpersonal dimension explicitly into their replies by saying that they either want to be persons who "do not lie or incite people, do not have trouble with others" or are persons "whom others trust and respect."

What is most revealing about the above responses are the unexpected omissions. There are no references at all to religious considerations, even on

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the part of older people.[12] Particularly obvious is the absence of any reference to accumulating Buddhist merit. Neither is there any reference to the pleasures derived from dealing happily or enjoyably with other people. The closest we get to this is with the responses of two informants who are concerned mainly with the welfare of their children, and who speak in terms of "inspiring respect" in their children or assuming the role of "doctor" who, either by his knowledge (in case the children are ill) or wealth, could take care of them. Given all the conceivable things that villagers might wish to be—fanciful, real, personal, social, of this world, and of any world—the dominant wish is to have status, wealth, and respectability within their prevailing peasant context.

The next item, *"Most of all he wants to . . ."* is essentially a confirmation of the above findings. However, perhaps because of the syntax of the Thai version of the item and the inclusion of the word, "most" (*"The thing which raw wants the most is (namely) . . ."*) the responses assume a considerably more extreme and "unimodal" form. The overwhelming majority of the informants, 77 percent, want only one thing: money. A few of them say that they want what are essentially cultural variations of money: property, rice fields, land, cattle, and jewelry. Several of them almost wax purple about the significance of money in their lives: *"The thing which raw wants the most is (namely) . . .* have money and gold, because money can help us all the time. Whatever one wishes to have, one can use money to buy it all. Even when one wants a wife, if one has a lot of money one can have anyone's daughter"; ". . . have money. Money is better than anything else. It is only the moon and stars that money cannot buy"; ". . . to have money. She wants money very much because when she lacks other things she can find something to take their place, but when she lacks money she is most unhappy"; ". . . have wealth because everything else comes after that." These responses, of course, explicate the major function of money. They indicate that money is not an end in itself, but a means by which to achieve some of the other life goals appearing here.

The minority responses to this item are in no case held by more than four individuals. Four villagers do give religious responses, saying that what they want most is to accumulate merit (one mentions both merit and money); three refer to maintaining the welfare of their families (one of them merging money and succorance by saying that he wants enough money to provide for his family); and four say that they want happiness (again, two of them linking money and happiness together).

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[12] There is nothing in the grammatical-semantic structure of the Thai version of this item inhibiting a religiously oriented response. The Thai cognate for the verb "to be" here is *"pen,"* which could easily result in a response such as ". . . *pen khon thii mii bun,"* or ". . . a person who has merit." This would be the most obvious "religious" completion under the circumstances.

[P. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

121 132 243 433 565 462 142 582 584 842 851 84 826 774 75 779 782 779

Diet in Body Maintenance and Curing

261 262 753 Because food created fire, the daily diet could be a source of illness or a therapeutic means. Every food had known properties for heating or cooling, and for other effects as well. Guava fruit, alcohol, and turtle or cobra curry were heating. Eggs were cooling. Depending on the occasion, ice and iced concoctions were over-heating or over-cooling. They were always "dangerous during menstruation." Banana varied according to the variety: kluai hŏm (fragrant banana) was undesirably cooling and caused either diarrhea or constipation (Hauck, 1959:27); kluai nam wā was less deleterious (salāng) while kluai nam was good for the sick or for parturients (Boonlong).

252 262 [758] [846] Properties in food changed in cooking. Boiling made rice "ripe" (auk) and so available as nourishment (Anuman Rajadhon:77). Even the method of cooking varied the properties. For the sick and for parturients, the banana variety called kluai hak auk was good if baked, but not if cooked in syrup (Boonlong).

262 753 827 Some foods were "incompatible" with, and so aggravated, certain illnesses. Air-borne food in the form of smell was incompatible with, and compounded, a condition of wind excess. Death or blindness ensued. On the other hand, asafetida might be tied to the wrist of a new-born baby so that the smell, an established carminative, might cure the excess wind in his stomach manifested as flatulence.

262 [774] [782] Beneficial foods were encouraged. Of all these none surpassed rice, the main sustenance of the body, "the only true food" (Yong Chutima, in Hauck, 1959:27) and source of "strength" to the farmer. Rice was a safe food. It never disturbed elements. Eating rice, as compared with meat, had no overtone of taking life. One could eat one's fill without any sin. Most of all, rice nourished the human khwan, for each grain contained a part of the khwan of the divine Rice Mother. Furthermore, any food offered ritually to a spirit or to make merit acquired strengthening properties, and was afterwards given to priests, children, or to the sick.

[776] Foods with known dangers were avoided. "Kluai tānī banana, a variety full of seeds, was never eaten because it contained a female ghost (phī)." Jackfruit was avoided by lactating women as a direct source of wind-excess. Fruit in general was not dangerous but "did not give enough strength for a rice farmer. It was all right for an orchardist."

magical formulae and incantations (khāthā cf. Textor 1960:80-88; 67-79). It was one of the branches of occultism (saiyasāt [McF. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khāo (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khāo. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō raksā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyae). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.[19]

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

Influences on Health

In Bang Chan, a discussion of sickness and health merely in terms of element balance would be true but insufficient, or even superficial. After all, whether manipulated by oneself or by a professional curer, elements could only be controlled within certain limits. Far deeper questions were posed, probing the ultimate nature of health, life, and death. What determined the particular proportions of a person's 4 elements with which he had been born, and whether he had, say, a preponderance of wood from Jupiter or gold from Venus? The immediate answer of astrological confluences on the date of birth would be true, for each day had its own qualities and aspects, but it was not enough. Why had he been born on that date to that set of governing factors? In life, why did one person meet the circumstances that created illness, while another lived in glorious health? The answers to these questions must be sought in the Buddhist moral and cosmic beliefs.

The Buddhist universe operated on a principle of immutable law. Each person received his just due, suffering for his own sins, enjoying reward for his virtue. There was no personified deity to help, forgive, or blame. Moreover, attachments were the cause of sorrow. Because existence was fraught with desires, all life was basically painful. Even flashes of happiness by their cessation caused sorrow.

In this universe and on this earth, individuals, each a unique and independent entity, were born to live and die, over and over again, throughout eons of time. They bore no relation to each other. Separate and autonomous, each was in charge of his own destiny. All beings formed a single grand scale of existence from demons in hell, through such lowly creatures as worms and insects, upward through dogs, cats, buffaloes, and elephants to mankind, then on up to angels and gods in the last paradises before the peace of Nipphān (Nirvana).

The insight of the Buddha showed the way to break the sorrowful eternal cycle of rebirth and reach Nipphān. The Buddha perceived that meritorious behavior caused one to progress up this ladder of existence toward freedom from incarnation. In each life merit (bun) could be accumulated by compassionate behavior: caring for priests, and being kind and generous to persons less able to care for themselves. With merit one's next life was happier and freer of restrictions. A dog had more merit than a worm, a buffalo than a dog.

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775 Man was higher on the scale than woman.[20] Progress toward
[562] Nipphan was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phī) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
• 782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good health and long life, a kindly personality, many fine children, wealth, high status,
[775] intelligence, and luck. Astrologically, he was born on a day of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death,
[753] deformities, unhappiness, poverty, and had a cruel nature. Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

751 The long-range protection against all illness was to
784 live virtuously and make merit. However, to guard against
[577] temporary supernatural intrusions, everyone possessed and
[782] usually wore Buddha lockets and other amulets. Some
[304] underwent tatooing, men having Cambodian or other figures, women, 2 small dots tatooed on the torso under the arm.

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20. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

Chapter III

PREGNANCY AND PARTURITION

842

Conception

Conception occurred when a khwan-soul flew into the womb of a woman during sexual intercourse. "A father and a mother are equally important because there is no birth in the world without both. An infant is the product of both sexes," said a priest in a Bang Chan sermon.[21]

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The little being in the womb from the moment of conception was a specific individual who had lived many times before, meritful or sinful according to its previous actions. Desire for rebirth was in itself evidence of inadequate merit to effect release from incarnation. Though this life was to some extent a fresh start, his character (nisai) and heart (čhai) were already largely formed through his store of merit and ingrained habit from former existences.[22]

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21. The teachings of the Buddha state: "Rebirth takes place when a father and a mother come together, and it is the mother's period, and the one to be born is present" (Suriyabongse:20).

22. He bore with him the last ideas spoken to him at his most recent death. The Visuddhi-Magga tells how this carry-over occurs. One of the categories of karma, was the "close at hand, karma remembered at the point of death [which] springs up with [a person] in rebirth" (Warren:246). As King Mongkut lay dying, everyone in the room called out "arahat!" in his ear incessantly so that by "remembering it at the point of death" he might be reborn an Arahat (E.R.E. "Siam": 487). Another pertinent category of karma was the "habitual": "karma that has become habitual through frequent repetition. This brings on rebirth when [other] forms are absent" (Warren:246). Here is the basis for the inborn character, heart and ingrained habit (cf. J.R. Hanks, 1959, and the section below on "Habit" (khoei).

843 She was "more sensitive, tender, and delicate," and more vulnerable to outside influences, both good and bad. For her goal of nourishing a beautiful child, her greater sensitivity gave her the means. Because of the physical unity of mother and child, her every sight, sound, touch, taste or smell, every thought and action reacted on the child. Out of compassion she sought out beautiful sights and avoided ugly ones; she behaved virtuously and tenderly. As the tonsure-chant put it:

> "A child's skin is as soft as cotton. His mother dares not eat hot-tasting foods lest they burn this tender skin and make him suffer. Awake or asleep, she is careful in sitting and reclining lest he be hurt inside. She is merciful, and sensitive for her child. His pain is like that of a tiny helpless bird being clubbed by savage hunters. She will not taste incompatible foods, nor the sweet nor the peppery, even though she thirsts for them...." (S.S.).

She took every opportunity to associate herself with words or actions which implied success in situations analogous to parturition. For instance, in order that her child would "come out" more easily she cooked and ate a lotus bud, carried by monks and chanted over, especially those used at the termination of Buddhist Lent, when the monks "came out" (ɔ̄k) of their sequestration (Textor:169-170).

The father, too, shared in the responsibility, for it took both a father and a mother to bring forth a child. Quarrels were avoided for they made for a quarrelsome child. A man was particularly enjoined to help by keeping his wife in a happy mood. The father's industriousness in collecting wood for his wife's post-partum fire made for an industrious child. As a good example for the child and for their own "merit," a pregnant woman and her husband chanted prayers (mon;skt:mantra) at night together before retiring. Thus their child would be "easy to raise" (Textor 1960:87).

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Sometimes these aberrancies were viewed as desirable sources of supernatural power, but on other occasions, they were seen as a sign of demerit, caused embarrassment, and were suffocated at once (if alive), and buried. 845 847

If a woman died pregnant, her body was at once brought to the temple where the unborn child was removed surgically. The usual solacing sermon, rites "to lead the deceased to live in her right place in the next world," and cremation took place, with the fetus laid beside its mother so that it "would come out normally." The mother and child were separated to prevent a ghost which was double-powered. No prayers were chanted at home before exsection "lest they make the power of the spirit stronger." Moreover, any violent or premature death caused an angry ghost. The ghost of a premature child had a heavy load of sin, for its stay in purgatory, where sin was worked off, had been interrupted (Textor:262). An unscrupulous mǒ was eager to get possession of any ghost for use in sorcery, and a double ghost was stronger than any other. Ghosts were obtained by plundering the mortuary chambers of the temple prior to cremation. By feeding (liang) it, a mǒ controlled it. The ghost of a male infant was preferable because it was "stronger than that of a female." In the light of this situation, not only should the body of a pregnant woman never be left alone " so that no one can get at them (sic)," but a pregnant woman herself ought not to be alone.[26] The behavior towards the Rice Goddess, Mother Posop, who was "pregnant" when the grains in the stalk filled out, illuminated many of these attitudes: "Mae Posop feels weak, hungry, and uneasy. She is eager to taste sour and sweet foods. She is a woman and beautiful in her pregnancy." To allay her hunger the 845 766 [775] 845 775 754 775 843 782 [754] 843 782 796

26. In Cambodia, a pregnant woman might be murdered, even by her husband, so that the murderer might gain the malevolent power that possession of her now double soul would afford. (E.R.E. "Cambodia": p.159). This specific statement was not found in Bang Chan but might be part of the shadowy background to local reluctance to leave a pregnant woman alone. [171]

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843 farmers brought to the fields an offering of two kinds of
782 bananas (kluai hŏm and kluai namwâ), sugar cane, taro,
776 young coconut and cakes; and "fresh earth burned and offered with oranges and other kinds of fruit."[27] She was also given the things "dear to women": new clothing, perfume, face-powder, hair lotion and a mirror. In the
843 annual harvest ritual, when some woman (never a man)
776 escorted the Goddess from the field to the rice bin, participation was forbidden to a pregnant woman because
784 "the Goddess-Mother might be jealous of the woman's heightened beauty" and so be malevolent. Also, "being now emotionally weak and easily upset, a woman might be frightened by seeing the Goddess, who, after all, is close to being a spirit (phî).

843 The prominence of food cravings in this traditional
262 description leads to a consideration of diet in pregnancy.

Diet in Pregnancy[28]

As long as everything went well, pregnant women "ate as usual." The underlying premise was that each woman early in childhood had established a regular diet suitable to her individual make-up of elements, and eliminated foods that because they did not agree with her or were disliked, were judged "not compatible." A woman could eat as usual because the ordinary daily foods, rice, coconut, etc., were "safe." The modifications introduced to beautify and protect the mother and baby were made on the basis of the properties and

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27. The goddess was following traditional "defeated by one's pregnancy" (phaethŏng [Mc.F: 598]) symptoms of desiring "sour, salty, or strange things such as burnt earth." Like any woman, her craving for sweets indicated that a heavenly creature was to be born; for fruits, that she would bring forth an animal; for burnt earth, that the god Brahma would be born (Anuman Rajadhon 1961:115-116).

[114] 28. This section does not purport to present a dietary study in modern nutritional terms. Hauck's study (1959) of maternal and child health gives information on foods eaten, craved, disliked, or viewed as "good for" or "not good for" women during child-bearing, and also on illnesses found among pregnant women, including beri-beri, nausea, cramps, and fainting. The data here add to her information on behavior and stress traditional views as to the purpose of the dietary injunctions.

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844 "faked labor pains to hold down her errant husband!" or so a sour mother-in-law said (Hauck,ibid.).

844
789 Finally, one day, Dūan felt uncomfortable and decided not to go out to plow. Lek prepared for her hot-tasting medicine. When Song came in at eleven from work, he went to the garden, to the little house of the family's protecting spirit (săn phra phūm), lighted incense and offered flowers, asking that it and the ancestors help his wife and keep away evil ghosts. He also prayed for help of the ancestors. Mī went to ask Sāi not to go far away that day and to ask in what exact direction to push over the woodpile. Sāi replied, "Push it over in the direction the snake lies today, so that Dūan and the wood lie parallel with their heads and its apex in the same direction to the north and east. Never let them be to the south and west." A passing boatman saw the wood go over. "There's news to tell!" he said. "The child is being born!" Dūan thought she ought to send away her little son, but he refused to go, and stayed by his mother the whole time. Song's sister came by for a visit, but stayed to help after getting word to their parents. It was no time for visitors, especially men, but any helpers, male or female, were welcome. Lek prepared the all-important ceremonial gift, the khwan khāo (soul-rice), for the midwife, which validated, and insured the use of, her private magic. She put a bunch of bananas, 7 betel pepper leaves, 7 areca nuts, flowers, incense sticks, a candle, and 20 baht into a bowl filled with dry rice grains. A little later she strung the holy thread around the 4 walls of the house. On each side she attached "yan," (Skr.: yantra). These protective cloths, about 10 inches square with magical letters and drawings, kept away the terrifying phi krasū spirits, seen as lights at night, who, attracted by bad smell and blood, would creep up the housepost, eat Dūan's blood, intestines, and faeces through her anus. Then Mī went again to Sāi to report that "the pain was increasing." These words were the signal to Sāi that it was time for her come.

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As Dūan was to profit from the magic, it was better that she herself hand the midwife the khwan khāo bowl. Sāi lit the incense and offered the bowl in gratitude to the teacher who had given her her magic. She whispered in the direction of Dūan's head, "All good spirits in the high heavens and in the locality, help and do not obstruct at this delivery! Give happiness to mother and baby!" Placing the bowl on a high place to the side of Dūan's head, she said, "My teacher is long since dead, but will hear this request, and will pass the request and the khwan khāo to her teacher, and so on, back all those thousands

846 789 782 Now that the fire was going nicely and Dūan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sāi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dūan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaichiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dūan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

846 [757] [853] As Dūan was resting quietly, Sāi made three "taping fruits" (lūk prakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dūan's legs to cure the birth wound (phlē). The other two were set aside for use on subsequent days. Sāi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dūan, on the side away from the fire.

787 827 With satisfaction of a job well done, Sāi and Lek sat together for a quiet chew of betel. "Lek," said Sāi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that best

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36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

37. The deities addressed were mæ phra phlōeng and mæ phra phai. Another Pali-Thai magic formula to control fire was: "Phra Mōk Khan Lē Mō will extinguish the fire from hell, na mō phut thā ya." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mō...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Textor 1960:483-485).

844 In view of the stake of a child in the successful outcome of his own birth,[39] under what circumstances might a child not be helpful? This was explained by merit (bun) and habit (khoei).

Merit

• 782 828 761 844 Since merit, gained through virtuous behavior, determined a person's character, circumstances, health, and longevity, the merit of mother and child set the course of childbirth. It will be recalled that persons who lacked merit because of previous sins were cruel, lived short lives, and had to endure suffering, while meritorious persons enjoyed success, kindly natures, and long life. Yet an outwardly fortunate person might be at the point of merit-exhaustion, when suffering commenced. Any mother who suffered greatly lacked merit. In one case, "7 babies of a woman died young while the eighth and subsequent ones lived, proving she had to suffer greatly to work off some misdeed in former existences. She was given the trouble of bearing and feeding the child, and the child did not have enough merit to grow up, and so to feed her in return." Her punishment was to bear non-meritorious children who could not live. A woman's premature[40] death in childbirth was caused only by her own lack of merit.

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[171] 39. By way of contrast, consider how parturition is pictured in the United States. The active role is played by the midwife or doctor, or some other outsider, who "delivers," i.e. "liberates," the child from the womb, or frees the mother and baby from one another. "A child is born" presents the child as completely passive; in "to have a baby" the mother is relatively so. The most active English renderings are "to bear a child" and "to give birth to a child." It is noteworthy that modern anaesthetics have tended to increase the passivity of the mother.

40. The idea of a natural term of life was described in the Visuddhi-Magga: "The Karma that caused conception has ripened to a termination, although the dependence for continuing the series constituting the term of life be not exhausted. Death by the exhaustion of the natural term of life occurs when the span of life, the nutritive powers... proper to any given grade of existence come to an end..." (Warren:252).

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

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A midwife or doctor could not be blamed, unless it was felt they did not help as much as they could have.

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A child lacking in merit died. Such individuals, for some reason, did enough at their own birth. Words of comfort to a surviving mother were, "your baby did not have enough merit to live." If particularly sinful, it died after making delivery unusually painful. "Once a child was born dead, but it teased the midwife by moving its legs a bit. Consequently, its death was not the fault of the midwife." The child's lack of merit was proved by its death and its maliciousness. There was no hostility towards any child born in a hard delivery, for if both mother and child survived, the demerit that caused the suffering was the mother's.

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On the other hand, a meritorious woman with a meritorious baby had a short, easy delivery. Such a child was considerate: "he will not hurt his mother, will help her to bear him easily, and will live."

A woman who safely came through childbirth felt deep satisfaction and new security. Bearing a child in itself did not bring any merit, though it was an act of merit. Merit could come later with the ordination of a son. However, why one woman had successful or short labor, and another not, was unequivocally clear and accepted. If delivery were normal, she was confident of her and her child's store of merit. If not, she bore the anguish, convinced that she had brought it on herself in some previous life. Since sins were worked off with pain, every thrust made her future lives happier. Fear was minimized, for if death came, it was merit-determined.

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retreat (ōk phanaā) in order that her child would come out (ōk) more easily. Here none sought to divide the worlds of the natural and the supernatural, or to mark off "imitative magic" from the "learning by example of the natural world." A stronger influence came from more powerful agents, so that the effects of the Buddhist temple carried greater effect than the actions of a mere neighbor. Yet any like influence was of aid, especially in a verbal similarity. Thus, an event occurring on a Friday was apt to be auspicious because the Thai name for Friday contains an element identical in sound (though etymologically different) to the word for happiness (wansuk=Friday; suk=happiness), and for the fortunate status of true adulthood (suk=mature, ripe).

Stability in a Floating World

In explaining why some children were "born easily and were easy to raise" (liang ngaā) certain persons simply said, "They were born into the right family. Those born to the wrong family usually die." In defining the "right" family, merit, habituation, and helpfulness converge.

Most families were thought to live together as a group in life after life. In view of the separateness of souls, how was this brought about? The key lay in the conviction that people who made merit together met in future lives. Since most merit-making was undertaken as an enterprise of the nuclear family, sometimes with close kinsmen and friends, they would find each other. Some of the eagerness of friends to help (chuai ngān) with cash or labor was in order to meet in later lives. These persons were used to each other, used to helping each other, and so might marry. Thus, if they lived rightly, the nuclear family, maybe with an infusion of beloved old friends, expected to carry on in the next existence. Although a family's prosperity proved its merit, and its wealth facilitated making more merit, continuity in time was not limited to the wealthy. Proof that a couple had been married in a previous life lay in the birth of a boy as first born. Such a couple was known as a "khū" (pair), and divorce was held to be highly unlikely.

How did a child find its "right" family? After whatever necessary stay in purgatory, the khwan soul of a deceased member roosted in a tree near to its old home, then flew into an accustomed womb. One recalls the start of the blessing (p.48), "Come, khwan! Come my own child!" A woman hoped that the khwan was one previously born to her. "A couple lost its first child. Later the wife was fearing for the life of their sickly second-born." The husband said, "It is according to your sin and merit. If the child is your own child, he will live with you. If not, he cannot."

761 Since only meritorious children were born into the
775 "right family," they were helpful and so easy to raise. The
593 easiest to raise were reincarnations of babies deceased in
829 the mother's present life. "A girl of three died. Her father
• 782 dreamed he was at her coffin. She asked for water which he gave her, then brought her home. Months later a boy was born, so easily raised up that people knew it was a reincarnation of that girl." Here amiability and the change to male sex demonstrated merit. In another tale, "a woman lost many babies at birth. Her husband, thinking it was the same child trying to be born to that mother, marked the forehead of the last deceased baby. His surmise proved correct, because the next baby born had this mark on its forehead."

This assumption that a woman's children were born to her over and over led to a measure of control over the cooperativeness of the child in the womb. A child trained to "good habits" became a meritorious adult who, when reborn, would of course "help" his mother in childbirth. It was advisable to set one's own child into paths of proper behavior, for he could be born again to a descendent, and in all likelihood to oneself.

On the other hand, families were not closed groups. "Like a leech that sticks in one place, then goes to stick somewhere else, so a deceased person may be reborn somewhere else," said a priest. The marriage blessing stated, "May angels, not criminals or beggars, reincarnate as your children." Thus was explained why upright parents might have a disobedient, roaming child. He had roamed into a new family which perhaps he had met during a pleasant casual visit to them in another life. If he did not stay home to make merit with his present family, a wayward child would roam out of it as easily as he came in. Here was the ultimate danger in visiting around too much.

761 Because all individuals lacking in merit died off at
593 birth, some of whom because they got into the wrong family,
782 a selective process continuously weeded out the extremely
[163] non-meritorious so that those who were born usually survived. In fact, Hauck's figure of 90.6 live births (1956:33), the percentage of total pregnancies shows how many meritorious babies were born to the right family!

852 The Winnowing Ceremony

844 This ceremony, described in Dūan's tale, was usually
774 performed shortly after delivery, though it might occur anytime during the first three days of a baby's life. The child, placed on the tray (twins were laid together or separately) was claimed by the mother or the father, who

before completing these obligations, the parents lost out on their anticipated reward (cf. L.M. Hanks, 1962).

Since waywardness (pai thīao) was considered a continuous threat, magical means were taken at the moment of birth to ensure that a child stay close to the family that raised him. The blessing following the winnowing ceremony invoked immovable things: the post, the cat that traditionally never roamed far, the pumpkin that sat and fattened:

> "...Stay at home like the bottom of the house post. Watch the house like a cat. Eat and stay here! Never leave home. Be fat and heavy as the ash pumpkin..."

The most important binding actions utilized, or brought the child into physical contact with, objects long associated with family, in particular the house and land. The umbilical cord was cut on earth or phlai dug from the house-land itself with a bamboo "knife" sliced from one of the deeply sunk house posts. Of these "the knife is the important thing." The phlai also had medicinal purposes. With a feather "from the mother's house" the baby's navel was smeared with cobwebs from a spider whose web indicated long undisturbed residence. They buried the placenta either under some large old tree that stood near the house, or under the house stair. The old family winnowing tray, old clothes, and well-used family possessions were used first before any new furnishings were purchased for the baby. A fire of sakāe wood grown on premises boiled the water for the baby and mother, and heated the mother. Sakāe "was planted when a house was first built so that every generation of occupants would have it available for use at confinement" and also for firewood at other times (cf. McF. 834). All these binding rites assured that the child being rooted to a home terrain, would not wander frightened, and so "would not cry." He also would be at home to participate in the merit-making that would reconstitute the family in another existence.

If a child were born away from home, how was this bond to his locality established? On one to two occasions when the child was born at the Minburi Health Center, Hauck (notes, 195[illegible] observed a solution to this dilemma. The mothers returned home, as was customary, within a few hours of delivery and were established by their respective fires. Their babies were winnowed and laid on their trays with the usual auspicious book, pencil, and needle. Neither tray held any bamboo, clod, nor phlai, however, for these had not been used. On one tray, though, was laid a steel knife from the kitchen, mute proof that a family cutting instrument ought to be there. On another occasion, a father asked to be given his child's placenta so as to bury it on the house site. In so far as possible, people in Bang Chan tried to carry on the old rites.

562 delivery, "her blood was purified to a white color to become
[827] the milk of the breast."[48] Nursing a child was the essence
[853] of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 In a wider context, not only all their household members
462 but people anywhere were the objects of women's nurture:
252 women were in charge of the cooking even if occasionally
264 helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor houshold, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry any more." She construed this as proof that she had ample
[082] merit, but it also meant that she was a great donor who gave
[431] continuously and took little. Women usually offered the
[796] early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When
593 age pushed women past their mature capacities, they returned
888 to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 A desire to give tender care and nourishment was deemed
857 inborn in all women. Although sex was not strongly
[291] differentiated in babyhood,[49] by age 3 a hard-to-handle
[593] skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phūm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[856] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

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156 (riak khwan). Theirs was an augmented personal potency[55] in nurture not unlike the mana so widespread in the Asian-Pacific area.[56] The best midwives were liang di, though not all liang
[159] di were midwives. This societal peak was not an unattainable ideal. In the community, certain women were pointed out as liang di and some of them recognized in themselves the validity of this title.

562 The association of rice, motherhood, and khwan now stands
774 clear. Rice made suk by cooking over a fire, was the essential
776 food not only for the body but for the khwan. Growth and life
262 depended on the nourished khwan. Rice came from a maternal figure, the Rice Goddess, Mae Phosop (cf. J.R. Hanks, 1960). Human mothers, too, when made suk, gave suk nourishment: the milk of the breast was merely transformed rice. Whenever rice was eaten throughout human adulthood, the Rice Mother continued her nourishment, for in each grain was a bit of her khwan, nourishing to the human khwan. The rice-bowl and ladle, used in many a ceremony, stood for the maternal care given a human khwan, and by extension, personal care throughout life. Whenever the rice bowl with offerings (khwan khao: soul-[of]-rice)
[782] was presented by a parturient or by a sick person, loving care comparable to maternal care was being requested.

182 The idea of re-birth, of a fresh start within the pure
885 area encircled by the holy cord, with auspicious words and
846 consecrated fire, was deep in every life-cycle rite. The
562 particular circumstance of the fire of parturition was a forthright cooking to bring out and increase a woman's
372 essential femaleness, to transform her from a youthful, partial giver into a complete, mature donor of nourishment. Such was the satisfaction of women in this female role that many said they would like to be reborn as women. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:375) for a quick run-down on a definition of mana.

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sacred books were inherited by males.

In the light of this definition, only the 2 or 3 males were true professional midwives. They gave elaborate annual ceremonies of homage to their teachers (wai khrū) attended by all the persons who had profited from the teacher's magic that year. However, all the male midwives were also fully qualified mō. Their ceremonies were large because they were dedicated to the teachers of their curing powers as well as midwifery.

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The male midwives, then, were in a somewhat different category than the females. They were mō who had, in addition, trained their hands for midwifery as an "extra specialty." Midwifery seems to have been one of the few areas where skilled hands were considered of greater importance than magic. "We have no magic for delivery," said one male midwife, knowing that nothing but merit could guarantee success. Because they had access to the incantations for element and spirit control, and could make holy water, the midwife-mō could spare the parturient the necessity of getting in an outside mō, if such were needed. However, one part of the midwife's job the men could not do. To protect their male powers of invulnerability they were forbidden to wash the woman's clothing. A woman or a female midwife always had to do this. Men also could not provide the female "mystique" particularly related to the khwan and to growth.

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However, the community did not adhere to this narrow definition of professionalism, for several of the experienced and competent women, Buddhist and Muslim, behaved as professionals and were accorded the title of mō tamyaa. Their magical formulae, being congruent with their female office of promoters of growth and life, were especially effective. Like a mō they received the ritual gift of the khwan khaw, hallmark of the possession of occult formulae, which the patient presented to assure the benefits of magical knowledge.[68]

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68. This ritual bowl of rice and offerings was never excused even between the closest kin. If forgotten or misused, the "teacher" punished the midwife with pains, and had to be mollified with a food offering. The magical benefits could not be withheld once the khwan khaō had been accepted. It was not accepted if the patient were too near death to be assisted. If the patient died, the whole gift, cash, rice, and all, was given at once to the temple to make merit.

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by instruction from a ritually[71] approached teacher. "One cannot accidentally learn. One has to ask to be taught." As a practitioner in this field, the title "mɔ̄" signalized expertise; where teaching was involved, the title was khrū (teacher [McF. 183]) or ācān (professor [McF.990]). Speech was the key to this tradition, in spite of sacred books and wall-carvings in the temples.[72] Modern education, being book-and-teacher based, shared in this aura. There, even today, listening is more comfortable than reading.

Techniques of the practical, natural world were learned not by teaching but pragmatically by observation, example and experience. Eyes were the key. "I know because I saw," said a midwife. At the highest level of achievement in the natural world one was expert (nak), e.g. convict (nak thōt, an expert in being punished) a tourist (nak thiao, an expert in roaming around).[73] Within the natural world, an intense pragmatism reigned always emphasizing visual phenomena. People were keenly

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71. To speak ritually one held in the hand the trio of incense, flowers, and a candle. This was the way to cross over from the profane to the sacred world, to inform (bɔ̄k) or make a request of, a sacred being (a teacher, priest, king, or deity). The tiny flame of the offering invoked holy fire, and so had the effect of making one's words compelling, for no one could gainsay a request under such circumstances. A husband about to deliver his wife held incense, flower, and candle in hand as he requested the help of ancestors and spirits. (Bishop Pallegoix saved the existence of his mission by thus approaching the King [Pallegoix, Vol. 2:201]). The trio of offerings, whether at the 4 corners of the lying-in fire-floor, or in "hat phlī krathong" at a "than khwan" rite, or even in an ordinary khwan khao made all actions and words compelling.

72. Because words, immaterial and invisable, lay at the base of occultism, words as continuous agents of power permeated Bang Chan's ordinary daily life. This was why words, verbal play, and punning initiated action: pregnant women attended the monks' "coming out of retreat" (ɔ̄k phansā) so that the child would "come out" (ɔ̄k) easily.

73. It should not be forgotten that most activities in the supernatural world had their technical sides, and the term "nak" was used there too. A curer had to learn his herbs; a dancer, his steps; and a master of ceremonies, the words of the chants.

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An old woman summed up significantly 2 attitudes saying, "In the old days people made more merit and so lived longer, but because we had no hospitals, the children died younger." The relation of good health and longevity to proper religious and moral behavior was fundamental in Bang Chan. If merit did not suffice, medical attention, traditional or modern, could not prolong life. Children, however, were tender (ɔ̄n) and easily prey to sickness. Traditional care could help them, but being delicate and tender like city people, children could also be helped by modern hospital care.

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Between the 2 systems people sensed little conflict, for each patient made a preliminary diagnosis of his symptoms and sought the type of assistance his diagnosis and convenience indicated. Mɔ̄ with some knowledge of both systems might offer their patients a choice of remedy. With the right diagnosis, magic, and medicines, a quick cure was expected. If not forth-coming, people were disappointed and moved to another specialist for his help. Modern medicine merely took its place as one more recourse.

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The basic handicap of modern medicine was that it had no magical resources or holy water. "Its effectiveness is limited to the properties of the ingredients." Old medicine on the other hand had, in addition to these properties, "The strength of the mɔ̄'s incantation plus the power of every person who learned and used that incantation, back to the time of its discovery, centuries ago." Thus where the medical schemes offered the same specialty, as in fevers, bone-setting, or obstetrics, the old appeared to offer more resources.

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Besides its deficiencies in magic and strength-making attributes, modern medical care had other drawbacks. First, it was not accessible. A trip to Bangkok for medical purposes involved far more time than a day. Minburī's Health Center was a feasible trip, even for a woman in labor (stays ranged from 6 to 24 hours). Home arrangements for tending children, feeding buffalo, and other chores were less demanding. Bang Chan's eagerness for local modern care was shown when a Bangkok physician visited Bang Chan for a few times as part of a nutrition study. He was besieged with private requests for medical advice. Secondly, modern medical care was expensive. In Bangkok, after the expense of getting there, taxis, food, and housing costs for accompanying relatives, hospital, and doctor's fees sometimes meant losing the family gold and even land. Minburī's costs were closer geared to farm income, but medicines appeared costly. "Modern drugs taste and act better, but the poor have to use the old." Third,

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
57 the steps in the Buddhist winnowing ceremony and performed
852 them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khāo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
774 "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist, meant charitable giving in the sense of tithes, for Islam
782 prescribed that a portion of one's income be given to the poor. On the other hand, the Muslims had taken over many
177 Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 Completely Muslim was the stress on physical and
783 moral purification as an objective of every rite, and conversely, the prevalence of the idea of defilement.
304 "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate pro-
764 cedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before
831 burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and
834 contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality
562 much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (fāk thong: to deposit gold). On returning home, she went as
273 fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim mid-
795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclos-
562 ed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khāo contained "7

The Muslim khwan khao contained " 7 items"--a young (or ripe) coconut with its water; thread or "a skein of yarn"(used not to tie in the khwan but "for the teacher"); 7 pieces or areca nut; 7 betel pepper leaves; one "heavy" (15 gram) yellow wax candle; one "bag" of incense; rice; and 30 haht in money.[78] The khwan khao was not offered with the idea of its reaching phra In (Indra) ultimately, but rather the local princely spirits of the land, chao thi, chao thān, and Mae Thoranī (Mother Earth). It was waved 3 times by the midwife over the abdomen of the woman in labor with the prayer: "Spirits of the land, Mother Earth, may the delivery be easy!" The khwan khao was then placed at the mother's head. The woodpile was knocked over so as to point to Mecca, which was west, a direction avoided by the Buddhists. "When nearly ready to deliver, a Muslim midwife turns the mother's face in the direction where the family's hens hatch their chicks. If they have no chicken, then in any direction."[79] If delivery were slow, a Buddhist mo was called to "shift the mother to new places" until the baby came out.

Muslim women lay post-partum by a fire for the usual physiological reasons. In making up the fireplace, instead of a cluster of incense, flowers, and a candle, this purely Hindu-Brahman-Buddhist trio, they sprinkled salt "to keep away evil spirits" on the dirt at the corners. Salt, oil, or alcohol was spewed over the fire and the woman's body, or only magic was recited, "to control the poison of the fire." "Of these, salt is best," said a Muslim midwife, but "whichever a midwife used first has to be continued for the rest of her life as her way of doing things, because the habit has been started that way." The Muslim magic for controlling the fire was "om ming om fun om fai sawa hai." "So be it, stove, rocks (or mountains), fire, be cool, may a blessing rest to you," though "om" is the Pali-Buddhist "mystical word." The placenta was not put in a pot beside the fire, but was washed by the midwife several times until perfectly clean, then was mixed with salt and buried in the dirt directly under the fire. When the fire was finally destroyed, the placenta was dug up, washed again, and immediately buried (not in a pot), with the

78. There was some evidence that the thread and incense were included only when a Muslim midwife was delivering a Buddhist woman.

79. To the Muslims this was an act of imitative magic. The Buddhists saw the action of a setting hen as a quick source of information for the parturient's orientation. The hen always avoided the direction of the phi luang (Textor:378).

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

262 A discussion of food habits in Bang Chan would be in-
796 complete without some description of ceremonies ((l)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

796 The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-
527 teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion
264 of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

• [782] Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could
[554] afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and
527 at festivities. Thus, there was reason to make a (l)ngaan
796 as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

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[196] [461] 1. Significantly the same Thai word is used for work and for ceremony.

[302] [591] [835] 2. Topknots, formerly worn by all Thai children, used to be cut ritually at the time of puberty. In Bang Chan, the growing of a topknot had become primarily an attempt to improve a child's health. Few school age children wore topknots. They were usually cut earlier than puberty.

[575] 3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

796 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the
[876] time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives
• [782] and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A
764 big cremation might require planning in detail for years ahead:
796 invitations to priests and relatives in distant parts of the
574 country; hiring an orchestra and obtaining ceremonial gear.
533 For the largest events, when the guest lists ranged upward to
[428] 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person,
[252] usually one of the "professional" cooks of the village. The
[476] day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

[262] The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an
262 annual homage-to-the-teacher rite. It is the nearest approxi-
796 mation to a quantitative record of food for a ceremony that
895 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either
796 at 7 a.m. or 11 a.m., or both, always at least in part by the
792 host, who sat and chatted with them. No one else ate until

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)daeeeng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chauaun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

50

In Bang Chan when donations for a new school
264 building warranted buying the foundation materials, so that
476 volunteer labor was solicited for their installation, some of
946 the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

782 The spirit-offering, or the portions eaten by a partic-
264 ipant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests.
262 The pork was cut up and eaten with a hot sauce, or put into a
262 "with-rice" dish. It was especially appropriate with liquor.

262 The use of food ritually was not limited to the ceremon-
755 ial season nor to big events. The same purposes underlay the
852 use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

43 The benefits of a (l)ngaan accrued to every participant
554 down to the last worker and contributor according to the degree
796 of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

796 One assistance in the financing was that every invited
476 guest made a contribution, customarily 5 to 10 baht, which
435 helped defray the costs. In 1952, household heads reported these contributions as totalling from 30 to 1,000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (l)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

concerning its culture and use. Tilapia culture was learned largely by trial and error, and was considered primarily as a source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

More home consumption of eggs would be desirable, but their ready sale and acceptability for barter may present an obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

Milk, as canned, dried or malted milk preparations, was considered an appropriate gift for the priests, who are forbidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to include milk among them. People gladly bought food for the priests and would probably accept on the authority of the head priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headmen were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

The importance of merit making and the relatively large cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

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essentials not atypical of the region. Instead of villages being organized administratively on the basis of natural social groupings and demarcations—that is, social centers and groups with which people feel a primary identification, in Bang Chan's case the local Buddhist monastery and government primary school—so that governmental and social units are isomorphic, they are gerrymandered into highly arbitrary administrative units. Thus the village of Bang Chan is comprised of seven *muubaan* or hamlets, at the head of which are seven hamlet headmen; these hamlets are located in two different *tambon*, or communes (four in one commune, three in the other) headed by two commune headmen, neither of whom lives in Bang Chan; the two communes are located in two different districts headed by two different district officers and their staffs; the two districts fortunately are in a single province, Phranakhoon, the same administrative unit in which the metropolis of Bangkok is located. Yet the people who reside in these varying hamlets located in different communes and districts all perceive themselves as living in the single village of Bang Chan. The fundamental organizational problem here is that since the sources and lines of governmental authority do not follow the lines of the natural Bang Chan community, jurisdictional conflicts and confusions arise to threaten the effectiveness of those community-wide programs that occasionally may be initiated. For example, during a diphtheria immunization campaign in the village (Hanks and Hanks 1955), the public health officer from one of the district offices was reluctant to immunize all the children of Bang Chan on the grounds that some of them came from hamlets outside his district's jurisdiction; he yielded, as the Hankses note, only when a perceptive villager pointed out that if germs knew no boundaries why should he?

Not all villages of the Central region have such real or potential administrative difficulties. (And Bang Chan does not have them too frequently either, principally because the government does not initiate too many community service programs.) However, the basic organizational principle which admits them—that houses are grouped together as administrative "villages" on the basis of conceptual neatness rather than socially functional criteria—is a common feature of the administrative structure of the Central Plain.

The foregoing account describes some basic culture patterns which Bang Chan shares with other villages of either the region or the nation. In addition to these broader patterns, Bang Chan has certain traits which inevitably refer to local village conditions and contingencies. For example, the most active and viable social unit in Bang Chan beyond the familial level is the order of Buddhist monks associated with the monastery. It is the only organization within the village that has been successful in mobilizing community activity (Sharp *et al.* 1953), although much of this activity has

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been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad, national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.[4] As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

[4] It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.* Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

* There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost a Buddhist monastery where one may make merit and only secondarily the Bang Chan Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

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These assumptions about the indeterminate nature of the universe and human actions are so integral to the villagers' cognitive orientations that Bang Chaners often hesitate to make even the most elementary kinds of prediction. Thus, in asking a village lad how he felt about his older brother's forthcoming ordination, I was told, "I don't know." The tone of his reply indicated that he was not evading the question, so I pursued the matter further: "Well, do you feel happy about it? Do you wish you were being ordained together with him?" He answered: "The ordination is not for another three days. I do not know how I will feel at that time. But when that time comes I will know." In another case, I was going up the canal with a villager to attend a "Kathin" being held at the monastery. (A "Kathin" is a fiesta-like merit making ceremony sponsored by a person or group of persons from outside the village at which new robes are presented to the monastery monks. It involves the sponsors, their local hosts, and all villagers who wish to attend.) Although not necessarily an annual event, "Kathins" are held often enough at Monastery Bang Chan so that this villager, who was also a member of the monastery lay committee, was thoroughly familiar with every aspect of them. Simply to make conversation, I asked him: "What is the 'Kathin' going to be like today?" to which he replied, "I do not know. I have not been to the monastery yet today." Assuming that his past experience with "Kathins" provided him with some knowledge of the goings-on, I went on: "Well, do you think there will be many people?" His answer: "I do not know. You never know what a situation is like until you meet it. I have not met this one yet today."

The point of these various illustrations is that they represent a psychological universe of uncertainty and unpredictability. And in this kind of universe—where one hesitates to build up sharply defined expectations and where one is forever aware of the mutability and frailty of the environment—it is not unusual that there should also be a high tolerance for interpersonal nonconformity. What the actual limits are, theoretical or empirical, to this tendency to nonconformity are uncertain. Much of the nonconformity is undoubtedly made possible, in the first instance, by the sociologically simple and relatively undifferentiated nature of Bang Chan society; that is, the actual number of functionally specific tasks and roles—those that require special competencies—are few, and any number of different individuals can perform them. Thus, when a Bang Chan employee walks out on his boss or when a wife walks out on her husband, their actions do not from a functional point of view disable the system. Since the requirements of the role of house servant or farmhand are characteristically simple and understood by all, the departing employee can usually be replaced by another individual. Similarly, since any adult—aunt, grandparents, older sibling—can and often does rear another's children, and

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Chan. However, there remains the crucial question of how villagers manage to develop the long-term relationships that they do have, for despite the inevitable unpredictability of all human contacts, most Bang Chaners do live together in family units for more or less sustained periods of time, fathers do save for years in order to give their sons respectable ordinations into the monkhood, relatives and friends who have not seen each other since childhood do assemble for the cremation of a late kinsman or mutual friend, and mature adults do continue to feel a profound sense of respect and obligation to individuals who were their teachers when they were youngsters. What are the bases and rewards for these enduring interpersonal commitments?

The immediate rewards for these commitments are, on the one hand, quite apparent. They involve such things as the simple, unrationalized kind of love found among any group of kin or close friends. In the case of the ordination and cremation, there is the reward of making merit, not only for the son and the departed soul, but for all those who sponsor and participate in the ceremonials. The satisfactions gained from increasing one's social prestige by putting on an ostentatious ceremonial are not to be overlooked either. At a more subtle level in the case of the respectful student, the reward is gained from knowing that one is behaving in a proper and courteous way toward one's *ascaan* (in its social psychological connotations, similar to the Indian term *guru*) and is thus upholding established normative patterns. The rewards of maintaining the rituals of the moral order are not to be glossed over for Bang Chaners, like most Siamese, are a deeply ethical people. This is not meant as an evaluation of their behavior or as a statement of their capacity to conform to their ethical prescriptions, but simply as a statement of their preoccupation with ethical concerns. The rewards of *feeling* (genuinely or self-deceptively) that one has behaved in an ethically and ritualistically prescribed way are among the most satisfying of sentiments, although as indicated in the discussion of "social cosmetics," villagers often use the rituals of ethical behavior as substitutes for more demanding interpersonal involvements. Indeed, the great emphasis given to the performance of ethical rituals (speaking in soft and gentle words, honoring one's mentors) helps perpetuate the loosely structured relationships found in the community in that conformity to these rituals is perceived by many as comprising the fulfillment of their interpersonal obligations. Beyond this they are free to pursue their own interests. To a large extent the ritualistic forms serve as a comforting psychological justification for the pursuit of individualistic concerns, *i.e.*, "But I otherwise treat others so nicely." [80] This is not the result of conscious

[80] In one of his more recent and typically penetrating works, Goffman (1963) coins the terms "Involvement Shields," "Main Involvements," and "Subordinate

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114 156 171 571 status differences and the looseness of social ties loom considerably in Bang Chan probably makes for some other structural variations.[22] However, as stated below, Foster's formulation applies almost perfectly to Bang Chan (1173-1176):

> The model appears to account for the nature of interaction between people of the same socio-economic status, between people of different statuses, between fellow villagers, between villagers and outsiders, and perhaps between man and supernatural beings as well. Although my analysis deals only with Tzintzuntzan, I think the model will prove useful for other societies with similar structural features . . .
>
> Briefly it is hypothesized that every adult organizes his social contacts . . . by means of a special form of contractual relationship. These contracts are informal, or implicit, since they lack ritual or legal basis. [This is not completely true for Bang Chan. There is, for example, a special "Teachers' Day," sanctioned by the national government, set aside for honoring teachers, and thus providing ritualistic reinforcement to the contract.] They are not based on any idea of law, and they are unenforceable through authority; *they exist only at the pleasure of the contractants.* The contracts are dyadic in that they occur only between two people; three or more individuals are not brought together. The contracts are noncorporate, since social units such as villages, *barrios*, or extended families cannot truly be said to enter contractual relations with other families, although spouses often honor the obligations inherent in each other's contracts.
>
> The implicit dyadic contract is made between members of a family as close as siblings [and in Bang Chan, as close as husband and wife, and parents and children] . . . ; and it unites neighbors and friends. Contracts are found between social and economic equals within Tzintzuntzan or with similar people in other communities. And they are found between people (or beings) of different status and category, as on those few occasions when outside political leaders or economic patrons have ties with villagers and when a villager invokes the aid of the Virgin Mary or a saint. [In Bang Chan, a functional equivalent of the latter would be when villagers propitiate the *caw*, or Spirit Lord, who resides in the *San Phra Phuum*, or house of the Guardian Spirit of the home. This is a replica of a house, about the size of a bird cage, located in every house lot in Bang Chan. The offering of rice and flowers to the *caw* is explicitly a form of payment to him for the use

[176] [782] [778] [782]

[22] A second paper on Tzintzuntzan (Foster 1963) indicates that there are some crucial motivational differences as well, viz., Bang Chaners enter into dyadic contracts with a much greater sense of freedom than do Tzintzuntzeños. Their attitude is both more cavalier and cold-blooded than the Mexican peasant who feels that if he is to exist, he has no choice but to enter into these contracts. The Bang Chaner is animated by a sense of personal advantage; the Tzintzuntzeño by a sense of passive participation in a system he cannot change.

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of the land upon which the human home is built. In effect, humans have temporarily "rented" the land from him.]

. . . [The] contract implies and is validated by reciprocal obligations . . . [In] its totality the system of complementary reciprocity validates, maintains, and gives substance to the implicit contractual networks. The symbolic meaning of exchanges (as contrasted to economic and other functions) is accepted without question by all villagers: as long as a person continues to give to and receive from a partner, he is assured that the particular relationship is in good order. *When an exchange pattern between two people terminates, it is overt evidence to both that the contract is dead,* regardless of the formal institutional ties or the religious validation which may, in theory, continue to bind the participants. [Italics added.]

In anthropological analysis it is customary first to seek and attempt to identify the factors which link human beings together rather than those which keep them apart. This is so much a part of our professional tradition—in effect, one of our "primitive predicates"—that we tend to gloss over the question of the extent to which people must have enduring interpersonal commitments. This question has not been pursued in precise detail in our discussion. However, the realities of Bang Chan social behavior are so weighted in the direction of atomistic and essentially non-relational considerations that any coherent discussion of them should be organized in approximately equivalent terms. It is for this reason that the bulk of our presentation has focused on the individualistic nature of the villagers and that the factors accounting for interpersonal linkage were left to the end. It is hoped that such an organization has accurately reflected the tone and quality of Bang Chan social life as it is encountered and felt by an outside observer trying to understand its meaning to those who experience it.

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the part of older people.[12] Particularly obvious is the absence of any reference to accumulating Buddhist merit. Neither is there any reference to the pleasures derived from dealing happily or enjoyably with other people. The closest we get to this is with the responses of two informants who are concerned mainly with the welfare of their children, and who speak in terms of "inspiring respect" in their children or assuming the role of "doctor" who, either by his knowledge (in case the children are ill) or wealth, could take care of them. Given all the conceivable things that villagers might wish to be—fanciful, real, personal, social, of this world, and of any world—the dominant wish is to have status, wealth, and respectability within their prevailing peasant context.

The next item, "*Most of all he wants to . . .*" is essentially a confirmation of the above findings. However, perhaps because of the syntax of the Thai version of the item and the inclusion of the word, "most" ("*The thing which raw wants the most is* (*namely*) . . .") the responses assume a considerably more extreme and "unimodal" form. The overwhelming majority of the informants, 77 percent, want only one thing: money. A few of them say that they want what are essentially cultural variations of money: property, rice fields, land, cattle, and jewelry. Several of them almost wax purple about the significance of money in their lives: "*The thing which raw wants the most is* (*namely*) . . . have money and gold, because money can help us all the time. Whatever one wishes to have, one can use money to buy it all. Even when one wants a wife, if one has a lot of money one can have anyone's daughter"; ". . . have money. Money is better than anything else. It is only the moon and stars that money cannot buy"; ". . . to have money. She wants money very much because when she lacks other things she can find something to take their place, but when she lacks money she is most unhappy"; ". . . have wealth because everything else comes after that." These responses, of course, explicate the major function of money. They indicate that money is not an end in itself, but a means by which to achieve some of the other life goals appearing here.

The minority responses to this item are in no case held by more than four individuals. Four villagers do give religious responses, saying that what they want most is to accumulate merit (one mentions both merit and money); three refer to maintaining the welfare of their families (one of them merging money and succorance by saying that he wants enough money to provide for his family); and four say that they want happiness (again, two of them linking money and happiness together).

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[12] There is nothing in the grammatical-semantic structure of the Thai version of this item inhibiting a religiously oriented response. The Thai cognate for the verb "to be" here is "*pen*," which could easily result in a response such as ". . . *pen khon thii mii bun*," or ". . . a person who has merit." This would be the most obvious "religious" completion under the circumstances.

125 29.d. IF R HAS SONS 20 AND UP: Of your sons over twenty, how many have been ordained as Buddhist priests, or not?

[793]	7. DA	212
[593]	A. None	22
[792]	9. One	58
[162]	X. Two	25
	Y. Three or more	16

e. Do you have any sons under twenty?

	9. Yes	188
	X. No	108
	— No Answer	37

[793] f. IF YES: In future, do you want your sons under twenty to be ordained as priests, or not?

• [782]	Y. Yes	186
	O. No	—
	— No Answer	2

g. IF YES: But aside from your admirable desire to have them ordained, in your true heart how sure is your expectation? Are you very sure or not very sure, or fairly sure that they will be ordained?

	1. Very sure	140
	2. Not sure	26
	3. Fairly sure	12
	4. Unascertainable	9
	NA	1

h. All over Thailand there are some Thai men who are over 50 but have never been ordained as priests. For what various reasons might this happen?
(See code at end)

[461] 30. Suppose there was some work you could do individually, or that could be done in a small group of two or three, or that could be done in a large group. Which way would you prefer to do the work--as an individual, or in a group of two or three, or in a large group?

	8. Individually	60
	9. Small group	55
	X. Large group	202
	Y. Undecided, depends	4
	0. Unascertainable	12

[572] 31. Around here in HC-KY there are some people who have many close friends and there are other people who have few close friends. And how about yourself? Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?

	5. More than most	62
	6. Fewer than most	94
	7. About the same	154
	8. Unascertainable	23

843 [775] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phi tai thang klom, caused "the worst of all possible deaths." The phi krasu spirit,[25] entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). The [753] supernatural disease missile called "khun" might also strike. "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extra pain [751] occurring just before the baby comes out." To protect [304] themselves, women wore extra talismans or had 7 dots tattooed under the arm.

843 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 7 visible teeth, which indicated it was a non-human, yak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of women giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (McF.46). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb sat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
591 the steps in the Buddhist winnowing ceremony and performed
[852] them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khǎo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
[794] "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist,
[782] meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the
[17] poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 Completely Muslim was the stress on physical and
[783] moral purification as an objective of every rite, and conversely, the prevalence of the idea of defilement.
[304] "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate pro-
[764] cedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before
[831] burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and
[834] contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality
[562] much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (fāk thong: to deposit gold). On returning home, she went as
[273] fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim mid-
795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclos-
[562] ed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khǎo contained "7

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)daeaeng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chauaun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

843 farmers brought to the fields an offering of two kinds of
782 bananas (kluai hōm and kluai namwā), sugar cane, taro,
776 young coconut and cakes; and fresh earth burned and offered with oranges and other kinds of fruit."[27] She was also given the things "dear to women": new clothing, perfume, face-powder, hair lotion and a mirror. In the
843 annual harvest ritual, when some woman (never a man)
776 escorted the Goddess from the field to the rice bin, participation was forbidden to a pregnant woman because
• 784 "the Goddess-Mother might be jealous of the woman's heightened beauty" and so be malevolent. Also, "being now emotionally weak and easily upset, a woman might be frightened by seeing the Goddess, who, after all, is close to being a spirit (phī).

843 The prominence of food cravings in this traditional
262 description leads to a consideration of diet in pregnancy.

Diet in Pregnancy[28]

As long as everything went well, pregnant women "ate as usual." The underlying premise was that each woman early in childhood had established a regular diet suitable to her individual make-up of elements, and eliminated foods that because they did not agree with her or were disliked, were judged "not compatible." A woman could eat as usual because the ordinary daily foods, rice, coconut, etc., were "safe." The modifications introduced to beautify and protect the mother and baby were made on the basis of the properties and

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27. The goddess was following traditional "defeated by one's pregnancy" (phaethong [Mc.F: 599]) symptoms of desiring "sour, salty, or strange things such as burnt earth." Like any woman, her craving for sweets indicated that a heavenly creature was to be born; for fruits, that she would bring forth an animal; for burnt earth, that the god Brahma would be born (Anuman Rajadhon 1961:115-116).

[114] 28. This section does not purport to present a dietary study in modern nutritional terms. Hauck's study (1959) of maternal and child health gives information on foods eaten, craved, disliked, or viewed as "good for" or "not good for" women during child-bearing, and also on illnesses found among pregnant women, including beri-beri, nausea, cramps, and fainting. The data here add to her information on behavior and stress traditional views as to the purpose of the dietary injunctions.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

231 was given away fresh to selected kin and friends, including
262 those who helped to butcher, and the remainder was salted
784 and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems
184 are forbidden to eat an animal with two or four legs which
252 "dies," although eating dead locusts or fish is not forbidden.
431 Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

231 Oxen, a sign of prosperity, were bought as calves by
262 the Moslems and fattened for meat, usually with a ceremony in
554 mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders
184 in Bang Chan raised hogs, and 4 of these had 1 or 2 only.
262 Moslems ate no pork. A permit from the district officer was
554 necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

235 Poultry was not commonly used for food in Bang Chan.
262 It was the poor man's "feast" food suitable for guests. One
431 couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were
235 raised for sale in the market by one Moslem family. In 1953-
177 54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for
677 foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

224 Various wild creatures were used for food whenever they
225 were caught. Turtle curry was considered a great delicacy,
262 but as turtles, which could be caught from May to February,
643 brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

226 Fish. - Next to rice, fish constituted the most abun-
262 dant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

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251 1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

Killing
262 fish was apparently regarded more lightly by many Buddhists
226 than killing of larger animals, but fishing on (1)wan (4)phra,
• 134 the weekly holy day, was forbidden. Fish were caught from the
canal with nets, traps, spears and hooks. Some were trapped
226 in trenches in the rice fields. Techniques varied with the
varieties of fish mature and plentiful at different seasons.[1]
227 Moreover, every house had a fish pond. It was usually the
hole from which earth had been removed for mounding the home
site, and was connected by a ditch to the canal. Fish were
lured from the canal into the pond by clearing it of injurious
undergrowth, planting appropriate fish-feeding plants, of

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251 Smaller fish were preserved as fermented fish. The fish
with bones left in, were salted overnight. This product was
[269] called (1)plaa (1)raa. For fermented fish to be used as
seasoning, in various dishes, the liquid was drained off, then
the fish were washed and mixed with salt and specially pre-
pared rice. This had been soaked overnight, fried and pounded.
The mixture was allowed to ferment in a small jar for from 2
weeks to 2 or 3 months, depending on the product desired.
Large bones were removed by putting the product through a col-
ander before use. Fermented fish had the advantage that it
could be eaten without further preparation, and the flavor was
generally liked.

Small shrimp, which were caught in quantity during only about 3 weeks in February, were made into shrimp paste as follows: the shrimp were washed, mixed with salt and allowed to stand overnight. The liquid was drained off, and the shrimp were spread out on trays and exposed to the sun for a day or so. Larger ones might then be beaten to loosen the shells, which could be winnowed away. For very small shrimp, this step was omitted. The shrimp were then pounded thoroughly in a mortar, and stored in a jar for about a month before use. Very small fish were sometimes made into fish paste in the same way. The yield was about 2 kg. of the tannish or grayish colored shrimp paste from 4 baskets (4/5 tang) of shrimp. Shrimp paste or (2)ka-(2)pi was an essential ingredient of Thai hot dishes.

The liquid which was drained off from the mixture of fish or shrimp and salt in the first stage of preparing fermented fish or shrimp paste was used by some villagers to prepare (4)nam (1)plaa or fishsoy. The liquid was boiled with certain green leaves such as mango leaves, onion, garlic and salt for from 30 minutes to an hour, then it was strained.
[263] The resulting red-brown liquid was bottled and was ready for use as a condiment.

[186] 1. Sharp et al. (1953, pp. 185-196) described some common fishing techniques and listed 32 varieties of fish known to be found in Bang Chan in 1948-49.

would not come willingly to work. When a family with a reputation for stinginess diluted the (3)khaaw (3)tom too much, the group refused to eat any, thereby reminding the host of his obligation for hospitality.

574 Guests to whom meals were served fell into four categories: 1) kin, 2) visiting dignitaries, 3) priests and 4) drinking companions. Kinfolk who came as guests were married children, or those who were away at school or work, or kinsmen from Bangkok or elsewhere. The older the relative or the greater the distance travelled, the greater the honor accorded him. Foods were exchanged. Two visiting ladies travelling in a large boat, made an annual round of all their relatives, bringing certain "city" foods and receiving substantial gifts of rice, fish and fruit. They stayed for several days as guests of one family, then moved on. Every person from Bang Chan who visited a relative in Bangkok carried big packages of food, usually rice or eggs, as gifts. With the inflated prices in Bangkok, it was advantageous to have a "country cousin" who might bring food. Visiting kinsmen always recognized the need for eventual reciprocity.

Visiting dignitaries were usually entertained by hamlet headmen. Meals served to visiting officials, policemen and others might be elaborate, involving cooperative help in preparation, but reciprocity, if any, rarely took the form of a return meal.

Regular visits of the priests, as well as the invitation of priests to the house for special events, have been mentioned. Priests might also come from afar, usually staying at the temple but receiving generous offerings of food from people of the community.

The custom of convivial get-togethers of either or both sexes was well established. Men traditionally enjoyed "stag" dinners of four up to twenty or more whenever the ingredients for a turtle, frog, cobra or other snake curry were available. Chicken curry might also be thus served, and once a catfish mash was prepared by a male visitor from the north. These curries were cooked by men, and the host served liquor freely. The all-male character of the occasion reflected the old restrictions on women's partaking of flesh foods (see p. 42), but older women did not hesitate to join in the drinking. Women also got together in drinking parties, sometimes to play cards.

In addition to sharing food with people in these four categories, the general rules of hospitality required that anyone who came to the house at meal time, should be offered food, or at least a drink of liquor, tea, or plain water.

Attitudes Toward Food

To older Bang Chan residents, to lack rice was to starve even though fish or vegetable fare were at hand. Since rice was the staff of life, many important customs clustered about it. Ceremonies to the Rice Goddess accompanied the raising, selling, and storing of rice. When the unhusked rice was in the bin, it could not be withdrawn at any time as needed, but astrological charts had to be consulted to make sure the day was auspicious. Paddy could never be withdrawn on Friday, a day sacred to the Rice Goddess. After cooking, the best rice was said to be at the mouth of the pot, so this was offered on ceremonial occasions. Important rules were that when cooking rice, the cover of the pot must never be laid in a mortar and it must be inverted, never laid down flat; otherwise one would be short of rice. One must never scrape the top of the rice with the cover, or the "soul" of the rice would be scraped out of the pot. Moslem residents murmured an Arabic prayer every time the rice was put into the pot, and every time the pot was put onto the fire, as well as before eating.

Rice has been generally regarded as the strength-giving food par excellence. A portion of Chutima's (1939) description of the "old system" follows:

> Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal. Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply.

The quotation indicates first that in the past, rice was considered much more important as food than the "with-rice" dishes. Since the Food and Drug Division of the Ministry of Public Health has been attempting to encourage the eating of more "with-rice," the attitudes found in Bang Chan are of interest. One informant stated that only rice can make children fat, and that the "hot taste" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish, and was weak; he refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk (evaporated or dried milk, diluted with boiled water) expressed the opinion that the ancient belief was based on thrift. He said that thrifty

262 753 853 constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

The belief that eggs would cause dental caries, and should therefore be omitted from children's diets, was expressed by the mother in a poorly nourished family. The possibility that such ideas arose from unwillingness to spend much money on food for a child has already been noted (see p. 42).

262 753 758 Information on food suitable in illness was obtained only incidentally. The Thai did not appear to have a consistent theory as to the cause of disease (Sharp et al. 1956, p. 489), and residents of Bang Chan did not seem to associate any of their illnesses with contaminated food or water. Choice of food in illness was probably associated in some instances with the idea that the body is composed of the four elements: wind, water, fire and earth, and that sickness results from or is a symptom of imbalance in the proportions or arrangement of these elements. Thus the "fragrant banana" and eggs, because of their "cooling effect," were said to be forbidden in measles. A child who was getting measles was restricted to rice and dried fish. In contrast the small, [853] rather flavorless banana, designated (3)kluaj (4)nam-(4)waa, was said to have "no cooling effect" and was considered an acceptable food in illness, as well as for newborn infants.

262 753 784 In one instance, when a patient had been taken to the hospital with severe diarrhea, a nurse instructed other family members not to eat ices, syrup (see p. 36), or raw vegetables, nor to drink unboiled water. The informant who told us about this offered no reason for these precautions. These foods were simply "forbidden" to the family of a patient with severe diarrhea.

717 824 245 Notions as to what is fortunate or unfortunate may also affect agricultural processes. The many ceremonies associated with culture and use of rice have been mentioned (p. 42). The idea that a papaya tree growing near the house was "unlucky" was attributed to Thai by a young Thai Moslem in Bang Chan. When we commented on the papaya tree near his front door, he said the papaya tree dies easily and does not like water, but his was planted on high ground. According to this informant few villagers would be willing to grow papaya trees near the house. He considered the non-specific threat of harm as unreasonable, though he said that if specific harm were said to [717] result, he would be concerned about it. The midwife at Minburi Health Center said that she urged each woman who came there for delivery to have more banana, mango and papaya trees planted for home use. Before raising of papayas can be successfully encouraged, however, the idea that papaya trees bring back luck must be overcome.

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to be reborn as man. All women were eager to undergo the post-partum fire at least once. After that modifications might be entertained.[57] Whether the baby lived or died was not pertinent, for the benefits of the fire were for the mother.

Comparison of Male and Female Maturation Rites

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The parallel ritual that fitted men to perform their masculine role was ordination into the Buddhist priesthood. The well-documented Buddhist ends should not be permitted to eclipse this other personal goal. Just as the fire prepared a woman for motherhood, so ordination changed an immature youth into a man ready for marriage and fatherhood. He too was transformed from raw (dip) to ripe (suk). Men gained compassion through denial and suffering. Since their natures were seen as hard (khaeng), strong, bent on gain, influence, and power, possibly destructive and concupiscent, the severest deprivations were invoked: the renouncement of the gratifications of sex and food. Of the 2, the deprivation of food involved the greatest break with previous habits, for since babyhood, food had been a symbol of maternal care. Hence, a man was cast on his own. His only refuge and support was the Buddha, the law, and the Brotherhood. This self-denial induced the suffering that, coupled with knowledge gained from study of the scriptures, led to compassion. The suffering in no way

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57. The fire-rest though desirable was not obligatory. In 1965, Bradley said it could be "dispensed with in times of civil commotion, for fear of the enemy" and "no damages whatever were suffered whatever to mother or child" (p.79). Like other life cycle rites it was postponed if not convenient (nadnak). Also in times of peace, "a few mothers here and there cannot lie by the fire," and a few say, "they will not" (ibid:p.79). Bang Chan would accept this viewpoint freely as reflecting an individual, constitutional set of elements, or as an autonomous decision of an individual. The woman would never feel herself as competent as a ritually mature person though.

885 deprived a man of his masculine strength but was expected to
793 change him into a kind and merciful being.[58] It took at least
562 a three month season (phansā) in the priesthood to make a man
mature, responsible, and effective. That this moral fitness
785 was not obtained overnight was given vivid illustration: if a
[718] Buddha Amulet, designed for invulnerability, failed to be effective when tested by having a gun fired at it, it was "sometimes jokingly dismissed as a monk (phra) who has just been ordained (bwat mai)" (Textor:529). This interesting episode illuminates
789 one other important result achieved by both men and women in
885 their respective maturation rites: authorization to handle magic.

Magic and Maturity

In Bang Chan, magic was powerful. Whatever the purpose, whether beneficial or nefarious, it was effective if all conditions were met. Lest such power fall into unscrupulous hands, the community limited its availability and use to those who had gained the moral qualities and fitness to handle it wisely. Only the ritually mature could be counted on to be compassionate, strong, responsible adults, and so were permitted access to occult powers. Whether by ordination or the fire-rest, to be suk was an absolute prerequisite to magical knowledge. It did not give magical power, but qualified one to seek it out. Since no career in medicine was possible without magic, no man could be a mō who had not been previously ordained.

789 The uses of magic by men had entirely different objectives
562 from those of women. Their respective fields did not

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58. "A monk was changed...to be meek and mild." By seeking his morning alms he "show(s) mercy towards creatures" (prot sat) (Amuman Rajadhon:76-77). Women's tenderness in their maternal function was not associated with shyness. A compassionate woman with a strong winyan soul (which projected the quality of the heart) was enterprising and effective (cf. J.R. Hanks, 1959). Where sexual characteristics were confused, instability in behavior appeared. The cultural expectation was that children and women were delicate (ɔ̀n), older people and men were hard (khaang). "A male who is easily induced to convulse is one who had a 'soft' heart (ɔ̀i ɔ̀n).[t ...and also a 'soft' khwan (khwan ɔ̀n).....Such a young man is excitable rather than predictable and dependable, and hence is cause for parental anxiety" (Textor:408).

concerning its culture and use. Tilapia culture was learned largely by trial and error, and was considered primarily as a source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

More home consumption of eggs would be desirable, but their ready sale and acceptability for barter may present an obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

Milk, as canned, dried or malted milk preparations, was considered an appropriate gift for the priests, who are forbidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to include milk among them. People gladly bought food for the priests and would probably accept on the authority of the head priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headman were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

The importance of merit making and the relatively large cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

All food was also made up of the 4 elements. Here rice was of particular importance. The body was seen as built and maintained by rice. Flesh in fact was rice, an image probably derived from Buddhist scriptures. 11

Each element carried with it its substantive aspect of heat, flowing, etc., and its astrological nature and relations. Elements could be compatible or incompatible with each other. Earth, water, wind, iron, and wood for instance were compatible. Gold "got along" with all elements. Fire, though, was incompatible with wind, water, and wood for it could destroy their proper proportion.

The effect of astral and planetary relationships at the moment of birth on one's constituent elements induced qualities of character.12 Mind and body were a continuum. Because family members were born at different moments of time, intrafamilial temperamental differences were expected.13 Persons made up of incompatible elements quarreled. Thus friction might occur between parents and children. For a husband and wife, who lived in especially close proximity, the constitutional elements were of special importance. Through marital relationships their elements were in physical contact. Consequently, in the old days, a couple contemplating marriage ascertained through their horoscopes the compatibility of their natal elements to determine whether they could live together without destroying each other. For instance, a girl with much fire in her make-up was easily angered and prone to fevers. She could not make a successful marriage with a boy with much wood.

Physiology

A single physiological process controlled the functioning of the body and the mind; i.e., the equilibrium of its elements. If the elements were in proper balance, proportion or harmony, a person was healthy; if an element were excessive or deficient,

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11. "This, my formed body, is composed of the 4 Elements, generated by Father and Mother, built up from rice, porridge and sour gruel," says the Buddha (Suriyabongse 1961:11).

12. Merit, the other determinant of character, is discussed in "Influences on Health" below.

13. Cf. the proverb "The joints (knots) on the same stem are nevertheless unequally spaced, so even brothers are of different minds," (Gerini 1894:14).

magical formulae and incantations (khāthā cf. Textor 1960:88-98; 67-79). It was one of the branches of occultism (saiyasāt [McF. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khāo (cf. Duan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khāo. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō rakeā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyae). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.19

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

Influences on Health

In Bang Chan, a discussion of sickness and health merely in terms of element balance would be true but insufficient, or even superficial. After all, whether manipulated by oneself or by a professional curer, elements could only be controlled within certain limits. Far deeper questions were posed, probing the ultimate nature of health, life, and death. What determined the particular proportions of a person's 4 elements with which he had been born, and whether he had, say, a preponderance of wood from Jupiter or gold from Venus? The immediate answer of astrological confluences on the date of birth would be true, for each day had its own qualities and aspects, but it was not enough. Why had he been born on that date to that set of governing factors? In life, why did one person meet the circumstances that created illness, while another lived in glorious health? The answers to these questions must be sought in the Buddhist moral and cosmic beliefs.

The Buddhist universe operated on a principle of immutable law. Each person received his just due, suffering for his own sins, enjoying reward for his virtue. There was no personified deity to help, forgive, or blame. Moreover, attachments were the cause of sorrow. Because existence was fraught with desires, all life was basically painful. Even flashes of happiness by their cessation caused sorrow.

In this universe and on this earth, individuals, each a unique and independent entity, were born to live and die, over and over again, throughout eons of time. They bore no relation to each other. Separate and autonomous, each was in charge of his own destiny. All beings formed a single grand scale of existence from demons in hell, through such lowly creatures as worms and insects, upward through dogs, cats, buffaloes, and elephants to mankind, then on up to angels and gods in the last paradises before the peace of Nipphān (Nirvana).

The insight of the Buddha showed the way to break the sorrowful eternal cycle of rebirth and reach Nipphān. The Buddha perceived that meritorious behavior caused one to progress up this ladder of existence toward freedom from incarnation. In each life merit (bun) could be accumulated by compassionate behavior: caring for priests, and being kind and generous to persons less able to care for themselves. With merit one's next life was happier and freer of restrictions. A dog had more merit than a worm, a buffalo than a dog.

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[278] fast enough to break the amniotic sac. Sāi made her a medicine of mung bean and sugar, both of which wet the uterus, and murmured some magic words to help. Later she worked with her hands at the vagina, twisting the sac a bit to break it. Suddenly the sac ruptured.

Now the child was almost there. The head showed well. Sāi sat down directly in front of Dūan to do the pressing herself. With one hand she held or gently pulled on the baby, with the other she pressed on the abdomen with every [789] contraction. As she started in, she said magic words. She worked for an hour--no midwife would press more than that--until at last the child was out. A little boy! With her finger Sāi removed the blood from his mouth, and pucked out the lips. Breathing was slow in coming, so she shook him vigorously, then laid him down. Quickly she chewed up an onion and spit it over his body. "Ah-h-h!" A cry, though not very strong! Seeing the new baby appear, Chai, who up to then had been constantly near his mother, rushed precipitously from the house, and refused to come in for hours, in spite of Song and Lak's coaxing.

[787] Everyone had observed an auspicious circumstance: the cord was looped around the baby's neck! This imitation of the holy cord (nongkhon) placed around head and neck in Brahman rites of passage was a rare and good sign. "A cord looped thus could never kill a baby," someone said.

Since the placenta was slow in coming, Sāi prepared to cut the cord while Dūan rested and sipped the fiery snake brand medicine. Depending on circumstances she might cut it [278] before or after the placenta was out. Taking a rhizome of phlai (McF. 60), a traditional healing root, she laid it on a clod of soil brought in from outside. From one of the [412] old bamboo house beams, someone had sliced with a knife a sharp-edged, tapering sliver to serve as a cutter. The cord was stroked 3 times, starting near the baby's stomach "to remove the dirt." Then "something that is in the umbilical cord" was pushed back towards the baby's stomach "to prevent [778] a flow of blood." She measured the cord from the baby's abdomen to his knee, and tied off 2 places in it with the holy unspun cotton cord used ordinarily in rituals. Laying the part between the 2 knots on the phlai on its bed of soil, and saying her magic "w'nyān a sam pa nō," she cut [757] the cord with the bamboo cutter. With a chicken feather which had to come "from the mother's yard," she collected a few spider webs from the rafters, mixed them with coconut oil, and painted them around and on the cord-stump, also "to stop the blood-flow." While doing this, Sāi said, "One midwife I know severs the cord by tying it with the thread at 3 places, then burns it with a flame."

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Lek watched over the baby, while Sāi turned towards Dūan. "One looks to the mother first, unless the baby needs help more." First Sāi gave DŪan medicine for the placenta. She rubbed her hands with alum and tried unsuccessfully to work down (klōm) the slippery placenta. Then she told Dūan to get on her hands and knees, and exert all the force she could. DŪan crept around the floor but it still did not come. Sāi then tried hitting Dūan's back 3 times with DŪan's own pillow. Finally she gave DŪan a leaf of betel pepper to chew, hoping to induce a wind-producing nausea and so push out the placenta. In the end DŪan resumed her sitting position and it was pressed out. So the baby would not get pimples, the placenta was cleaned carefully, then put into an old pot, mixed with 2 dishes [751] of salt, and set aside.

While Lek sewed up the partially completed cushion, Sāi laid the baby along her legs, and washed him with soap. Sometimes she washed the baby before the cord was cut, if the placenta came quickly. She used salt to remove the greasy fat from his body, though would have preferred "fermented tamarind to protect him from pustules that enlarge to sores (rōk phuphōng)." "Soft tissue like a stomach covering his head! What a good sign of progress and fortune!" she exclaimed. She powdered him with face powder (dinsōphōng), and painted his abdomen with turmeric,[34] "so wind will not make him cry." Covering him with a little piece of old cloth, she laid him on Lek's old winnowing tray (kradong). [787] [278]

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It was the moment to winnow (rōn) the baby, and link it to home and family. While Lek got the holy unspun cord, others placed on the tray with the baby all manner of traditional things to influence the progress and well-being of the child during his lifetime. Sāi put on the phlai, the clod of soil, and the tapered bamboo she had used to cut the cord "because they will never be used again," but actually these things had a far deeper meaning to all present. Song laid on a school exercise book and pencil, so that his son would have knowledge and a good memory. Mī got a needle for sharp wit. If the baby had been a girl, the needle would have given sewing skills. When all was in readiness, DŪan had to decide on the ones to raise the child aloft, catch the tray as it was dropped, and bless him as the holy thread was tied on. She had to choose these persons carefully, for the child

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34. Other mixtures (used also on the mother) were lime-bergamot lemon; or phlai (if possible the one on which the cord was cut), wānnan (acorus calamus) (Textor:84-86) and mahāhing (asafoetida) with burned betel leaf. These were all to keep out wind.

846 789 782 Now that the fire was going nicely and Dūan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sāi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dūan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaichiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dūan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

846 [757] [853] As Dūan was resting quietly, Sāi made three "taping fruits" (lūk prakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dūan's legs to cure the birth wound (phlēe). The other two were set aside for use on subsequent days. Sāi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dūan, on the side away from the fire.

• 787 827 With satisfaction of a job well done, Sāi and Lek sat together for a quiet chew of betel. "Lek," said Sāi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that best

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36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

37. The deities addressed were mǣ phra phlōeng and mǣ phra phai. Another Pali-Thai magic formula to control fire was: "Phra Mōk Khan Lē Mō will extinguish the fire from hell, na mō phut the ye." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mō...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Textor 1960:483-485).

date of all, Sao Hā Day, one Saturday in April, which was the fifth day of the waxing moon of the fifth month, in the year of the Big Snake. That boy is truly blessed. He will be the best and most respected doctor or teacher. He is in school now and people are always telling him he is bright. Chāi came on a Monday, so he'll be charming, but, alas, always roaming away from home! This new little son has his mother's features, which is as desirable as a daughter's having her father's features. Still, no one knows what characteristics come from a parent. One more thing, Dūan. Now you may take medicine as you please." Shortly after, Sāi took leave until the next day.

The new mother turned her face toward the fire and tried to sleep. It was night. Lek was close by, and Song slept in his mosquito net near Chāi's cradle. The fire was so hot it kept waking Dūan. Though the smoke made her eyes smart it kept the mosquitoes away. In spite of the discomfort, Dūan was eager to have the fire as hot as she could stand it, for this heat and that of the medicine would dry her uterus, rid her of the bad blood and waters of childbirth, restore her strength and stimulate her milk. She forced herself to drink as much hot boiled water as possible to keep out the dreaded wind element that might get into her body and cool her. When, however, the fire was overpowering, she dripped water from a handy jar with a cloth.

The next day, Sāi returned. With warm, boiled water she bathed Dūan--this time the upper part of her body also--and the baby. The boiled water was much more important for the mother, but being available, was used for the baby, too. Sāi washed the soiled clothing and the baby's little cloths. Turmeric was again painted on both Dūan's and the baby's abdomen, head, and neck to protect from wind. Sāi questioned and examined Dūan. Measuring a handspan down from Dūan's groin, she pressed outward gently. "I want to see if these particular ligaments on the thigh are joined. They are often damaged and do not heal if the time by the fire is too short. Some mothers cannot walk at all. They have to call a masseur for regular treatment." To "make the ligaments well," she tapped Duan's body all over with the second of the tapping-fruit balls and had her sit on one while bathing. She massaged the muscles, stiff from lying quietly near the fire, by pressing in the ball with her hands and even feet. Medicinal herbs were warmed and laid on Dūan's breasts so that the "useless early milk [colostrum] which would give diarrhea" could be worked out and thrown away. "The real milk is not ready for the baby until the third day," Sāi said, "but if the baby is crying much, and if there is milk some mothers start nursing on the second day."

Almost from the moment of his birth, whenever the baby

846 [787] Seven days after the end of the fire period, Dūan sent a message to the mō to look in his book as to what direction from the house she should bury the phlai, the bamboo knife, and the pot with the now dried placenta and cord. She already knew some of the procedure: burying should take place on a Monday or a Friday; south was right during the first three months of the lunar calendar, November, December, January; and the full moon of the twelfth month (October) was especially good, for the moon waned thereafter. Chāi had been born in October, so north was right for him, but for a girl it would have been east. Song or Lak or anyone could bury the pot, but most mothers did it themselves. If it were buried in the wrong direction, the baby would die, and if not under a tree, he would leave them and their home, and roam. The instructions came. With the things in her hand, she walked toward a big jackfruit tree. Beside it was a sakāe. Either was good, so she chose the sakāe which, being nearer the house, might strengthen by that much the roots that would keep her boy at home. After burying the pot and all, she returned directly to the house, remembering to pick, as she came, a fruit, a vegetable, a leaf, and then a piece of wood, all useful things. In the house she added them to the usual household stores. By doing so, and by using them up shortly, she ensured that her new son would be a good worker, who on returning home would always bring something to add to the requirements and wealth of the household. Once buried, the placenta, "like ashes," was ignored and the spot forgotten.

846 262 [461] [753] [757] 862 Within a month after childbirth, Dūan was back at farm work, even to the back-straining pounding of rice in the big mortar. For three months she avoided fruits, particularly guava and jackfruit. Then, since the baby was thin, she gave up vegetables, especially gourds, corn, and the green plants that grew in the canal. One day, because she carelessly ate some salted field crabs, the baby got thrush on its tongue. They cured him by smearing the milky juice of a peel of kluāi nam banana on the cloth sheet covering his cushion, then wiping this on his tongue (cf. Anuman Rajadhon 1961:153). So the year passed, and then another. Not long after his third birthday, Dūan realized she was pregnant again, so took steps to wean him. She painted her nipples with "black medicine" (yā dam), a bitter and hot tasting ointment made from the boraphed rhizome (McF; 474). Then she sent the child over to her mother's older sister's house for four nights. To make quite sure, she followed an old ritual way, too. She boiled an egg hard and peeled it. Holding the egg behind her back, she turned her face away from her son, and handed it to him behind her so that she could not see his face. "Henceforth, you shall not nurse any more," she said. Without looking at him, she walked

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A major clustering of first experiences, and so of habit formation, was in intra-uterine existence. Every experience of the mother was shared by the fetus. After birth, a baby daily formed habits of eating, sleeping, and crying, and later, as a child, habits of respect, obedience, truth-telling, etc. To create good habits efforts were bent to control and ameliorate any first experience: to make it as correct as possible; to seek out favorable astrological moments; to ask auspicious, skilled, or learned persons to be part of the initial action. An example was the establishment of nursing. When the baby was put to the breast the first time, the objective was not nourishment but to establish a good habit, viz. copious and strong sucking from an ample milk supply. Only after this first nursing did breast-milk as nourishment become important. If on this occasion he did not nurse well, he would have the habit of eating poorly all his life. Moreover, whatever the mother's experience with her first-born, it would not only be repeated every time he nursed, but set the nursing pattern for all subsequent children she bore. For her first-born, though, a mother would have had no previous experience of making milk. She had to be taught, or shown, how to make good milk, just as the baby had to be taught to suck, and later taught to eat rice. Consequently, the first-born baby was almost always first nursed by another person (not necessarily a kinswoman) with copious milk. Then 2 or 3 days later, because the example had been set, good milk came in and the mother started nursing. What was to be avoided at all costs was a first suck of colostrum, which appeared to be "unfit, early milk" from an insufficiently lactating breast. This would be a poor precedent. Until a mother decided her milk was right for nursing, a baby subsisted usually on honey and water, and maybe a little crushed banana. If a woman were not satisfied with her nursing capacities for her first-born child, when the second child was born she might ask another lactating woman to give the baby a first nursing so as to improve her own habit.[42] One woman flatly said her own milk was always unfit as proved by her babies' health, so she used a bottle of (canned) cow's milk from the start. She felt she had the habit

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42. Bradley (79-80) felt that the dehydration attendant on lying by the hot fire significantly reduced the quantity and quality of the milk.

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In addition, strengthening foods like rice and fish, the staples for stout farmers, were stressed. Fruit, "which gave no strength," and vegetables (except for the nursing curry mentioned below) were avoided.

The holy fire also transformed a woman into a better nourisher. It gave her new, lasting beneficial nursing habits. As one man explained, "the very nature of water is changed by boiling over a fire. It becomes suk (ripe)." Similarly, a woman's body, her very nature, was permanently changed to suk by the fire's heating. The fire, in fact, made suk all the food she ate beside it. Since this food was turned into milk, her breast milk became suk and so more nourishing, and did not disturb elements.[52] "Food eaten while lying by the fire, when eaten later on (during lactation) by the mother, does not cause diarrhea in the baby." Jackfruit ordinarily caused wind-trouble during lactation, but one woman ate it during the fire-rest, and at once "got used to it, so she could eat it all the time." To make themselves better nourishers, some women spoke of the desirability of "eating a bit of every kind of food." The "nursing curry" (kaeng lIang) was a mixture of vegetables.

Finally, the consecrated fire strengthened a woman's own khwan. She could better withstand convulsion if attacked by a spirit.[53] She was able thereby to handle a khwan even without the special magic that existed for it.

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52. To be nourishing even the daily rice had to be made suk by boiling (Anuman Rajadhon:77). It may be that no food was considered nourishing unless suk, either naturally (like ripe fruit) or by cooking.

53. "...when 'involuntarily' entered by ghosts...maidens in the 17-25 age bracket tend to convulse more violently than do women of more advanced years"(Textor:406). "Maidens" were presumably not married and so not suk.

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to temper with men's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mō, she could do everything a mō could do. Men were never mediums. Bang Chan's only medium was possessed by a male mō.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

[832] [156] [688] [626] [593] 59 My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasū as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "suk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasū's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

759 In these 2 qualifications of skill and success, some of the explicitly non-professional old ladies were recognized as easily matching the professionals. What then was the definition of a professional midwife?

759 789 What the professional midwives alone did was to deliver non-kin, for which they had to have magical formulae and reliable celestial knowledge. The incantations gave a midwife the right to be called a mɔ̄ tamyān, for he or she was using to a greater or lesser extent the sacred wisdom of occultism (saiyasāt). Here midwifery was like any other craft or endeavor. One could cure, sing, and build a boat without magic, but with it, the chances of success and effectiveness were increased. The incantations could "ease delivery," "get a baby out that had died inside"(for this baby could no longer do his part), "prevent the poison of the fire from burning the mother," and give other special help. That this magic was the crucial difference between the professional and non-professional was illustrated by the old lady who had delivered 30 babies, but vehemently[67] denied being a midwife. "I am not a professional. I have no magic. I only pray to the Lord Buddha and think of sacred things each time."

759 • 787 A professional also had more detailed astrological knowledge of the orientations of relevant celestial beings so that delivery would be "helped and not obstructed." This knowledge was in no way a professional secret, but if complications during childbirth were evident, it was necessary to have accuracy, and convenient that the midwife had it.

759 562 212 191 778 To certain villagers the designation "professional" could not be applied to women because, never having been ordained, they had not learned to read, as men supposedly had, not only Thai but Pali and Cambodian, the languages of medical and magical lore. "A professional midwife has a book. No woman can become professional because she cannot read." The idea was that incantations were correct only if taken from the sacred texts at the temple, though in fact the formulae were taught orally. One male midwife had a sacred book in his private possession, which was proper, for sacred books were inherited by males.

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67. Her vehemence may reflect either pride in being so successful without magic--a true lɯ̄ang dī--fear of being reported as unlicensed (see below, p. 145); or consternation lest she be accused of using magic to which she was not entitled.

Attitudes Toward Food

To older Bang Chan residents, to lack rice was to starve even though fish or vegetable fare were at hand. Since rice was the staff of life, many important customs clustered about it. Ceremonies to the Rice Goddess accompanied the raising, selling, and storing of rice. When the unhusked rice was in the bin, it could not be withdrawn at any time as needed, but astrological charts had to be consulted to make sure the day was auspicious. Paddy could never be withdrawn on Friday, a day sacred to the Rice Goddess. After cooking, the best rice was said to be at the mouth of the pot, so this was offered on ceremonial occasions. Important rules were that when cooking rice, the cover of the pot must never be laid in a mortar and it must be inverted, never laid down flat; otherwise one would be short of rice. One must never scrape the top of the rice with the cover, or the "soul" of the rice would be scraped out of the pot. Moslem residents murmured an Arabic prayer every time the rice was put into the pot, and every time the pot was put onto the fire, as well as before eating.

Rice has been generally regarded as the strength-giving food par excellence. A portion of Chutima's (1939) description of the "old system" follows:

> Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal. Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply.

The quotation indicates first that in the past, rice was considered much more important as food than the "with-rice" dishes. Since the Food and Drug Division of the Ministry of Public Health has been attempting to encourage the eating of more "with-rice," the attitudes found in Bang Chan are of interest. One informant stated that only rice can make children fat, and that the "hot taste" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish, and was weak; he refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk (evaporated or dried milk, diluted with boiled water) expressed the opinion that the ancient belief was based on thrift. He said that thrifty

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

A Bang Chan employee who walks out on his superior because he does not like the food he is served or a villager who agrees to lend a person money and then is not at home when the person calls for the loan can easily account for his actions by saying that circumstances had changed.

It must be noted, and this is crucial, that there is generally no animosity felt toward the employer with the unpalatable food, toward the fleeing[21] employee, or toward the unreliable creditor. Villagers are thoroughly conditioned to the possibility of such events and accept them simply as part of the inauspicious nature of life. That they are in fact considered inauspicious rather than results of the willful or malevolent intentions of others is not accidental. Bang Chaners faced with a breakdown in the fulfillment of commitments can of course point to the individual who directly caused it. But there is no satisfaction to be gained from this. The person who broke his obligation must have had his own good reason, and beyond this, there were probably other factors, unknown to both parties, that caused the breakdown. For most Bang Chaners, all human intentions are forever set within a framework of cosmic, and particularly moral, unpredictabilities.[22] If things do not work out the way one expects, it is most likely due to the inauspiciousness of the time, place, and persons involved. The proper time is particularly important. It is precisely for these reasons that the more important events in a person's life—marriage, trying to win a lottery or a maiden's heart, taking an important trip—are so often preceded by ceremonial attempts to decide the cosmologically auspicious conditions for effecting the event. These involve consultations with monks, shamans, and other religious practitioners, and highly ritualized forms are followed to select the appropriate conditions. (See Textor 1960 and 1962 for systematic discussions of the various kinds of problems and practices associated with this complex.) The kind of occurrences discussed above are not of this order of significance, but they do partake of the same cognitive assumptions that lead to such highly institutionalized practices. Thus, whereas most Occidentals would point exclusively to the actions of the other person as being both the necessary and sufficient cause of the interactional breakdown, Bang Chaners, who have considerably less confidence in human capacities, would really not be sure. To them, human volition represents only one of several indeterminate and uncontrollable factors giving rise to events. Who knows what accident, change of heart, sudden windfall—particularly one occasioned by something done by one of the parties several lives earlier—might intervene to alter what had originally been planned and agreed upon?

[21] This is just the term that villagers, with their wonderful sense of hyperbole, apply to such cases. The original Thai word is *nii*.

[22] I am indebted to L. M. Hanks, Jr., for suggesting this line of thought.

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[789] 22. Have you consulted with a medium frequently, occasionally, seldom, or never?

1. Frequently	7
2. Occasionally	4
3. Seldom	66
4. Never	856

[775] 23. Have you been disturbed by a ghost frequently, occasionally, seldom, or never?

5. Frequently	6
6. Occasionally	8
7. Seldom	55
8. Never	864

[641] 24.a. Excuse me, could you tell me, who is now the prime minister of Thailand? If you know, could you please tell me his name?

1. Correct answer	193
2. Incorrect answer	89
3. DK, cannot recall	111

b. Excuse me, could you tell me, who is now the chief of police of Thailand? If you know, could you please tell me his name?

4. Correct answer	167
5. Incorrect answer	24
6. DK, cannot recall	142

25.a. IF R LIVES IN BC COMMUNE: Who is the district officer in Minburi? If you know, could you please tell me his name?

1. DA, as from Bangkapi	194
2. Correct name of present DO	9
3. Correct name of past DO	—
4. Incorrect name	16
5. DK, cannot recall	111
— No Answer	3

b. IF R LIVES IN KY COMMUNE: Who is the district officer in Bangkapi? If you know, could you please tell me his name?

6. DA, as from Minburi	141
7. Correct name of DO	19
8. Incorrect name	—
9. DK, cannot recall	154
— No Answer	28

[434] [829] [556] 26.a. Throughout the world and here in Bang Chan-Khanna Yao too, it is common among men that there must be some who are rich and some who are poor and some who are neither rich nor poor. How about you yourself? Are you rich, or poor or neither rich nor poor?

1. Rich	2
2. Poor	68
3. Neither	863

b. IF POOR: Here in BC-KY, do you think there are many or few people who are poorer than you?

5. Many	30
6. Few	31
7. Unascertainable	7

b. And how about mushroom growing? Do you think mushroom growing yields very good money, good money, or little money? [125] [244]

5.	Very good money	68
6.	Good money	160
7.	Little money	49
8.	Unascertainable	56

c. And what about Tilapia. Do you think tilapia raising pays very good money, or good money, or little money? [228]

9.	Very good money	15
X.	Good money	73
Y.	Little money	175
0.	Unascertainable	70

39. Do you believe in nadiums strongly, somewhat, or not at all? [787]

1.	Strongly	12
2.	Somewhat	191
3.	Not at all	105
4.	Unascertainable	84

40.a. Suppose you could do the same work in another rural place and earn ½ more than here. For example, it would be a place 100 kilometers from here. Would you be willing to leave for that place or not? [166]

5.	Yes	118
6.	No	203
7.	Unascertainable	12

b. IF NO: For what various reasons would you not be willing to go?
(See code at end)

41.a. If you had no land to work in K-KY would you move to another place or not?

X.	Yes	164
Y.	No	112
0.	Unascertainable	80
—	No Answer	36

b. IF NO: For what various reasons?
(See code at end)

42.a. Some people say that, generally speaking people who live in Bangkok have more genuine and lasting happiness than people here in K-KY. Do you agree or disagree? [369] [829]

1.	Agree	136
2.	Disagree	136
3.	Unascertainable	49

b. IF AGREE: For what various reasons do you agree?

If Agreement (See code at end)

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There were also the protecting rites of the life cycle, and Buddhist, Hindu, Muslim, and animist rituals to ameliorate events in every walk of life.

by instruction from a ritually[71] approached teacher. "One cannot accidentally learn. One has to ask to be taught." As a practitioner in this field, the title "mɔ̌" signalised expertise; where teaching was involved, the title was khrū (teacher [McF. 183]) or ʔāchān (professor [McF.990]). Speech was the key to this tradition, in spite of sacred books and wall-carvings in the temples.[72] Modern education, being book-and-teacher based, shared in this aura. There, even today, listening is more comfortable than reading.

Techniques of the practical, natural world were learned not by teaching but pragmatically by observation, example and experience. Eyes were the key. "I know because I saw," said a midwife. At the highest level of achievement in the natural world one was expert (nak), e.g. convict (nak thôt, an expert in being punished) a tourist (nak thîaw, an expert in roaming around).[73] Within the natural world, an intense pragmatism reigned always emphasising visual phenomena. People were keenly

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71. To speak ritually one held in the hand the trio of incense, flowers, and a candle. This was the way to cross over from the profane to the sacred world, to inform (bɔ̀k) or make a request of, a sacred being (a teacher, priest, king, or deity). The tiny flame of the offering invoked holy fire, and so had the effect of making one's words compelling, for no one could gainsay a request under such circumstances. A husband about to deliver his wife held incense, flower, and candle in hand as he requested the help of ancestors and spirits. (Bishop Pallegoix saved the existence of his mission by thus approaching the King [Pallegoix, Vol. 2:201]). The trio of offerings, whether at the 4 corners of the lying-in fire-floor, or in "hat phlī krathong" at a "thaw khwan" rite, or even in an ordinary khwan khan made all actions and words compelling.

72. Because words, immaterial and invisable, lay at the base of occultism, words as continuous agents of power permeated Bang Chan's ordinary daily life. This was why words, verbal play, and punning initiated action: pregnant women attended the monks' "coming out of retreat" (ʔɔ̀k phansā) so that the child would "come out" (ʔɔ̀k) easily.

73. It should not be forgotten that most activities in the supernatural world had their technical sides, and the term "nak" was used there too. A curer had to learn his herbs; a dancer, his steps; and a master of ceremonies, the words of the chants.

Despite the availability of fish and of vegetables in the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

The two months of September and October during which the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit and take trips. A few might go on a pilgrimage. Therefore, in this season, all family members were less often together at the evening meal. Fishing was a continuous occupation, with some preserving and home craft. Jobs such as selling food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

High water caused time-consuming inconvenience only in earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

By November, the earliest varieties of rice matured. Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience of purchased food was greatest, cash was exhausted. With rice money in sight, venders might be generous with credit, but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

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1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

A soul desiring rebirth flew into the womb of a woman at conception. By care and imitative magical practices, both parents helped the fetus grow but the mother gave the baby its body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of several days was taken beside a hot fire, the purpose of which was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman. The comparable ceremony of maturation for men, when they too were changed from "raw" to mature, compassionate, and strong males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

The understanding of, and the attitudes toward, modern medicine are given along with findings accounting for acceptance or rejection of modern hospital care for parturients. Accepting the changes that were observed in the practices surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

For persons interested in introducing changes in the

magical formulae and incantations (khāthā cf. Textor 1969:88-98; 67-79). It was one of the branches of occultism (saiyasāt [Mcf. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khaō (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khaō. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō raksā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyāe). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.19

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

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775 Man was higher on the scale than woman.[20] Progress toward
[562] Nipphan was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phī) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good health and long life, a kindly personality, many fine children, wealth, high status,
[775] intelligence, and luck. Astrologically, he was born on a day of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death,
[763] deformities, unhappiness, poverty, and had a cruel nature. Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

751
• 784 The long-range protection against all illness was to
[577] live virtuously and make merit. However, to guard against temporary supernatural intrusions, everyone possessed and usually wore Buddha lockets and other amulets. Some
[782] underwent tatooing, men having Cambodian or other figures,
[304] women, 2 small dots tatooed on the torso under the arm.

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20. Man had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

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There were also the protecting rites of the life cycle, and Buddhist, Hindu, Muslim, and animist rituals to ameliorate events in every walk of life.

seen childbirth not once, but many times, so willing hands abounded. So, one day, Dŭan went to Sāi. "Will you help me, and come when I call you? Please do not go far at that time." Sāi agreed, knowing in her heart she had expected to care for Dŭan. No day could be calculated because the baby decided when to be born. Dŭan came home very fast, for doing so would help ensure a fast delivery.

As the weeks passed, Song, the new child's father, collected outside the house a great cone of sakae firewood from their land. This wood was for the post-partum fire beside which Dŭan would lie for many days. As the fire had to be very hot, a great deal of wood was needed, all to be collected beforehand. Song also covered the outside of the pile with thorny woods to keep away evil spirits. On her part, Dŭan knew that everything needed for delivery was ready in the house as part of the regular household staples or utensils. Nothing need be bought except possibly a little Borneo camphor to mix with lemon grass for faintness, and alum. The midwife should never bring anything with her because it was essential to use what was in the house. Anything lacking could be quickly borrowed after the pains started. The little cushion on which the baby was to lie was cut, and half-filled with kapok. It was not sewn up, lest it induce by example a closed-up exit from the womb, or suggest a mal-placed or deformed baby which had to be delivered onto a pillow. No one wanted to prepare for such an unhappy event. No clothing was bought for the child ahead of time for then the child might die, and all would have to be destroyed.

Dŭan felt at ease and yet somewhat frightened at the prospect of the pain ahead. At an ordination she attended one night she listened again to the chant she had heard many times:

> "In childbirth a woman has pain all over her body...She is losing her soul and feels so frightened, despairing, and suffering that she throws herself up and down from time to time as if her mind were terribly wounded by the poisonous arrow of a hunter. She is uneasy and moans loudly as if a big mountain had fallen down upon her, and she is supposed to wait for death. She does not recover even if massaged by someone. She does not think of her pain, but tries to save the child's life, when, after the pushing wind comes, he is born" (S.S.).

On other occasions she pondered the deep satisfaction of her maternal role, then laughed in recalling a crafty woman who

843
844 "faked labor pains to hold down her errant husband!" or so a sour mother-in-law said (Hauck,ibid.).

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789 Finally, one day, Dūan felt uncomfortable and decided not to go out to plow. Lek prepared for her hot-tasting medicine. When Song came in at eleven from work, he went to the garden, to the little house of the family's protecting spirit (sān phra phūm), lighted incense and offered flowers, asking that it and the ancestors help his wife and keep away evil ghosts. He also prayed for help of the ancestors. Mī went to ask Sāi not to go far away that day and to ask in what exact direction to push over the woodpile. Sāi replied, "Push it over in the direction the snake lies today, so that Dūan and the wood lie parallel with their heads and its apex in the same direction to the north and east. Never let them be to the south and west." A passing boatman saw the wood go over. "There's news to tell!" he said. "The child is being born!" Dūan thought she ought to send away her little son, but he refused to go, and stayed by his mother the whole time. Song's sister came by for a visit, but stayed to help after getting word to their parents. It was no time for visitors, especially men, but any helpers, male or female, were welcome. Lek prepared the all-important ceremonial gift, the khwan khāo (soul-rice) for the midwife, which validated, and insured the use of, her private magic. She put a bunch of bananas, 7 betel pepper leaves, 7 areca nuts, flowers, incense sticks, a candle, and 20 baht into a bowl filled with dry rice grains. A little later she strung the holy thread around the 4 walls of the house. On each side she attached "yan," (Skr.: yantra). These protective cloths, about 10 inches square with magical letters and drawings, kept away the terrifying phī krasū spirits, seen as lights at night, who, attracted by bad smell and blood, would creep up the housepost, eat Dūan's blood, intestines, and faeces through her anus. Then Mī went again to Sāi to report that "the pain was increasing." These words were the signal to Sāi that it was time for her come.

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As Dūan was to profit from the magic, it was better that she herself hand the midwife the khwan khāo bowl. Sāi lit the incense and offered the bowl in gratitude to the teacher who had given her her magic. She whispered in the direction of Dūan's head, "All good spirits in the high heavens and in the locality, help and do not obstruct at this delivery! Give happiness to mother and baby!" Placing the bowl on a high place to the side of Dūan's head, she said, "My teacher is long since dead, but will hear this request, and will pass the request and the khwan khāo to her teacher, and so on, back all those thousands

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of generations, to the hermit Phra KhulIsān, who first discovered this magic. He got it from Phra In (Indra). He will make it good."

Dūan was sitting in the main part of the house. Her mother was seated behind her, arms under Dūan's arms, pressing down on the abdomen with every pain. She, Song, and others had taken turns thus supporting Dūan's back all afternoon. Dūan hoped it would not be like the first time when she had screamed with the pain of the tender spot where they constantly pushed. Their toes, digging into her thigh, also had left large bruises. Some women in the area had tried arm ropes, hung from the ceiling, on which to pull, and some women tried lying flat, but sitting while someone pressed was the usual way. Sāi examined Dūan, and announced that labor was not very far along. She moved Dūan around so she faced another direction. "No wonder you are having a hard time," she said. "Your feet were pointing toward the <u>sān phra phūm</u> spirit house and you were not properly in line with today's direction of the celestial prince-snake (<u>Chao Mā</u>). By turning you thus, the baby will be born with, and not against, the scales that lie on the <u>nāk's</u> back. The snake's direction differs each hour of the day, each day in the week, month and season in the year. Today is Monday, so your head must be in the east, but Sundays, for instance, it must be to the north. You must also not face the Great Ghost (<u>phī lūang</u>).[33] Another being to respect is the <u>Chao Krung Phā Li</u> (cf. Texter 487-498). Offerings to him must be at the feet or sides. If offered at the head, he would be angry at your disrespect, and you would have a fever and a terrible time. My grandfather taught me this from his Pali book. His was more accurate than the books in Thai one sees in the market."

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Song was asked to boil up several kettles of water using this <u>rakāe</u> wood. Husbands always did that. "I was recently asked," said Sāi, "to help at a woman's fourth child. I had been there for all the other 3, and for every one her husband was absent, gambling, I heard. He said he did not want to stay there because it was an awful sight. So it is, but there must be a man around, the husband; if he is dead, or gone, then a father or brother. I refused to accept that case because of the husband's neglect."

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The winds that circulated in Duan's body were not speeding

33. Texter (378,423) relates that it makes a complete circle of all directions throughout 24 hours, and its direction of the moment must be avoided.

844 [278] fast enough to break the amniotic sac. Sāi made her a medicine of mung bean and sugar, both of which wet the uterus, and murmured some magic words to help. Later she worked with her hands at the vagina, twisting the sac a bit to break it. Suddenly the sac ruptured.

Now the child was almost there. The head showed well. Sāi sat down directly in front of DŪan to do the pressing herself. With one hand she held or gently pulled on the baby, with the other she pressed on the abdomen with every [789] contraction. As she started in, she said magic words. She worked for an hour--no midwife would press more than that--until at last the child was out. A little boy! With her finger Sāi removed the blood from his mouth, and pucked out the lips. Breathing was slow in coming, so she shook him vigorously, then laid him down. Quickly she chewed up an onion and spit it over his body. "Ah-h-h!" A cry, though not very strong! Seeing the new baby appear, Chai, who up to then had been constantly near his mother, rushed precipitously from the house, and refused to come in for hours, in spite of Song and Lek's coaxing

[787] Everyone had observed an auspicious circumstance: the cord was looped around the baby's neck! This imitation of the holy cord (nongkhon) placed around head and neck in Brahman rites of passage was a rare and good sign. "A cord looped thus could never kill a baby," someone said.

Since the placenta was slow in coming, Sāi prepared to cut the cord while DŪan rested and sipped the fiery snake brand medicine. Depending on circumstances she might cut it [278] before or after the placenta was out. Taking a rhizome of phlai (Ref. 804), a traditional healing root she laid it on a clod of soil brought in from outside. From one of the [412] old bamboo house beams, someone had sliced with a knife a sharp-edged, tapering sliver to serve as a cutter. The cord was stroked 3 times, starting near the baby's stomach "to remove the dirt." Then "something that is in the umbilical cord" was pushed back towards the baby's stomach "to prevent [778] a flow of blood." She measured the cord from the baby's abdomen to his knee, and tied off 2 places in it with the holy unspun cotton cord used ordinarily in rituals. Laying the part between the 2 knots on the phlai on its bed of soil, and saying her magic "w'ayān a sam pa nō," she cut the cord with the bamboo cutter. With a chicken feather [757] which had to come "from the mother's yard," she collected a few spider webs from the rafters, mixed them with coconut oil, and painted them around and on the cord-stump, also "to stop the blood-flow." While doing this, Sāi said, "One midwife I know severs the cord by tying it with the thread at 3 places, then burns it with a flame."

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Lek watched over the baby, while Sāi turned towards Dūan. "One looks to the mother first, unless the baby needs help more." First Sāi gave DŪan medicine for the placenta. She rubbed her hands with alum and tried unsuccessfully to work down (klōm) the slippery placenta. Then she told Dūan to get on her hands and knees, and exert all the force she could. DŪan crept around the floor but it still did not come. Sāi then tried hitting Dūan's back 3 times with DŪan's own pillow. Finally she gave DŪan a leaf of betel pepper to chew, hoping to induce a wind-producing nausea and so push out the placenta. In the end DŪan resumed her sitting position and it was pressed out. So the baby would not get pimples, the placenta was cleaned carefully, then put into an old pot, mixed with 2 dishes [751] of salt, and set aside.

While Lek sewed up the partially completed cushion, Sāi laid the baby along her legs, and washed him with soap. Sometimes she washed the baby before the cord was cut, if the placenta came quickly. She used salt to remove the greasy fat from his body, though would have preferred "fermented tamarind to protect him from pustules that enlarge to sores (rōk phuphōng)." "Soft tissue like a stomach covering his head! What a good sign of progress and fortune!" she exclaimed. [787] She powdered him with face powder (dinaōnphōng), and painted his [278] abdomen with turmeric,[34] "so wind will not make him cry." Covering him with a little piece of old cloth, she laid him on Lek's old winnowing tray (kradong).

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It was the moment to winnow (rōn) the baby, and link it to home and family. While Lek got the holy unspun cord, others placed on the tray with the baby all manner of traditional things to influence the progress and well-being of the child during his lifetime. Sāi put on the phlai, the clod of soil, and the tapered bamboo she had used to cut the cord "because they will never be used again," but actually these things had a far deeper meaning to all present. Song laid on a school exercise book and pencil, so that his son would have knowledge and a good memory. MĪ got a needle for sharp wit. If the baby had been a girl, the needle would have given sewing skills. When all was in readiness, DŪan had to decide on the ones to raise the child aloft, catch the tray as it was dropped, and bless him as the holy thread was tied on. She had to choose these persons carefully, for the child

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34. Other mixtures (used also on the mother) were lime-bergamot lemon; or phlai (if possible the one on which the cord was cut), wānnam (acorus calamus) (Textor:64-66) and mahāhing (asafoetida) with burned betel leaf. These were all to keep out wind.

844 989 852 would later manifest their characteristics. Much as Dūan loved her own mother, Lek ought not to winnow the child because she had had the misfortune to lose 3 babies in infancy. An older person was desirable, for longevity, too, indicated virtue, and the child would then also live long. Of all the women present, besides her mother, Sāi was the one Dūan trusted and respected most, and Sāi had raised healthy babies. Dūan turned to her. "Please winnow and bless the baby." She wanted, as every mother did, to catch and so claim the child for herself.

Sāi seated herself close to Duan, picked up and raised high the tray with the little boy and the auspicious items. Waving the tray in a circular motion slowly from left to right, clockwise, she recited the old words: "Three days a spirit child; on the fourth day, a human child! Whose child is this? Is this the child of a female pot? Of a jar? Come, take this child!" Three times Sāi chanted these old words and on the third, Dūan cried out, "Mine!" The tray with the child was gently tossed in her direction. She caught it as it slid toward her. Then Sāi took the holy thread and tied some around each of the child's wrists and ankles to seize and "welcome" its soul (kānraphkhwan), giving the while the traditional blessing. "Come, khwan! Come my own child! Stay well and eat well! Do not get sick or have fever! Be cool and happy! Feed your father and mother until they are old. Hold the walking stick with the gold head, or the stick with jewels on its top! Stay at home like the bottom of the house post! Watch the house like a cat! Eat and stay here! Never go roaming! Be fat as the golden ash pumpkin, heavy as the long melon, strong as an elephant in must! Be the head priest when ordained and the leader of men when you leave the priesthood! Come, khwan!"[35] Thus Dūan claimed the child for herself and for her family, to nourish and raise. Because such a fine person as Sāi had started this son on its life-habits, and Dūan was already sparing no efforts in assuring his progress, he would be a good boy, and reciprocate her pain and effort.

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[539] 35. Another version added the words, "Have the strength of Hanuman! Hold the stick with the iron head! Be a student." For a girl, "If you have a family, keep cool and happy! Earn your livelihood (thammāhākin)! Have enough to use and eat! Do not lower (ram) your face, or eyes," i.e. "don't be poorer than your friend." A China-born Thai woman's blessing was "Mother, nourish, and care for this child. Do not let it be hurt or have fever."

Now that the fire was going nicely and Dŭan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sāi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dŭan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaichiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dŭan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

As Dŭan was resting quietly, Sāi made three "taping fruits" (lūk yrakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dŭan's legs to cure the birth wound (phlēe). The other two were set aside for use on subsequent days. Sāi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dŭan, on the side away from the fire.

With satisfaction of a job well done, Sāi and Lek sat together for a quiet chew of betel. "Lek," said Sāi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that best

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36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

37. The deities addressed were mǣ phra phlœng and mǣ phra phlai. Another Pali-Thai magic formula to control fire was: "Phra Mōk Khan Lē Mō will extinguish the fire from hell, na mō phut thā ya." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mō...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Texter 1960:483-485).

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the fire for her during the first day or so, lest in her straining, DŭAn's womb "move to a new place," but Duan did it herself thereafter. The smoke was harder on others than for her for she was on the floor. She could leave the plank to bathe and to relieve herself through a crack in the floor. As soon as Chāi got over being frightened of her turmeric-yellow stomach, he often came and lay beside her on the plank, though it was a squeeze! She took her medicine and often sipped hot water, feeling very modern with her brand-new thermos bottle. Constantly turning her back or front to the fire, she poked or dripped water on the flames to make coals. Once she tossed on a dry palm leaf, and as it flared up, put a cloth over her head to trap the smoke and heat. Though a rash developed on her body, she was complimented by Lek on the care she was taking of the heating and drying process. Unfortunately, a neighbor who wanted to help brought in some of the wood one day. Not remembering that to make noise with the wood caused diseased red eyes in the baby, she dropped the bundle with a crash! Alas, "sang" disease, of course, came at once. So the near-by mō who always cared for them had to be called, but he used no medicine. "For eyes red from 'sang'," he said, "never use any eye-medicine as drops, or they will be permanently damaged or blind. Such eyes have not enough resistance to win over the strength of the medicine. A drop of mother's milk, any mother's, in the eyes is the cure." [753] [757]

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Uterus pain was said to last one day for the first child, 2 days for the second, and so forth, increasingly. As DŭAn seemed to be in considerable pain, Lek resorted to an old cure: she secretly took the bamboo knife and the phlai from the baby's tray and put them under Duan's plank bed without telling her. Slowly the pain diminished.

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If anyone spoke of uterus pain to her during the fire period, Duan would suffer still more. If a visitor spoke of the hotness of the fire, little boils would appear on her body. The fire, being thus made too hot, would have to be put out, and Duan "would be weak for a long time." This was because actions or even words occurring beside the holy fire set a new and permanent pattern. Neighbor's children were kept away lest they inadvertently exclaim about the heat.

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A few relatives with gifts of banana, turmeric, and face powder dropped in, but visitors mostly stayed away. "It is an ugly sight," said DŭAn, "lying here with only a cloth over me, half naked and yellow, and I fear there might be an unpleasant smell."

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The winnowing tray, with the baby on a pillow now covered with a plastic cloth, rested on a low table, the legs of which stood in bowls of water to keep away ants. At first an old dome-shaped fish trap had been set over it to prevent draft and

153 of making poor milk. Any woman whose milk flowed early and
853 well needed no example, for she was seen as having the habit as an in-born characteristic so deeply ingrained that it came through from a previous incarnation.[63] After nursing was established by the mother, babies were not often given over to another woman's breast because they were reputed to refuse it, "being not used to it."

In sum, the nursing patterns in Bang Chan varied with the previous lactating experience (if any) of the mother, and the ordinal position of her children.

(262 Hauck shows the old way of establishing good eating
846] habits in a baby. "If a mother ate small amounts of many different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time" (1959:14). Through the beneficial effects of the fire, any deleterious qualities of the foods were eliminated (as we shall see in "The Fire of Maturity") and the child had his first experience with these foods in the breast milk.

153 Bang Chan's life was full of secondary opportunities for starting new habits. Every rice crop, every boat purchased, every house built, and all the rites of the life cycle could, if handled properly, start a fresh and fortunate sequence on its way. We shall have more to say of this in discussing maturity.

• 789 Imitation
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The familiar principle of imitation (Anuman Rajadhon: 154), the influence of like making for like, operated throughout daily life in Bang Chan. An action, event or presence emanated an analogous influence on its surroundings. A woman returned from a visit to the midwife with all possible speed in order to achieve a speedy delivery of her child a few weeks hence. Another pregnant woman visited the temple on the final day of the rainy-season Buddhist

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[829] 63. Bradley's informants gave an example of a deeply ingrained habit: "European and American mothers can better dispense [with the fire-rest] because their own mothers from time immemorial have never been in the practice of the custom, and consequently their constitutions do not at all require it (p.78)."

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retreat (ōk phansā) in order that her child would come out (ōk) more easily. Here none sought to divide the worlds of the natural and the supernatural, or to mark off "imitative magic" from the "learning by example of the natural world." A stronger influence came from more powerful agents, so that the effects of the Buddhist temple carried greater effect than the actions of a mere neighbor. Yet any like influence was of aid, especially in a verbal similarity. Thus, an event occurring on a Friday was apt to be auspicious because the Thai name for Friday contains an element identical in sound (though etymologically different) to the word for happiness (wansuk=Friday; suk=happiness), and for the fortunate status of true adulthood (suk=mature, ripe).

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Stability in a Floating World

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In explaining why some children were "born easily and were easy to raise" (liang ngāi) certain persons simply said, "They were born into the right family. Those born to the wrong family usually die." In defining the "right" family, merit, habituation, and helpfulness converge.

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Most families were thought to live together as a group in life after life. In view of the separateness of souls, how was this brought about? The key lay in the conviction that people who made merit together met in future lives. Since most merit-making was undertaken as an enterprise of the nuclear family, sometimes with close kinsmen and friends, they would find each other. Some of the eagerness of friends to help (chūai ngān) with cash or labor was in order to meet in later lives. These persons were used to each other, used to helping each other, and so might marry. Thus, if they lived rightly, the nuclear family, maybe with an infusion of beloved old friends, expected to carry on in the next existence. Although a family's prosperity proved its merit, and its wealth facilitated making more merit, continuity in time was not limited to the wealthy. Proof that a couple had been married in a previous life lay in the birth of a boy as first born. Such a couple was known as a "khū" (pair), and divorce was held to be highly unlikely.

How did a child find its "right" family? After whatever necessary stay in purgatory, the khwan soul of a deceased member roosted in a tree near to its old home, then flew into an accustomed womb. One recalls the start of the blessing (p. 48), "Come, khwan! Come my own child!" A woman hoped that the khwan was one previously born to her. "A couple lost its first child. Later the wife was fearing for the life of their sickly second-born." [redacted] husband said, "It is according to your sin and merit. If the child is your own child, he will live with you. If not, he cannot."

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called out "Mine!" ("khǭng chan" [female speaking] or "phom" [male speaking]). Never did a parent say "ours!"[44] Sometimes the mother might ask a relative or friend present to claim the child, and so become a godparent.

As the first human step to control the volatile khwan, the first objective of winnowing a baby was to seize it (kan rap khwan) and so "complete" the child's person.[45] By tying holy thread at the wrist and ankle soul-exits, the khwan which had flitted in and out of the womb was given root. It was still flighty, but now it had a life-long home.

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Secondly, the child was given membership in a human family. Connection through blood and semen did not establish kinship. At first, the child hovered between corporeal and non-corporeal existence. "The child is not fully human for the first 3 days." This period was under the supernatural control of Mother Sǭ, for babies "never died during the first 3 days after birth. They might be born dead or they died 6 or 7 days later." The shock of dropping the child on the tray "made him forget his life as a spirit." When someone cried "mine!" the child finally cut his relationship with the spirit-world. As an old woman explained, "The ties are the important part [of the ceremony]. They show that the child belongs to someone. Once a tie fell off one wrist. The child cried and cried until it was restored," fearing its lost khwan would attach itself elsewhere. The claiming set up kinship as a contract before witnesses. Whoever announced responsibility for the child's care, and this was usually the mother, deserved reciprocal care in old age. Other relatives would also help to bring him through to maturity. He would not be so frightened of an evil spirit because of family support, nor of the "ghost of an ancestor" who would be recognized as a relative.

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Third, the ceremony strengthened the child. By giving him through the ties a stable khwan, he "grew better, cried less, and did not get sick."

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The incorporation of as many auspicious elements as possible into the ritual was customary. Since the child took

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44. A winnowing tray (basket) had the capacity to "trap" spirits. It could seize or trap not only the khwan soul, but, at New Year's, one of the fun ghosts (Textor:371).

45. There is no convenient way of expressing "ours" in Thai in this restricted sense (id.).

852 after whoever claimed him, a mother might ask a "wealthy
856 person, of polite, calm, and good character" to do this.
• 789 The baby also started an association with whatever items were placed on his tray with him. Besides the most common ones mentioned in Dien's tale were ink and books (which induced learning); gold, rings, jewelry, money (wealth); bergamot thorn, a tin of kaffir lime (sharp wit); and a razor (a good wood-cutter for the fire; said to be a Muslim custom). When the baby was finally transferred from tray
852 to cradle these items were returned to household use. The
789 bamboo cutter, rhizome of phlai, and earth associated with cutting the cord were taken off the tray and buried with the placenta. Their significance lay as part of a binding ritual. The phlai and earth might be taken off ahead of time.

Binding Rituals

829 Because Bang Chan accorded autonomy to every individ-
774 ual, whatever his age, everyone had the free choice to go wherever his advantage lay. In infancy and childhood, the khwan soul might flee at any time, and could only be recaptured by a khwan-calling or khwan-leading rite (Textor: 896-911). After about the age of 8, a thaan khwan ceremony [852] helped to bind in and strengthen the khwan soul. In daily life, the fear that a loved one, whatever his age, would withdraw or run away if unhappy, frightened, or overburdened dogged people their whole lives. Casual episodes
829 were sometimes viewed with alarm. Once a boy of 10 on his
593 own initiative went off to live a few days with his grandmother only 10 minutes away by boat. His mother complained that he had wandered (pai thiaw) and feared it would become a habit. Parents dreaded that grown children would find work away from the village; that daughters would elope; that adopted children or spouses run away; or even that their child, at marriage, would elect to go live with his in-laws. At any time a husband might go into the priesthood leaving his wife and children to fend for themselves, though here the wife had to give her permission and the motive was sympathetically viewed.

A traditional jesting threat was to "go away to the jungle-forest" (pai paa).

The economic and social base for this fear of losing a child to the world was that children were a parental investment with an anticipated return: for the trouble of bearing and raising them, children should work for the family until their marriage. Furthermore, a boy was to bring his parents merit by being ordained, while a girl was to care for them in their old age. If a child moved away

before completing these obligations, the parents lost out on their anticipated reward (cf. L.M. Hanks, 1962).

Since waywardness (*ngai thiaw*) was considered a continuous threat, magical means were taken at the moment of birth to ensure that a child stay close to the family that raised him. The blessing following the winnowing ceremony invoked immovable things: the post, the cat that traditionally never roamed far, the pumpkin that sat and fattened:

> "...Stay at home like the bottom of the house post. Watch the house like a cat. Eat and stay here! Never leave home. Be fat and heavy as the ash pumpkin..."

The most important binding actions utilized, or brought the child into physical contact with, objects long associated with family, in particular the house and land. The umbilical cord was cut on earth or *phlai* dug from the house-land itself with a bamboo "knife" sliced from one of the deeply sunk house posts. Of these "the knife is the important thing." The *phlai* also had medicinal purposes. With a feather "from the mother's house" the baby's navel was smeared with cobwebs from a spider whose web indicated long undisturbed residence. They buried the placenta either under some large old tree that stood near the house, or under the house stair. The old family winnowing tray, old clothes, and well-used family possessions were used first before any new furnishings were purchased for the baby. A fire of *rakam* wood grown on premises boiled the water for the baby and mother, and heated the mother. *Rakam* was planted when a house was first built so that every generation of occupants would have it available for use at confinement" and also for firewood at other times (cf. Mcf. 81e). All these binding rites assured that the child being rooted to a home terrain, would not wander frightened, and so "would not cry." He also would be at hand to participate in the merit-making that would reconstitute the family in another existence.

If a child were born away from home, how was this bond to his locality established? On one to two occasions when the child was born at the Minburi Health Center, Mauck (notes, 1954) observed a solution to this dilemma. The mothers returned home, as was customary, within a few hours of delivery and were established by their respective fires. Their babies were winnowed and laid on their trays with the usual auspicious book, pencil, and needle. Neither tray held any bamboo, clod, nor *phlai*, however, for these had not been used. On one tray, though, was laid a steel knife from the kitchen, mute proof that a family cutting instrument ought to be there. On another occasion, a father asked to be given his child's placenta so as to bury it on the house site. In so far as possible, people in Bang Chan tried to carry on the old rites.

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000 in Bang Chan tried to carry on the old rites.

848 372 The Cone of Wood

When a child was conceived out of wedlock, the first problem raised was, "Who will build the wood pile?" The actual father had to come forward and identify himself, for he and no one else could perform this duty. A child could not be born without the father giving this assistance.

593 84 789 372 This cone of wood represented a "womb" towards which a father actively played out his role. His child was in it. While building it, his behavior affected the child, just as his wife's behavior acted on the child in her womb. If the pile were incomplete before the onset of labor or gave out before the fire-rest was terminated, the child would "never finish any task in its life." The very manifestation of industriousness involved in collecting the wood, though, made the unborn child industrious. Gathering a quantity of wood for this big pile was not easy. Old houses had plenty of wood, for they stood in thick groves, but new houses sometimes stood bare and stark in the fields. He placed spiny Indian jujube or Chinese date (phutsā) and Manila tamarind (ma khām thet) all over the outside to protect [824] this "womb" from invasion by malevolent spirits. Thus he also protected his wife's womb. Lakāo wood was preferred because it was smokeless. Collecting a mixture of woods was easier, but then the fire smoked. Mixed or all lakāo: whichever the constitution of the pile for a woman's first confinement set the pattern for all her later ones.

At the onset of labor, the father had to open the way for his child to come out of the womb, so the pile was tipped over in a direction paralleling the position of the Great Snake. This astrological orientation was exactly that of the woman in labor. Unless the mother's head and the apex of the fallen wood pile coincided with the direction of the head of the Snake, with the open end of womb and cone below, "with and not against [illegible] of the snake's scales," the child would have to struggle against these scales as he came out. By tipping the cone of wood properly the father helped his child to an easy exit.

The thorns protected the womb and the baby inside from all evil spirits during the months of pregnancy. With the onset of labor, the holy cord which surrounded the mother took over this function, and kept away such dangerous spirits as phi krasy and, if the baby died at birth, the violent New Baby Ghost (cf. Textor:261).

Even after the child was out, the pile of wood was still a drying womb to be treated carefully. It was also the wood for a consecrated fire. To drop a piece of this wood carelessly both injured and desecrated. If this happened a disease of the eyes "sang," came at once for which no male medical powers had any remedy. The only cure was in women's hands, that essence of maternity, "a drop of mother's milk--any mother's." The larger implications of this linking of fire and maternity are dealt with in the next section.

The Fire of Maturity

In the events surrounding the birth of the child, the significant step for the woman personally was the post-partum rest period by the fire (yū fai). Far more was at stake than just drying the uterus. The fire rest was one of the series of rites of the life-cycle which marked the course of an individual from birth to death. The others were the cutting of the umbilical cord, first head shaving, top-knot tonsure, ordination (for men), marriage, and cremation. Through the consecrated fire a woman formally achieved full maturity: she became suk (cooked, ripe, mature). Maturity did not come just by bearing a child. The fire brought about the transformation.[46]

How was mature womanhood viewed? What was the essential female role and office? Bang Chan saw a woman as one who "feeds and lengthens lives." As the custodian of growth she was, first, the guardian of the vital, essential khwan soul, and especially of the immature, flighty khwan of growing persons.

Secondly, a woman was a donor of nourishment (liang).[47] Her primary responsibility was to nurture children and other tender beings. She nourished the fetus with her blood. After

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46. "The fiery element digests what is eaten or drunk...and cooks the body and gives it its beauty of complexion. And the body thus cooked is kept free from decay" (Warren:157-158).

47. All the deities "concerned with the welfare of our bodies and our khwan" were maternal (mae), e.g. Rice, Water, Earth, "Mother-Goddess" (Mae Sū), and several Mother-Princesses (Chao Mae). Fire, and maybe wind, were both female (mae) and male (phra) (Textor:485). To these deities, "higher" than ordinary spirits, Bang Chan "owed more."

Only when the youngster was satiated did she gobble the remainder.[50] Parents often commented that girls in general were obedient and good, but boys were not. Everyone spoke, however, of exceptions. The capacity to play the female role grew with the child. It was not completed with the physiological maturity of first menstruation but only with ritual maturity.

The rituals to fit a woman for her office, described as "directly related to the welfare of the child," had 4 specific purposes. They perfected her as a compassionate being; restored and strengthened her body; improved her capacities as a nourisher; and strengthened her own khwan. The key to each of these aims was the holy fire.[51] Because actions taken by the fire were immediately and permanently effective, every effort was made to induce auspicious happenings. Words spoken by the fire had compelling effect so even ordinary speech became magical. Speaking of the fire's hotness so raised its heat that a mother was burned. For this reason, uninformed or careless visitors like children or foreigners were a danger.

According to Buddhist thinking, suffering developed compassion. Through the discomfort of pregnancy, followed by the anguish of childbirth and the heat of the fire, a woman became compassionate and so achieved the guide-line for moral behavior. Then a woman was sure to be touched with pity for the younger or less fortunate. One teacher despite the inconvenience went home twice a day from school to nurse her new baby because she "pitied" him too much to hire a wet-nurse. It was "pitiful" to see a child at another woman's breast for it implied that its mother was either unwilling or unable to nurse it. Thus, babies were rarely nursed by others than their own mothers.

The fire also strengthened a woman by ridding her of bad blood and foul fluids. Wind and Fire, the 2 spirit guardians of the elements necessary to the occasion, were invoked to assist in the drying of the uterus. In addition, strengthening

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50. Boys too fed their younger siblings but their purpose was a power-play: "to assure obedience in the future" (cf. Hanks and Phillips:648).

51. This fire was kept entirely separate from the one for cooking and boiling of water. It was ritually lit and ritually extinguished at the end of the fire-rest.

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Thus she performed several rites involving the maintenance of the immature khwan of children and of rice.[54]

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The acme of maternal virtues was manifested in the "good nourishers" (lĭang dī). These women had borne many children who "nursed and slept well, did not cry, and easily established good habits." They were lĭang dī not just because of the time spent by the fire, for that time could be matched by persons who had lost babies. They were special persons of more than usual capacities for success in nurture. Good to have around for their auspicious influence, they were called upon to inaugurate or help processes concerned with health and growth. They performed, or caught the child in the winnowing ceremony, or gave babies their first suck. They were the persons to whom a sickly child was brought so that his health might be improved by calling the soul and tying holy cord at wrist and ankle (riak khwan). [755] [774]

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54. If a child indfcated by continuous crying that he had lost his khwan, a mature (suk) woman had to be asked to call it back ritually and re-tie it into the body with sacred cord at wrist and ankle. There was no special magic. Her words suffice. Khwan-ladling, a more elaborate and compelling form of the same ceremony, used magical formulae (Textor:401-402). One of Phillips' sentence-completion tests was, "If one is frightened, the best thing to do is..." Of the respondents, 7 women, including one Muslim, would set to work to "call back the khwan" (Phillips:267-268). No man suggested the latter.

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In the agricultural rites, women handled the rice's khwan in basically the same way when it was immature: inviting the young Rice Goddess to stay and grow in the field, and transporting to the house the child-like seed that only next year would grow to maturity. For these rites a woman used an incantation if she knew one. That she could also handle the rice khwan by speaking "extemporaneously" (Textor:429), indicated that her mere words were enough. If no one else were available, a non-suk woman could call the khwan of a child or of the Rice Mother by reason of her in-born female potency, but could not "ladle" a khwan.

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When the khwan was mature (after a person was about age 10) men took over its care. In the men's thăm khwan (khwan-strengthening) rite, here, too, women were the ones to carry off the cloth-and-leaf covering of the bàisī (tiered offering) into which the khwan had flitted during the ceremony. The rice-ceremony at the threshing floor was a thăm khwan, so was performed by men.

885 deprived a man of his masculine strength but was expected to
793 change him into a kind and merciful being.[58] It took at least
562 a three month season (phansā) in the priesthood to make a man
785 mature, responsible, and effective. That this moral fitness
[778] was not obtained overnight was given vivid illustration: if a
Buddha Amulet, designed for invulnerability, failed to be effective when tested by having a gun fired at it, it was "sometimes jokingly dismissed as a monk (phra) who has just been ordained (bwat mai)" (Textor:529). This interesting episode illuminates
• 789 one other important result achieved by both men and women in
885 their respective maturation rites: authorization to handle magic.

Magic and Maturity

In Bang Chan, magic was powerful. Whatever the purpose, whether beneficial or nefarious, it was effective if all conditions were met. Lest such power fall into unscrupulous hands, the community limited its availability and use to those who had gained the moral qualities and fitness to handle it wisely. Only the ritually mature could be counted on to be compassionate, strong, responsible adults, and so were permitted access to occult powers. Whether by ordination or the fire-rest, to be suk was an absolute prerequisite to magical knowledge. It did not give magical power, but qualified one to seek it out. Since no career in medicine was possible without magic, no man could be a mo who had not been previously ordained.

789 The uses of magic by men had entirely different objectives
562 from those of women. Their respective fields did not

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58. "A monk was changed...to be meek and mild." By seeking his morning alms he "show(s) mercy towards creatures" (prot sat) (Anuman Rajadhon:76-77). Women's tenderness in their maternal function was not associated with shyness. A compassionate woman with a strong winyān soul (which projected the quality of the heart) was enterprising and effective (cf. J.R. Hanks, 1959). Where sexual characteristics were confused, instability in behavior appeared. The cultural expectation was that children and women were delicate (ōn), older people and men were hard (khaeng). "A male who is easily induced to convulse is one who had a 'soft' heart (čhai ōn). ...and also a 'soft' khwan (khwan ōn).....Such a young man is excitable rather than predictable and dependable, and hence is cause for parental anxiety" (Textor:405).

overlap at all. Magic was wielded by men to gain power over spirits, persons, elements, and forces. It had either social or personal benefits. The role of highest social benefit, corresponding to the liāng dī in women, was the khwan-specialist (mǭ khwan) who conducted the life-cycle, khwan-strengthening (thām khwan) (for persons and for the rice) and many other ceremonies for the mature khwan. This role demanded men of the highest qualifications in probity, erudition, and personal dedication. Men also had the formulas for curing, house- or boat-blessing, invoking guardian spirits (sān phrá phūm), etc. Men could make protective amulets to render the wearers safe from bullets, knives, spirits, and all sorts of hostile forces in the world.

On the other hand men's magical objectives could be aggressive and hostile. The gamut of amulets, missiles, love-oil, and incantations (Textor:passim) showed the potential for attack and why the converse need for invulnerability was so strong. Men had a nurturing (liāng) role, but only for non-human beings, e.g. buffalo, pet birds, and guardian spirits of house and land. Subverting this role for hostile ends, they obtained possession of the ghost of a recent corpse by gathering the drop of oil at the chin, and nourishing it (liāng) for use in sorcery. For a man, nourishing something gave control.

All of the powers of men's magic were available to women on request for any purpose, hostile or not, but the "owner" had to be the mediating agent.

A woman's magical knowledge was linked exclusively to her female task. It did not give power over people. It could not be destructive. No female sorceress existed in Bang Chan. No woman feared the magic of another woman in childbirth nor at any time. A woman's magic was devoted solely to promoting the processes of growth and life. Thus it controlled the searing heat of the fire, invoked the Spirits of the 4 elements, and helped at various points in childbirth. It handled the soul of the Rice Goddess and of Mother Sū, guardian of children. It restored any frail and wandering khwan to its proper bodily abode. Such was a woman's magic.

To insure separateness the respective provinces of magical activity were ringed with sanctions. Contact with a woman's skirt, undergarments, or menstrual blood completely negated any of a man's protective amulets (re tattooing, cf. Textor: 102). Though this reflected the traditional avoidance between sexual phenomena and Buddhism, it might also indicate a tacit moral evaluation of the magical powers of men and women: the powers for growth were ultimately ascendant over those for power, for men had nothing that undid a woman's powers. Though women were easily prey to man's magical control, as by

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with men's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mō, she could do everything a mō could do. Men were never mediums. Bang Chan's only medium was possessed by a male mō.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

[832] [156] [688] [626] [593] 59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasū as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "suk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasū's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

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The medium's powers as a หมอ appeared to be entirely equivalent to a man's.

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To summarize, the fire-rest enabled a woman to acquire fruitful habits, new status, and the right to handle magic. The implications of the ritual clarified the role of women and the associated symbolism of rice, and by contrast the role of men. The nature of the magical resources available to each sex laid the groundwork for a career in midwifery for women, and for men, a career as a หมอ.

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Comparison of the respective rites of maturation points up certain contrasts and parallels between men and women. Women achieved compassion and maturity through their sexual role, while men achieved these qualities by denying their masculinity. Even a bounty of merit, which a man achieved directly by ordination, came to a woman through procreation, by the ordination of a son, or as a wife if her husband were ordained. Many activities were done by either sex, but each had certain exclusive proprietary areas. If women were donors of nourishment, men too had their donor roles, sexual, economic, religious, etc. Each paralleled the other in the formal steps to maturity, building the way for a complementary social and marital partnership for which both were ritually and psychologically well prepared.[62]

62. In contrast, note the psychological ill-preparedness, leading to severe tensions in Ceylon (Oberesekere, passim).

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in the khwan khaō "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mō or to the Mīnburī Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

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Though living like other elder citizens of the community; in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mō was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (tham ačhīp [Mc.F. 990]) when others who had equal or more experience were not so considered?

759 In these 2 qualifications of skill and success, some of the explicitly non-professional old ladies were recognized as easily matching the professionals. What then was the definition of a professional midwife?

759 What the professional midwives alone did was to deliver
789 non-kin, for which they had to have magical formulae and reliable celestial knowledge. The incantations gave a midwife the right to be called a mɔ̄ tamyaa, for he or she was using to a greater or lesser extent the sacred wisdom of occultism (saiyasāt). Here midwifery was like any other craft or endeavor. One could cure, sing, and build a boat without magic, but with it, the chances of success and effectiveness were increased. The incantations could "ease delivery," "get a baby out that had died inside"(for this baby could no longer do his part), "prevent the poison of the fire from burning the mother," and give other special help. That this magic was the crucial difference between the professional and non-professional was illustrated by the old lady who had delivered 30 babies, but vehemently[67] denied being a midwife. "I am not a professional. I have no magic. I only pray to the Lord Buddha and think of sacred things each time."

759 A professional also had more detailed astrological
787 knowledge of the orientations of relevant celestial beings so that delivery would be "helped and not obstructed." This knowledge was in no way a professional secret, but if complications during childbirth were evident, it was necessary to have accuracy, and convenient that the midwife had it.

759 To certain villagers the designation "professional"
562 could not be applied to women because, never having been
212 ordained, they had not learned to read, as men supposedly
191 had, not only Thai but Pali and Cambodian, the languages of
778 medical and magical lore. "A professional midwife has a book. No woman can become professional because she cannot read." The idea was that incantations were correct only if taken from the sacred texts at the temple, though in fact the formulae were taught orally. One male midwife had a sacred book in his private possession, which was proper, for

sacred books were inherited by males.

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67. Her vehemence may reflect either pride in being so successful without magic--a true liang dī--fear of being reported as unlicensed (see below, p. 145); or consternation lest she be accused of using magic to which she was not entitled.

759 [465] Although as to fees, they said, "It is as you please," these women received as a rule the higher honoraria of 10, 20, and 30 baht. They did not have a separate teacher-rite but paid their respects during regular temple events, such as offering a pig's head and the other items during someone's ordination, though the Muslim midwife had her modified teacher-rite in a separate home ceremony, not at the mosque (cf. [212] [214] Appendix:Muslim Customs). It was even said of the best female midwife that "she had a book." She was literate in Thai. Even if her book were a popular astrological guide, it carried the reverence accorded all books. Whatever it was, its possession increased her aura of reliability. [789] Though the women did not receive their magic at the temple but rather from a kinsman in the maternal line, their incantations, which appeared to be in the Pali-Thai tradition, were no less effective.

759 The professional midwives, both men and women, saw themselves as individual custodians of sacred knowledge and competent in a technique. They were not only interested and ready, but obligated to give expert care to anyone, anywhere it was needed.

The non-professional midwives always thought of themselves as voluntary helpers of kinsmen, acting "out of pity," and carrying on their female responsibility for new life as [562] older women helping their younger relatives. The idea of giving nurture and assistance was so deeply ingrained in the female office that the professional midwives saw themselves fundamentally as volunteers.

Learning Midwifery

The decision to deliver a daughter or a wife was not momentous. One did not have to be "suk" to deliver a baby. The same practical and compassionate motives that led a mother or husband to do this led some of these people to seek out professional techniques so that they might "help more." One woman, bearing her own child at 25 with intense suffering, became angry (chep thai) because "the midwife did nothing to help, but just sat and chewed betel while others did all the work." In desperation she called in her own mother to deliver her. She also "felt she had many relatives who would need her help." Another was asked by her mother's brother, a midwife, to accompany him as he was getting too old. He then gave her his magic. A man took up the specialty after his first child, a son, died at birth from ineptness, he thought, of the midwife. Another man, though, took it up as a "minor extra" to his career as a mō. All learned the skill by accompanying and helping an

759 sought, ritually requested of some relative who was a mid-
571 wife.[70] Some persons though continued to limit themselves
602 to delivering their relatives, and never sought magic at all.

Two Worlds: The Natural and the Supernatural

759 To deliver a baby as a midwife or even as an unskill-
772 ed kinsman, embraced 2 aspects: a manual or technical, and a magical. These aspects corresponded to Bang Chan's 2 great worlds of knowledge and experience: the natural and the supernatural.

Midwifery was not alone in embracing both of these categories. Every activity, bus-driving, dancing, printing, or other, had its incorporated magical means to augment the probability of success. Though with the manual or technical skills of the natural world alone one could come through all right with even a modicum of supernatural help, success was greater. No one wanted to take the responsibility and risks of "going it alone" especially when the resources of the supernatural world were so freely and easily accessible to everyone. At the very least, one could start an enterprise on Friday (Wan Suk: Happy Day). The closer an enterprise was to the margin of life and death, however, the larger the supernatural element. In farming, curing, and midwifery, for instance, the ritual component was strong.

[874] Since these 2 worlds were qualitatively different, each required a different method of learning. The supernatural world, immaterial, royal and sacred, was learned

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[789] 70. Three women had recieved theirs from their mother, mother's mother, and mother's older brother, respectively. A retired midwife planned to give hers "to the daughter or grandchild ("lan":sex not specified) who was interested enough to ask for it." One man had received his from his father's father. Childbirth magic would hardly be a suitable topic of conversation between priests, but it might have been passed down there, too. The midwife whom one accompanied while learning probably was the source of one's magic. Women's magic was passed down the maternal line only, whereas men could get theirs both from kinsmen and at the temple.

by instruction from a ritually[71] approached teacher. "One cannot accidentally learn. One has to ask to be taught." As a practitioner in this field, the title "mɔ̄" signalized expertise; where teaching was involved, the title was khrū (teacher [McF. 183]) or ācān (professor [McF.990]). Speech was the key to this tradition, in spite of sacred books and wall-carvings in the temples.[72] Modern education, being book-and-teacher based, shared in this aura. There, even today, listening is more comfortable than reading.

Techniques of the practical, natural world were learned not by teaching but pragmatically by observation, example and experience. Eyes were the key. "I know because I saw," said a midwife. At the highest level of achievement in the natural world one was expert (nak), e.g. convict (nak thōt, an expert in being punished) a tourist (nak thīao, an expert in roaming around).[73] Within the natural world, an intense pragmatism reigned always emphasizing visual phenomena. People were keenly

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71. To speak ritually one held in the hand the trio of incense, flowers, and a candle. This was the way to cross over from the profane to the sacred world, to inform (bɔ̄k) or make a request of, a sacred being (a teacher, priest, king, or deity). The tiny flame of the offering invoked holy fire, and so had the effect of making one's words compelling, for no one could gainsay a request under such circumstances. A husband about to deliver his wife held incense, flower, and candle in hand as he requested the help of ancestors and spirits. (Bishop Pallegoix saved the existence of his mission by thus approaching the King [Pallegoix, Vol. 2:201]). The trio of offerings, whether at the 4 corners of the lying-in fire-floor, or in "bat phlī krathong" at a "than khwan" rite, or even in an ordinary khwan khan made all actions and words compelling.

72. Because words, immaterial and invisable, lay at the base of occultism, words as continuous agents of power permeated Bang Chan's ordinary daily life. This was why words, verbal play, and punning initiated action: pregnant women attended the monks' "coming out of retreat" (ɔ̄k phansā) so that the child would "come out" (ɔ̄k) easily.

73. It should not be forgotten that most activities in the supernatural world had their technical sides, and the term "nak" was used there too. A curer had to learn his herbs; a dancer, his steps; and a master of ceremonies, the words of the chants.

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home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

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To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Mīnburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 7 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccessibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grow up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

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In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Mīnburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

The Muslim khwan khao contained 7 795
items"--a young (or ripe) coconut with its water; thread or 782
"a skein of yarn"(used not to tie in the khwan but "for the 844
teacher"); 7 pieces or areca nut; 7 betel pepper leaves; 789
one "heavy" (15 gram) yellow wax candle; one "bag" of incense; 759
rice; and 30 baht in money.[78] The khwan khao was not offered with the idea of its reaching phra In (Indra) ultimately, but rather the local princely spirits of the land, chao thi, chao thān, and Mae Thoranī (Mother Earth). It was waved 3 times by the midwife over the abdomen of the woman in labor with the prayer: "Spirits of the land, Mother Earth, may the delivery be easy!" The khwan khao was then placed at the mother's head. The woodpile was knocked over so as to point to Mecca, which was west, a direction avoided by the Buddhists. "When nearly ready to deliver, a Muslim midwife turns the mother's face in the direction where the family's hens hatch their chicks. If they have no chicken, then in any direction."[79] If delivery were slow, a Buddhist mō was called to "shift the mother to new places" until the baby came out.

Muslim women lay post-partum by a fire for the usual 795
physiological reasons. In making up the fireplace, instead of 846
a cluster of incense, flowers, and a candle, this purely Hindu- 372
Brahman-Buddhist trio, they sprinkled salt "to keep away evil 789
spirits" on the dirt at the corners. Salt, oil, or alcohol [759]
was spewed over the fire and the woman's body, or only magic
was recited, "to control the poison of the fire." "Of these,
salt is best," said a Muslim midwife, but "whichever a midwife
used first has to be continued for the rest of her life as her
way of doing things, because the habit has been started that
way." The Muslim magic for controlling the fire was "ōm ming
ōm fūn ōm fai sawā hāi." "So be it, stove, rocks (or mountains),
fire, be cool, may a blessing rest to you," though "ōm" is the
Pali-Buddhist "mystical word." The placenta was not put in a
pot beside the fire, but was washed by the midwife several times
until perfectly clean, then was mixed with salt and buried in 795
the dirt directly under the fire. When the fire was finally 844
destroyed, the placenta was dug up, washed again, and immediately
buried (not in a pot), with the

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78. There was some evidence that the thread and incense were included only when a Muslim midwife was delivering a Buddhist woman.

79. To the Muslims this was an act of imitative magic. The Buddhists saw the action of a setting hen as a quick source of information for the parturient's orientation. The hen always avoided the direction of the phī luang (Textor:378).

4:Phillips E-4,5 (1956-1957) 1966
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152 571 ritualized, ways of expressing hostility. What is significant about these particular procedures is that their very formalism serves to keep the aggression controlled and within bounds. Thus, everybody knows precisely how to behave when a buffalo disappears in the middle of the night and an intermediary arrives the next day to arrange the price for its return. Similarly, the aggressor, his victim, and everyone else present knows what is meant when someone calls a dog by the name of a person who is within hearing range and claims it was simply a slip of the tongue. The victim might respond by stealing his antagonist's boat and returning it a few weeks later, after his adversary has suffered sufficient anxiety. Note that in all these cases a face-to-face confrontation is either avoided or concealed.

152 571 754 Related to the above is the use of magical aggression. Textor (1960) points out that magical aggression—from one *person* to another *person*—is on the wane in Bang Chan. Also, it is clear from his exhaustive inventory of the magical practices in the village that interpersonal aggression has a very minor part in what is otherwise an extremely elaborate belief and ritual system: there are no more than three or four supernatural "objects," out of more than one hundred and seventy, that even suggest witchcraft, and although these objects are considered highly potent, they are rarely used. Even in the most extreme case—a young man using the oil from the chin of a corpse to induce hysteria in a maiden who has rebuffed his advances[9]—the victim is held partially responsible for having succumbed to the magic, a consideration that diminishes the "magical" implications of the ritual.[10]

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152 762 Finally, a word should be said about the most convoluted way of expressing aggression. This is suicide, a procedure which, obviously, is applicable to only a small number of people. Nevertheless, during the relatively brief period that I was in the field, three Bang Chaners (out of a population of 1,771) attempted to do away with themselves by hanging. They always selected a conspicuous place (a tree on the Minburi highway or over the main canal) and were always unsuccessful. The aggression here is convoluted not only because it is turned inward, but also because it is

[9] This blending of sex and aggression does not have the same meaning in Bang Chan as it has in the West. Although the young man is concerned with punishing the girl for not responding to him, he is more concerned with breaking down her defenses and equilibrium, the very factors which denied him access. In English terminology, he wants to "unhinge" her, with all the duality that such symbolism might imply.

[10] While magical aggression between people is relatively minor, magical means of averting aggression by non-human forces is not. In fact, the largest number of magical practices in Bang Chan relate to protecting the health and welfare of the organism from malevolent spirits, accidents, and dangerous animals. These data, of course, are quite consistent with the SCT data on "anxiety," presented in the preceding section.

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magical formulae and incantations (khāthā cf. Textor 1960:80-98; 67-79). It was one of the branches of occultism (saiyasāt [Mcf. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khāo (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khāo. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō raksā) who made up deomctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyae). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.19

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

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overlap at all. Magic was wielded by men to gain power over spirits, persons, elements, and forces. It had either social or personal benefits. The role of highest social benefit, corresponding to the liăng dĭ in women, was the khwan-specialist (mɔ̌ khwan) who conducted the life-cycle, khwan-strengthening (thăa khwan) (for persons and for the rice) and many other ceremonies for the mature khwan. This role demanded men of the highest qualifications in probity, erudition, and personal dedication. Men also had the formulas for curing, house- or boat-blessing, invoking guardian spirits (săn phrs phŭm), etc. Men could make protective amulets to render the wearers safe from bullets, knives, spirits, and all sorts of hostile forces in the world. [791] [156]

On the other hand men's magical objectives could be aggressive and hostile. The gamut of amulets, missiles, love-oil, and incantations (Textor:passim) showed the potential for attack and why the converse need for invulnerability was so strong. Men had a nurturing (liăng) role, but only for non-human beings, e.g. buffalo, pet birds, and guardian spirits of house and land. Subverting this role for hostile ends, they obtained possession of the ghost of a recent corpse by gathering the drop of oil at the chin, and nourishing it (liăng) for use in sorcery. For a man, nourishing something gave control. [754]

All of the powers of men's magic were available to women on request for any purpose, hostile or not, but the "owner" had to be the mediating agent. [424]

A woman's magical knowledge was linked exclusively to her female task. It did not give power over people. It could not be destructive. No female sorceress existed in Bang Chan. No woman feared the magic of another woman in childbirth nor at any time. A woman's magic was devoted solely to promoting the processes of growth and life. Thus it controlled the searing heat of the fire, invoked the Spirits of the 4 elements, and helped at various points in childbirth. It handled the soul of the Rice Goddess and of Mother Sŭ, guardian of children. It restored any frail and wandering khwan to its proper bodily abode. Such was a woman's magic. [754]

To insure separateness the respective provinces of magical activity were ringed with sanctions. Contact with a woman's skirt, undergarments, or menstrual blood completely negated any of a man's protective amulets (re tattooing, cf. Textor: 102). Though this reflected the traditional avoidance between sexual phenomena and Buddhism, it might also indicate a tacit moral evaluation of the magical powers of men and women: the powers for growth were ultimately ascendant over those for power, for men had nothing that undid a woman's powers. Though women were easily prey to men's magical control, as by [841] [834] [754]

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with men's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 • 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male phī, she could do everything a phō could do. Men were never mediums. Bang Chan's only medium was possessed by a male phī.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

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[832] [156] [688] [626] [593] 59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasū as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "auk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasū's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [737] 61. In Bangkok, monkey, cats, or spirits may also possess women.

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The medium's powers as a หมอ appeared to be entirely equivalent to a man's.

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To summarize, the fire-rest enabled a woman to acquire fruitful habits, new status, and the right to handle magic. The implications of the ritual clarified the role of women and the associated symbolism of rice, and by contrast the role of men. The nature of the magical resources available to each sex laid the groundwork for a career in midwifery for women, and for men, a career as a หมอ.

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Comparison of the respective rites of maturation points up certain contrasts and parallels between men and women. Women achieved compassion and maturity through their sexual role, while men achieved these qualities by denying their masculinity. Even a bounty of merit, which a man achieved directly by ordination, came to a woman through procreation, by the ordination of a son, or as a wife if her husband were ordained. Many activities were done by either sex, but each had certain exclusive proprietary areas. If women were donors of nourishment, men too had their donor roles, sexual, economic, religious, etc. Each paralleled the other in the formal steps to maturity, building the way for a complementary social and marital partnership for which both were ritually and psychologically well prepared.[62]

62. In contrast, note the psychological ill-preparedness, leading to severe tensions in Ceylon (Obeyesekere, passim).

Bang Chan Canal bissected the community and joined, about one mile south, Sāensaēb Canal, a broad old waterway connecting Bangkok and Minburī with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Minburī, two miles east, cut through one side of the area. On it lay Bang Khūat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō pēet," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Minburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Minburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Minburī, Kilō pēet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoē), one located in Minburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided, reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

1. A new large school has since been built away from the temple compound.

426 Because of scattered farms and frequent shortage of cash, borrowing food and other items, and many exchanges of service were necessary. Blood-kin were easier to approach, and in the larger social unit, nearer. Borrowing from a non-kin neighbor was supposed to be less frequent, and the favor had to be returned more promptly and exactly.

434 Most opportunities for increasing cash income such as hiring out as temporary farm labor, digging canals, marketing eggs, mushrooms, or cooked snacks, took one out of the home, often overnight. In the small family, one partner was left at home. Both could not go because fear of theft forbade leaving a home unoccupied for any length of time.

The Buddhist Priesthood

792 At the temple lived twenty or thirty priests under the abbot, with a group of boys to serve them. The priesthood was maintained by daily voluntary offerings of food, with larger donations of food and commodities at certain times. Persons who thus "made merit," by supporting the priesthood, by giving to the needy, and adhering to the ethical tenets of the Buddhist religion, reaped a reward of health, happiness, wealth and eventually, freedom from rebirth. The immediacy of these beliefs must not be underestimated. Men only were ordained. They might resign at any time after three months, but some spent their lives in the priesthood.

792 262 431 In Bang Chan, throughout the year, the priests set out at dawn to receive cooked food for the day. They appeared at houses by more or less specific arrangement and were given a generous share of the food prepared by the family for its own use, sometimes with the addition of fruit and other delicacies. Each priest stopped at two or more houses. The food then was brought to the temple to be eaten at 8 and 11. For the rest of the day the priests fasted, i.e. they ate no solid food, but drank liquids such as tea, soft drinks, and recently, tinned milk and a fortified malted milk drink. Priests were also invited to eat in homes not only at large ceremonies, but at small merit-making occasions. Sporadic special food offerings were also received. If a buffalo died, much of the meat was usually given to the temple. Traditional practitioners, mid-wives, and ceremonialists always gave the priests a portion of the fees from their practice which consisted in 1 or 2 liters of milled rice, a bunch of bananas, and perhaps cash. On the numerous Buddhist holidays and at specially organized temple convocations, quantities of cooked, preserved and raw foods were brought to the temple and apportioned among the priests. From this bounty a meal was served to the priests, who ate while the villagers looked on in satisfaction.

One of the duties of the abbot was to coordinate the

792 262 411 village offers of regular service, the holiday offerings, home invitations and sporadic gifts so that all priests had places to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut[1] or hardship.

792 796 262 About mid-July, Buddhist Lent changed the food habits somewhat. This three-month period corresponded with the height of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering, and thereafter the priests went regularly on their appointed rounds.

796 261 On Buddhist holidays, the people did not usually eat any of the food brought to the temple, but on (3)thauad (2)ka-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bounteously.

792 857 262 Residing at Wat Bang Chan in 1954 were 22 boys, aged 10 to 16, sent to serve the priests, get their living and attend school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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792 262 737 235 1. Amounts of food given usually exceeded the actual needs of the priests and temple boys. One instance was noted in which food was sent by the priests to a needy old person nearby. Leftover rice was dried and sold for chicken feed.

114 104 2. The transcription used throughout this report is that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

canal misjudged his needs for milled rice and ran out, he had to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

Of 105 households which had and used a home rice mill, 99 used the polishings for feed but no family in Bang Chan used them for human food (Goldsen and Ralis, 1957). One farmer, headman of a hamlet, who lived near the main canal and the road to Minburi but who used home-milled rice, offered as the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

As reported by Janlekha (1955) consumption of milled rice in 106 households amounted to about 285 kilograms per capita per year or 780 grams per person per day. Such "household consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

Flesh Foods Other than Fish. - The people of Bang Chan had a taste and appreciation for flesh food, but the production and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they were cut up and given to the priests. When the buffalo belonging to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the killing. Actual butchering was done by Moslems or Chinese who did not object.

2. Households were identified by numbers assigned by lot.

252 and dinner, either meal taking an hour or two to prepare.
264 Snacks might be eaten at any time. Adults often ate just the two principal meals, but children, especially the small ones who were not in school, might eat whenever hungry. The school children often purchased snacks from venders on the
• [998] school grounds. If food was to be offered to the priests,
[853] who went around the village about seven o'clock in the morning, breakfast preparation was begun early, between 4:30 and 5:30 a.m., although family members might eat at various times during the morning: the husband before he went to the field, older children, before school time, babies and small children when the mother had time to feed them, and so on (Appendix A, p. 95). Preparation of supper usually took place sometime between 2:30 and 6 p.m. Whenever possible, family members ate together at the evening meal, but many exceptions were noted.

252 Rice is the principal item in every Thai meal. In Thai
262 the general term meaning "to eat" is translated literally "to eat rice." All food items are divided into two classes: rice and "with rice," or (2)kab (3)khaaw. Among the families studied three or four "with-rice" dishes were usually prepared during the day, i.e. for the two main meals, but the number varied in different families, and according to season. One or two of these dishes would usually be "hot" i.e. highly seasoned with fresh or dried chili peppers. Fish was the food item second in importance to rice, but the typical "with rice" preparation, whether hot or mild, contained more than one food item in addition to a variety of spices and flavoring materials (Appendix C, p. 118).

262 Between meal snacks might be any available leftover
264 food,[1] fruit, or items purchased from a vender.[2] Such snacks were not regarded as meals, however, as no Thai considers that he has eaten a meal unless he has eaten liberally of rice.

252 The general method of cooking rice was the same throughout the village. The rice was washed two times in water from the canal or fish pond, and was then boiled in a large volume of unsalted water for about 24 minutes. The rice pot was

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1. Leftover foods from breakfast were eaten later that day with or without reheating. "With-rice" was seldom left over from the evening meal, but rice was frequently kept over night.

[252] 2. Deep fat frying of bananas, sweet potato slices and the like was commonly observed, both among venders who sold their wares on the school ground, and those who travelled by boat. This method of cooking was never observed in ordinary home food preparation probably because fat was in relatively short supply.

252 cooking water was discarded. In Bang Chan, foods were not usually cooked a long time.

In most village homes, one fire only was built for ordinary meal preparation. Rice was cooked first, then "with-rice" dishes, no attempt being made to serve the rice and accompanying foods hot. Indeed, with the frequent use of chilies, one might have the sensation of eating hot foods, no matter when they were taken from the fire. Notes on the preparation of a meal in one household that participated in the dietary study, are included in Appendix C, p. 119.

Meal Service and Techniques of Eating

264 Food was generally served in the kitchen area. When possible, family members ate together at the evening meal, sitting on the floor, each one old enough to feed himself having a bowl of rice before him. The "with-rice" dishes were placed in the center of the group. Family members helped themselves to portions of the "with-rice," using the right hand to take solid foods, and a serving spoon for fluid foods. Enough rice for a bite was pressed together with the fingers of the right hand, so that grains would not be scattered as the rice was conveyed to the mouth. "With-rice" of semi-fluid consistency was eaten by dipping the ball of rice into it, or more exactly, touching one side of the ball of rice to it. The amount of "with-rice" was generally small, and to take more than one spoonful onto the plate at a time would appear greedy.

264 When families did not sit down to eat together, those
593 who ate first were expected to take no more than their share. The wife saw to it that her husband had a liberal serving of the best food available. She also gave generously to the children, holding back, eating last or what was left, herself. In a well-to-do household, where food was ample, the mother would be as well fed as others; in a poor household she might be short-rationed day after day.

When priorities in serving were observed,[1] young children, "not old enough to know better" were not expected to wait until the elders had been served. A frequent pattern at both breakfast and dinner was for older children to feed the younger ones before their own meal; elders in the family then ate, and husband and wife ate together if possible, or as
792 convenient to their separate schedules. In the morning if food was to be offered to priests, family members did not ordinarily eat until after the priests had been served. If necessary, however, the priests' food could be served onto a
000 tray, then others might eat. The observer often had

1. See footnote 1, p. 49.

264 would not come willingly to work. When a family with a repu-
476 tation for stinginess diluted the (3)khaaw (3)tom too much,
[574] the group refused to eat any, thereby reminding the host of his obligation for hospitality.

574 Guests to whom meals were served fell into four categories: 1) kin, 2) visiting dignitaries, 3) priests and 4) drinking companions. Kinfolk who came as guests were married children, or those who were away at school or work, or kinsmen from Bangkok or elsewhere. The older the relative or the greater the distance travelled, the greater the honor accorded him. Foods were exchanged. Two visiting ladies travelling in a large boat, made an annual round of all their relatives, bringing certain "city" foods and receiving substantial gifts of rice, fish and fruit. They stayed for several days as guests of one family, then moved on. Every person from Bang
[431] Chan who visited a relative in Bangkok carried big packages of food, usually rice or eggs, as gifts. With the inflated prices in Bangkok, it was advantageous to have a "country cousin" who might bring food. Visiting kinsmen always recognized the need for eventual reciprocity.

Visiting dignitaries were usually entertained by hamlet headmen. Meals served to visiting officials, policemen and others might be elaborate, involving cooperative help in preparation, but reciprocity, if any, rarely took the form of a return meal.

[792] Regular visits of the priests, as well as the invitation of priests to the house for special events, have been mentioned. Priests might also come from afar, usually staying at the temple but receiving generous offerings of food from people of the community.

[562] The custom of convivial get-togethers of either or both sexes was well established. Men traditionally enjoyed "stag" dinners of four up to twenty or more whenever the ingredients for a turtle, frog, cobra or other snake curry were available. Chicken curry might also be thus served, and once a catfish mash was prepared by a male visitor from the north. Those curries were cooked by men, and the host served liquor freely.
784 The all-male character of the occasion reflected the old re-
388 strictions on women's partaking of flesh foods (see p. 42),
213 but older women did not hesitate to join in the drinking.
[524] Women also got together in drinking parties, sometimes to play cards.

In addition to sharing food with people in these four categories, the general rules of hospitality required that anyone who came to the house at meal time, should be offered food, or at least a drink of liquor, tea, or plain water.

796 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the [476] time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives [782] and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A 764 big cremation might require planning in detail for years ahead: 796 invitations to priests and relatives in distant parts of the 514 country; hiring an orchestra and obtaining ceremonial gear. 533 For the largest events, when the guest lists ranged upward to 426 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person, [258] usually one of the "professional" cooks of the village. The [476] day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

[262] The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an 262 annual homage-to-the-teacher rite. It is the nearest approxi- 796 mation to a quantitative record of food for a ceremony that 815 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either 796 at 7 a.m. or 11 a.m., or both, always at least in part by the 792 host, who sat and chatted with them. No one else ate until

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)daeaeng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chauaun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

435 Some information as to the cost in baht of the larger
196 ceremonies held in 1954, and their scale, was obtained from
[124] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[764] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000. Guests gave 2300.
[583] B: Rite of forgiveness after elopement: a meal, with 5 bottles of liquor.
[184] C: Moslem: 2 buffalo slaughtered. 400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-four "pairs" of specified foods, i.e. two bearers each of
[583] sugar cane, fruits, sweetmeats and other things. At more modest weddings and the rite of forgiveness for a couple who had eloped, food might differ from the usual fare only by including the three essentials of a wedding: pork, chicken and alcohol.

273 Increased consumption of alcoholic beverages during the
796 ceremonial season was indicated by the sales of one local
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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[574] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

One other aspect of (1)ngaan which should be mentioned
852 in connection with food and health is the opportunity for con-
796 tamination of food. The villagers did not associate sanitation
751 with health, hence the hazards of a community meal which many
[751] persons helped to prepare were many. Two incidents observed the day before an ordination in early April, will illustrate. In the final stage of making Chinese noodles, rice flour paste was extruded through a perforated disk into an enormous pot of boiling water. When done, the product was removed with a fish net, and plunged into the canal to cool, after which women helpers spread it out on banana-leaf covered trays. Dishes were also washed before use in the canal, which was then too low for boats. Since, however, many people drank untreated canal water at this season (see p. 28), the added hazards for the participants caused by these procedures may have been slight.

262 In summary, food plays a major role in ceremonies and
792 festivities, which are concentrated in the 3 months' dry season. Proposals for dietary improvement in Bang Chan must take into account not only the possible effects of the (1)ngaan season on the total nutrient intake, and on opportunity for exposure to contaminated food, but also the importance of these affairs from the standpoint of merit and prestige, and the relatively great financial burdens which villagers therefore undertake because of them.

QUANTITATIVE DIETARY STUDY: FOODS EATEN AND ESTIMATED NUTRIENT INTAKE OF SELECTED FAMILIES IN BANG CHAN

Procedure

121 Selection of the Sample
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Medical inspection designed primarily to discover possible signs of nutritional deficiency was carried out in advance of the family dietary study. The suggestion of Grant (1948) that matched groups, of contrasting economic or other status be studied, appeared to be appropriate to the situation in Bang Chan. Our hope was to be able to select from the random sample of families given medical inspection (Hauck, 1956) a group of families (A) in each of which several members had clinical signs which might be evidence of malnutrition, and a group of families similar in age and sex distribution (B) in each of which the members were largely or wholly free from such signs.

125 When the medical inspection of the random sample was
146 complete, however, too few of the families were found to meet our criteria for inclusion in Group A, i.e. the group of apparently less well nourished families. Additional families for

511
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Table 8. Summary of Economic Conditions of the Two Groups of Households Participating in Dietary Studies

Household Group and Code No.	Members	Land: Rai Worked	Land: Rai Owned	Buffalo[1]	Food Cost[2]: Total	Food Cost[2]: Per Cap.	No. of Priests Fed	Sources of Income
Group A								
222	5	0	0	0	2.96	0.59	0	Labor contractor; hired out as labor; boat repair; fishing; vegetables sold; canal digging.
12	3	12	0	1	2.70	0.90	0	Rice production; occasional work in Bangkok.
215	5	14	0	1	1.59	0.32	0	Rice production; wife, a medium.
67	5	16	6	1-0	2.52	0.50	0	Rice production; eggs sold; road jobs.
2	6[3]	20	0	2	3.97	0.66	3	Rice production; "professional cook".
103	8	47	12	5	2.04	0.26	2[4]	Rice production; eggs, fish, mushrooms sold; buffaloes raised.
Mean		18.2	3.0	1.6	2.37	0.49	0.7	
Group B								
23	8[3]	6	0	1	1.56	0.19	0	Rice production; selling fish and vegetables; masseur.
21	4	25	25	3	1.92	0.48	3	Rice production; headman
16	8	47	47	5	2.70	0.34	2	Rice production; vegetables, fruit sold; road jobs.
25	8	50	50	3	7.97	1.00	2	Rice production; eggs, mushrooms sold.
20	9	66	51	11	2.47	0.27	2	Rice production; ceremonialist; doctor; carpentry; trading; eggs collected and sold.
Mean		38.8	34.7	2.6[1]	3.32	0.45	1.8	

1. The buffalo belonging to Household 67 died during the year. In Household 20, the brother who moved in owned several buffalo, thus the total for Group B was more than the number shown.

2. Average cash expenditure per day, in baht. (One baht equalled about 5 cents) Household 222 received rice as part of wages.

3. Babies born during Round IV were not included. In Household 23, a 12-year old son served as temple boy and was away from home much of the time.

4. Rainy season only, when priests could come by boat; counted as 1 in computing average.

125 fishing and selling vegetables, they managed to obtain a fair
532 diet. The father's skill as a masseur was valued especially
511 at periods of heavy farm work, after childbirth, and by the
834 cooks at a ceremonial feast. This brought in from 2 to 12
163 baht per week.
[262]

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and
[236] housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household
[857] 67 were shy. One or the other of the two older children
059 often stayed home from school to look after the baby, so
[124] that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who
[152] were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household
[44] 222, the 14-year old daughter often gathered and sold vege-
[304] tables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the
[465] activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of
[435] land, as well as cash. Maintenance of a son in school in
[871] Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

431 All families in the survey group were Thai Buddhists,
262 and 6 of them offered food to priests more or less regularly.
792 On 17 of the 24 survey days when the observer visited these
[779] households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

511 Cash Expenditures for Food. - Mean total, and per
[128] capita daily cash expenditures for food for survey days, are shown, by household in Table 8. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

000 concerning its culture and use. Tilapia culture was learned
[434] largely by trial and error, and was considered primarily as a
[224] source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been
[262] different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

262 More home consumption of eggs would be desirable, but
[432] their ready sale and acceptability for barter may present an
[431] obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak
[432] season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented
[264] as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

272 Milk, as canned, dried or malted milk preparations, was
792 considered an appropriate gift for the priests, who are for-
788 bidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to in-
000 clude milk among them. People gladly bought food for the
[829] priests and would probably accept on the authority of the head
[792] priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headmen were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

[796] The importance of merit making and the relatively large
[882] cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

177
244 cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

243 At the height of the boom, the demand for rice straw
244 swept many of the fields clean of the stubble usually left
234 there after harvest, thereby decreasing food for the roaming
197 buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralis (1957) were 1) the cash outlay required was small, 2) returns were realized quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralis made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

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[431]
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[875]

Food for Homage-to-the-Teacher Rite Performed by a Buddhist Priest Who Was a Traditional Practitioner

Item	Amount	Cost in Baht	Item	Amount	Cost in Baht
Cereals and Legume Seeds:			Fish and Meat (cont.):		
Rice noodles		10.	Dried fish	6	gift
Soybeans & fermented vegetables	25 kg.	12.	Roasted fish	3 kg.	gift
			Shrimp paste	2 kg.	18.
Mung beans	10 lit.	25.	Lobsters		15.
Cassava flour		2.25	Lobsters (for soup)		7.50
Sugar and dessert:			Pig's skin (for soup)		10.
			Beef[1]	15 kg.	150.
Palm sugar	1 pail	67.	Ingredients for Mussel-man curry[1]		27.
Cane sugar	14 kg.	85.			
(2)Kha-(5)nom (3)tuaj-(1)foo	500 cups	35.	Boiled chickens[2]	2	22.
			Pig's head[2]	4 heads	222.
Fish and Meat:			Pork[2]	4 kg.	40.
Fish ((1)plaa (2)myk) for soup		6.			
Silurus and serpenthead	60 kg.	gift			

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
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essentials not atypical of the region. Instead of villages being organized administratively on the basis of natural social groupings and demarcations—that is, social centers and groups with which people feel a primary identification, in Bang Chan's case the local Buddhist monastery and government primary school—so that governmental and social units are isomorphic, they are gerrymandered into highly arbitrary administrative units. Thus the village of Bang Chan is comprised of seven *muubaan* or hamlets, at the head of which are seven hamlet headmen; these hamlets are located in two different *tambon*, or communes (four in one commune, three in the other) headed by two commune headmen, neither of whom lives in Bang Chan; the two communes are located in two different districts headed by two different district officers and their staffs; the two districts fortunately are in a single province, Phranakhɔɔn, the same administrative unit in which the metropolis of Bangkok is located. Yet the people who reside in these varying hamlets located in different communes and districts all perceive themselves as living in the single village of Bang Chan. The fundamental organizational problem here is that since the sources and lines of governmental authority do not follow the lines of the natural Bang Chan community, jurisdictional conflicts and confusions arise to threaten the effectiveness of those community-wide programs that occasionally may be initiated. For example, during a diphtheria immunization campaign in the village (Hanks and Hanks 1955), the public health officer from one of the district offices was reluctant to immunize all the children of Bang Chan on the grounds that some of them came from hamlets outside his district's jurisdiction; he yielded, as the Hankses note, only when a perceptive villager pointed out that if germs knew no boundaries why should he?

Not all villages of the Central region have such real or potential administrative difficulties. (And Bang Chan does not have them too frequently either, principally because the government does not initiate too many community service programs.) However, the basic organizational principle which admits them—that houses are grouped together as administrative "villages" on the basis of conceptual neatness rather than socially functional criteria—is a common feature of the administrative structure of the Central Plain.

The foregoing account describes some basic culture patterns which Bang Chan shares with other villages of either the region or the nation. In addition to these broader patterns, Bang Chan has certain traits which inevitably refer to local village conditions and contingencies. For example, the most active and viable social unit in Bang Chan beyond the familial level is the order of Buddhist monks associated with the monastery. It is the only organization within the village that has been successful in mobilizing community activity (Sharp *et al.* 1953), although much of this activity has

4:Phillips E-4,5 (1956-1957) 1966
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been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad, national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.[4] As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

[4] It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

4:Phillips E-4,5 (1956-1957) 1966
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continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959*b*: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family;

home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

4:Phillips E-4,5 (1956-1957) 1966
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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[6] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*luŋ*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

[6] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost a Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

4:Phillips E-4,5 (1956-1957) 1966
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fictive terms is of course sometimes prompted by nothing more than the desire to be polite, but equally often it symbolizes genuine feelings of affection and obligation not too different from what the terms imply when they are used in their original kinship context. Bang Chaners have a wonderfully convenient term, *phyan-yaad*, a compound meaning literally "family friends," which is used to refer both to friends to whom ego feels so close that he considers them members of his family and to individuals whom he considers his friends *because* they are members of his family. The particular persons to whom this term, as well as those noted above, is applied vary widely from informant to informant (expectedly so because they are non-institutionalized terms). However, the point to be emphasized is that for all villagers kinship provides a basic referential mechanism for expressing the degree of psychological affiliation that they feel toward other human beings.

An *awareness* of degrees of psychological affiliation and obligation and of the modes for expressing such sentiments are very much a part of village life. For with the exception of the five institutions mentioned above, most Bang Chaners, as I have noted elsewhere (Sharp *et al.* 1956: 241), are really not obliged—and do not feel obliged—to be beholden to anyone but themselves. In a very real sense, the village is comprised of 1,771 individualists whose major goals in life are to obtain sufficient land to support themselves, their growing children, and their religion, free from physical insecurities and unencumbered by entangling social obligations. When they enter into relationships with other people they do so with an awareness that they are always acting of their own free will.

Despite the conventions of ethnographic reporting, it is difficult to delimit the precise nature of the nuclear family in Bang Chan. The nuclear family clearly is the ideal for all villagers, but because Bang Chaners are just as responsive to convenience as they are to custom, there is considerable variation regarding this ideal. In his study of the economy of the village, Janlekha (1955) found it necessary to distinguish five different kinds of functioning, mutually exclusive household units in Bang Chan: the typical nuclear family (59.4 percent of all households); a limited extended family, consisting of a man, wife, either or both their sets of parents, and unmarried children (8.1 percent); an extended family, consisting of the limited extended family plus married children, the latters' children, and any collateral relatives of any generation (26.8 percent); a one-person family (5.4 percent); and the ecclesiastical "family," consisting of the order of Buddhist monks, the only truly corporate group in the village (0.3 percent). (These variations of the nuclear family, all localized groups, should of course not be confused with what I, following Sharp [1957], have been calling the kindred, with what Kaufman [1960] refers to as spatially and

4:Phillips E-4,5 (1956-1957) 1966
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These assumptions about the indeterminate nature of the universe and human actions are so integral to the villagers' cognitive orientations that Bang Chaners often hesitate to make even the most elementary kinds of prediction. Thus, in asking a village lad how he felt about his older brother's forthcoming ordination, I was told, "I don't know." The tone of his reply indicated that he was not evading the question, so I pursued the matter further: "Well, do you feel happy about it? Do you wish you were being ordained together with him?" He answered: "The ordination is not for another three days. I do not know how I will feel at that time. But when that time comes I will know." In another case, I was going up the canal with a villager to attend a "Kathin" being held at the monastery. (A "Kathin" is a fiesta-like merit making ceremony sponsored by a person or group of persons from outside the village at which new robes are presented to the monastery monks. It involves the sponsors, their local hosts, and all villagers who wish to attend.) Although not necessarily an annual event, "Kathins" are held often enough at Monastery Bang Chan so that this villager, who was also a member of the monastery lay committee, was thoroughly familiar with every aspect of them. Simply to make conversation, I asked him: "What is the 'Kathin' going to be like today?" to which he replied, "I do not know. I have not been to the monastery yet today." Assuming that his past experience with "Kathins" provided him with some knowledge of the goings-on, I went on: "Well, do you think there will be many people?" His answer: "I do not know. You never know what a situation is like until you meet it. I have not met this one yet today."

The point of these various illustrations is that they represent a psychological universe of uncertainty and unpredictability. And in this kind of universe—where one hesitates to build up sharply defined expectations and where one is forever aware of the mutability and frailty of the environment—it is not unusual that there should also be a high tolerance for interpersonal nonconformity. What the actual limits are, theoretical or empirical, to this tendency to nonconformity are uncertain. Much of the nonconformity is undoubtedly made possible, in the first instance, by the sociologically simple and relatively undifferentiated nature of Bang Chan society; that is, the actual number of functionally specific tasks and roles—those that require special competencies—are few, and any number of different individuals can perform them. Thus, when a Bang Chan employee walks out on his boss or when a wife walks out on her husband, their actions do not from a functional point of view disable the system. Since the requirements of the role of house servant or farmhand are characteristically simple and understood by all, the departing employee can usually be replaced by another individual. Similarly, since any adult—aunt, grandparents, older sibling—can and often does rear another's children, and

and KY followed by a number.) The center of social life in Bang Chan is the Buddhist monastery or wat and the adjacent government primary school. The community simply consists of the clientele which regularly patronizes Wat Bang Chan and this school rather than other comparable institutions elsewhere in the region. Within the area of the community lives a minority of Thai Moslems constituting about ten per cent of the population. They have their own mosque which happens to be just outside Bang Chan, but they attend many secular and some Buddhist functions at Wat Bang Chan. A number of small stores, which also serve as coffee houses and men's clubs, are used as neighborhood centers in different parts of the village. Near the central wat and school, there is also a store, and the house provided by one of the headmen for use as the Project headquarters.

This present interim report of the Cornell Thailand Project includes some of the data necessary for the design of a program to improve health and diet in Bang Chan. Another report, now in preparation, will give the results of a detailed dietary survey made in the community following the health survey reported on here. These two studies together will indicate existing deficiencies in health and diet, and will permit the formulation of recommendations for needed changes in behavior as these can be realized in the context of the village and national culture.

The author of this study, Dr. Hazel M. Hauck, is Professor of Food and Nutrition in Cornell University. She has been associated with the work of the Cornell Thailand Project since 1950. She not only designed and supervised the research on health, nutritional status, and diet in Bang Chan, but during almost a year of field work in Thailand she obtained valuable data on many other topics for the Project's files. Some of her daily work in Bang Chan made little sense to the villagers, but they nevertheless became devoted to her. Her energy, tact and fine spirit in facing the discomforts and difficulties of rough field work in a tropical foreign land inspired both her Thai and American associates. Working with Professor Hauck were Dr. Amusith Rajatasilpin, now a teacher in the School of Public Health in Bangkok; Miss Sapha Indrasud, now in the Ministry of Public Health; Dr. Chumlong Kittivoja, of the Dental School of the University of Medical Sciences, Bangkok; and Miss Saovanee Sudsanoh, who has been doing post-graduate work in nutrition at Cornell and Harvard. To all of these faithful workers, the Cornell Thailand Project is greatly indebted.

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27.a. Excuse me, but at present do you have a (wife/husband) who lives and eats with you, or not? [125] [592]

1. Yes	255
2. Yes, qualified _____	6
3. No	72

b. IF NO: Excuse me, but is this because you are widowed, separated, divorced, or is there some other reason? [589] [586]

4. Widowed	45
5. Separated	9
6. Divorced	1
7. Other, specify	10
— No Answer	7

28.a. Your own children, all of them that have ever been born, how many are there? [592] [162]

8. None	24
9. One	32
X. 2 to 3	70
Y. 4 to 5	74
0. 6 or more	133

b. How many of your children are still living?

0. None	29
1. One	40
2. 2 to 3	83
3. 4 to 5	82
4. 6 or more	97
— No Answer	2

c. How many of your children have died? [165]

0. None	198
1. One	44
2. 2 to 3	56
3. 4 to 5	17
4. 6 or more	9
— No Answer	9

29.a. Have you ever been ordained as a priest, or not? [793] [792]

1. Yes	187
2. No	31
— No Answer	2

/Male Buddhist (220)/

b. IF NO: In the future, do you want to be ordained as a priest, or not?

3. Yes	20
4. No	11

c. ASK ALL: How many sons do you have twenty years old or over? [592] [162]

5. None	176
6. One	56
7. Two	29
8. Three or more	29
— Unascertainable	43

125 29.d. IF R HAS SONS 20 AND UP: Of your sons over twenty, how many have been ordained as Buddhist priests, or not?

[793]
	7.	DA 219
	A.	None 82
[593]	9.	One 58
	X.	Two 25
* [792]	Y.	Three or more 16

[162] e. Do you have any sons under twenty?

	9.	Yes 188
	X.	No 106
	—	No Answer 37

[793] f. IF YES: In future, do you want your sons under twenty to be ordained as priests, or not?

[782]
	Y.	Yes 186
	O.	No —
	—	No Answer 2

g. IF YES: But aside from your admirable desire to have them ordained, in your true heart how sure is your expectation? Are you very sure or not very sure, or fairly sure that they will be ordained?

	1.	Very sure 140
	2.	Not sure 26
	3.	Fairly sure 12
	4.	Unascertainable 9
		NA 1

h. All over Thailand there are some Thai men who are over 50 but have never been ordained as priests. For what various reasons might this happen?
(See code at end)

[461] 30. Suppose there was some work you could do individually, or that could be done in a small group of two or three, or that could be done in a large group. Which way would you prefer to do the work--as an individual, or in a group of two or three, or in a large group?

	8.	Individually 60
	9.	Small group 55
	X.	Large group 202
	Y.	Undecided, depends 4
	O.	Unascertainable 12

[572] 31. Around here in EC-KY there are some people who have many close friends and there are other people who have few close friends. And how about yourself? Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?

	5.	More than most 62
	6.	Fewer than most 94
	7.	About the same 154
	8.	Unascertainable 23

54

125 [369] [829] [793] [792] 42.a. IF DISAGREE: For what various reasons do you disagree?

If Disagreement (See code at end)

43. Do you agree or disagree that all priests are honest and moral men?

X. Agree	197
Y. Disagree	90
O. Undecided	40
— No Answer	6

[829] 44. Do you think it is right or wrong for a Thai to marry a Chinese?

1. Right	55
2. Wrong	182
3. Unascertainable	91
— No Answer	5

[775] 45. Do you believe that ghosts bother people? Strongly, somewhat, or not at all?

4. Strongly	40
5. Somewhat	136
6. Not at all	124
7. Unascertainable	28
— No Answer	5

[653] 46.a. During the past year, have there been any activities for the public welfare in BC Wat, or not, to which you contributed labor?

1. Yes	231
2. No	102

b. IF YES: For what various activities did you contribute labor?

_____

_____

c. During the past year or so, have there been any activities for the public welfare in the wat, or not, to which you contributed money or goods?

1. Yes	264
2. No	63
— No Answer	6

[651] d. IF YES: For what various activities did you contribute money or goods?

_____

_____

47.a. How about activities not connected with the wat or with religious ceremonies in the home. During the past year, have there been any such activities for the public welfare in BC-KY, to which you contributed labor, or not?

1. Yes	98
2. No	232
3. Unascertainable	7

Question 29.h. Reasons respondents give for why some old men have not served in priesthood (multiple choice replies). 125 793 792 828 829

Immediate deprivation		
Dependents (worry about family, have wives, they have many children)	78	
Financial reasons (they are very poor, they have no money, their parents are very poor, in debt)	56	
Property (worry about property and profession)	15	
Life situation		
Married too young (too early, have wives early, "fell in love, got married, acquired dependents, so could not get ordained")	50	
Wrong orientation to life (they believe in a wrong way of life, they are lazy and not religious, they pay too much attention to wordly things, they cannot pray, "they don't think of their parents enough, they think only of themselves, and only of the present")	19	
Religious belief system		
Apathy to priesthood (they do not like it, feel indifferent about ordaination, have no intention of being ordained)	43	
Indifference to Buddhism (they are not true believers, they did not participate in religion, "they aren't sons of Lord Buddha," "they don't love their race or Buddha")	19	
Qualification		
Illiteracy, ignorance (they cannot read, they are ignorant, "afraid cannot abide by teachings and discipline," "they cannot read so they are ashamed if they become priest")	21	
Personality (they are ruffians, they are disorderly drinking men, they are poorly brought up, they are not good enough, mental disturbance)	11	
Background		
Lack of parental supervision (their parents can't control them, "nobody would give the advice and so they did not enter the priesthood)	5	
Parental objection ("Some men have quarrels and their parents don't want them ordained," "they cannot receive permission from their parents")	2	
Other reasons ("Because such men did not get ordained in previous incarnation, either," "because he has sinned in the past life and has had luck in this life," "they have to be soldiers," "they don't know the merit of sin," "they are too old, their merit did not reach the certain point so they did not have the chance," "they have children and sometimes feel ashamed before sons who have been ordained," "they forgot")	8	
No Answer	63	
Don't know, unascertainable	37	

592 do not share the same arrangements for preparing and consuming food.

621 The 298 families living in Bangchan on May 23, 1953
59 may be grouped into five categories: (1) "One-person house-
• [792] hold" consisting of a lone man or woman /for ease in typological manipulation we arbitrarily consider this as a family, although strictly speaking a one-person household is not a family/; (2) "Nuclear family" consisting of a man and wife and their unmarried children; (3) "Limited extended family" consisting of a man and wife, either or both their sets of parents, and their unmarried children; (4) "Extended family" consisting of those included in "limited extended family" plus married children and children of the latter, plus any collateral relatives of any generation; and (5) "Ecclesiastical family" consisting of Buddhist priests, novices, and temple boys, all males, living together in the temple under the Headpriest's supervision. The distribution of these different types of families so defined is shown in Table 3.

592 Further explanation is perhaps necessary with respect
596 to the "extended families" in Table 3. It must be pointed
621 out that the term 'extended' is here used for the sole purpose of defining types of families which include dependent married couples as differentiated from the ordinary independent nuclear family. It will be seen in the next section, however, that there is no permanency in this inclusion of married couples whose intention is always to establish an independent family of their own. The so-called 'extended' family in

[TEXT CONTINUES ON PAGE 63]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 3

DISTRIBUTION OF TYPES OF FAMILY
Bangchan, Thailand, 1953

59
621
• [792]

Family Types	Frequency	Per Cent
One-person household	16	5.4
Nuclear family	177	59.4
Limited extended family	24	8.1
Extended family	80	26.8
Ecclesiastical family	1	0.3
Total	298	100.0

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 4

DISTRIBUTION OF FAMILY SIZE
Bangchan, Thailand, 1953

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592
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Family Size	Frequency	Per Cent
One-person family	16	5.4
Two-man family	18	6.0
Three-man family	34	11.4
Four-man family	35	11.7
Five-man family	43	14.4
Six-man family	48	16.1
Seven-man family	38	12.8
Eight-man family	26	8.7
Nine-man family	23	7.7
Ten-man family	10	3.4
Eleven-man family	1	0.3
Twelve-man family	2	0.7
Thirteen-man family	2	0.7
Fourteen-man family	1	0.3
[792] Forty-one-man family*	1	0.3
Total	298	100.0
Mean	5.7	
Median	6	

* Ecclesiastical family.

178 the family members we were informed that A's daughter and
592 her four children had moved out of the village separately
621 to different places which could not be traced, while B's brother and sister went to live with a relative in Lam-loogga, also a rice growing village some fifteen miles to the north. The two chief bread winners of the family, A's husband and B's father, managed successfully to get themselves ordained and are now residing in the village temple. Early in 1953 B went to live with her relatives in Lam-loogga, leaving the sick old grandmother alone in Bangchan.
[792] The arrangement was that the old woman was to quit the old
[888] shack and take refuge in the secular part of the temple where it would be possible for her ex-husband, now a priest, to have two meals delivered to her every day. Just before the 1953 census was taken, however, she was taken to Lam-loogga. The last member of the disintegrating family was thus left out of the 1953 census.

178 Case 2: After the death of his first wife, an old
592 man in BC4 gave his two sons equal shares of his property.
587 He then acquired a second wife and built a separate quarter
736 apart from the main building, thus creating a new family of
621 two. In 1952 he was fatally hit by a truck on the Minburi road. After a few months of unhappy stay with one of her step sons, the widow acquired a new husband and moved out to a neighboring village.

178 Case 3: There was in BC4 a laboring family of three
592 consisting of an old man, his daughter, and her son. After
621
[166]

178 592 621 [166] the death of her father, it was reported that the woman and her son moved to Bangplee, another rice growing village some fifteen miles to the south. After checking with some of the former Bangchan residents who are now living in that village, the first report was found to be inaccurate. In fact no one in Bangchan seemed to know where they were. The only hint available to us concerning the mother and son was "Family disintegrated. Mother went one direction, son another direction."

Case 4: A woman and her adopted son were operating [702] a 22-rai rice farm in BC6. After the death of the mother, the man remained in the village alone for a short time and then was conscripted into the army.

Case 5: After the death of the head of a laboring family in BC6, the wife and their four grownup children left the village separately. In the eyes of villagers this was [166] another case of "family disintegration." The wife's birth place was in KY8, but she could not go back to her old family because there was not enough land to work.

Case 6: An old woman, age 76, was reported in the [737] 1949 census to be living alone in KY5. Later she moved [792] into the secular compartment of the temple (she was an aunt of the headpriest) where she died before the 1953 census was made.

Case 7: A man, age 50, was living in KY8 with his older sister, age 60, and their nephew's son, age 6. When the man died, the older sister pursued her brother's farm

178 592 621 [593] because four members of her family had just left her to establish families of their own. The son-in-law accepted this invitation and had since taken over the management of his mother-in-law's large 60-rai rice farm.

Case 10: In 1949, an old woman was living with two boys, one distantly related to her, the other without any [427] [792] [431] blood relationship. She was operating a small rented rice farm. Some time in the past she had made a generous offer of her own house to the temple which was not acted upon by the receiving party. In 1953, the headpriest contemplated an expansion of one of the temple buildings and approached the woman for the gift. The woman complied with the request, had her house dismantled, saving only the kitchen, and sent all the building materials to the temple. Meanwhile, the two boys had left her; one went to live with his mother in [593] [431] the village, the other went to Bangkok. Later, the woman joined the household of her younger brother, who lived next door, with the understanding that the brother had free use of her buffalo in exchange for her room and board.

Case 11: In 1949, a woman was living in KY8 with her aged mother and her baby born of her separated husband [586] [587] who was a policeman. Two years later, the woman married a widower, who lived in the same hamlet, and brought along her mother and son to live with her new husband.

With the exception of Case 6, a lone aged woman who was survived by none after her death, these cases may be grouped according to the nature of acceptance of the families

434 463 7. Home enterpriser. Main income from food or handicraft articles produced at home.

434 792 463 8. Priest or novice. Though priests and novices do not receive salaries or wages, their maintenance, which comes from the temple and directly from the people in the form of contributions, is their main income. This category includes only permanent priests and novice personnel. Excluded here are all residents who enter the priesthood more or less perfunctorily for just a few months. Since sexual abstinence is demanded of all monastic personnel, no wives or offspring are found in this category.

434 9. Miscellaneous. The main income source for the eight families in this category is obscure. The heads of these families are not known to have any steady occupations.

178 463 621 Table 9 shows the occupational distribution of Bangchan families as of 1949. It may be observed that some of the figures in this table differ slightly from those reported in the preliminary study previously cited. This is because errors such as duplications and omissions in the original census have been detected and corrected.

Table 10 shows the same distribution as of 1953, and Table 11 the change in the occupational structure of the village that took place during the four intervening years. In 1949, 80 per cent of Bangchan families were farm operators. Four years later, the figure was reduced to 73 per cent. While there was no percentage change in the figures for public servants, miscellaneous, and priest or

243 marriage did take place, the couple were usually obliged
162 to stay with the parents of either the husband or the wife.
178 It is reasonable to believe that the nascent period was
592 prolonged during this period of hard times. Thus, the
182
[582] family size tended to be larger than it normally is. This is especially true for rice farming families where there always is some work for members able to work. It is not surprising, then, that the average size of farm operating families in Bangchan was 6.3 in 1948 while the average size of all families was 5.7 according to the 1949 census. A steady rise in the price of paddy after the war has improved the economic condition of rice farmers. The increased income, however, had to be spent first on replacement of equipment and housing facilities which had been long overdue.
[792] Finally, the bumper crop of 1948 with an ever-increasing price put an end to farm misery, and the following dry season saw a record number of newly ordained priests and
[591] merit making activities. From then on proportionately more marriages took place and there were fewer economic obstacles to keep newly wed couples from starting out independently. The combined effect of termination of prolonged nascent period and freer establishment of new families was that the size of the farm operating family was considerably reduced.

16 It may seem strange that more marriages should bring about a drop in the number of the young from 2.5 per family in 1948 to 2.0 in 1952. By the young is meant, however,

592 a transient member of the family. This was rather unusual,
464 however. The pattern was that a transient member was
[561] accepted when he is rather young. If he was quite mature,
he might also be accepted; but the expressed motive of the
592 accepting family would then be somewhat different. When
465 approached by a mature prospective transient member, the
464 family head would most probably say that he could not afford to keep a hired laborer but he would be glad to let the man or woman stay with him as a member of the family, and that they might as well "share in the food, and share in the work".

It has been observed that transient family workers received much less from the family than the standard wage
[435] of hired laborers. While the latter received an annual wage of 1,000 baht or the crop from 5 rai, the former might be given only 50 or 100 baht a year. To farm operators of moderate or large rice farms, transient family workers were certainly an economic advantage. It was quite natural that these operators would try to keep them in the family as long as possible. Among the several methods observed were the following: (1) adoption; (2) promise to sponsor ordination of the young male transient member; and (3) giving a certain amount of <u>lampai</u>.

592 It was mentioned in the section on the family in
464 Chapter II that adoption as practiced in Bangchan did not
[597] involve legal registration of the adopted child, and that
[792] maltreatment of adopted children was not infrequent. To sponsor an ordination was in fact not quite as expensive

592 as it might seem to be, for there was a wide range of
464 ordination expenses and the family head naturally tended
• 792 to arrange one that was not so expensive unless it was for his own son. He might even arrange a joint ordination of
592 which the cost was much reduced. Moreover, most of the cost
464 of the ordination would be covered by the customary contributions made by neighbors. The lampai arrangement, which was nothing but a sophisticated term for wage, was a real concession on the part of the family head, indicating that he really wanted to keep the transient member in the family even at a certain cash expense.

464 The presence of transient family workers and their
592 relatively low remunerations indicated a condition of popu-
466 lation pressure on land. Already, these people had adversely
[161] affected the laboring sector of the village economy because they represented an additional supply of cheap labor. Although they had contributed to a low cost of producing paddy and thus benefited the operators, with the rise of the price of foods which farmers had to buy and with the decline of free food (in the forms of fish and aquatic plants) transient family members may in time become a liability rather than an asset to the family. To be sure, when such a time has arrived, the family would be reluctant to admit a transient member. The trouble, however, is that the cost of maintaining an extra family member is implicit and not readily distinguished by the family. It would thus take some time before the real situation would be recognized.

*243 needs at least two work suits in each rice season, one
291 during the field preparation and another during the har-
511 vesting season.

372 Kerosine is used every day for lighting purposes.
226 We do not include in this category kerosine which is used
511 in the farm work; but that used with the pressure lamp in fishing by spearing during the night is included in the ordinary household expenses, for we do not consider fishing as a farm enterprise but as a routine activity participated in by all Bangchan residents, farmers and non-farmers alike.

431 Contributions to neighbors is a necessary item of
476 expense in the village. These are cash gifts made by in-
796 vited guests to the sponsor of such rituals as ordination,
511 cremation, marriage, topnotch-cutting, and teacher worship.
[792] These rituals usually take place during the dry season fol-
[764] lowing harvesting when cash is abundant in the village and
[585] are always followed by feasts, not uncommonly in a series of two or three days. Since all these rituals necessitate the participation of the priests, they have to be arranged in consultation with the temple to avoid conflicting schedules. Although few rituals have been noted to be in conflict with one another, usually they are spread throughout the dry season and m ost people are able to attend rituals to which they are invited. In cases where they cannot attend in person, they are obliged by conventional requirement to send in their cash contributions. The standard cash contribution is 5 - 10 baht. Usually, a

779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

84 [775] [774] [789] A soul desiring rebirth flew into the womb of a woman at conception. By care and imitative magical practices, both parents helped the fetus grow but the mother gave the baby its body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of several days was taken beside a hot fire, the purpose of which was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

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The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman. The comparable ceremony of maturation for men, when they too were changed from "raw" to mature, compassionate, and strong males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

793 789 562 [688]

844 This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

128 844 846 369 178 The understanding of, and the attitudes toward, modern medicine are given along with findings accounting for acceptance or rejection of modern hospital care for parturients. Accepting the changes that were observed in the practices surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

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This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

Marriage

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As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Minburī to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

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Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.[4] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:67) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

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4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

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magical formulae and incantations (khāthā cf. Textor 1960:80-88; 67-79). It was one of the branches of occultism (saiyasāt [McF. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khāo (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khāo. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mō. In the context of medicine, mō was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mō" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mō phī), and the curers (mō raksā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mō dū) analysed disturbances due to astral confluences; soul-ceremonialists (mō khwan) carried on the khwan-strengthening rites; and the mō sanē specialized in love and hate magic. On a lower plane were masseurs (mō nūat) and midwives (mō tamyāe). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mō were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.19

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mō was not entitled to be called mō. Her special circumstances are discussed in "Magic and Maturity."

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to be reborn as man. All women were eager to undergo the post-partum fire at least once. After that modifications might be entertained.[57] Whether the baby lived or died was not pertinent, for the benefits of the fire were for the mother.

Comparison of Male and Female Maturation Rites

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The parallel ritual that fitted men to perform their masculine role was ordination into the Buddhist priesthood. The well-documented Buddhist ends should not be permitted to eclipse this other personal goal. Just as the fire prepared a woman for motherhood, so ordination changed an immature youth into a man ready for marriage and fatherhood. He too was transformed from raw (din) to ripe (auk). Men gained compassion through denial and suffering. Since their natures were seen as hard (khaang), strong, bent on gain, influence, and power, possibly destructive and concupiscent, the severest deprivations were invoked: the renouncement of the gratifications of sex and food. Of the 2, the deprivation of food involved the greatest break with previous habits, for since babyhood, food had been a symbol of maternal care. Hence, a man was cast on his own. His only refuge and support was the Buddha, the law, and the Brotherhood. This self-denial induced the suffering that, coupled with knowledge gained from study of the scriptures, led to compassion. The suffering in no way

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57. The fire-rest though desirable was not obligatory. In 1865, Bradley said it could be "dispensed with in times of civil commotion, for fear of the enemy" and "no damages whatever were suffered whatever to mother or child" (p.79). Like other life cycle rites it was postponed if not convenient (sadwak). Also in times of peace, "a few mothers here and there cannot lie by the fire," and a few say, "they will not" (ibid:p.79). Bang Chan would accept this viewpoint freely as reflecting an individual, constitutional set of elements, or as an autonomous decision of an individual. The woman would never feel herself as competent as a ritually mature person though.

885 793 562 785 [178] 789 885

deprived a man of his masculine strength but was expected to change him into a kind and merciful being.[58] It took at least a three month season (phansā) in the priesthood to make a man mature, responsible, and effective. That this moral fitness was not obtained overnight was given vivid illustration: if a Buddha Amulet, designed for invulnerability, failed to be effective when tested by having a gun fired at it, it was "sometimes jokingly dismissed as a monk (phra) who has just been ordained (būat mai)" (Textor:529). This interesting episode illuminates one other important result achieved by both men and women in their respective maturation rites: authorization to handle magic.

Magic and Maturity

In Bang Chan, magic was powerful. Whatever the purpose, whether beneficial or nefarious, it was effective if all conditions were met. Lest such power fall into unscrupulous hands, the community limited its availability and use to those who had gained the moral qualities and fitness to handle it wisely. Only the ritually mature could be counted on to be compassionate, strong, responsible adults, and so were permitted access to occult powers. Whether by ordination or the fire-rest, to be suk was an absolute prerequisite to magical knowledge. It did not give magical power, but qualified one to seek it out. Since no career in medicine was possible without magic, no man could be a mō who had not been previously ordained.

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The uses of magic by men had entirely different objectives from those of women. Their respective fields did not

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58. "A monk was changed...to be meek and mild." By seeking his morning alms he "show(s) mercy towards creatures" (prōt sat) (Anuman Rajadhon:76-77). Women's tenderness in their maternal function was not associated with shyness. A compassionate woman with a strong winyān soul (which projected the quality of the heart) was enterprising and effective (cf. J.R. Hanks, 1959). Where sexual characteristics were confused, instability in behavior appeared. The cultural expectation was that children and women were delicate (ōn), older people and men were hard (khaeng). "A male who is easily induced to convulse is one who had a 'soft' heart (čhai ōn).; ...and also a 'soft' khwan (khwan ōn).....Such a young man is excitable rather than predictable and dependable, and hence is cause for parental anxiety" (Textor:405).

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to temper with men's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mō, she could do everything a mō could do. Men were never mediums. Bang Chan's only medium was possessed by a male mō.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

[832] [156] [688] [626] [593] 59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasū as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "suk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasu's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

125
[592]

27.a. Excuse me, but at present do you have a (wife/husband) who lives and eats with you, or not?
1. Yes 255
2. Yes, qualified _____ 6
3. No 72

[589]
[586]

b. IF NO: Excuse me, but is this because you are widowed, separated, divorced, or is there some other reason?
4. Widowed 45
5. Separated 9
6. Divorced 1
7. Other, specify 10
— No Answer 7

[592]
[162]

28.a. Your own children, all of them that have ever been born, how many are there?
8. None 24
9. One 32
X. 2 to 3 70
Y. 4 to 5 74
0. 6 or more 133

b. How many of your children are still living?
0. None 29
1. One 40
2. 2 to 3 83
3. 4 to 5 82
4. 6 or more 97
— No Answer 2

[165]

c. How many of your children have died?
0. None 198
1. One 44
2. 2 to 3 56
3. 4 to 5 17
4. 6 or more 9
— No Answer 9

[793]
[792]

29.a. Have you ever been ordained as a priest, or not?
1. Yes 187
2. No 31
— No Answer 2

/Male Buddhist (220)/

b. IF NO: In the future, do you want to be ordained as a priest, or not?
3. Yes 20
4. No 11

[593]
[162]

c. ASK ALL: How many sons do you have twenty years old or over?
5. None 176
6. One 56
7. Two 29
8. Three or more 29
— Unascertainable 43

125 29.d. IF R HAS SONS 20 AND UP: Of your sons over twenty, how many have been ordained as Buddhist priests, or not?

[793]

7.	DA	212
8.	None	22
9.	One	58
X.	Two	25
Y.	Three or more	16

[593]
[792]
[162]

e. Do you have any sons under twenty?

9.	Yes	188
X.	No	108
—	No Answer	37

[793] f. IF YES: In future, do you want your sons under twenty to be ordained as priests, or not?

[782]

Y.	Yes	186
O.	No	—
—	No Answer	2

g. IF YES: But aside from your admirable desire to have them ordained, in your true heart how sure is your expectation? Are you very sure or not very sure, or fairly sure that they will be ordained?

1.	Very sure	140
2.	Not sure	26
3.	Fairly sure	12
4.	Unascertainable	9
	NA	1

h. All over Thailand there are some Thai men who are over 50 but have never been ordained as priests. For what various reasons might this happen?
(See code at end)

[461] 30. Suppose there was some work you could do individually, or that could be done in a small group of two or three, or that could be done in a large group. Which way would you prefer to do the work--as an individual, or in a group of two or three, or in a large group?

8.	Individually	60
9.	Small group	55
X.	Large group	202
Y.	Undecided, depends	4
O.	Unascertainable	12

[572] 31. Around here in KC-KY there are some people who have many close friends and there are other people who have few close friends. And how about yourself? Do you have more close friends than most people around here, or about the same as most people around here, or fewer close friends than most people around here?

5.	More than most	62
6.	Fewer than most	94
7.	About the same	154
8.	Unascertainable	23

54

125 42.c. IF DISAGREE: For what various reasons do you disagree?

[369]

If Disagreement (See code at end)

[829]

[793] 43. Do you agree or disagree that all priests are honest and moral men?

[792]

X. Agree	197
Y. Disagree	90
O. Undecided	40
— No Answer	6

[829] 44. Do you think it is right or wrong for a Thai to marry a Chinese?

1. Right	55
2. Wrong	182
3. Unascertainable	91
— No Answer	5

[775] 45. Do you believe that ghosts bother people? Strongly, somewhat, or not at all?

4. Strongly	40
5. Somewhat	136
6. Not at all	124
7. Unascertainable	28
— No Answer	5

[653] 46.a. During the past year, have there been any activities for the public welfare in EC Wat, or not, to which you contributed labor?

1. Yes	231
2. No	102

b. IF YES: For what various activities did you contribute labor?

_____

_____

c. During the past year or so, have there been any activities for the public welfare in the wat, or not, to which you contributed money or goods?

1. Yes	264
2. No	63
— No Answer	6

[651] d. IF YES: For what various activities did you contribute money or goods?

_____

_____

47.a. How about activities not connected with the wat or with religious ceremonies in the home. During the past year, have there been any such activities for the public welfare in EC-KY, to which you contributed labor, or not?

1. Yes	94
2. No	232
3. Unascertainable	7

Question 29.h. Reasons respondents give for why some old men have not served in priesthood (multiple choice replies).

125
793 •
792
828
829

Immediate deprivation	
Dependents (worry about family, have wives, they have many children)	78
Financial reasons (they are very poor, they have no money, their parents are very poor, in debt)	56
Property (worry about property and profession)	15
Life situation	
Married too young (too early, have wives early, "fell in love, got married, acquired dependents, so could not get ordained")	50
Wrong orientation to life (they believe in a wrong way of life, they are lazy and not religious, they pay too much attention to wordly things, they cannot pray, "they don't think of their parents enough, they think only of themselves, and only of the present")	19
Religious belief system	
Apathy to priesthood (they do not like it, feel indifferent about ordaination, have no intention of being ordained)	43
Indifference to Buddhism (they are not true believers, they did not participate in religion, "they aren't sons of Lord Buddha," "they don't love their race or Buddha")	19
Qualification	
Illiteracy, ignorance (they cannot read, they are ignorant, "afraid cannot abide by teachings and discipline," "they cannot read so they are ashamed if they become priest")	21
Personality (they are ruffians, they are disorderly drinking men, they are poorly brought up, they are not good enough, mental disturbance)	11
Background	
Lack of parental supervision (their parents can't control them, "nobody would give the advice and so they did not enter the priesthood)	5
Parental objection ("Some men have quarrels and their parents don't want them ordained," "they cannot receive permission from their parents")	2
Other reasons ("Because such men did not get ordained in previous incarnation, either," "because he has sinned in the past life and has had luck in this life," "they have to be soldiers," "they don't know the merit of sin," "they are too old, their merit did not reach the certain point so they did not have the chance," "they have children and sometimes feel ashamed before sons who have been ordained," "they forgot")	8
No Answer	63
Don't know, unascertainable	37

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

621 631 essentials not atypical of the region. Instead of villages being organized administratively on the basis of natural social groupings and demarcations—that is, social centers and groups with which people feel a primary identification, in Bang Chan's case the local Buddhist monastery and government primary school—so that governmental and social units are isomorphic, they are gerrymandered into highly arbitrary administrative units. Thus the village of Bang Chan is comprised of seven *muubaan* or hamlets, at the head of which are seven hamlet headmen; these hamlets are located in two different *tambon*, or communes (four in one commune, three in the other) headed by two commune headmen, neither of whom lives in Bang Chan; the two communes are located in two different districts headed by two different district officers and their staffs; the two districts fortunately are in a single province, Phranakhoon, the same administrative unit in which the metropolis of Bangkok is located. Yet the people who reside in these varying hamlets located in different communes and districts all perceive themselves as living in the single village of Bang Chan. The fundamental organizational problem here is that since the sources and lines of governmental authority do not follow the lines of the natural Bang Chan community, jurisdictional conflicts and confusions arise to threaten the effectiveness of those community-wide programs that occasionally may be initiated. For example, during a diphtheria immunization campaign in the village (Hanks and Hanks 1955), the public health officer from one of the district offices was reluctant to immunize all the children of Bang Chan on the grounds that some of them came from hamlets outside his district's jurisdiction; he yielded, as the Hankses note, only when a perceptive villager pointed out that if germs knew no boundaries why should he?

Not all villages of the Central region have such real or potential administrative difficulties. (And Bang Chan does not have them too frequently either, principally because the government does not initiate too many community service programs.) However, the basic organizational principle which admits them—that houses are grouped together as administrative "villages" on the basis of conceptual neatness rather than socially functional criteria—is a common feature of the administrative structure of the Central Plain.

621 792 The foregoing account describes some basic culture patterns which Bang Chan shares with other villages of either the region or the nation. In addition to these broader patterns, Bang Chan has certain traits which inevitably refer to local village conditions and contingencies. For example, the most active and viable social unit in Bang Chan beyond the familial level is the order of Buddhist monks associated with the monastery. It is the only organization within the village that has been successful in mobilizing community activity (Sharp *et al.* 1953), although much of this activity has

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad, national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.[4] As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

[4] It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

621 a loosely defined, laterally oriented kindred; the nation-state (mentioned
594 not for formal reasons, but because it actually is psychologically impor-
64 tant); and to a lesser extent, the village monastery and school. Of these five
792 institutions, the nuclear family is the principal focus of psychological
871 concern, beyond the individual himself. Otherwise, there are in Bang
[564] Chan no castes, age-grade societies, occupational groups (other than the
[561] family), neighborhood groups, or groups expressive of village solidarity
[571] (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[6] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

621 All villagers have additional relationships of varying degrees of inti-
571 macy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of
[171] *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a
571 similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and
601 elder aunt (*paa*) are used as terms of address and reference between
609 individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

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[6] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost *a* Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

and KY followed by a number.) The center of social life in Bang Chan is the Buddhist monastery or wat and the adjacent government primary school. The community simply consists of the clientele which regularly patronizes Wat Bang Chan and this school rather than other comparable institutions elsewhere in the region. Within the area of the community lives a minority of Thai Moslems constituting about ten per cent of the population. They have their own mosque which happens to be just outside Bang Chan, but they attend many secular and some Buddhist functions at Wat Bang Chan. A number of small stores, which also serve as coffee houses and men's clubs, are used as neighborhood centers in different parts of the village. Near the central wat and school, there is also a store, and the house provided by one of the headmen for use as the Project headquarters.

This present interim report of the Cornell Thailand Project includes some of the data necessary for the design of a program to improve health and diet in Bang Chan. Another report, now in preparation, will give the results of a detailed dietary survey made in the community following the health survey reported on here. These two studies together will indicate existing deficiencies in health and diet, and will permit the formulation of recommendations for needed changes in behavior as these can be realized in the context of the village and national culture.

The author of this study, Dr. Hazel M. Hauck, is Professor of Food and Nutrition in Cornell University. She has been associated with the work of the Cornell Thailand Project since 1950. She not only designed and supervised the research on health, nutritional status, and diet in Bang Chan, but during almost a year of field work in Thailand she obtained valuable data on many other topics for the Project's files. Some of her daily work in Bang Chan made little sense to the villagers, but they nevertheless became devoted to her. Her energy, tact and fine spirit in facing the discomforts and difficulties of rough field work in a tropical foreign land inspired both her Thai and American associates. Working with Professor Hauck were Dr. Anusith Rajatasilpin, now a teacher in the School of Public Health in Bangkok; Miss Sapha Indrasud, now in the Ministry of Public Health; Dr. Chumlong Kittiveja, of the Dental School of the University of Medical Sciences, Bangkok; and Miss Saovanee Sudsaneh, who has been doing post-graduate work in nutrition at Cornell and Harvard. To all of these faithful workers, the Cornell Thailand Project is greatly indebted.

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September, 1956

T 63 Place of Bangchan in the Administrative Area

In the highly centralized system of Thai administration, the whole country is divided into 9 circles (pharq), 71 provinces (changwad), 414 districts (amphur) and 77 sub-districts (king-amphur), 3,650 communes (tambol), and some 50,000 hamlets (muban).

CT 621 634 121 In the section on reasons for the choice of the field site (page 32) mention was made of an artificial division of Bangchan between two administrative units. By that we mean one part of our "natural" or "functional" Bangchan village administratively belongs to one amphur and the other part belongs to another amphur. The situation will become more vivid when we discuss our "natural" Bangchan village.

CT 621 121 Our "Natural" Bangchan Village

In this study we are not interested in an administrative unit which is often an artificial division, but rather in a "natural" or "functional" village which may be operationally defined as a geographical area inhabited by a conglomeration of people having one or more common social centers.

CT 621 •794 872 Bangchan people patronize an active Buddhist religious institution popularly known as Wat Bangchan, and an adjacent government primary school, both centrally located in the community.

CT 621 *128 For practical reasons for ease in statistical manipulation, we assume that the smallest administrative unit --

[Erratum: this should read "page 36"---Analyst]

175
621 elephants still roamed. They thus opened up to commercial rice production a new region lying behind the thin fringe of population already occupying all land bordering Saensaeb Canal.

The genealogies suggest that it was not until the 1880's that any major settlement occurred in Bangchan. There is doubtless a correlation between the rapid development of the community from then on and the increasing national and international demand for rice. Many of the settlers of this period were persons displaced from a southern and a northern section of Bangkok who were uprooted by the government which forced purchase of their land for the first Thai railroad and a large munitions factory. The Thai Islam or Moslem group in Bangchan claims descent from Patani Malays who were sent north by the Thai government in the course of wars during the 1830's and 1840's; many of their families settled in Donburi or along Saensaeb Canal before moving into the Bangchan area. Another element came into the region in the 1890's when some Lao Thai were encouraged to settle here after having fled their countryiin the northeast when the French occupied it in 1893.

[173]
[794]

By 1895 the Bangchan population was sufficiently numerous to support its own wat, which was established and officially recognized about that time and has flourished ever since.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

434 amounted to somewhere around 5,000 baht, which was about
463 four times as much as the labor earnings of an average rice
621 farm operator as we shall see later.

178 The present occupational situation and accounts of
463 the changes in the past few years alone may not be enough to give us a complete picture of occupational development since the beginning of the history of Bangchan. Fourtunately, however, since settlement in the village in a considerable scale took place only some eighty years ago, evidence from genealogical studies has provided us with ample materials on which a reconstruction of the past development may be made.

[175] When Bangchan was being settled in the 1870's, as a probable consequence of the increasing national and international demand for rice and the revolutionary change in Thai society, every family was naturally a farm operator family. As long as there was land available for clearing, opportunity would be open for every new family, either branching off from the old ones or moving in from the outside, to operate a rice farm.

[161] Eventually, population grew up to a size large enough
[194] to support a temple in 1895. Population growth and the
[175] emergence of a village center at the temple prompted occupational specialization. At the beginning, investing, trading, professional servicing, and home enterprising probably took the forms of secondary occupations, while farm operating remained the primary occupation throughout. In time, these secondary occupations became more and more specialized and

Chapter I

THE COMMUNITY OF BANG CHAN

The Geographical Setting

In the populous flat central plain of Thailand where Bang Chan was located, fenceless geometric rice-fields, dotted by clumps of trees, stretch as far as the eye can see. Houses, clustering occasionally into hamlets, line the canals that serve for domestic use, drainage, irrigation and communication. A few mounded-up roads lead out from Bangkok, the national capital on the Menam Chao Phraya, the great central river.

The monsoon divides the year into three seasons: a hot and wet (late May through November); a cool and dry (December to mid-February); and a hot and dry (late February to mid-May). The temperatures range annually from 59° to 89° F. (15° to 32° C.) with monthly means of 77° to 86° F. (25° to 30° C.) (de Young:5). A drop at night averages around 18° F. (10° C.) in April, and 22° F. (12° C.) in January, while the relative humidity varies between 65 per cent and 81 per cent (Hauck, et al.:12). Rainfall averages about 50 inches a year, 40 of which fall in the wet season (Janlekha:21). Because of the run-off from the mountains in the north, once a year the Menam Chao Phraya slowly rises, fills the canals and then overflows its banks, covering the plain for hundreds of miles to a depth of three feet or more. In Bang Chan, the water stood on the land from June until January, with its peak in October. From February to May the canals ran low, and the land dried and cracked from the intense heat.

The Community

In 1954, 1700 persons (336 families) lived in Bang Chan. Muslims, comprising 10 per cent of the population, lived as fully Thai citizens in all parts of the community in economic and social symbiosis with Buddhists. A few ethnic Chinese had married into Thai families and were accepted.

The community spread over an area of about 7000 rai (1000 hectares or 4 square miles). Bang Chan Canal bissected

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mō, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mō gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mō. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the than khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

759 795 844 57 [852] the slight differences in ministrations. "The Muslim midwife massages more than the Buddhist." The women easily entered into reciprocal courtesies. The Muslim woman knew the steps in the Buddhist winnowing ceremony and performed them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khăn in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 779 [794] [782] [197] Certain fundamental ideas of the Muslims led to reinterpretations of familiar Buddhist terms and activities. "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist, meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the poor. On the other hand, the Muslims had taken over many Buddhist practices; for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 [783] [304] [764] Completely Muslim was the stress on physical and moral purification as an objective of every rite, and conversely, the prevalence of the idea of defilement. "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate procedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 843 844 [273] The events surrounding childbirth illustrated the differing viewpoints between Muslim and Buddhist. In the seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (fàk thong: to deposit gold). On returning home, she went as fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim midwife prescribed large doses of liquor before and during parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclosed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khăn contained "7

795 844 [562]

The Muslim khwan khao contained "7 items"--a young (or ripe) coconut with its water; thread or "a skein of yarn"(used not to tie in the khwan but "for the teacher"); 7 pieces of areca nut; 7 betel pepper leaves; one "heavy" (15 gram) yellow wax candle; one "bag" of incense; rice; and 30 baht in money.[78] The khwan khao was not offered with the idea of its reaching phra In (Indra) ultimately, but rather the local princely spirits of the land, chao thi, chao thān, and Mae Thoranī (Mother Earth). It was waved 3 times by the midwife over the abdomen of the woman in labor with the prayer: "Spirits of the land, Mother Earth, may the delivery be easy!" The khwan khao was then placed at the mother's head. The woodpile was knocked over so as to point to Mecca, which was west, a direction avoided by the Buddhists. "When nearly ready to deliver, a Muslim midwife turns the mother's face in the direction where the family's hens hatch their chicks. If they have no chicken, then in any direction."[79] If delivery were slow, a Buddhist mō was called to "shift the mother to new places" until the baby came out.

Muslim women lay post-partum by a fire for the usual physiological reasons. In making up the fireplace, instead of a cluster of incense, flowers, and a candle, this purely Hindu-Brahman-Buddhist trio, they sprinkled salt "to keep away evil spirits" on the dirt at the corners. Salt, oil, or alcohol was spewed over the fire and the woman's body, or only magic was recited, "to control the poison of the fire." "Of these, salt is best," said a Muslim midwife, but "whichever a midwife used first has to be continued for the rest of her life as her way of doing things, because the habit has been started that way." The Muslim magic for controlling the fire was "ōm ming ōm fūn ōm fai sawā hāi." "So be it, stove, rocks (or mountains), fire, be cool, may a blessing rest to you," though "ōm" is the Pali-Buddhist "mystical word." The placenta was not put in a pot beside the fire, but was washed by the midwife several times until perfectly clean, then was mixed with salt and buried in the dirt directly under the fire. When the fire was finally destroyed, the placenta was dug up, washed again, and immediately buried (not in a pot), with the

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78. There was some evidence that the thread and incense were included only when a Muslim midwife was delivering a Buddhist woman.

79. To the Muslims this was an act of imitative magic. The Buddhists saw the action of a setting hen as a quick source of information for the parturient's orientation. The hen always avoided the direction of the phī luang (Textor:378).

795 844 795 304 852 851 795 853 608 795 759

phlai and bamboo cutter under the house "so the child would not roam away from home." The circumcision (akika) performed up to the eleventh year, allied a child to a human group. "Circumcision is to accept the new-born baby into the status of human beings" In a corresponding ceremony for girls, the To Iman "cut a little piece of the labia." However, some Muslims had the full winnowing ceremony performed. If it were not, the child was raised aloft in the midwife's hands with the words, "Mother Si, Mother Sak, may this child be cool and happy!" The new-born baby was then laid in a cloth cradle. Fruits were hung over the tray or cradle. If a lactating Muslim mother accepted another's child to nurse, the 2 babies had to be of the same sex "lest later in life they marry, in which case their would be an incestuous, brother-sister marriage." The Buddhists entertained no such idea, so nursed babies of either sex as needed. A Muslim view of colostrum as "like pus from a sore" carried a more negative overtone than the Buddhist's statement: "At first the mother's milk is too dilute to be useful."

At the annual homage of a Muslim midwife to her teacher each of her patients of the year sent a kilogram of sugar, one coconut, one or 2 liters of glutinous rice, and a hen (if a baby girl had been born) or a rooster (if a boy). The chicken was killed by the midwife and made into curries for mosque officials (men) invited to the ceremony. The incense and candles were burned "while she thinks of her teacher."

4

Bangkok. The tropical monsoon climate divides the year into three seasons, a hot, wet season from late May to November, a cooler, dry season from December to early February, and a hot, dry season from late February to mid-May. The community, scattered over an area of approximately five square miles, was composed of seven neighboring hamlets. In 1954, the population was approximately 1700, divided among 336 households. About 60 per cent of the households were made up of independent families, parents with unmarried children, with an average family size of 5.7 persons. The main occupation of 80 per cent of all families was rice farming.

The climate together with the overflowing Chao Phraya river, provided natural conditions for raising a single crop of wet rice. From May or June to February, the principal activities were those connected with rice production. This crop greatly exceeded the needs for local consumption as human food, feed, and seed. The surplus of rice which was sold, was estimated for 1953 as 1.4 times the amount used for all purposes within the village (Janlekha, 1955).

Wat Bang Chan, the Buddhist monastery and place for religious exercises, was also the center of social life in the community. When data for this study were being gathered, the one primary school in the village was located on the grounds of the wat. The community was defined simply by the clientele which patronized Wat Bang Chan and this elementary school. Within the area of the community lived a small minority of Thai Moslems who patronized a mosque and school just outside Bang Chan. The few Chinese in the village were considered as part of the Thai-Buddhist community. Information to be presented on food habits refers primarily to habits of the Buddhist majority, although some reference will be made to ways in which Moslem practices differed therefrom.

Although for six or more months of the year the fields were covered with water, sometimes to a depth of a meter or more, a year-round road, connecting Bangkok and Minburi, the nearest market town, ran through one edge of the village. Bus service was available along this road, to either Bangkok or Minburi but within the community one went by boat on the network of canals during the wet season, and during the dry season, on foot along the dikes or across fields. From late January through May, when subsidiary canals were apt to be dry, getting about was somewhat difficult. Boat travel was considered easy, but as many families had only one boat, a trip to the store or even to a neighbor's home had to be planned with reference to the activities of other family members.

Large scale purchases, as for a ceremony, were always made at a big market, but in general, instead of people going to the market-town, the "market" came to the people. Boat-venders brought not only fresh produce and staples but also sweets, ices, soft drinks, and cooked foods such as Chinese

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

whole, depends in large part on one's frame of reference.[2] In the most general terms, the people of Bang Chan are like almost all ethnic Thai peasants (excepting on some counts Thai Moslems and some of the economically disenfranchised people of the Northeast) in that they have a keen sense of membership in the nation-state with a deep loyalty to the Crown, speak the Thai language, are Therevada Buddhists, are outwardly highly deferential to the authority of the Central government, and have a conception of the good life that stresses fun, physical comfort and security, intellectual simplicity and practicality, and a moral (as contrasted with a natural) ordering of the universe. Too, like the vast majority of their rural compatriots,[3] they are engaged in the production of rice, an activity which to them is not only an economic operation (Ingram 1955, Janlekha 1955) but almost a way of life, being bound up with their social structure, dietary habits, religious practices, and even their philosophical (J. R. Hanks 1961) and aesthetic conceptions.

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[2] For readers unfamiliar with Thailand, the nation-state, it should be noted that the country is predominantly rural; 84 percent of the total national labor force is in agriculture and there are only ten towns with populations of 20,000 people or more, in which 6 percent of the national population (1947 census) live. Although Bangkok has a population of approximately 1,200,000, the second largest city, Chiengmai, has only 60,000 (1957 estimate).

The nation also has a high degree of ethnic homogeneity, 82 percent of the population considering themselves native Thai (1957 estimate). The largest ethnic minority group is the overseas Chinese, comprising 11.3 percent of the population (1953 estimate, from Skinner 1957), the balance being Malays, Cambodians, and Indians; the so-called tribal groups number in toto only about 150,000 people.

The religious composition of the country is 94.1 percent Buddhist, 3.9 percent Moslem, 0.5 percent Christian, and 1.5 percent "others," many of whom are tribal animists. Thai Buddhism is of the Southern (Therevada, Hinayana, or "Lesser Vehicle") variety and as practiced by most Thai, has syncretized within it many Brahmanic and traditional Southeast Asian animistic elements (see the chapter on "Religion" in Sharp *et al.* 1956, and Textor 1960). The largest minority religion, Islam, is practiced by ethnic Malay living in the four southernmost provinces of Thailand, as well as by some ethnic Thai—many of them descendants of former Malay slaves or war prisoners—scattered through the areas north and east of Bangkok, including Bang Chan, where they comprise 9.8 percent of the local population. Relationships between Buddhists and Moslems, at least in Bang Chan, are quite amicable and except for ideal prohibitions against intermarriage and occasional offhand remarks such as "Moslem women are loose" or "Moslems kill animals," there is little overt hostility between the two groups. Certainly few Bang Chaners ever distinguish between their Buddhist and Moslem neighbors when arranging a work group, selecting a drinking partner, or even compiling a guest list for a son's ordination.

[3] Janlekha (in Sharp *et al.* 1953: 110) indicates that 55 percent of the total national labor force is involved *solely* in the cultivation of rice—which occupies approximately 90 percent of the total cultivated land area—and as many as 92 percent of all agricultural households are rice households. The 55 percent figure excludes all those people who are involved in the transportation, milling, storing, and distribution of rice. Eighty-five percent of the population of Bang Chan (1953) are rice farmers.

magical formulae and incantations (khāthā cf. Textor 1960:80-98; 67-79). It was one of the branches of occultism (saiyasāt [McF. 1940:895]), the ancient science which sought by magical means to control the forces of the heavens and of earth and to manipulate them in behalf of man's interests and enterprises, whether economic, aesthetic, personal, or other. Some of the other branches were dancing, singing, the agricultural rites, boxing, boat- and house-building, and the life-cycle rites. This powerful wisdom was contained in sacred books at the Buddhist temple where it passed, usually orally, from priest to priest. It could be transmitted away from the temple between men, if they had once been ordained. Its transmission was controlled by ritual teacher-pupil relations, and its use by formal request through presentation of a sacred offering, the khwan khāo (cf. Dūan's Tale p.44). Unauthorized magic did not work because it was not validated by its supernatural discoverer; improper ritual behavior incurred strong supernatural sanctions. Instruction in magic and its use was free except for the token offerings and coin in the khwan khāo. The only rigid obligation was a public annual homage-to-the-teacher ritual (wai khrū).

The persons authorized to handle any part of saiyasāt were called mǭ. In the context of medicine, mǭ was translated "doctor." To keep the modern and ancient traditions separate, we shall use the Thai word "mǭ" throughout this paper for the practitioner of the ancient occult art, reserving the word "doctor" for physicians trained in modern medicine.

The field of medicine was split into categories or specialties. There were, for instance, the exorcisers of spirits or disease objects (mǭ phī), and the curers (mǭ rakhā) who made up decoctions particularly for element imbalances. Astrologist-foretellers (mǭ dū) analysed disturbances due to astral confluences; soul-ceremonialists (mǭ khwan) carried on the khwan-strengthening rites; and the mǭ sanē specialized in love and hate magic. On a lower plane were masseurs (mǭ nūat) and midwives (mǭ tamyae). No specialist could operate in the field of another unless he had formally acquired that specialty. No limits, though, were set on the number of specialties a person might acquire so that all their lives, mǭ were open to and seeking new knowledge by pilgrimage, discussion, or visit to a Chinese or modern druggist. The major curing specialties were only in the hands of males, but men and women both practiced the minor branches of midwifery and massaging.[19]

19. A woman medium (khonsong) who cured when possessed by the spirit of a male mǭ was not entitled to be called mǭ. Her special circumstances are discussed in "Magic and Maturity."

562 [827] [853] delivery, "her blood was purified to a white color to become the milk of the breast."[48] Nursing a child was the essence of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 462 252 264 In a wider context, not only all their household members but people anywhere were the objects of women's nurture: women were in charge of the cooking even if occasionally helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor houshold, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry any more." She construed this as proof that she had ample merit, but it also meant that she was a great donor who gave continuously and took little. Women usually offered the early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When age pushed women past their mature capacities, they returned to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

[082] [431] [796] 593 888

562 857 [291] [593] A desire to give tender care and nourishment was deemed inborn in all women. Although sex was not strongly differentiated in babyhood,[49] by age 3 a hard-to-handle skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phūm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[856] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

sacred books were inherited by males.

In the light of this definition, only the 2 or 3 males were true professional midwives. They gave elaborate annual ceremonies of homage to their teachers (wai khrū) attended by all the persons who had profited from the teacher's magic that year. However, all the male midwives were also fully qualified mō. Their ceremonies were large because they were dedicated to the teachers of their curing powers as well as midwifery.

The male midwives, then, were in a somewhat different category than the females. They were mō who had, in addition, trained their hands for midwifery as an "extra specialty." Midwifery seems to have been one of the few areas where skilled hands were considered of greater importance than magic. "We have no magic for delivery," said one male midwife, knowing that nothing but merit could guarantee success. Because they had access to the incantations for element and spirit control, and could make holy water, the midwife-mō could spare the parturient the necessity of getting in an outside mō, if such were needed. However, one part of the midwife's job the men could not do. To protect their male powers of invulnerability they were forbidden to wash the woman's clothing. A woman or a female midwife always had to do this. Men also could not provide the female "mystique" particularly related to the khwan and to growth.

However, the community did not adhere to this narrow definition of professionalism, for several of the experienced and competent women, Buddhist and Muslim, behaved as professionals and were accorded the title of mō tamyaa. Their magical formulae, being congruent with their female office of promoters of growth and life, were especially effective. Like a mō they received the ritual gift of the khwan khaō, hallmark of the possession of occult formulae, which the patient presented to assure the benefits of magical knowledge.[68]

68. This ritual bowl of rice and offerings was never excused even between the closest kin. If forgotten or misused, the "teacher" punished the midwife with pains, and had to be mollified with a food offering. The magical benefits could not be withheld once the khwan khaō had been accepted. It was not accepted if the patient were too near death to be assisted. If the patient died, the whole gift, cash, rice, and all, was given at once to the temple to make merit.

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mɔ̄, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mɔ̄ gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mɔ̄. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the tham khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

792 262 411 village offers of regular service, the holiday offerings, home invitations and sporadic gifts so that all priests had places to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut[1] or hardship.

792 794 262 About mid-July, Buddhist Lent changed the food habits somewhat. This three-month period corresponded with the height of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering, and thereafter the priests went regularly on their appointed rounds.

796 261 On Buddhist holidays, the people did not usually eat any of the food brought to the temple, but on (3)thauaud (2)ka-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bounteously.

792 857 262 Residing at Wat Bang Chan in 1954 were 22 boys, aged 10 to 16, sent to serve the priests, get their living and attend school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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792 262 737 235 1. Amounts of food given usually exceeded the actual needs of the priests and temple boys. One instance was noted in which food was sent by the priests to a needy old person nearby. Leftover rice was dried and sold for chicken feed.

114 104 2. The transcription used throughout this report is that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

221 132 243 244 245 262 434 503 766 811

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ←WET→							←COOL→		←HOT→		
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	→heavy	moderate	←heavy→		←light→				←negligible→			
Canals	rising			high	(floods)				lowering fast		low,dry	
Cultivation of Rice	plowing→ seedbed grown		TRANSPLANTING		growing	early var. mature		←HARVEST→				
School	vacation							vacation			vacation	
Cash available Source	cash in hand→ rice					←cash shortage→ cash jobs→			main rice sale		cash in hand→	
Fruit;vegetables	→	←new planting→							←annuals die→			
Fish: Supplies	ponds drained→								←ponds drained→			
Maturation		←many varieties→							←best varieties→			
Preserving	←much→	←moderate→							←most→			
Ceremonies	ceremonies→		←Buddhist Lent→							←ceremonies→		
Dietary survey	→	←Round I→		←Round II→				←Round III→		←Round IV→		

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 18°F (10°C) in April and 22°F (12°C) in January.

2: Hauck et al. D.E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at other seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

262 A discussion of food habits in Bang Chan would be in-
796 complete without some description of ceremonies ((1)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

796 The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-
527 teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion
264 of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

[782] Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could
[554] afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and at festivities. Thus, there was reason to make a (1)ngaan
527 as opulent as possible, but celebrations of every degree
796 occurred in Bang Chan, from lavish feasts to simple ceremonies.

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[194] 1. Significantly the same Thai word is used for work
[461] and for ceremony.

[302] 2. Topknots, formerly worn by all Thai children, used
[554] to be cut ritually at the time of puberty. In Bang Chan, the
[555] growing of a topknot had become primarily an attempt to improve a child's health. Few school age children were topknots. They were usually cut earlier than puberty.

[575] 3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

796 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the
[476] time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives
[782] and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A
764 big cremation might require planning in detail for years ahead:
796 invitations to priests and relatives in distant parts of the
574 country; hiring an orchestra and obtaining ceremonial gear.
533 For the largest events, when the guest lists ranged upward to
[426] 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person,
[258] usually one of the "professional" cooks of the village. The
[476] day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

[262] The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an
262 annual homage-to-the-teacher rite. It is the nearest approxi-
796 mation to a quantitative record of food for a ceremony that
895 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either
796 at 7 a.m. or 11 a.m., or both, always at least in part by the
792 host, who sat and chatted with them. No one else ate until

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)dæɛɛng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chauaun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be auspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)tham-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol is this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

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In Bang Chan when donations for a new school
264 building warranted buying the foundation materials, so that
476 volunteer labor was solicited for their installation, some of
946 the money went into food, despite additional donations of food. This was in no way misappropriation. Helping to cook was as important as helping to dig the holes.

782 The spirit-offering, or the portions eaten by a partic-
824 ipant as a sacrament, were actually tiny bits of each food. Afterward, the entire lay-out, pork, sweetmeats and all, was eaten. Because all this was holy food, it was felt to be especially strengthening, so was usually given to children, but might be eaten by family members and occasionally, priests.
262 The pork was cut up and eaten with a hot sauce, or put into a
282 "with-rice" dish. It was especially appropriate with liquor.

262 The use of food ritually was not limited to the ceremon-
755 ial season nor to big events. The same purposes underlay the
852 use of a hard-boiled egg eaten in the ceremony that was designed to restore a child "sick from temporary loss of its soul," and in another performed in order to wean a baby.

43 The benefits of a (l)ngaan accrued to every participant
554 down to the last worker and contributor according to the degree
796 of assistance. With status in this and in later lives at stake, no one hesitated to plunge into debt or even to sell land. For the sake of economy two different ceremonies might be performed on the same day, for example a child's topknot cutting at a daughter's wedding.[1] The saving was in time and expense for food preparation, but such multiple ceremonies were performed less often than one might expect.

796 One assistance in the financing was that every invited
476 guest made a contribution, customarily 5 to 10 baht, which
435 helped defray the costs. In 1952, household heads reported these contributions as totalling from 30 to 1,000 baht, with an average of 343 for the year (Janlekha, 1955). Of 96 household heads who provided information on special expenses during the 5-year period March, 1948 through February, 1953, 36 had given (l)ngaan with net expenditures (costs minus contributions) ranging from -10[2] to 15,000 baht. The average net cost was 4,361 baht (Janlekha, 1955). These figures might represent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

435 Some information as to the cost in baht of the larger
• 196 ceremonies held in 1954, and their scale, was obtained from
[124] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[764] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000.
Guests gave 2300.
[583] B: Rite of forgiveness after elopement:
a meal, with 5 bottles of liquor.
[184] C: Moslem: 2 buffalo slaughtered.
400 guests.

585 Arranged marriages could be large merit-making affairs,
282 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
[583] sugar cane, fruits, sweetmeats and other things. At more
modest weddings and the rite of forgiveness for a couple who
had eloped, food might differ from the usual fare only by in-
cluding the three essentials of a wedding: pork, chicken and
alcohol.

273 Increased consumption of alcoholic beverages during the
196 ceremonial season was indicated by the sales of one local
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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

[792] 3. The whole chapter of priests from Wat Bang Chan
[574] was always included at cremations, and often others from a distance.

4. See list of food purchased, Appendix A, pp. 102-103.

storekeeper: about 800-900 liter bottles per month during the 3 months dry season as compared to about 350 bottles per month during the 9 months of the rice season.

Moslems never served liquor at their weddings, cremations, and other auspicious events. Moslem residents occasionally attended Buddhist (l)ngaan in spite of dietary proscriptions that Buddhists did not observe.[1] A medium (spiritualist) commented however that because pig's head was essential for her homage-to-the-teacher rites, some Moslem sick persons preferred to go to the Buddhist temple for treatment. There the priest-practitioner could afford to set up a separate kitchen for his Moslem patients, and so spare them the distress of confronting pork. To one big ordination Moslem guests brought their own food. Buddhists came somewhat more often to Moslem ceremonies.

We do not have enough information to appraise the nutritional significance of food eaten at ceremonies. Some individuals got a great deal of it, others very little. One must remember that the (l)ngaan was not a public but a private event at home, to which guests came on invitation. Although cremations and the teacher-rites of priest-practitioners were held at the temple, and so had a semi-public character, no one who was not invited presented himself for food. Of the participants, the working group undoubtedly received the most food; they were there the longest time, had regular meals, tastings and snacks throughout the (l)ngaan meal itself. This group comprised the host, co-sponsors and their immediate kin; other relatives and friends who were asked or who volunteered to help. The feeling was, if one were "very fond" of the host, one volunteered to cook. If less close, one was invited as a guest, but made the usual cash donation. Sociable persons combining skill and energy were invited often and volunteered often, hence spent many days at ceremonies. Young unmarried men and women were asked and liked to be asked to work, for such occasions offered a great chance for fun and flirting.

Different degrees of participation may be estimated from Janlekha's (1955) figures for reported contributions ranging from 30 to 1000 baht in a year. Since a contribution of 5 to 10 baht per (l)ngaan was customary, the villager with the lowest reported contribution probably attended from 3 to 6 ceremonial occasions. Attendance at 100 or more (l)ngaan is unlikely, hence the villager who gave as much as 1000 baht probably made larger contributions per (l)ngaan.

What sort of persons or groups in the village were invited as guests? Every host's list included his older

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1. Moslems were said to resist army service because they were afraid they would have to eat pork.

196 relatives, his other kin and friends according to bonds of
574 affection and respect. Certain priests of pleasing personalities, wide acquaintance or kinship in the community, or of valued skills, were invited more often than others, as were prominent elders and hamlet headmen. An invitation usually went only to the elder couple in a family. It did not automatically include the children. If married sons or daughters were invited, they were asked separately. Poor individuals were included only in the festivities of their close kinfolk, their immediate neighbors, maybe their own hamlet headman, or persons to whom they were obligated. Unless they were aged, their presence was validated only by hard work. Reciprocity was a factor, for one who could not reciprocate presumably would not be asked, nor would he volunteer. The few who were "anti-social" for whatever personal reason rarely attended.

268 Most members of the working group and guests left at
574 home their children of such age as to require watching.
196 Nursing babies might be there, hung in a hammock. Though
858 the children who ran excitedly about seemed numerous, most of them were the children, grandchildren, nieces and nephews of host, co-sponsors and relatives, so could not be excluded.

To sum up, those who shared least in the diet of the ceremonial season were the dependent children, i.e. up to the age of 6 or so, the less gregarious, and the poor who had no way to reciprocate. Children from 7 to adolescence shared in a limited way, attending (l)ngaan of their own close kin or of a geographically close neighbor. Parents sometimes took snacks from the feast home to the children. On the other hand, persons of prestige and popularity, especially if aged, were asked frequently.

242 Doubtless for those who attended many (l)ngaan, the
796 food eaten during the ceremonial season differed considerably from the usual family fare. We have no way of knowing whether it was better than usual because of a larger intake, for instance, of pork and meat in general, or whether the total nutritive value was less satisfactory because of increased consumption of "empty calories" in the form of sugar and alcohol.

242 During the (l)ngaan season the home meal schedule was
264 frequently disrupted in the families of the participants.
796 The main cook might be absent, too tired, or too full to feel like cooking a big meal at home. In anticipation of a feast, preparation of the usual breakfast or dinner or both might be abandoned, with reliance on a few snacks for the stay-at-homes to add to their rice. Thus the food intake of family members who did not attend the ceremonials might be adversely affected.

690 One other aspect of (l)ngaan which should be mentioned

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One other aspect of (1)ngaan which should be mentioned
952 in connection with food and health is the opportunity for con-
• 756 tamination of food. The villagers did not associate sanitation
751 with health, hence the hazards of a community meal which many
[751] persons helped to prepare were many. Two incidents observed the day before an ordination in early April, will illustrate. In the final stage of making Chinese noodles, rice flour paste was extruded through a perforated disk into an enormous pot of boiling water. When done, the product was removed with a fish net, and plunged into the canal to cool, after which women helpers spread it out on banana-leaf covered trays. Dishes were also washed before use in the canal, which was then too low for boats. Since, however, many people drank untreated canal water at this season (see p. 28), the added hazards for the participants caused by these procedures may have been slight.

262 In summary, food plays a major role in ceremonies and
792 festivities, which are concentrated in the 3 months' dry season. Proposals for dietary improvement in Bang Chan must take into account not only the possible effects of the (1)ngaan season on the total nutrient intake, and on opportunity for exposure to contaminated food, but also the importance of these affairs from the standpoint of merit and prestige, and the relatively great financial burdens which villagers therefore undertake because of them.

QUANTITATIVE DIETARY STUDY: FOODS EATEN AND ESTIMATED NUTRIENT INTAKE OF SELECTED FAMILIES IN BANG CHAN

Procedure

121 Selection of the Sample
125
146 Medical inspection designed primarily to discover possible signs of nutritional deficiency was carried out in advance of the family dietary study. The suggestion of Grant (1948) that matched groups, of contrasting economic or other status be studied, appeared to be appropriate to the situation in Bang Chan. Our hope was to be able to select from the random sample of families given medical inspection (Hauck, 1956) a group of families (A) in each of which several members had clinical signs which might be evidence of malnutrition, and a group of families similar in age and sex distribution (B) in each of which the members were largely or wholly free from such signs.

125 When the medical inspection of the random sample was
146 complete, however, too few of the families were found to meet our criteria for inclusion in Group A, i.e. the group of apparently less well nourished families. Additional families for

concerning its culture and use. Tilapia culture was learned largely by trial and error, and was considered primarily as a source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

More home consumption of eggs would be desirable, but their ready sale and acceptability for barter may present an obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

Milk, as canned, dried or malted milk preparations, was considered an appropriate gift for the priests, who are forbidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to include milk among them. People gladly bought food for the priests and would probably accept on the authority of the head priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headmen were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

The importance of merit making and the relatively large cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

177 249 cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

243 244 254 147 At the height of the boom, the demand for rice straw swept many of the fields clean of the stubble usually left there after harvest, thereby decreasing food for the roaming buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralis (1957) were 1) the cash outlay required was small, 2) returns were realized quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralis made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

262 435 796 [431] [998] [875] Food for Homage-to-the-Teacher Rite Performed by a Buddhist Priest Who Was a Traditional Practitioner

Item	Amount	Cost in Baht	Item	Amount	Cost in Baht
Cereals and Legume Seeds:			Fish and Meat (cont.):		
Rice noodles		10.	Dried fish	6	gift
Soybeans & fermented vegetables	25 kg.	12.	Roasted fish	1 kg.	gift
			Shrimp paste	2 kg.	18.
Mung beans	10 lit.	25.	Lobsters		15.
Cassava flour		2.25	Lobsters (for soup)		7.50
Sugar and dessert:			Pig's skin (for soup)		10.
			Beef[1]	15 kg.	150.
Palm sugar	1 pail	67.	Ingredients		27.
Cane sugar	14 kg.	85.	for Mussel-man curry[1]		
(2)Kha-(5)noom (3)tuaj-(1)foo	500 cups	35.	Boiled chickens[2]	2	22.
			Pig's head[2]	4 heads	222.
Fish and Meat:			Pork[2]	4 kg.	40.
Fish ((1)plaa (2)myk) for soup		6.			
Silurus and serpenthead	60 kg.	gift			

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435
• 736
[295]

Food for Homage-to-the-Teacher Rite (cont.)

Item	Amount	Cost in Baht
Fruit:		
Bananas ((3)klua; (4)nga-(4)waa)	5 bun.	from father
Chico[2]		5.
Coconut	150	180.
Coconut (young, to make dessert)	30	30.
Job's tears	1 lit.	3.
Plums, yellow[2]		5.
Pomelos[2]		6.
Rose apples[2]		2.
Tamarind		7.50
Tomato sauce		8.
Young palm fruit[4]	7 bun.	3.
Vegetables (non leafy):		
Bamboo shoots, cooked	1 pail	28.
[272] Cucumber		--3
[273] Egg plants		--3
[274] Garlic	5 kg..	26.50
Gourd, white		1.
Onion, fragrant[5]		6.
Onion[5]	4 kg.	4.
Onion, welsh[5]		--3
Mushrooms		3.
Radish, white		--3
[554] **Vegetables (leafy green and yellow):**		
Cabbages		--3
Chinese kale		--3
Chili, green		7.50
Vegetables (leafy green & yellow) cont.:		
Lettuce		--3
Parsley		--3
Pumpkin	3 fruits	12.
Sweet basil leaves		1.
Sweet potatoes	6 kg.	6.
(3)Tang-(5)oo		--3
Seasonings etc.:		
Vinegar	1 bottle	1.
Fishsoy	1 jar	10.
(2)Ka-(1)chaa;	2½ kg.	12.50
Sodium glutamate		5.
Pepper		14.
Agar	400 gms.	36.
Miscellaneous:		
Cola beverage	72 bottles	72.
Liquor	16 bottles	60.[6]
Ice		30.
Cigarettes	2 pkgs.	--[6]
Tobacco	1 heap	--[6]
Betel pepper		9.
Fresh areca nut		10.
Dried areca nut		8.
Dried palm leaves	1 big bundle	2.
Firewood		50.
	Total	1577.75

[284]

1. For Muslim guests.
2. Food items placed on a tray and used in the ceremony proper.
3. Items so marked cost a total of 140 baht.
4. Not identified.
5. Several kinds of onions, both fresh and dried, are commonly used.
6. Prices not stated; estimate for liquor.

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

174 "extended families." The aim of all Bang Chan families even then was to
596 attain a position in which they would be free from such obligations or would have other families dependent upon them.

596 In the intervening years the influx of new families into Bang Chan, the
594 increased self-sufficiency of the individual nuclear families and, most im-
177 portant, the increased acceptance of commercial values, have served to
178 break down kindred groups so that today few kinsmen work their fields together and even fewer share their food or equipment with one another, beyond what has been noted above. Perhaps the only remaining *universally* [476] practiced function of the old kindred groups is the celebration of cere- [796] monials involving members of the family, particularly cremations and ordinations, the cost and merit of which are shared among the participants, [426] depending upon their wealth. Very often people do not want to borrow from or lend money or equipment to kinsmen precisely because the intrusion of the kinship tie makes the collection of such debts doubly awkward ("relatives take twice as long in repaying money; I do not want to lend anything to them"). However, the old forms have not been completely obliterated and when necessity requires or personal convenience moves an individual to look to others, the traditions of extended kinship, as indicated earlier, may be invoked.

596 For purposes of conceptual convenience, two types of kindred may be specified: the kind referred to above which involves kinsmen living in the village and to which Kaufman (1960) gives the name "spatially extended family"; and the type descriptive of relatives living outside Bang Chan, dispersed throughout other villages and provinces or in Bangkok, and called by Kaufman "the remotely extended family" and by L. M. Hanks (1959c) "the multi-local extended family." These terms are of course generic labels descriptive of actual or potential relationships between individuals, not of specifically delimited groups. Sometimes Bang Chaners attempt to extend the definition of the latter type of relationship to individuals who have never heard of them, but who may be in a position to help their son obtain a job in the city or get him admitted into a vocational
596 school. Hanks has shown how the multi-local extended family has to a
167 limited extent in recent years rejuvenated extended kinship ties by becom-
602 ing the major institutional mechanism through which villagers leave Bang
178 Chan to seek their fortunes elsewhere. (This last phrase is not merely a figure of speech; many young Bang Chan men have what could be called almost a Dick Whittington view about leaving Bang Chan for Bangkok.) A cousin who undertakes to serve as a villager's liaison to a city job or who offers him a place to stay usually does so willingly, for it creates obligations which may be called upon later if need be.

596 The above description of variations and extensions has been presented

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

These assumptions about the indeterminate nature of the universe and human actions are so integral to the villagers' cognitive orientations that Bang Chaners often hesitate to make even the most elementary kinds of prediction. Thus, in asking a village lad how he felt about his older brother's forthcoming ordination, I was told, "I don't know." The tone of his reply indicated that he was not evading the question, so I pursued the matter further: "Well, do you feel happy about it? Do you wish you were being ordained together with him?" He answered: "The ordination is not for another three days. I do not know how I will feel at that time. But when that time comes I will know." In another case, I was going up the canal with a villager to attend a "Kathin" being held at the monastery. (A "Kathin" is a fiesta-like merit making ceremony sponsored by a person or group of persons from outside the village at which new robes are presented to the monastery monks. It involves the sponsors, their local hosts, and all villagers who wish to attend.) Although not necessarily an annual event, "Kathins" are held often enough at Monastery Bang Chan so that this villager, who was also a member of the monastery lay committee, was thoroughly familiar with every aspect of them. Simply to make conversation, I asked him: "What is the 'Kathin' going to be like today?" to which he replied, "I do not know. I have not been to the monastery yet today." Assuming that his past experience with "Kathins" provided him with some knowledge of the goings-on, I went on: "Well, do you think there will be many people?" His answer: "I do not know. You never know what a situation is like until you meet it. I have not met this one yet today."

The point of these various illustrations is that they represent a psychological universe of uncertainty and unpredictability. And in this kind of universe—where one hesitates to build up sharply defined expectations and where one is forever aware of the mutability and frailty of the environment—it is not unusual that there should also be a high tolerance for interpersonal nonconformity. What the actual limits are, theoretical or empirical, to this tendency to nonconformity are uncertain. Much of the nonconformity is undoubtedly made possible, in the first instance, by the *sociologically simple and relatively undifferentiated* nature of Bang Chan society; that is, the actual number of functionally specific tasks and roles—those that require special competencies—are few, and any number of different individuals can perform them. Thus, when a Bang Chan employee walks out on his boss or when a wife walks out on her husband, their actions do not from a functional point of view disable the system. Since the requirements of the role of house servant or farmhand are characteristically simple and understood by all, the departing employee can usually be replaced by another individual. Similarly, since any adult—aunt, grandparents, older sibling—can and often does rear another's children, and

47.b. IF YES: For what various activities did you contribute labor? (See code at end) 125 [653]

c. During the past year, have there been any public welfare activities, not connected with the wat or with religious ceremonies in the home, or not, to which you contributed money or goods?

1. Yes	128
2. No	197
3. Unascertainable	8

d. IF YES: For what various activities did you contribute money or goods? (See code at end)

48.a. Have you attended the ceremony of wisaka bucha at Wat BC every year, or only in some years, or only once in many years, or never? [796]

8. Every year	156
9. Only in some years	135
X. Once in many years	21
Y. Never	14
0. Unascertainable	7

b. Have you attended the ceremony of gilding the Buddha's footprint at Wat BC every year, or only in some years, or only once in many years, or never?

1. Every year	225
2. Only in some years	62
3. Once in many years	17
4. Never	9
5. Unascertainable	20

49.a. Excuse me, this is a strange question, but do you own a pair of shoes? [291]

6. Yes	136
7. No	197

b. Of what various materials are your shoes made?

8. Leather	65
9. Cloth, canvass	37
X. Other, specify_____	11
0. Unascertainable	
— No Answer	1

50.a. In your household, is there a hatchet, or not? [412]

1. Yes, hatchet	309
2. No	24

b. (In your household), is there a pressure lamp, or not? [416]

3. Yes, pressure lamp	188
4. No	145

c. (In your household), is there a flashlight or not?

5. Yes, flashlight	272
6. No	61
— No Answer	1

125 Question 46.d. (Cont'd)

431 Construction activities (Cont'd)

651 To the Wat (to repair Wat, construction in Wat, fixing walls) 27

Contribution for building materials (buy cement, concrete floor, wood and tin, for new cement sidewalks, water tank) 21

To Surae (general fund, repair) 9

To build a bridge 8

To buy a generator 6

To build priest's house bathroom 5

To build preaching hall 3

[796] Ceremonials

[764] For ceremonies, unspecified 12

To guild the golden leaf 27

To cremation (to build crematorium; to cremate father, people without relatives; to build corpse go-down; priest's funeral) 12

To Wat fair 10

Other (to Katlin, to revise the Buddhist sacred book, to ordain priest, for building Buddha figure, to New Year festival, for dancing girls) 11

To Surae fair 4

Food and related donations

Gave rice, unspecified 5

Gave rice (food) for Wat, priests 18

Gave rice for Wat fair 7

To buy utensils (including cooking utensils) for Wat 6

To buy utensils for Surae 6

Gave food to Surae 1

243 291 511 needs at least two work suits in each rice season, one during the field preparation and another during the harvesting season.

372 226 511 Kerosine is used every day for lighting purposes. We do not include in this category kerosine which is used in the farm work; but that used with the pressure lamp in fishing by spearing during the night is included in the ordinary household expenses, for we do not consider fishing as a farm enterprise but as a routine activity participated in by all Bangchan residents, farmers and non-farmers alike.

431 476 796 511 [792] [764] [585] Contributions to neighbors is a necessary item of expense in the village. These are cash gifts made by invited guests to the sponsor of such rituals as ordination, cremation, marriage, topnotch-cutting, and teacher worship. These rituals usually take place during the dry season following harvesting when cash is abundant in the village and are always followed by feasts, not uncommonly in a series of two or three days. Since all these rituals necessitate the participation of the priests, they have to be arranged in consultation with the temple to avoid conflicting schedules. Although few rituals have been noted to be in conflict with one another, usually they are spread throughout the dry season and m ost people are able to attend rituals to which they are invited. In cases where they cannot attend in person, they are obliged by conventional requirement to send in their cash contributions. The standard cash contribution is 5 - 10 baht. Usually, a

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

431 guest contributes exactly the same amount that was given
476 him by the man when he last attended his party. Written
796 account is always kept by the host specifying contributors
511 and respective amounts given. When invited to a ritual, the guest consults his book and takes along an appropriate amount of cash. It is on this basis of reciprocal help that a prospective sponsor of a ritual has been able to determine the size of cash contribution he would receive from neighbors. Since a guest normally contributes no more than ten baht and no less than five baht, his annual expense on this item depends largely on the number of parties he attends each year. Our records for 1952 show that this ranges from 30 to 1,000 baht, averaging 343 baht.

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511 We include in the personal item of expenses the amounts spent on traveling, entertainment, coffee, liquor, etc. To be sure, some of these should be grouped under the stimulant item. We, however, intentionally put coffee and liquor here because the sequence seems to better fit the requirements of the persons responding to questions so that better answers might be obtained. Tobacco, betel, and areca, for example, appear to have somewhat constant rates of consumption. They are usually bought in large quantities which will last for a considerable length of time. As a result, informants are in a position to give more accurate rates of consumption of these items than those of liquor and coffee of which consumption is somewhat irregular and is difficult to estimate.

434 enough for efficient movement of paddy.

458 The general practice was that right after harvest immediate sale of paddy was necessary for settlement of credit purchase accounts and rentals. Another sale was perhaps necessary a few days later for living expenses which had been postponed during the cash-scarce [796] period before harvesting. Then another sale might be made in order to have cash to pay for building materials needed for repair work which was usually done during this time. Just before March a final sale for this first period was made in order that the family may have cash enough to last through July. The money was to cover contributions to various rituals to which the family had already been invited, and perhaps to cover ritual sponsor by the family itself. Besides, there was still need for cash for each family member to carry around during this period of festivals.

*243 Villagers said that few farm operators had any
434 paddy left for sale in the second period (July - November).
458 This was contrary to our findings as shown later in Table 65. Perhaps, they were thinking of conspicuous sales of large amounts by farmers having say over 500 tang of paddy for sale in the second period.

*[128] During the last few days of March, 1953, when paddy sale had apparently ceased, we made a round call covering the homes of all 96 sample-families and checked the amount of paddy on hand as of the end of March.

[TEXT CONTINUED ON PAGE 360]

432 seller of the land did not show up until the next morning. Recruit had to be made for guns and men to guard the money for that whole long night.

3. Scarcity of money

243 434 Scarcity of money exists in Bangchan because there is, relative to the demand for purchased goods and services, only a small margin between the price received and the cash outlay of producing paddy. Another reason is that most farms are too small, thus yielding small net cash incomes to the majority of farm operators in the village. Small incomes of farm operators who constitute the core of village economy means also small incomes of the rest of the village population whose financial condition directly or indirectly depends on incomes of farm operators.

426 458 Scarcity of money is directly evidenced by shortage of money during theperiod from July to December. It is also indicated by high rates of interest on credit purchases and loans sought in the village.

434 454 The problem of scarcity of money has been rendered more acute by the fact that affluent farmers do not like to keep cash at home or put it in liquid form such as in saving bank in the nearby market town, but prefer to invest it in a more or less non-liquid form such as loans or land purchases. Some of those who had accumulated a large amount also tend to spend it on sponsoring of rituals costing as high as several

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thousand baht to more than ten thousand baht which is a real drain on the village cash supply.

These huge expenses are, however, partially compensated by such items as loans sought from outside or sale of lands and other assets. It cannot be expected, however, that these items would provide enough supply of cash to bring down the rate of interest in the village.

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4. Role of paddy

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Paddy is extensively used in the village as a medium of exchange. It is used in both small transactions of a few baht and large transactions of several thousand baht. Thus paddy stock may almost be considered as equivalent of a bank balance.

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The most important consumption uses of paddy are as seeds and for human consumption. In order to make it really comparable to a bank balance, allowance must be made for the amount necessary for seeds and human consumption although the amount for chicken feed may be dispensed with because the farmer may choose to drop his poultry enterprise. On this basis, we have arbitrarily coined a term "index ofcapital formation potential with present levels of living" to represent the amount of paddy in tang which is left at the operator's disposal at the end of March after allowance for seeds and family consumption has been made. No allowance is made for special consumption expenses such

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*243
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wood was getting low. Friday (wan suk:day of happiness) was the best day of all to leave the fire, but for her, Friday happened to fall on the fourteenth day after delivery. It was better to come off on another day than to risk taking such an important step on an even-numbered day. Even numbers were always associated with the even corners of a coffin.

Usually the fire period went off safely, but not this time! One day, the heat "seemed to come up suddenly" and choke Dūan. She rose gasping and ran to the window for air. Horrified at the terrible danger of cool air, Lek hastened to get her back to the board. Then by accident Dūan dripped too much water on the fire and put it out! Later, Dūan was almost unconscious, felt unhappy (klum) and as if "the fire were burning inside her." Lek called both Sai and the mō. As the mō entered, Lek handed him the expected offering of incense, flowers, candle, and a baht and a half for his khwan khāo. He prayed to his teacher, then made holy water and a decoction both of which he gave Dūan to drink, saying, "The bad blood and the fish-water did not flow out well, a common trouble after childbirth. Since your body is not cold and the fire has not been out a half-day, you could start the fire up again. But as it is never good to put out the fire like this, I am taking you off it. Take a pot of salt, heat it well and wrap it in a cloth. Put that on your abdomen. Drink no cold water, or you will die."

Dūan was sad that she had to leave the fire early and on an even-numbered day, but one always wanted to obey a mō. All had gone so well when Chāi was born! That time she had taken the usual steps, choosing a Friday to come off the fire. Now she could not choose. Her formal leave of the fire was as before: The mō prepared earth holy water (nammon thoranisān), some of which she drank, and some he sprinkled on the fire. She then knelt down facing the fire and touched her forehead to the floor 3 times, asking the Mother of the Fire to bless her and her child, and to keep them well. She went outside to bathe, first with warm water to cleanse her body, then with holy water, and put on a clean skirt. Returning to the house she seated herself quietly, for she was not supposed to do anything for a time. Others in the family broke up the fireplace. The baby was taken off the winnowing tray. Warm water mixed with the holy water was dropped in his mouth. After being bathed in the holy water, he was laid in a little cradle made of a long cotton scarf, spread apart with sticks, and swung between 2 houseposts.

Now that the fire-period was over, they stopped all boiling of the water for the baby and Dūan. Rain water was substituted, but whenever the baby seemed sickly, boiled water was used. When their rain-water ran out, they got some at the temple. Both Dūan and the baby continued taking medicine for many weeks.

846 births, until with the seventh child it might be dispensed with altogether without harm. In Bang Chan women who observed (2)juu (1)faj rested for an odd number of days, from 5 to 15 in this series. Seven or 9 days was most common. An odd number of days was considered good; an even number, bad. A wood fire was customary, although in 2 instances a charcoal brazier was used. One woman lay near a charcoal brazier and used a hot ashes chamber[1] also. With one exception (a non-Thai), even those who did not lie by the fire, but who used the hot ashes chamber, rested an odd number of days.

846 372 The traditional ideas on which the custom of lying by the fire was based were described in the Bangkok Calendar (Bradley, 1865):

> "The Siamese theory in regard to the part, which external and internal fire plays in the functions of life and health, is made to work powerfully in these circumstances. It teaches that there is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in the circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child."

The author, however, attributed deficiency in milk production to the practice of lying by the fire:

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> "How it is very remarkable that these last sequences, which are guarded against at so much expense of ease and comfort by the custom, are postively and directly brought about by following it. The mothers have but little milk for their babes during the month, and that of a poor quality. Consequently the attendant nurses have to feed them from the hour of their birth with honey, rice-water, and the pulp of soft bananas. This is their almost entire living for the first two or three days, and a large portion of it during the first month."

846 Of the 5 women we interviewed who did not lie by the fire, 3 used a hot ashes chamber regularly throughout the postpartum rest period, one used it occasionally, and one used both the hot ashes chamber and a hot water bottle. This latter woman

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1. A small metal box in which sticks of fuel were burned. The box was wrapped in cloth and placed on the mother's abdomen.

221 435 Despite the availability of fish and of vegetables in the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

221 512 The two months of September and October during which the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit and take trips. A few might go on a pilgrimage. Therefore, in this season, all family members were less often together at the evening meal. Fishing was a continuous occupation, with some preserving and home craft. Jobs such as selling food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

343 133 High water caused time-consuming inconvenience only in earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

243 221 By November, the earliest varieties of rice matured. Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could 461 not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into 226 the night. At this time also many varieties of fish matured and men fished night after night. Just when the convenience 434 of purchased food was greatest, cash was exhausted. With 426 rice money in sight, venders might be generous with credit, 443 but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

504 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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CHAPTER II

THE COMMUNITY

Geography

131 The community of Bangchan is situated some twenty road-miles northeast of Bangkok in the heart of the economically all-important commercial rice growing area of central Thailand. Surrounded by their rice fields, the population 361 (161) (503) of about 1,600 persons lives on some three hundred small family homesteads scattered along a half dozen connecting *[243] canals. The community occupies an area of 6,500 rai,[1] or 2,600 acres, all of which, with the exception of about 300 rai of homesites and narrow strips bordering canals, is given over to the production of wet rice.

134 The soil of Bangchan area is heavy dark clay with *243 an impervious layer at a depth of about six to eight inches and is suited only to rice growing.

133 The area is essentially flat, rising slightly toward 312 the north. It receives, in addition to rain water, irrigation water channeled into it through the Saen-saeb Canal one mile to the south, Samwa Canal one mile to the east, and Khlong-song Canal one mile to the north.[2]

• [804] 1. One rai is equal to two-fifths of an acre.

2. See map on page 162.

583 of their adopted daughter, of which some 300 baht went to
535 bedding materials and 5,000 baht to the wedding feast which
435 the bride's parents alone were supposed to give. It should be noted, however, that in this last case the bride's parents received as dowry from the bridegroom's parents 4,000 baht in cash and two baht[9] weight of gold worth about a thousand baht, and they also received from the guests an aggregate customary contribution of 2,360 baht. Thus, the bride's parents came out with a net gain of 1,080 baht plus the gold which was to be given to the bride.

593 While the conventional marriage was somewhat costly especially for the bridegroom's party, the popular marriage by elopement was much less expensive. Our records show that in addition to nominal ceremonial materials of white cloth, candles and incense, the bridegroom had to pay a fine of only a few hundred baht to his wife's parents when the couple came to receive formal forgiveness from them.

We do not have comparative figures for the occurrence of conventional marriage and elopement, but the latter appeared very frequently in our daily field notes as against very few cases of the former.

591 There are two types of establishment of new families
184 after marriage: (a) immediately after marriage, and (b) some years after staying with parents of either party.

It was observed that immediate establishment of new families after marriage was common among couples originating from farm laboring families and families of poor farm operators.

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9. One baht weight is equivalent to fifteen grams.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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APPENDIX A

TERMS USED IN THIS STUDY

Measurement

1. Rough rice or paddy: Grains of rice after they have been threshed but before they have been milled.
2. Milled rice or clean rice: Grains of rice after they have been milled.
3. One rai equals two-fifths of an acre.
4. One tang equals twenty litres. It is the standard measurement for both paddy and rice. The weight of one tang of paddy varies from one locality to another. On the average, Bangchan paddy weighs about eleven kilograms per tang. The weight of one tang of milled rice does not vary significantly from place to place, the average being sixteen kilograms.
5. One baht (weight for gold and silver) equals fifteen grams.

Currency

The basic monetary unit is the baht. During the period of the study, Thailand maintained a so-called open market exchange rate which served largely as the going and legal rate for all commercial transactions other than exported rice and a few specified items of export and import. At the time of the study, this open market rate was about 20.25 baht to one U. S. dollar.

The official rate of exchange during the early post-war period was 10 baht to one U.S. dollar. Following the

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[412] 50.d. (In your household) is there a pair of scissors of any kind or not?

7.	Yes, scissors	219
8.	No	114

[207] e. (In your household) is there a radio or not?

9.	Yes, radio	47
0.	No	286

[402] f. (In your household) is there a winnowing machine, or not?

X.	Yes, winnowing machine	102
Y.	No	231

[243] g. (In your household) is there a windmill, or not?
[402]

1.	Yes, windmill	161
2.	No	172

[805] 51. Do you have a wrist watch, or not?
[405]

3.	Yes	79
4.	No	252
—	No Answer	2

[231] a. Here in your household, how many buffaloes do you own?

5.	None	81
6.	One	27
7.	Two	67
8.	Three	61
9.	Four or more	97

b. (Here in your household) how many pigs do you have?

0.	None	321
1.	One	2
2.	Two	2
3.	3 or more	1
—	No Answer	7

[235] c. (Here in your household) how many chickens do you have?

4.	None	35
5.	1 to 2	7
6.	3 to 4	17
7.	5 to 9	31
8.	10 or more	243

d. (Here in your household) how many ducks do you have?

0.	None	308
1.	1 to 2	9
2.	3 to 4	16
3.	5 to 9	58
4.	10 or more	42

125 items the same day with Mr. Texter or with Mr. Civ. As the
124 space provided on the answer sheet might not be sufficient for this purpose, the back page of the interviewer checkform should be used and an asterik should be placed in the space provided for the reply on the answer sheet. It is expected that for these questions one to three line replies would be of normal length. Such replies, posted on the backpage of the interviewer checkform, can be written in Thai and sufficient space should be left between the various notations for an English translation to be fitted in.

Before an item by item discussion of the questions, just two more remarks about probing. Probing is chiefly used in two kinds of situations: (a) when a R. is slow in replying to a question, or seems not to have understood a given question, or when he might try to avoid a reply by stating that he does not know (D.K.) or "does not recall"; in such cases the question or relevant parts of it are repeated verbatim; and (b) when a R. gives an irrelevant answer and the interviewer is prompted to probe with the intention to stimulate a response to the point of the question; here, usually more probing will be necessary than under (a).

DO NOT PAY ANY ATTENTION TO THE "CLM." COLUMN NUMBER DESIGNATIONS which follow question numbers on the answer sheet.

Q:. 2: Write in the precise age obtained on the line behind the corresponding age group. Below, you find a table of the zodiac years ranging from 24 to 73, which will provide you with a check and an adjustment of the frequently approximative age indicated by the R. For instance, assume that a R. says he is 50 years old, when you ask him: How old are you: You then ask him in what zodiac year he has been born. Assuming his reply is "khaan," you then read from below table "53 years" and this is the age which you register in the line behind: " 50 to 59" age group.

• [805] Table of zodiac years

rakee	24,	36,	48,	60,	72	chaluu	30,	42,	54,	66,	78
woog	23,	35,	47,	59,	71	khaan	29,	41,	53,	65,	77
rakha	22,	34,	46,	58,	70	tho	28,	40,	52,	64,	76
coo	21,	33,	45,	57,	69	marocang	27,	39,	51,	63,	75
kun	20,	32,	44,	56,	68	waseng	26,	38,	50,	62,	74
chuad	31,	43,	44,	67,	79	sumia	25,	37,	49,	61,	73

Q:. 6: You ask the R.: Do you smoke and offer him simultaneously a cigarette.

Influences on Health

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In Bang Chan, a discussion of sickness and health merely in terms of element balance would be true but insufficient, or even superficial. After all, whether manipulated by oneself or by a professional curer, elements could only be controlled within certain limits. Far deeper questions were posed, probing the ultimate nature of health, life, and death. What determined the particular proportions of a person's 4 elements with which he had been born, and whether he had, say, a preponderance of wood from Jupiter or gold from Venus? The immediate answer of astrological confluences on the date of birth would be true, for each day had its own qualities and aspects, but it was not enough. Why had he been born on that date to that set of governing factors? In life, why did one person meet the circumstances that created illness, while another lived in glorious health? The answers to these questions must be sought in the Buddhist moral and cosmic beliefs.

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The Buddhist universe operated on a principle of immutable law. Each person received his just due, suffering for his own sins, enjoying reward for his virtue. There was no personified deity to help, forgive, or blame. Moreover, attachments were the cause of sorrow. Because existence was fraught with desires, all life was basically painful. Even flashes of happiness by their cessation caused sorrow.

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In this universe and on this earth, individuals, each a unique and independent entity, were born to live and die, over and over again, throughout eons of time. They bore no relation to each other. Separate and autonomous, each was in charge of his own destiny. All beings formed a single grand scale of existence from demons in hell, through such lowly creatures as worms and insects, upward through dogs, cats, buffaloes, and elephants to mankind, then on up to angels and gods in the last paradises before the peace of Nipphān (Nirvana).

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The insight of the Buddha showed the way to break the sorrowful eternal cycle of rebirth and reach Nipphān. The Buddha perceived that meritorious behavior caused one to progress up this ladder of existence toward freedom from incarnation. In each life merit (bun) could be accumulated by compassionate behavior: caring for priests, and being kind and generous to persons less able to care for themselves. With merit one's next life was happier and freer of restrictions. A dog had more merit than a worm, a buffalo than a dog.

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Chapter V

BIRTH CUSTOMS: THEIR SIGNIFICANCE

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Physiological ideas clarify only part of DÛan's tale. To illuminate other underlying tenets, we begin with the idea of help.

Help

[812] In "Influences on Health" (p.27) it was pointed out that Bang Chan conceived of individuals as unique beings, each with his fate in his own hands, with no bonds nor responsibilities to any other being. In an earthly existence, though, it would be difficult to obtain satisfaction or even life itself under such separatist terms. What relationship was possible between such autonomous beings? How in fact was rebirth brought about? Help (chuai) was the fundamental principle for organizing social interaction. Without help, the villagers saw existence not only as lonely and ineffective but even unrealizable. With it, personal and mutual goals were achieved, and life was enriched. People were "independent agents serving each other because it is mutually beneficial" (Phillips:63).

Responsibility for initiating help lay formally with persons of greater age or higher status. Elders assisted juniors, government officials assisted peasants. They received in return gratitude, obedience, and respect. Parents received care in their old age from the children they had nurtured. In the ordinary walk of life, particularly in a household, though, aid took the form of a continuous give and take with associates. The view of help as the mainspring of social action cut through many a problem of initiating aid or waiting on another to act, for fundamentally, on the cosmic scene, all beings were equally old. The child who helped most by giving over his earnings was loved most by his parents (Phillips:89); when married, children helped their parents less than before marriage, still less if they cooked in separate kitchens in the same house, and much less when they moved to a separate house, for their time and cash went increasingly to maximize their own interests. [593]

by instruction from a ritually[71] approached teacher. "One cannot accidentally learn. One has to ask to be taught." As a practitioner in this field, the title "mɔ̄" signalised expertise; where teaching was involved, the title was khrū (teacher [McF. 183]) or ājhān (professor [McF.990]). Speech was the key to this tradition, in spite of sacred books and wall-carvings in the temples.[72] Modern education, being book-and-teacher based, shared in this aura. There, even today, listening is more comfortable than reading.

Techniques of the practical, natural world were learned not by teaching but pragmatically by observation, example and experience. Eyes were the key. "I know because I saw," said a midwife. At the highest level of achievement in the natural world one was expert (nak), e.g. convict (nak thōt, an expert in being punished) a tourist (nak thīaw, an expert in roaming around).[73] Within the natural world, an intense pragmatism reigned always emphasizing visual phenomena. People were keenly

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71. To speak ritually one held in the hand the trio of incense, flowers, and a candle. This was the way to cross over from the profane to the sacred world, to inform (bɔ̄k) or make a request of, a sacred being (a teacher, priest, king, or deity). The tiny flame of the offering invoked holy fire, and so had the effect of making one's words compelling, for no one could gainsay a request under such circumstances. A husband about to deliver his wife held incense, flower, and candle in hand as he requested the help of ancestors and spirits. (Bishop Pallegoix saved the existence of his mission by thus approaching the King [Pallegoix, Vol. 2:201]). The trio of offerings, whether at the 4 corners of the lying-in fire-floor, or in "bat phlī krathɔ̌ng" at a "thaw khwan" rite, or even in an ordinary khwan khaw made all actions and words compelling.

72. Because words, immaterial and invisable, lay at the base of occultism, words as continuous agents of power permeated Bang Chan's ordinary daily life. This was why words, verbal play, and punning initiated action: pregnant woman attended the monks' "coming out of retreat" (ɔ̄k phansā) so that the child would "come out" (ɔ̄k) easily.

73. It should not be forgotten that most activities in the supernatural world had their technical sides, and the term "nak" was used there too. A curer had to learn his herbs; a dancer, his steps; and a master of ceremonies, the words of the chants.

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aware of what they observed and interested in experimentation. One woman, observing a mother who did not take any medicine, and even ate jackfruit, commented that she was "quite strong." Another watched what happened to a parturient who had no one to boil water for her, so used canal water. "She is healthy!" she exclaimed. Another decided to test whether not burning up all the wood made a child unable to finish his work and found the maxim untrue.

Just as supernatural knowledge was individually transmitted from a teacher to a pupil, so knowledge learned by observation was personal, even idiosyncratic. The actual observer of a phenomenon might change his ways accordingly, if he wished, but no one else would do so unless he too "saw it with his own eyes." The habits of one did not become the habits of another unless the same visual experience had been shared.

Because of the separation of the occult and the practical, the old midwives of Bang Chan would find it inconceivable that technical aspects which should be visually transmitted could be taught from a book.

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An old woman summed up significantly 2 attitudes saying, "In the old days people made more merit and so lived longer, but because we had no hospitals, the children died younger." The relation of good health and longevity to proper religious and moral behavior was fundamental in Bang Chan. If merit did not suffice, medical attention, traditional or modern, could not prolong life. Children, however, were tender (ɔ̄n) and easily prey to sickness. Traditional care could help them, but being delicate and tender like city people, children could also be helped by modern hospital care.

Between the 2 systems people sensed little conflict, for each patient made a preliminary diagnosis of his symptoms and sought the type of assistance his diagnosis and convenience indicated. Mɔ̄ with some knowledge of both systems might offer their patients a choice of remedy. With the right diagnosis, magic, and medicines, a quick cure was expected. If not forth-coming, people were disappointed and moved to another specialist for his help. Modern medicine merely took its place as one more recourse.

The basic handicap of modern medicine was that it had no magical resources or holy water. "Its effectiveness is limited to the properties of the ingredients." Old medicine on the other hand had, in addition to these properties, "The strength of the mɔ̄'s incantation plus the power of every person who learned and used that incantation, back to the time of its discovery, centuries ago." Thus where the medical schemes offered the same specialty, as in fevers, bone-setting, or obstetrics, the old appeared to offer more resources.

Besides its deficiencies in magic and strength-making attributes, modern medical care had other drawbacks. First, it was not accessible. A trip to Bangkok for medical purposes involved far more time than a day. Mīnburī's Health Center was a feasible trip, even for a woman in labor (stays ranged from 6 to 24 hours). Home arrangements for tending children, feeding buffalo, and other chores were less demanding. Bang Chan's eagerness for local modern care was shown when a Bangkok physician visited Bang Chan for a few times as part of a nutrition study. He was besieged with private requests for medical advice. Secondly, modern medical care was expensive. In Bangkok, after the expense of getting there, taxis, food, and housing costs for accompanying relatives, hospital, and doctor's fees sometimes meant losing the family gold and even land. Mīnburī's costs were closer geared to farm income, but medicines appeared costly. "Modern drugs taste and act better, but the poor have to use the old." Third,

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home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

178 743 758 554 [842]

To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Mīnburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 7 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccessibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grow up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

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In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Mīnburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

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are less eaten today because they are too expensive."

A slight trend towards depersonalization might be part of the aping of urban behavior, or idiosyncratic, or of more general significance.[76] The Minburi Health Center may have been used to avoid certain face-to-face situations. A woman whose labor was prolonged was taken there by her (male) midwife who had to get to a meeting. He preferred the impartiality of the Center to turning her over to another midwife. A woman took up the hot-ashes container so "others would not have to wait on her." Another appeared to have obtained a midwife from outside the community rather than seek out someone inside and closer at hand. A very poor woman used no boiled water because of inadequate help in the household to prepare it. Whatever the circumstances of her social isolation, ordinarily kin or neighbors would have seen to it that this job was done. This episode too was watched by neighbors who commented that since her health remained good, boiling might be unnecessary. Finally, to advertise certain medicines, a firm handed out yan, the magically inscribed cloth, to suspend on the holy cord that surrounded the mother. This was a long way from the personally inscribed "yan" of old.

[743] [571] [812]

A final reason for the acceptance of change was the larger number of choices of behavior because of a broader horizon. Bang Chan had never been an isolated community, for pilgrimages and visiting through easy boat-travel had been for decades part of its life. Yet the growing number of literates, the establishment of bus and other transportation services to the city, the experience, for a few, of work in Bangkok or of military service in Korea, the continuous association with non-Thai, (Chinese, Muslims, a Cambodian, and now the Americans), and the now somewhat diversified economy of the community all led to the increased familiarity with other ways of doing things. Patterns of childbirth were already reflecting this awareness.

[177]

Unchanging in the scene at childbirth was the necessity of supernatural assistance, and heat to ripen and restore the mother.

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76. I feel this evidence is slight, and set it down merely as a point for future observation.

262 All food was also made up of the 4 elements. Here rice was of
826 particular importance. The body was seen as built and maintained by rice. Flesh in fact was rice, an image probably derived from Buddhist scriptures. 11

• 82 Each element carried with it its substantive aspect of heat, flowing, etc., and its astrological nature and relations. Elements could be compatible or incompatible with each other. Earth, water, wind, iron, and wood for instance were compatible. Gold "got along" with all elements. Fire, though, was incompatible with wind, water, and wood for it could destroy their proper proportion.

828 The effect of astral and planetary relationships at the
787 moment of birth on one's constituent elements induced qualities of character.12 Mind and body were a continuum. Because family members were born at different moments of time, intrafamilial temperamental differences were expected.13 Persons made up of incompatible elements quarreled. Thus, friction might occur between parents and children. For a husband and wife, who lived in especially close proximity, the constitutional elements were of special importance. Through marital relationships their elements were in physical contact. Consequently, in the old days, a couple comtemplating marriage ascertained through their horoscopes the compatibility of their natal elements to determine whether they could live together without destroying each other. For instance, a girl with much fire in her make-up was easily angered and prone to fevers. She could not make a successful marriage with a boy with much wood.

Physiology

753 A single physiological process controlled the functioning
826 of the body and the mind; i.e., the equilibrium of its elements.
[827] If the elements were in proper balance, proportion or harmony, a person was healthy; if an element were excessive or deficient,

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11. "This, my formed body, is composed of the 4 Elements, generated by Father and Mother, built up from rice, porridge and sour gruel," says the Buddha (Suriyabongse 1951:11).

12. Merit, the other determinant of character, is discussed in "Influences on Health" below.

[539] 13. Cf. the proverb "The joints (knots) on the same stem are nevertheless unequally spaced, so even brothers are of different minds," (Gerini 1904:14).

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775 Moreover, her life would some day begin again. Whether birth
844 was rapid or slow, the experience of the suffering deepened her sense of compassion and, as will be shown, brought her closer to fulfillment of her life role.[41]

Habit

153 If mutual help organized relationships, habit (khoei)
•82 stabilized them. Khoei means "to be used to, accustomed to,
853 habituated." A first occurrence was an example and set the pattern for all subsequent occurrences. With one performance
[761] one was accustomed to an action. For instance, shortly after the temple was built 2 people died, deaths in Bang Chan "always occurred in pairs;" it was the temple's "habit." Moverover, "the head priest could never expel a priest because he had never done so." Again, a few women saw to it that during this period their babies were given a few grains of rice (even though they were far too young to be offered new rice regularly), so that "later on, if they got sick, they could always at least eat rice," for "they would be used
[171] to it." "Glutinous rice was not good for babies in Bang Chan, but in North Thailand [where it was a staple] it could be eaten because people were used to it." Someone had set the example which started the custom.

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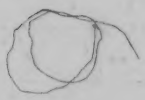
844 41. Bang Chan's Buddhist phrasing of the meaning of pain and
154 death in childbirth seems to indicate that childbirth occurred
171 under psycho-cultural conditions that induced relaxation and
114 reduced fear and pain. An "easy" delivery lasted 2 hours. According to a modern medical theory, (Dick-Read: Childbirth Without Fear, passim) lack of fear of childbirth leads to mental and physical relaxation which in turn reduces pain and labor. Dr. Dan Bradley observed that labor was shorter among Siamese women than among non-Siamese. "Facts seem to prove that parturition is both shorter and easier to Siamese mothers than is usual to Europeans and Americans" (Bradley, 1865:79). We accept his first-hand observation because he had 40 or more years of experience in delivering babies, both Thai and non-Thai (missionary wives, etc.), and suggest that it may be taken as proof of mental and physical relaxation derived from lack of fear. Although the missionary women may have been frightened because they were in a far country, Dick-Read argues that fear of childbirth has long been present among American women and this fear has the effect of longer, harder labor.



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A major clustering of first experiences, and so of habit formation, was in intra-uterine existence. Every experience of the mother was shared by the fetus. After birth, a baby daily formed habits of eating, sleeping, and crying, and later, as a child, habits of respect, obedience, truth-telling, etc. To create good habits efforts were bent to control and ameliorate any first experience: to make it as correct as possible; to seek out favorable astrological moments; to ask auspicious, skilled, or learned persons to be part of the initial action. An example was the establishment of nursing. When the baby was put to the breast the first time, the objective was not nourishment but to establish a good habit, viz. copious and strong sucking from an ample milk supply. Only after this first nursing did breast-milk as nourishment become important. If on this occasion he did not nurse well, he would have the habit of eating poorly all his life. Moreover, whatever the mother's experience with her first-born, it would not only be repeated every time he nursed, but set the nursing pattern for all subsequent children she bore. For her first-born, though, a mother would have had no previous experience of making milk. She had to be taught, or shown, how to make good milk, just as the baby had to be taught to suck, and later taught to eat rice. Consequently, the first-born baby was almost always first nursed by another person (not necessarily a kinswoman) with copious milk. Then 2 or 3 days later, because the example had been set, good milk came in and the mother started nursing. What was to be avoided at all costs was a first suck of colostrum, which appeared to be "unfit, early milk" from an insufficiently lactating breast. This would be a poor precedent. Until a mother decided her milk was right for nursing, a baby subsisted usually on honey and water, and maybe a little crushed banana. If a woman were not satisfied with her nursing capacities for her first-born child, when the second child was born she might ask another lactating woman to give the baby a first nursing so as to improve her own habit.[47] One woman flatly said her own milk was always unfit as proved by her babies' health, so she used a bottle of (canned) cow's milk from the start. She felt she had the habit

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47. Bradley (79:80) felt that the dehydration attendant on lying by the hot fire significantly reduced the quantity and quality of the milk.

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562 delivery, "her blood was purified to a white color to become
[827] the milk of the breast."[48] Nursing a child was the essence
[853] of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 In a wider context, not only all their household members
462 but people anywhere were the objects of women's nurture:
252 women were in charge of the cooking even if occasionally
264 helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor houshold, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry
[182] any more." She construed this as proof that she had ample
[431] merit, but it also meant that she was a great donor who gave
[796] continuously and took little. Women usually offered the early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When
593 age pushed women past their mature capacities, they returned
888 to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 A desire to give tender care and nourishment was deemed
857 inborn in all women. Although sex was not strongly
[291] differentiated in babyhood,[49] by age 3 a hard-to-handle
[593] skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phūm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[856] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

TABLE 19

He was most afraid of . . .
The thing saw is most afraid of is (namely) . . .

THREATS TO PHYSICAL WELL-BEING:	61%	poverty. If he had enough, he would not be afraid.
		having nothing to eat. I mean when there is a flood, and all the paddy is lost, and we will starve because there is no rice to eat.
		not having enough to eat.
		having fever; getting sick and having no money.
		fire, because when a house catches fire it is a great loss.
		death.
		snakes. He is not afraid of ghosts. He can walk in the dark. But snakes are dangerous. He does not like to go anywhere after dark.
ACTIONS OF OTHERS:	20%	people. When she had money, she was afraid she would be robbed. When she did not have any, she was in difficulty.
		her father beating her.
MALEVOLENT SPIRITS:	10%	ghosts; but if there were no choice (no place to go, no way to get out of the situation), then she could manage.
		death; of ghosts haunting him. If the ghosts don't haunt him, he is not afraid.

topics) it was noted that, "uneasiness, when it occurs, is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality." The data here would tend to reinforce that conclusion. At the same time, however, it must be remembered that 20 percent of the informants do give what is at least symbolic expression to their fear of others, and it would, therefore, be most inappropriate to go to the other extreme and assert that villagers have no anxiety about interpersonal relationships. I also noted in the earlier discussion that "the nervousness that is betrayed indicates some of the internal strain that villagers undergo in having to maintain a constant front of politeness." This appears to be a case of their simply accepting—without worry, shame, or any other secondary anxiety—their own shortcomings. The anxiety that *is* experienced is just not *felt* as a psychological burden.

One of the responses above, although idiosyncratic, merits attention. This is the response of the villager, age 52, who says that she is frightened by her *karma*: "it depends on *raw's* mind [or heart]. Some people are afraid of ghosts. They see things and they believe that they see ghosts. That is not right. They see falling leaves and they think that is a ghost. There is nothing when they approach. The most frightening thing is bad *karma*. It

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of generations, to the hermit Phra Khulilain, who first dis- 789
covered this magic. He got it from Phra In (Indra). He will
make it good."

Dŭan was sitting in the main part of the house. Her mother was seated behind her, arms under Dŭan's arms, pressing down on the abdomen with every pain. She, Song, and others had taken turns thus supporting Dŭan's back all afternoon. Dŭan hoped it would not be like the first time when she had screamed with the pain of the tender spot where they constantly pushed. Their toes, digging into her thigh, also had left large bruises. Some women in the area had tried arm ropes, hung from the ceiling, on which to pull, and some women tried lying flat, but sitting while someone pressed was the usual way. Sai examined Dŭan, and announced that labor was not very far along. She moved Dŭan around so she faced another direction. "No wonder you are having a hard time," she said. 844
"Your feet were pointing toward the săk phra phûm spirit house 789
and you were not properly in line with today's direction of the 823
celestial prince-snake (Thao Wăk). By turning you thus, the baby will be born with, and not against, the scales that lie on the nâk's back. The snake's direction differs each hour of the day, each day in the week, month, and season in the year. Today is Monday, so your head must be in the east, but Sundays, for instance, it must be to the north. You must also not face the Great Ghost (phî lûang).[33] Another being to respect is 844
the Thao Krung Phâ Li (cf. Textor:487-490). Offerings to him 789
must be at the feet or sides. If offered at the head, he would be angry at your disrespect, and you would have a fever and a terrible time. My grandfather taught me this from his Pali book. His was more accurate than the books in Thai one sees in the market."

Song was asked to boil up several kettles of water using 844
this săkăe wood. Husbands always did that. "I was recently asked," said Sai, "to help at a woman's fourth child. I had been there for all the other 3, and for every one her husband was absent, gambling, I heard. He said he did not want to stay there because it was an awful sight. So it is, but there must be a man around, the husband; if he is dead, or gone, then a father or brother. I refused to accept that case because of the husband's neglect."

The winds that circulated in Duan's body were not speeding

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33. Textor (378,n23) relates that it makes a complete circle of all directions throughout 24 hours, and its direction of the moment must be avoided.

People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauck, et al: 42-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny kluai nam, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" kluai nam wā. Mere orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plus--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (wiset:powerful) or natural (tām thammachāt) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "khuh"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paroxysm, flatulence, convulsion,

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16. Phillips (p. 61) reported that parents did not give their child a disliked medicine because "it offends him.... It is better not to give it to him than hurt his feelings."

17. This small skin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely pained (cf. Textor:116-127). Suspected khun was one of the few reasons why a family would authorize so grave a violation of the body of a deceased member as an autopsy.

before completing these obligations, the parents lost out on their anticipated reward (cf. L.M. Hanks, 1962).

Since waywardness (nai thiaw) was considered a continuous threat, magical means were taken at the moment of birth to ensure that a child stay close to the family that raised him. The blessing following the winnowing ceremony invoked immovable things: the post, the cat that traditionally never roamed far, the pumpkin that sat and fattened:

> "...Stay at home like the bottom of the house post. Watch the house like a cat. Eat and stay here! Never leave home. Be fat and heavy as the ash pumpkin..."

The most important binding actions utilized, or brought the child into physical contact with, objects long associated with family, in particular the house and land. The umbilical cord was cut on earth or phlai dug from the house-land itself with a bamboo "knife" sliced from one of the deeply sunk house posts. Of these "the knife is the important thing." The phlai also had medicinal purposes. With a feather "from the mother's house" the baby's navel was smeared with cobwebs from a spider whose web indicated long undisturbed residence. They buried the placenta either under some large old tree that stood near the house, or under the house stair. The old family winnowing tray, old clothes, and well-used family possessions were used first before any new furnishings were purchased for the baby. A fire of sakae wood grown on premises boiled the water for the baby and mother, and heated the mother. Sakae "was planted when a house was first built so that every generation of occupants would have it available for use at confinement" and also for firewood at other times (cf. McF. 834). All these binding rites assured that the child being rooted to a home terrain, would not wander frightened, and so "would not cry." He also would be at home to participate in the merit-making that would reconstitute the family in another existence.

If a child were born away from home, how was this bond to his locality established? On one to two occasions when the child was born at the Minburi Health Center, Hauck (notes, 1954) observed a solution to this dilemma. The mothers returned home, as was customary, within a few hours of delivery and were established by their respective fires. Their babies were winnowed and laid on their trays with the usual auspicious book, pencil, and needle. Neither tray held any bamboo, clod, nor phlai, however, for these had not been used. On one tray, though, was laid a steel knife from the kitchen, mute proof that a family cutting instrument ought to be there. On another occasion, a father asked to be given his child's placenta so as to bury it on the house site. In so far as possible, people in Bang Chan tried to carry on the old rites.

000 in Bang Chan tried to carry on the old rites.

848 The Cone of Wood

372 When a child was conceived out of wedlock, the first problem raised was, "Who will build the wood pile?" The actual father had to come forward and identify himself, for he and no one else could perform this duty. A child could not be born without the father giving this assistance.

593 This cone of wood represented a "womb" towards which
84 a father actively played out his role. His child was in it.
789 While building it, his behavior affected the child, just as
372 his wife's behavior acted on the child in her womb. If the pile were incomplete before the onset of labor or gave out before the fire-rest was terminated, the child would "never finish any task in its life." The very manifestation of industriousness involved in collecting the wood, though, made the unborn child industrious. Gathering a quantity of wood for this big pile was not easy. Old houses had plenty of wood, for they stood in thick groves, but new houses sometimes stood bare and stark in the fields. He placed spiny Indian jujube or Chinese date (phutsǎ) and Manila tamarind (ma kham thet) all over the outside to protect
[824] this "womb" from invasion by malevolent spirits. Thus he also protected his wife's womb. Lakǎ wood was preferred because it was smokeless. Collecting a mixture of woods was easier, but then the fire smoked. Mixed or all lakǎ, whichever the constitution of the pile for a woman's first confinement set the pattern for all her later ones.

At the onset of labor, the father had to open the way for his child to come out of the womb, so the pile was tipped over in a direction paralleling the position of the Great Snake. This astrological orientation was exactly that of the woman in labor. Unless the mother's head and the apex of the fallen wood pile coincided with the direction of the head of the Snake, with the open end of womb and cone below, "with and not against the lie of the snake's scales," the child would have to struggle against these scales as he came out. By tipping the cone of wood properly the father helped his child to an easy exit.

The thorns protected the womb and the baby inside from all evil spirits during the months of pregnancy. With the onset of labor, the holy cord which surrounded the mother took over this function, and kept away such dangerous spirits as phī krasū and, if the baby died at birth, the violent New Baby Ghost (cf. Texter:261).

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might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)eauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

262 753 855 constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

The belief that eggs would cause dental caries, and should therefore be omitted from children's diets, was expressed by the mother in a poorly nourished family. The possibility that such ideas arose from unwillingness to spend much money on food for a child has already been noted (see p. 42).

262 753 758 Information on food suitable in illness was obtained only incidentally. The Thai did not appear to have a consistent theory as to the cause of disease (Sharp et al. 1956, p. 489), and residents of Bang Chan did not seem to associate any of their illnesses with contaminated food or water. Choice of food in illness was probably associated in some instances with the idea that the body is composed of the four elements: wind, water, fire and earth, and that sickness results from or is a symptom of imbalance in the proportions or arrangement of these elements. Thus the "fragrant banana" and eggs, because of their "cooling effect," were said to be forbidden in measles. A child who was getting measles was restricted to rice and dried fish. In contrast the small, rather flavorless banana, designated (3)kluaj (4)nam-(4)waa, was said to have "no cooling effect" and was considered an acceptable food in illness, as well as for newborn infants.

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262 753 784 In one instance, when a patient had been taken to the hospital with severe diarrhea, a nurse instructed other family members not to eat ices, syrup (see p. 36), or raw vegetables, nor to drink unboiled water. The informant who told us about this offered no reason for these precautions. These foods were simply "forbidden" to the family of a patient with severe diarrhea.

777 820 205 Notions as to what is fortunate or unfortunate may also affect agricultural processes. The many ceremonies associated with culture and use of rice have been mentioned (p. 42). The idea that a papaya tree growing near the house was "unlucky" was attributed to Thai by a young Thai Moslem in Bang Chan. When we commented on the papaya tree near his front door, he said the papaya tree dies easily and does not like water, but his was planted on high ground. According to this informant few villagers would be willing to grow papaya trees near the house. He considered the non-specific threat of harm as unreasonable, though he said that if specific harm were said to result, he would be concerned about it. The midwife at Minburi Health Center said that she urged each woman who came there for delivery to have more banana, mango and papaya trees planted for home use. Before raising of papayas can be successfully encouraged, however, the idea that papaya trees bring back luck must be overcome.

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Influences on Health

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In Bang Chan, a discussion of sickness and health merely in terms of element balance would be true but insufficient, or even superficial. After all, whether manipulated by oneself or by a professional curer, elements could only be controlled within certain limits. Far deeper questions were posed, probing the ultimate nature of health, life, and death. What determined the particular proportions of a person's 4 elements with which he had been born, and whether he had, say, a preponderance of wood from Jupiter or gold from Venus? The immediate answer of astrological confluences on the date of birth would be true, for each day had its own qualities and aspects, but it was not enough. Why had he been born on that date to that set of governing factors? In life, why did one person meet the circumstances that created illness, while another lived in glorious health? The answers to these questions must be sought in the Buddhist moral and cosmic beliefs.

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The Buddhist universe operated on a principle of immutable law. Each person received his just due, suffering for his own sins, enjoying reward for his virtue. There was no personified deity to help, forgive, or blame. Moreover, attachments were the cause of sorrow. Because existence was fraught with desires, all life was basically painful. Even flashes of happiness by their cessation caused sorrow.

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In this universe and on this earth, individuals, each a unique and independent entity, were born to live and die, over and over again, throughout eons of time. They bore no relation to each other. Separate and autonomous, each was in charge of his own destiny. All beings formed a single grand scale of existence from demons in hell, through such lowly creatures as worms and insects, upward through dogs, cats, buffaloes, and elephants to mankind, then on up to angels and gods in the last paradises before the peace of Nipphān (Nirvana).

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The insight of the Buddha showed the way to break the sorrowful eternal cycle of rebirth and reach Nipphān. The Buddha perceived that meritorious behavior caused one to progress up this ladder of existence toward freedom from incarnation. In each life merit (bun) could be accumulated by compassionate behavior: caring for priests, and being kind and generous to persons less able to care for themselves. With merit one's next life was happier and freer of restrictions. A dog had more merit than a worm, a buffalo than a dog.

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562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to temper with men's magic, a severe sanction fell on her. She became the host of the phi krasu who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mɔ̄, she could do everything a mɔ̄ could do. Men were never mediums. Bang Chan's only medium was possessed by a male mɔ̄.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalised sufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than here, but limited in her sexual province.

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[832] [156] [418] [622] [593] 59. My finding is based on Textor's interesting facts (pp. 385-390). He described the hosts of phi krasu as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "auk" women, ritually established by the Holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phi krasu's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

[P. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existances over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

Chapter II

MAN AND WORLD

771 Bang Chan had for years heard preaching from Buddhist scriptures. Co-existing with these teachings were Hindu elements referring to Brahma, Shiva, and others. People also believed in an animistic lore concerning frightening ghosts and spirits (phī), protecting deities (thewadā), maternal goddesses, princely spirit-lords, and other supernatural guardians of a more or less benevolent nature. To these beliefs were added special bodies of knowledge, such as sacred literature from India and traditions of astrology from both China[8] and India. Other elements might be traced to Muslim influence, just as Muslims shared some of the foregoing references with their Buddhist neighbors. Bang Chan shaped its views of nature and man from all these sources. However, we shall not try in what follows to specify the sources of its beliefs.

The Human Body

826 774 184 192 The body of flesh, blood, bones, and other materials, harbored the noncorporeal aspects, in particular a person's merit story (kam; Skr: karma) and his several souls, viz., the khwan, the winyan, and the four chetthaphūt (cf.J.R. Hanks, 1959). Views of the human body formed no unitary system, but were as varied as their origins. Thus, sometimes villagers distinguished the material from the non-material: "a human being is composed of two aspects: rūp (body) and arūp (non-body)." Sometimes learned persons referred to the Hindu-Buddhist concept of 32 parts of the body, one of which, the winyān-soul, was the "organizer" of the others.

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8. No trace was discovered of the Chinese concept of Yin as female, dark, cold, and evil, etc., and Yang as its opposite.

[115] 9. Ming (Mc.F. 880) was once given as a term for "soul" by a Muslim informant, but without further information.

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As to the gross structure of the body, some persons learned about the skeleton when, in preparing corpses for cremation, the undertaker stripped the decaying flesh from the bones, usually in the presence of relatives and spectators of all ages. Occasional autopsies because of suspected sorcery, and surgical removal of a fetus from a deceased mother by caesarian section led to some knowledge of organs and blood vessels. Male and female masseurs of considerable competence were trained in the Chinese neuro-muscular system. A system of "origins," e.g. that the elbow-origin was in the arm pit, and the chest originated at the spine, might relate to the Chinese concept of linkage points on the body, in particular, acupuncture. In Bang Chan's popular conceptualization, the protecting skin which enclosed the body was thin at the top of the head and especially so at the stomach area. An old image also persisted that the body cavity itself was a relatively undivided space extending from neck to pelvis. Inside the cavity, food dropped from the top, faeces packed down at the bottom. Through the body curculated slowly the blood; several kinds of water (nâm) (McF. 453) e.g., the nâm khraam (refuse-water) (ibid. 453) in the abdomen; and several winds (lom) (ibid. 728) e.g., the pushing lom hêng (ibid. 487), and the pulling lom chawat (ibid. 287). The small hair-whorls noted on the head, hip, or shoulder were construed as minor vortices of these currents, or as souls (khwan).

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Foremost in people's minds were the elemental constituents of the body. The human body, along with every animal, plant, or mineral in the world, was made up of 4 elements (thâat): earth, fire, water, and wind (air).[10] This ancient four-fold view, also familiar to the Greeks, had mixed in Bang Chan with the traditional five-element Chinese system (metal, earth, fire, water, wood) because gold, iron, and wood were also spoken of as constitutional elements, and there may have been others. Some persons said that the proportions of the 4 major elements were the same for everyone, others, that they varied for different temperaments, which were also affected by the presence or absence of elements other than the basic 4.

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10. "The body, comprising about a bushel of powdery earth-element, is held together by half a bushel of juicy water-element, and propped up by the windy-element. The fiery element digests what is eaten or drunk and preserves the body". (Visuddhi-Magga. [Warren:157-158]).

All food was also made up of the 4 elements. Here rice was of particular importance. The body was seen as built and maintained by rice. Flesh in fact was rice, an image probably derived from Buddhist scriptures. 11

Each element carried with it its substantive aspect of heat, flowing, etc., and its astrological nature and relations. Elements could be compatible or incompatible with each other. Earth, water, wind, iron, and wood for instance were compatible. Gold "got along" with all elements. Fire, though, was incompatible with wind, water, and wood for it could destroy their proper proportion.

The effect of astral and planetary relationships at the moment of birth on one's constituent elements induced qualities of character.12 Mind and body were a continuum. Because family members were born at different moments of time, intrafamilial temperamental differences were expected.13 Persons made up of incompatible elements quarreled. Thus, friction might occur between parents and children. For a husband and wife, who lived in especially close proximity, the constitutional elements were of special importance. Through marital relationships their elements were in physical contact. Consequently, in the old days, a couple contemplating marriage ascertained through their horoscopes the compatibility of their natal elements to determine whether they could live together without destroying each other. For instance, a girl with much fire in her make-up was easily angered and prone to fevers. She could not make a successful marriage with a boy with much wood.

Physiology

A single physiological process controlled the functioning of the body and the mind; i.e., the equilibrium of its elements. If the elements were in proper balance, proportion or harmony, a person was healthy; if an element were excessive or deficient,

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11. "This, my formed body, is composed of the 4 Elements, generated by Father and Mother, built up from rice, porridge and sour gruel," says the Buddha (Suriyabongse 1951:11).

12. Merit, the other determinant of character, is discussed in "Influences on Health" below.

13. Cf. the proverb "The joints (knots) on the same stem are nevertheless unequally spaced, so even brothers are of different minds," (Cerini 1904:14).

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a condition which also affected the functioning of the others, he was ill or emotionally disturbed.[14] For example, dropsy, swelling, and yellow eyes came from excess water; cholera and constipation from earth mists. Wind and fire were the great trouble-makers.

Wind "was stronger than the other three elements." Either blowing wind or still air easily penetrated the skin and caused difficulties all the way from flatulence, stomach-ache and diarrhea to a minor head-ache and dizziness ("if wind whirls inside the body, the house swims around"); from incessant crying to serious interference with breathing, hence fainting and death. An accident, such as a cut or broken bone, disturbed, and might "let out," the air. Acute pain ensued if "rigidity" of earth, fire, or water interfered with the proper movements of the internal winds.

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Anger and fever were both in the category of excess fire. Since fire was particularly implicated in disturbed social relations, coolness was emphasized as the desirable state of body and mind. The blessings for both sexes at birth and at the marriage ceremonies enjoined the individual to be "cool and happy." There was some evidence that cool natures were tender (on) natures. Since women by nature were assumed to be "tender," and men not, a difference in element constitution may have been sex-linked. However, everyone knew of women who were not tender. For persons abundantly endowed with fire, temper control through temperature control was a constant preoccupation, for the allowable margin of fluctuation was especially narrow.

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Food occupied an especially important place in a person's welfare because food controlled the fire element.[15] The following material on diet is the background for some of the dietary injunctions during pregnancy and lactation.

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14. In view of Thailand's ancient Indian contacts, the parallels (and differences) between Bang Chan, and Hindu Ayurvada as described by Opler (1963:32-35), are noteworthy.

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15. "What was drunk or eaten by its decaying created the fire element in the body" (Suriyabongse 1964:12).

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An ill individual made a preliminary self-diagnosis to ascertain which was the pertinent specialist to consult. A quick cure occurred if the diagnosis were correct, because the specialist then had the exact curing agent and magic for that disorder. If the first mɔ̌ were unsuccessful, the patient moved on without embarrassment to another. In fact, a person might be a-curing with 2 or 3 mɔ̌ at once, and a modern doctor besides (cf. Hauck, 1956:37):

> "She goes to Mɔ̌ Suk who is good for spirits, and to Mɔ̌ Plung at Lan Pakachet who is good for headaches and vomiting. Two years ago her child was sick with ŋan chak and was cured by Mɔ̌ Suk. First she took the child to Suk but a few days later went to Sawad at Lolae because she was afraid the child would die. Sawad gave tablets. She did not revisit either mɔ̌ because the child recovered. Mɔ̌ Suk helped most because he had experience in magic" (55.).

[571] For reasons of convenience, however, people also developed lasting relationships with particular mɔ̌, usually the nearest, or a kinsman, to whom they turned first for medical help.

75. 826 Medicines cured either by direct rectification of deficiencies or excesses or on a principle of counter balance. Their effectiveness was increased by incantations. A rhinoceros in massive presence caused earth excess in the form of cholera (Bangkok Calendar, 1869:73), but a bit of its bone restored earth deficiency. Cobra was a direct ingredient for heat, but only sour tastes gave water element. A mɔ̌ described the medical theory behind curing techniques for the heat-rash, boils, and fever sometimes suffered after childbirth:

> "If the body is hot, fire is in excess, by which the other elements are heated. Thus the blood cannot move freely, and cells are deprived of their normal blood supply. The cells die, thus creating a boil or abcess. If the fire element is higher, the water of the body is lowered to a deficiency. Drinking water alone will not restore the water level. Sour tastes must be given. If the patient is thirsty, the lung is hot."

Influences on Health

In Bang Chan, a discussion of sickness and health merely in terms of element balance would be true but insufficient, or even superficial. After all, whether manipulated by oneself or by a professional curer, elements could only be controlled within certain limits. Far deeper questions were posed, probing the ultimate nature of health, life, and death. What determined the particular proportions of a person's 4 elements with which he had been born, and whether he had, say, a preponderance of wood from Jupiter or gold from Venus? The immediate answer of astrological confluences on the date of birth would be true, for each day had its own qualities and aspects, but it was not enough. Why had he been born on that date to that set of governing factors? In life, why did one person meet the circumstances that created illness, while another lived in glorious health? The answers to these questions must be sought in the Buddhist moral and cosmic beliefs.

The Buddhist universe operated on a principle of immutable law. Each person received his just due, suffering for his own sins, enjoying reward for his virtue. There was no personified deity to help, forgive, or blame. Moreover, attachments were the cause of sorrow. Because existence was fraught with desires, all life was basically painful. Even flashes of happiness by their cessation caused sorrow.

In this universe and on this earth, individuals, each a unique and independent entity, were born to live and die, over and over again, throughout eons of time. They bore no relation to each other. Separate and autonomous, each was in charge of his own destiny. All beings formed a single grand scale of existence from demons in hell, through such lowly creatures as worms and insects, upward through dogs, cats, buffaloes, and elephants to mankind, then on up to angels and gods in the last paradises before the peace of Nipphān (Nirvana).

The insight of the Buddha showed the way to break the sorrowful eternal cycle of rebirth and reach Nipphān. The Buddha perceived that meritorious behavior caused one to progress up this ladder of existence toward freedom from incarnation. In each life merit (bun) could be accumulated by compassionate behavior: caring for priests, and being kind and generous to persons less able to care for themselves. With merit one's next life was happier and freer of restrictions. A dog had more merit than a worm, a buffalo than a dog.

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The Pre-natal Baby

The baby's body "started as a hair." After conception it was necessary that the father, with his semen during intercourse "strengthen" the baby. There was less, if any, intercourse in the last weeks of pregnancy, though no prohibition against it. Food eaten by the mother, "transformed into blood," built the baby's body. For the first 3 months the child was a "clump of blood." By the third month the mother felt a shaking (san) at the clump. This was the "khwan soul flitting in and out of the baby's heart." The picture of pre-natal growth was expressed by the chant at the tonsuring ceremony:

> "The body of a child inside its mother's womb grows gradually like droplets of oil coagulating at the end of the yak's hair. The 5 apertures appear, the nose, 2 ears, and 2 eyes; and then the hair, hands, and feet. The infant's hands embrace its placenta from which it sucks water day and night. There it sits on its mother's faeces while her newly eaten foods pack closely on its head. Its chin rests upon its knees, its face is turned toward the mother's back as it leans back against her belly. It looks like a monkey in the rain, sitting, waiting, trying to warm itself in a hole at the foot of a tree" (S.S.).

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Before birth (and after), the baby was weak and tender (ɔ̃n), with especially soft, thin skin.

The Pregnant Woman

In pregnancy, a woman saw herself as moving toward the fulfillment of her long adumbrated female office[23] of nurturer. The essence of her femaleness, to be "soft and yielding, to lengthen life by nourishing others" was heightened.

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23. To paraphrase Fortes: "office," subsuming both status and role, means "calling, occupation, or life-task." It serves "instrumental or utilitarian ends," yet also has the "other dimension of duty and responsibility enjoined, sanctioned and above all symbolized in ceremonial or ritual forms placing it in the moral order" (Fortes:62).

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sin for the sake of nourishing the child. Some Thai village women followed a local Chinese belief that eating a female chicken gave strength during pregnancy. Eating a rooster, though, caused miscarriage through "ectopic gestation." Thai Muslims recommended chicken whole-heartedly.

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Medicines

Beginning early in pregnancy, one or more kinds of medicine (yā) were taken. These hot-tasting medicines of ginger, galanga, pepper, and such in 28 per cent alcohol were either bought from the big selection at a Chinese drugstore, or were made up at home from alcohol or water and an envelope of ingredients. A woman made the choice herself with the advice of experienced persons. Even the Muslims who ordinarily frowned on alcohol permitted their women to take it at this time. A few women, though, said they "did not like to get drunk," so took their medicines in hot water. The quantity varied from two to six spoonfuls per day, with big increases as delivery approached, e.g. "two big cups a day of it during the ninth month."

The primary purpose of medicine was to increase the appetite, but there were other reasons. Fragrant Medicine (yā hawm) cured wind. One Muslim midwife's mixture "stimulated the amniotic fluid." Other preparations had more general objectives. One label advertised "strength and good blood to men and beauty to women;" another promised to "maintain the mother's body and make the inner organs do their work properly" (M.M.M.).

In the last months, the reason for the medicines was to build up the body's heat. This purpose was not affected by hot tastes, which burned but did not necessarily raise the heat, but rather by alcohol, cobra, and specific decoctions. A label cautioned, though, "Not to be used by pregnant women with fever," lest the increment of heat be excessive. Snake Brand medicine, an exceedingly hot concoction used primarily post-partum, was occasionally taken in mild dosage during pregnancy. (Used full strength it caused miscarriage, so was rumored to induce abortion). The heat raised the body's temperature far above the ordinarily desired coolness so as to implement birth.

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The Physiology of Birth

At parturition the body's usual needs were reversed. The child could not be ejected under the normal, cool condition of the body. The pushing and pulling winds inside the body that ordinarily circulated slowly had to be

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speeded up with heat to the point of blasts. The strength of the contractions of labor was in direct proportion to the speed of the winds' circulation. The great pushes of the expulsive lon beng "broke down" the sac with the amniotic fluid (nam thun hua: water-that-supports-the-head-of-the-child), and forced out the child, water, and the placenta.

After the child was out, the mother was cold, weak, and exhausted. Her uterus was full of harmful fluids. Heat was needed more than ever not only to warm her but to give the winds "the power and push" to drive out three undesirable birth-waters: "The blood that looks like ordinary blood but is bad,"; the amniotic and abdominal body water (nam khreu: refuse water); and the pale, viscous, repugnant "fish-water" (nam khao pla). Therefore, a hot fire was built, close to which the mother lay (yu fai), turning all sides of her body towards the flame. She bathed in or drank hot or warm boiled water (nam suk: cooked, or ripe, water). She ate safe foods like rice and dried fish,[11] and kluai nam bananas, continued to take alcoholic medicines of the hottest sort, such as Snake Brand, and occasionally might be given cobra or other hot curries to eat. For a first-born, a woman stayed eleven or nine days by the fire (always an odd number), with stays shorter for each successive child, but never less than five days.

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Complications sometimes developed because of inadequate control of the heat. A "headache and a hot body" indicating "stagnation of the blood and the fishy-smelling-water," was cured by a heat-producing decoction. Rashes often occurred, causing small boils that might develop into sores. To soothe these, turmeric was painted on. In the most dangerous cases the heat "drove the bad blood to the heart, to the face or belly" where it was recognised by serious swelling, with resulting madness or death. In fact, one MD felt that the

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11. The reasons for rejecting fresh fish during pregnancy ("lest a creature of hell be born") would not hold after parturition. Yet fresh fish was rejected then too "as bad for the womb." One suspects that the less odorous dried fish was substituted so that the odor of fresh fish, like air-borne, incompatible food, would not affect adversely the "fish-smelling" post-partum discharge (nam khao pla). In Hauck's list of foods "bad for mother during the post-partum rest," the reasons are apparent: Sour tastes did not dry out the body, but built up water; egg was too cooling; jackfruit brought in wind; glutinous rice and the sugar of sweets "wet the uterus;" fruits did not give strength and were excessively cooling (cf. Hauck,1959:16).

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heat could be better controlled by medicine alone, saying "I do not prohibit a fire, but if called because of difficulties such as a temporary paralysis, I always take the patient off the fire and prescribe a decoction, or recommend more pickled medicine (*yā dong*)." "Damage to the thigh ligaments," treated by a masseur, was said to result from insufficient rest by the fire. If the baby died, the mother did not curtail her fire-rest but finished it out as planned. As will be seen later, the fire-rest had far deeper meaning than just physiological restoration.

date of all, Sao Hā Day, one Saturday in April, which was the fifth day of the waxing moon of the fifth month, in the year of the Big Snake. That boy is truly blessed. He will be the best and most respected doctor or teacher. He is in school now and people are always telling him he is bright. Chāi came on a Monday, so he'll be charming, but, alas, always roaming away from home! This new little son has his mother's features, which is as desirable as a daughter's having her father's features. Still, no one knows what characteristics come from a parent. One more thing, Dūan. Now you may take medicine as you please." Shortly after, Sāi took leave until the next day.

The new mother turned her face toward the fire and tried to sleep. It was night. Lek was close by, and Song slept in his mosquito net near Chāi's cradle. The fire was so hot it kept waking Dūan. Though the smoke made her eyes smart it kept the mosquitoes away. In spite of the discomfort, Dūan was eager to have the fire as hot as she could stand it, for this heat and that of the medicine would dry her uterus, rid her of the bad blood and waters of childbirth, restore her strength and stimulate her milk. She forced herself to drink as much hot boiled water as possible to keep out the dreaded wind element that might get into her body and cool her. When, however, the fire was overpowering, she dripped water from a handy jar with a cloth.

The next day, Sāi returned. With warm, boiled water she bathed Dūan--this time the upper part of her body also--and the baby. The boiled water was much more important for the mother, but being available, was used for the baby, too. Sāi washed the soiled clothing and the baby's little cloths. Turmeric was again painted on both Dūan's and the baby's abdomen, head, and neck to protect from wind. Sāi questioned and examined Dūan. Measuring a handspan down from Duan's groin, she pressed outward gently. "I want to see if these particular ligaments on the thigh are joined. They are often damaged and do not heal if the time by the fire is too short. Some mothers cannot walk at all. They have to call a masseur for regular treatment." To "make the ligaments well," she tapped Duan's body all over with the second of the tapping-fruit balls and had her sit on one while bathing. She massaged the muscles, stiff from lying quietly near the fire, by pressing in the ball with her hands and even feet. Medicinal herbs were warmed and laid on Dūan's breasts so that the "useless early milk [colostrum] which would give diarrhea" could be worked out and thrown away. "The real milk is not ready for the baby until the third day," Sāi said, "but if the baby is crying much, and if there is milk some mothers start nursing on the second day."

Almost from the moment of his birth, whenever the baby

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The genetic connections of those who did not help in cash, or labor at, say, cremations or cooperative work-parties were forgotten. Degree of help was a measure of kinship solidarity, and even marked the outer boundaries of kinship.

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The word "help" turned up over and over again in the context of childbirth. Birth came about because a married couple, already steeped in the knowledge that they had been so helped by their parents, "helped another individual to new life" through the mingling of semen and blood. The midwife's role was merely to "help." When a woman engaged a midwife, her words were, "Will you come to help me?" A baby having trouble breathing right after delivery "had to be helped for half an hour." Most important, only through the reciprocal help of mother and child was rebirth to earthly life implemented at all. Parturition was an active, cooperative venture between 2 autonomous beings. The child set the time for labor to start by "deciding to be born" when his 32 parts were "complete,"[38] and he had worked off sufficient sin in purgatory to permit rebirth. The mother by her labor "helped the child to be born," but she could not succeed unless he actively "helped," too. Though other assistance to her was desirable, such as persons to support her back and press out the infant, only his help was essential. Without it she had a hard or unsuccessful labor. A woman who gave birth successfully without outside help created no stir because it was evident that the baby had been helpful.

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38. Informants were not uniform in opinion here. Some said the khwan (or winyan) was the first "part" to establish itself--arriving at the moment of conception--others that it was the last (Textor:262). In either case it was highly volatile during pregnancy, and the trapping by winnowing at birth was the major means of rooting it in the person. During pregnancy, medicine for wind in the fetus was given "which was not effective if there were no khwan," but whether the khwan was the mother's or the child's was not certain.

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Chapter VIII

CHANGES

In studying change in the customs surrounding childbirth in Bang Chan, we have D.B. Bradley's description of birth in Bankok in 1865 as a base-line on which to project our findings. Since most of the population of Bang Chan (Thai, with a few Laotians, Mon, Muslims, and Chinese) stems from Bangkok, we may reasonably assume that the parallels derive from a true historical connection. Bradley's description fitted Bang Chan as if written today:

> "Siamese theory in regard to the part which external and internal fire plays in the functions of life and health is made to work powerfully...There is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which, if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child...[Thus a woman lies by the fire]... exposing all parts of her body, and more particularly her abdomen, to that drying process, so that the uterus shall be forced to shrink up quickly to its normal dimensions, and the sanguineous streams which had been diverted to support the child before birth, shall, by fire, be driven backward to their more usual limitations, all which is...a sine qua non to a sound constitution and good health in the future..." (Bangkok Calendar, 1865:78-84).

Bradley showed that some behavior one might call "change" today was a recognized alternative in 1865. For instance, in Bang Chan a few women "are made too unhappy (klum) by the fire so cannot use it. They should take extra amounts of pickled medicine" (yā dɔɔng). Bradley wrote, "a few delicate females...who cannot endure [this] usual treatment, are compelled, against all their ...fears of the consequences, and all the importunities of their

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan
Thailand AO1

4. The good person is one who tries to behave in an honest way.
5. Do not shove anything at anybody or throw anything at anybody.
6. Do not make loud noises when people are working.
7. Do not spit or clear your phlegm or yawn in public.
8. Do not gobble your food or scatter things on your plate or chew loudly.
9. Do not sit or walk carelessly or abruptly against other people.
10. Do not touch or horse-play with people who are your close friends.
11. If you are a superior, wherever you go, you should look after the comfort of your inferior.

Again, although the list is almost self-explanatory, note should be taken of some cultural emphases that run through several of the items: the stress on behaving properly toward superordinates and subordinates; the emphasis upon motoric and emotional self-discipline, and conversely, the implicit fear of losing control over one's impulses (as indicated in the dictum against horseplay, even with one's friends); the general stress of respecting the inviolability of every person; and finally, the great emphasis on the importance of the body in human behavior and social relationships. Although this last point may not seem unusual, in that the dicta are addressed to children—with whom one would expect much concern over the body—it in fact represents an area about which all Thai regardless of age are sensitive. In general Siamese, considerably more than Occidentals, tend to be aware of physical bearing, beauty, and ugliness, as well as the use of the body as a communicative device. A person's physical appearance is an indication of his character, particularly his moral nature, and kinesthetic modes are explicitly used for conveying love, regard, and as suggested above, disrespect.[2]

It is worth reëmphasizing that the above items are standards for, not descriptions of, behavior. The attention given to controlling body movements is simply to emphasize for the child that people will decide whether he is good or bad on the basis of the way he handles his body, and he must therefore exercise extreme care in its use. Items one, nine, and ten are not meant to imply anything fundamentally wrong with touching another. Most Thai, particularly members of the same sex, thoroughly enjoy expressing their mutual affection through bodily contact: by holding hands, grasping the leg or arm of the other, and in Bang Chan, sometimes by sleeping with one another. In the last instance, there is absolutely no sexual contact; often during the cold season the practice serves not only friendship ——— but the additional purpose of keeping the participants warm.

[2] Although it belongs to a different area of behavior, it is not insignificant that in classical Thai dance every body movement—the configuration of the hands, the position of the legs, eye movements—has a specific, conventionalized meaning. In the oldest, or *Kon*, version of the dance, the only means of communication other than that provided by masks are body movements.

As to the gross structure of the body, some persons learned about the skeleton when, in preparing corpses for cremation, the undertaker stripped the decaying flesh from the bones, usually in the presence of relatives and spectators of all ages. Occasional autopsies because of suspected sorcery, and surgical removal of a fetus from a deceased mother by caesarian section led to some knowledge of organs and blood vessels. Male and female masseurs of considerable competence were trained in the Chinese neuro-muscular system. A system of "origins," e.g. that the elbow-origin was in the arm pit, and the chest originated at the spine, might relate to the Chinese concept of linkage points on the body, in particular, acupuncture. In Bang Chan's popular conceptualization, the protecting skin which enclosed the body was thin at the top of the head and especially so at the stomach area. An old image also persisted that the body cavity itself was a relatively undivided space extending from neck to pelvis. Inside the cavity, food dropped from the top, faeces packed down at the bottom. Through the body curculated slowly the blood; several kinds of water (nām) (McF. 453) e.g., the nām khraw (refuse-water) (ibid. 453) in the abdomen; and several winds (lom) (ibid. 728) e.g., the pushing lom bēng (ibid. 487), and the pulling lom chawat (ibid. 287). The small hair-whorls noted on the head, hip, or shoulder were construed as minor vortices of these currents, or as souls (khwan).

Foremost in people's minds were the elemental constituents of the body. The human body, along with every animal, plant, or mineral in the world, was made up of 4 elements (thāt): earth, fire, water, and wind (air).[10] This ancient four-fold view, also familiar to the Greeks, had mixed in Bang Chan with the traditional five-element Chinese system (metal, earth, fire, water, wood) because gold, iron, and wood were also spoken of as constitutional elements, and there may have been others. Some persons said that the proportions of the 4 major elements were the same for everyone, others, that they varied for different temperaments, which were also affected by the presence or absence of elements other than the basic 4.

10. "The body, comprising about a bushel of powdery earth-element, is held together by half a bushel of juicy water-element, and propped up by the windy-element. The fiery element digests what is eaten or drunk and preserves the body". (Visuddhi-Magga. [Warren:157-158]).

All food was also made up of the 4 elements. Here rice was of particular importance. The body was seen as built and maintained by rice. Flesh in fact was rice, an image probably derived from Buddhist scriptures. 11

Each element carried with it its substantive aspect of heat, flowing, etc., and its astrological nature and relations. Elements could be compatible or incompatible with each other. Earth, water, wind, iron, and wood for instance were compatible. Gold "got along" with all elements. Fire, though, was incompatible with wind, water, and wood for it could destroy their proper proportion.

The effect of astral and planetary relationships at the moment of birth on one's constituent elements induced qualities of character.12 Mind and body were a continuum. Because family members were born at different moments of time, intrafamilial temperamental differences were expected.13 Persons made up of incompatible elements quarreled. Thus, friction might occur between parents and children. For a husband and wife, who lived in especially close proximity, the constitutional elements were of special importance. Through marital relationships their elements were in physical contact. Consequently, in the old days, a couple comtemplating marriage ascertained through their horoscopes the compatibility of their natal elements to determine whether they could live together without destroying each other. For instance, a girl with much fire in her make-up was easily angered and prone to fevers. She could not make a successful marriage with a boy with much wood.

Physiology

A single physiological process controlled the functioning of the body and the mind; i.e., the equilibrium of its elements. If the elements were in proper balance, proportion or harmony, a person was healthy; if an element were excessive or deficient,

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11. "This, my formed body, is composed of the 4 Elements, generated by Father and Mother, built up from rice, porridge and sour gruel," says the Buddha (Suriyabongse 1951:11).

12. Merit, the other determinant of character, is discussed in "Influences on Health" below.

13. Cf. the proverb "The joints (knots) on the same stem are nevertheless unequally spaced, so even brothers are of different minds," (Gerini 1904:14).

Diet in Body Maintenance and Curing

261 Because food created fire, the daily diet could be a
262 source of illness or a therapeutic means. Every food had
753 known properties for heating or cooling, and for other
effects as well. Guava fruit, alcohol, and turtle or cobra
curry were heating. Eggs were cooling. Depending on the
occasion, ice and iced concoctions were over-heating or
over-cooling. They were always "dangerous during
menstruation." Banana varied according to the variety:
kluai hom (fragrant banana) was undesirably cooling and
caused either diarrhea or constipation (Hauck, 1959:27);
kluai nam wa was less deleterious (salaeng) while kluai
nam was good for the sick or for parturients (Boonlong).

252 Properties in food changed in cooking. Boiling made
262 rice "ripe" (auk) and so available as nourishment (Anuman
Rajadhon:77). Even the method of cooking varied the
[758] properties. For the sick and for parturients, the banana
[846] variety called kluai hak muk was good if baked, but not if
cooked in syrup (Boonlong).

262 Some foods were "incompatible" with, and so aggravated,
753 certain illnesses. Air-borne food in the form of smell was
incompatible with, and compounded, a condition of wind
827 excess. Death or blindness ensued. On the other hand,
asafetida might be tied to the wrist of a new-born baby so
that the smell, an established carminative, might cure the
excess wind in his stomach manifested as flatulence.

262 Beneficial foods were encouraged. Of all these none
surpassed rice, the main sustenance of the body, "the only
true food" (Yong Chutima, in Hauck, 1959:27) and source of
"strength" to the farmer. Rice was a safe food. It never
disturbed elements. Eating rice, as compared with meat,
[774] had no overtone of taking life. One could eat one's fill
without any sin. Most of all, rice nourished the human
khwan, for each grain contained a part of the khwan of the
[782] divine Rice Mother. Furthermore, any food offered ritually
to a spirit or to make merit acquired strengthening proper-
ties, and was afterwards given to priests, children, or to
the sick.

Foods with known dangers were avoided. "Kluai tani
[776] banana, a variety full of seeds, was never eaten because
it contained a female ghost (phi)." Jackfruit was
avoided by lactating women as a direct source of wind-
excess. Fruit in general was not dangerous but "did not
give enough strength for a rice farmer. It was all right
for an orchardist."

Now that the fire was going nicely and Dūan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sāi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dūan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaithiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dūan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

As Dūan was resting quietly, Sāi made three "taping fruits" (lūk prakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dūan's legs to cure the birth wound (phlāe). The other two were set aside for use on subsequent days. Sāi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dūan, on the side away from the fire.

With satisfaction of a job well done, Sāi and Lek sat together for a quiet chew of betel. "Lek," said Sāi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that day

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36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

37. The deities addressed were māe phra phlōeng and māe phra phāi. Another Pali-Thai magic formula to control fire was: "Phra Mōk Khan Lā Nō will extinguish the fire from hell, na mō phut tha ya." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mō...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Textor 1960:483-485).

date of all, Sao Hā Day, one Saturday in April, which was the fifth day of the waxing moon of the fifth month, in the year of the Big Snake. That boy is truly blessed. He will be the best and most respected doctor or teacher. He is in school now and people are always telling him he is bright. Chāi came on a Monday, so he'll be charming, but, alas, always roaming away from home! This new little son has his mother's features, which is as desirable as a daughter's having her father's features. Still, no one knows what characteristics come from a parent. One more thing, Dūan. Now you may take medicine as you please." Shortly after, Sāi took leave until the next day.

The new mother turned her face toward the fire and tried to sleep. It was night. Lek was close by, and Song slept in his mosquito net near Chāi's cradle. The fire was so hot it kept waking Dūan. Though the smoke made her eyes smart it kept the mosquitoes away. In spite of the discomfort, Dūan was eager to have the fire as hot as she could stand it, for this heat and that of the medicine would dry her uterus, rid her of the bad blood and waters of childbirth, restore her strength and stimulate her milk. She forced herself to drink as much hot boiled water as possible to keep out the dreaded wind element that might get into her body and cool her. When, however, the fire was overpowering, she dripped water from a handy jar with a cloth.

The next day, Sāi returned. With warm, boiled water she bathed Dūan--this time the upper part of her body also--and the baby. The boiled water was much more important for the mother, but being available, was used for the baby, too. Sāi washed the soiled clothing and the baby's little cloths. Turmeric was again painted on both Dūan's and the baby's abdomen, head, and neck to protect from wind. Sāi questioned and examined Dūan. Measuring a handspan down from Duan's groin, she pressed outward gently. "I want to see if these particular ligaments on the thigh are joined. They are often damaged and do not heal if the time by the fire is too short. Some mothers cannot walk at all. They have to call a masseur for regular treatment." To "make the ligaments well," she tapped Duan's body all over with the second of the tapping-fruit balls and had her sit on one while bathing. She massaged the muscles, stiff from lying quietly near the fire, by pressing in the ball with her hands and even feet. Medicinal herbs were warmed and laid on Dūan's breasts so that the "useless early milk [colostrum] which would give diarrhea" could be worked out and thrown away. "The real milk is not ready for the baby until the third day," Sāi said, "but if the baby is crying much, and if there is milk some mothers start nursing on the second day."

Almost from the moment of his birth, whenever the baby

846 789 392 [753] [755]

Even after the child was out, the pile of wood was still a drying womb to be treated carefully. It was also the wood for a consecrated fire. To drop a piece of this wood carelessly both injured and desecrated. If this happened a disease of the eyes "sang," came at once for which no male medical powers had any remedy. The only cure was in women's hands, that essence of maternity, "a drop of mother's milk--any mother's." The larger implications of this linking of fire and maternity are dealt with in the next section.

The Fire of Maturity

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In the events surrounding the birth of the child, the significant step for the woman personally was the post-partum rest period by the fire (yū fai). Far more was at stake than just drying the uterus. The fire rest was one of the series of rites of the life-cycle which marked the course of an individual from birth to death. The others were the cutting of the umbilical cord, first head shaving, top-knot tonsure, ordination (for men), marriage, and cremation. Through the consecrated fire a woman formally achieved full maturity: she became suk (cooked, ripe, mature). Maturity did not come just by bearing a child. The fire brought about the transformation.[46] [885]

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How was mature womanhood viewed? What was the essential female role and office? Bang Chan saw a woman as one who "feeds and lengthens lives." As the custodian of growth she was, first, the guardian of the vital, essential khwan soul, and especially of the immature, flighty khwan of growing persons. [774]

Secondly, a woman was a donor of nourishment (liang).[47] Her primary responsibility was to nurture children and other tender beings. She nourished the fetus with her blood. After [827]

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46. "The fiery element digests what is eaten or drunk...and cooks the body and gives it its beauty of complexion. And the body thus cooked is kept free from decay" (Warren:157-158).

47. All the deities "concerned with the welfare of our bodies and our khwan" were maternal (Mae), e.g. Rice, Water, Earth, "Mother-Goddess" (Mae Sū), and several Mother-Princesses (Chao Mae). Fire, and maybe wind, were both female (mae) and male (phra) (Textor:485). To these deities, "higher" than ordinary spirits, Bang Chan "owed more." [776]

delivery, "her blood was purified to a white color to become the milk of the breast."[48] Nursing a child was the essence of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

In a wider context, not only all their household members but people anywhere were the objects of women's nurture: women were in charge of the cooking even if occasionally helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor houshold, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry any more." She construed this as proof that she had ample merit, but it also meant that she was a great donor who gave continuously and took little. Women usually offered the early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When age pushed women past their mature capacities, they returned to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

A desire to give tender care and nourishment was deemed inborn in all women. Although sex was not strongly differentiated in babyhood,[49] by age 3 a hard-to-handle skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phūm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

In addition, strengthening foods like rice and fish, the staples for stout farmers, were stressed. Fruit, "which gave no strength," and vegetables (except for the nursing curry mentioned below) were avoided.

The holy fire also transformed a woman into a better nourisher. It gave her new, lasting beneficial nursing habits. As one man explained, "the very nature of water is changed by boiling over a fire. It becomes suk (ripe)." Similarly, a woman's body, her very nature, was permanently changed to suk by the fire's heating. The fire, in fact, made suk all the food she ate beside it. Since this food was turned into milk, her breast milk became suk and so more nourishing, and did not disturb elements.[52] "Food eaten while lying by the fire, when eaten later on (during lactation) by the mother, does not cause diarrhea in the baby." Jackfruit ordinarily caused wind-trouble during lactation, but one woman ate it during the fire-rest, and at once "got used to it, so she could eat it all the time." To make themselves better nourishers, some women spoke of the desirability of "eating a bit of every kind of food." The "nursing curry" (kaeng lIang) was a mixture of vegetables.

Finally, the consecrated fire strengthened a woman's own khwan. She could better withstand convulsion if attacked by a spirit.[53] She was able thereby to handle a khwan even without the special magic that existed for it.

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52. To be nourishing even the daily rice had to be made suk by boiling (Anuman Rajadhon:77). It may be that no food was considered nourishing unless suk, either naturally (like ripe fruit) or by cooking.

53. "...when 'involuntarily' entered by ghosts...maidens in the 17-25 age bracket tend to convulse more violently than do women of more advanced years"(Textor:406). "Maidens" were presumably not married and so not suk.

Chapter VIII

CHANGES

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[162] In studying change in the customs surrounding childbirth in Bang Chan, we have D.B. Bradley's description of birth in Bankok in 1865 as a base-line on which to project our findings. Since most of the population of Bang Chan (Thai, with a few Laotians, Mon, Muslims, and Chinese) stems from Bangkok, we may reasonably assume that the parallels derive from a true historical connection. Bradley's description fitted Bang Chan as if written today:

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> "Siamese theory in regard to the part which external and internal fire plays in the functions of life and health is made to work powerfully...There is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which, if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child...[Thus a woman lies by the fire]... exposing all parts of her body, and more particularly her abdomen, to that drying process, so that the uterus shall be forced to shrink up quickly to its normal dimensions, and the sanguineous streams which had been diverted to support the child before birth, shall, by fire, be driven backward to their more usual limitations, all which is...a sine qua non to a sound constitution and good health in the future..." (Bangkok Calendar, 1865:78-84).

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757 Bradley showed that some behavior one might call "change" today was a recognized alternative in 1865. For instance, in Bang Chan a few women "are made too unhappy (klum) by the fire so cannot use it. They should take extra amounts of pickled medicine" (yā dong). Bradley wrote, "a few delicate females...who cannot endure [this] usual treatment, are compelled, against all their ...fears of the consequences, and all the importunities of their

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The effect of astral and planetary relationships at the moment of birth on one's constituent elements induced qualities of character.[12] Mind and body were a continuum. Because family members were born at different moments of time, intrafamilial temperamental differences were expected.[13] Persons made up of incompatible elements quarreled. Thus, friction might occur between parents and children. For a husband and wife, who lived in especially close proximity, the constitutional elements were of special importance. Through marital relationships their elements were in physical contact. Consequently, in the old days, a couple comtemplating marriage ascertained through their horoscopes the compatibility of their natal elements to determine whether they could live together without destroying each other. For instance, a girl with much fire in her make-up was easily angered and prone to fevers. She could not make a successful marriage with a boy with much wood.

Physiology

A single physiological process controlled the functioning of the body and the mind; i.e., the equilibrium of its elements. If the elements were in proper balance, proportion or harmony, a person was healthy; if an element were excessive or deficient,

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12. Merit, the other determinant of character, is discussed in "Influences on Health" below.

13. Cf. the proverb "The joints (knots) on the same stem are nevertheless unequally spaced, so even brothers are of different minds," (Gerini 1904:14).

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a condition which also affected the functioning of the others, he was ill or emotionally disturbed.[14] For example, dropsy, swelling, and yellow eyes came from excess water; cholera and constipation from earth mists. Wind and fire were the great trouble-makers.

Wind "was stronger than the other three elements." Either blowing wind or still air easily penetrated the skin and caused difficulties all the way from flatulence, stomach-ache and diarrhea to a minor head-ache and dizziness ("if wind whirls inside the body, the house swims around"); from incessant crying to serious interference with breathing, hence fainting and death. An accident, such as a cut or broken bone, disturbed, and might "let out," the air. Acute pain ensued if "rigidity" of earth, fire, or water interfered with the proper movements of the internal winds.

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Anger and fever were both in the category of excess fire. Since fire was particularly implicated in disturbed social relations, coolness was emphasized as the desirable state of body and mind. The blessings for both sexes at birth and at the marriage ceremonies enjoined the individual to be "cool and happy." There was some evidence that cool natures were tender (on) natures. Since women by nature were assumed to be "tender," and men not, a difference in element constitution may have been sex-linked. However, everyone knew of women who were not tender. For persons abundantly endowed with fire, temper control through temperature control was a constant preoccupation, for the allowable margin of fluctuation was especially narrow.

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Food occupied an especially important place in a person's welfare because food controlled the fire element.[15] The following material on diet is the background for some of the dietary injunctions during pregnancy and lactation.

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14. In view of Thailand's ancient Indian contacts, the parallels (and differences) between Bang Chan, and Hindu Ayurvada as described by Opler (1963:32-35), are noteworthy.

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15. "What was drunk or eaten by its decaying created the fire element in the body" (Suriyabongse 1954:12).

People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauck, et al: 42-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny kluai nam, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" kluai nam wā. Here orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plus--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (wiset:powerful) or natural (tām thammachāt) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "khun"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paroxysm, flatulence, convulsion,

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16. Phillips (p. 65) reported that parents did not give their child a disliked medicine because "it offends him.... It is better not to give it to him than hurt his feelings."

17. This small skin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely pained (cf. Textor:116-127). Suspected khun was one of the few reasons why a family would authorize so grave a violation of the body of a deceased member as an autopsy.

828 753 or fainting, and also such localized trauma as abcesses. Similar behavior followed the influence of malevolent magical amulets, incantations, and love magic. Natural intrusions may be exemplified by the seasonal influences of rain, which brought on too much water element; of heat, which increased fire; and of wind, which cooled too much or brought in certain fevers, e.g. north fever (khai nŭa). An accident was a natural cause of disequilibrium. A cut might let out the air or a soul.

774 [761] [953] Any lost soul, if not restored, meant death. Souls were lost from falls or frights or from spirit attack, a condition recognized by persistent crying, hysteria, and unconsciousness. The exits were at the top of the head, the palms of the hands, and the soles of the feet; the latter 2 sometimes localized at the 2 thumbs and the 2 great toes. One of the old beliefs associated an element with one of the four ṭhāttaphŭt souls (Textor:130). When one of these souls was lost one whole element was gone. Loss of the khwan soul was more frequent than any other, especially during childhood. Its care throughout life was very much in mind. The khwan[18] played an [844] especially prominent part during childbirth.

755 [262] [757] If a person were only slightly sick, he might first try to overcome his physical complaint by attention to diet. Very rarely did he by himself buy some medicine at a drug store. If it were a case of a child's lost khwan, women performed the rite for its recovery. When the khwan of an adult was affected, men performed a strengthening rite (thaa khwan), or a priest gave a holy water bath. If the person were very ill, holy cotton thread (sāi sin) was tied at wrist, ankle, and neck so as to shut off the soul exits. An elder relative or spouse might also "hon," i.e. vow food or liquor in return for the help of supernatural beings; or, with Buddhist "sacred things" in mind, promise the ordination of the afflicted person, or oneself, or some interested relative. In this case, the relatives had long since turned for help from the arts of medicine.

278 755 The Arts of Medicine

Medical knowledge comprised on the one hand a pharmacology of materia medica, and on the other, the far more important

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18. The conceptualization of this soul was Brahmanic in source, rather than Buddhist (cf. Martinie, 1952:370).

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775 Man was higher on the scale than woman.[20] Progress toward
[562] Nipphan was not assured but had to be earned. With sinful behavior a person might be catapulted back to being a beast. He who stole would "be born and die 500 times before he could even grow up." Almost everyone had to be sent to purgatory
[776] where demons carried on tortures until he had suffered enough to be released for rebirth. The evil spirits (phī) that wandered frighteningly in Bang Chan were part of the legions whose job was to increase deserved suffering on this earth.

771 The people of Bang Chan felt they could discern even
782 of themselves who was meritful and who was not according to
• 828 human circumstances, constitution, and behavior. A meritorious person was healthy, happy, and successful in all undertakings. He enjoyed good health and long life, a kindly personality, many fine children, wealth, high status, intelligence, and luck. Astrologically, he was born on a day
[775] of good confluences, of gold and auspicious signs. He who lacked merit, because of sins committed perhaps many ages ago, was born on an unfortunate day. He suffered early death, deformities, unhappiness, poverty, and had a cruel nature.
[753] Illness, whether supernatural or natural, whether induced by wind or sorcery or what, struck as part of the suffering brought on by former sin. It was accepted in the conviction that whoever suffered had brought it on himself. When merit ran out, or when sin cancelled out and then exceeded one's merit, suffering and premature death occurred, despite all human efforts. Because of the prevalence of illness and of life's difficulties, major and minor, no one, no matter how outwardly fortunate and so evidently meritorious, had at this earthly level of existence enough merit to escape some suffering and frustration. By the same token, though, no person was without hope. By making merit or by suffering in this life, existence would be happier in the next. The making of merit was in the forefront of daily conscious effort and even conversations of the people of Bang Chan.

751
789 The long-range protection against all illness was to live virtuously and make merit. However, to guard against temporary supernatural intrusions, everyone possessed and
[577] usually wore Buddha lockets and other amulets. Some
[782] underwent tatooing, men having Cambodian or other figures,
[304] women, 2 small dots tatooed on the torso under the arm.

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20. Men had achieved greater "other-worldliness" while women were more bound by the phenomena of the flesh (cf. Kirsch, 1961).

Chapter III

PREGNANCY AND PARTURITION

842 **Conception**

Conception occurred when a khwan-soul flew into the womb of a woman during sexual intercourse. "A father and a mother are equally important because there is no birth in the world without both. An infant is the product of both sexes," said a priest in a Bang Chan sermon.[21]

842 775 [782] [828] The little being in the womb from the moment of conception was a specific individual who had lived many times before, meritful or sinful according to its previous actions. Desire for rebirth was in itself evidence of inadequate merit to effect release from incarnation. Though this life was to some extent a fresh start, his character (nisai) and heart (jhai) were already largely formed through his store of merit and ingrained habit from former existences.[22]

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[779] 21. The teachings of the Buddha state: "Rebirth takes place when a father and a mother come together, and it is the mother's period, and the one to be born is present" (Suriyabongse:20).

22. He bore with him the last ideas spoken to him at his most recent death. The Visuddhi-Magga tells how this carry-over occurs. One of the categories of karma, was the "close at hand, karma remembered at the point of death [which] springs up with [a person] in rebirth" (Warren:246). As King Mongkut lay dying, everyone in the room called out "arahat!" in his ear incessantly so that by "remembering it at the point of death" he might be reborn an Arahat (E.R.E. "Siam": 487). Another pertinent category of karma was the "habitual": "karma that has become habitual through frequent repetition. This brings on rebirth when [other] forms are absent" (Warren:246). Here is the basis for the inborn character, heart and ingrained habit (cf. J.R. Hanks, 1959, and the section below on "Habit" (khoei).

844 In view of the stake of a child in the successful outcome of his own birth,[39] under what circumstances might a child not be helpful? This was explained by merit (bun) and habit (khoei).

Merit

782 828 761 844 Since merit, gained through virtuous behavior, determined a person's character, circumstances, health, and longevity, the merit of mother and child set the course of childbirth. It will be recalled that persons who lacked merit because of previous sins were cruel, lived short lives, and had to endure suffering, while meritorious persons enjoyed success, kindly natures, and long life. Yet an outwardly fortunate person might be at the point of merit-exhaustion, when suffering commenced. Any mother who suffered greatly lacked merit. In one case, "7 babies of a woman died young while the eighth and subsequent ones lived, proving she had to suffer greatly to work off some misdeed in former existences. She was given the trouble of bearing and feeding the child, and the child did not have enough merit to grow up, and so to feed her in return." Her punishment was to bear non-meritorious children who could not live. A woman's premature[40] death in childbirth was caused only by her own lack of merit.

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[171] 39. By way of contrast, consider how parturition is pictured in the United States. The active role is played by the midwife or doctor, or some other outsider, who "delivers," i.e. "liberates," the child from the womb, or frees the mother and baby from one another. "A child is born" presents the child as completely passive; in "to have a baby" the mother is relatively so. The most active English renderings are "to bear a child" and "to give birth to a child." It is noteworthy that modern anaesthetics have tended to increase the passivity of the mother.

40. The idea of a natural term of life was described in the Visuddhi-Magga: "The Karma that caused conception has ripened to a termination, although the dependence for continuing the series constituting the term of life be not exhausted. Death by the exhaustion of the natural term of life occurs when the span of life, the nutritive powers... proper to any given grade of existence come to an end..." (Warren:252).

Only when the youngster was satiated did she gobble the remainder.[50] Parents often commented that girls in general were obedient and good, but boys were not. Everyone spoke, however, of exceptions. The capacity to play the female role grew with the child. It was not completed with the physiological maturity of first menstruation but only with ritual maturity.

The rituals to fit a woman for her office, described as "directly related to the welfare of the child," had 4 specific purposes. They perfected her as a compassionate being; restored and strengthened her body; improved her capacities as a nourisher; and strengthened her own khwan. The key to each of these aims was the holy fire.[51] Because actions taken by the fire were immediately and permanently effective, every effort was made to induce auspicious happenings. Words spoken by the fire had compelling effect so even ordinary speech became magical. Speaking of the fire's hotness so raised its heat that a mother was burned. For this reason, uninformed or careless visitors like children or foreigners were a danger.

According to Buddhist thinking, suffering developed compassion. Through the discomfort of pregnancy, followed by the anguish of childbirth and the heat of the fire, a woman became compassionate and so achieved the guide-line for moral behavior. Then a woman was sure to be touched with pity for the younger or less fortunate. One teacher despite the inconvenience went home twice a day from school to nurse her new baby because she "pitied" him too much to hire a wet-nurse. It was "pitiful" to see a child at another woman's breast for it implied that its mother was either unwilling or unable to nurse it. Thus, babies were rarely nursed by others than their own mothers.

The fire also strengthened a woman by ridding her of bad blood and foul fluids. Wind and Fire, the 2 spirit guardians of the elements necessary to the occasion, were invoked to assist in the drying of the uterus. In addition, strengthening

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50. Boys too fed their younger siblings but their purpose was a power-play: "to assure obedience in the future" (cf. Hanks and Phillips:648).

51. This fire was kept entirely separate from the one for cooking and boiling of water. It was ritually lit and ritually extinguished at the end of the fire-rest.

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to choose, even if in this case it was seemingly to his own detriment—he knows what is best for himself. Even the incompetent, helpless infant is an independent soul with his own will and right of determination, and his dignity must be respected.

It must be recognized of course that in the cosmology of Bang Chan the infant is anything but a conative *tabula rasa*. When he enters the world of human beings he brings with him not only a stock of individually accumulated merit (*bun*) and demerit (*baap*) from countless previous lives which will affect his being in this one, but also a host of other forces which predetermine his character: his *khwaan* (soul-stuff), *winjaan* (psycho-biological motive power), *caj* (heart), and *nidsaj* or *ʔupanidsaj* (ingrained character), among others. (J. R. Hanks 1959 has a brilliant exposition of the role of these elements.) In a very real sense the infant enters the world of humans as a developed, or partially developed, psychological being. Human influences, particularly virtue and "good habits," can be inculcated into him, but they are ultimately limited by these pre-natally determined characteristics. Much of Bang Chan child rearing is actually a series of perpetual compromises between (a) parents surrendering to what they think are the child's predetermined traits (and while this represents an extraordinary respect for his infantile individuality, it also leads in a developmental sense to much of the solipsism to which we have been referring throughout); (b) parents trying to come to terms with, or overcome, his preordained characteristics by inculcating good habits through example, coaxing, and whipping (the three modes of socialization, in order of priority, although villagers are more prone to talk about whippings than actually give them; most are too tenderhearted, and the rare whipping is almost always the result of sudden rage); and (c) leaving the child to his own devices. The third differs from the first in that it focuses on the parent's concerns rather than the child's and indicates indifference rather than respect. Thus, in contrast to the illustration above, one constantly sees children, generally under eight years of age, "annoying" conversing adults (primarily by making noises, although not necessarily to get the latter's attention) to which the parent responds with continuous but intermittent "tsk, tsks." The adult never raises the volume of his admonition, never gets increasingly disturbed, and eventually gives up while the children continue on their merry, noise-making way. The parent's lack of genuine concern and compulsion is not lost upon the child. Although events of this type are not overly noticeable in Bang Chan—precisely because they occur in such an easygoing and unremarkable way—they do take place repeatedly, and represent one of the principal interactional themes of the parent-child relationship. Children learn quickly that although parents will go through little ritualistic forms of controlling them,

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57 must be extremely careful not to phrase it as a direct refutation of the speaker. Again, there is present in this approach the Thai assumption that the most important aspect of a social relationship is the psychic comfort and welfare of the persons involved, not the truth or validity of the matter under discussion. The overriding ethic is that each person not only has a right to be heard, but should be made to feel comfortable as well.

57 152 *156 Related to the above, but distinctive enough to require a category of its own, is the form of politeness expressed in the villagers' nervous laughter and in their preoccupation with inconsequential topics of conversation. Laughter and smiling is such a universal attribute of Thai demeanor (an early volume on Siam by W. A. R. Wood was in fact entitled *Land of Smiles*) that it is not always easy to distinguish precisely between this particular form and other more relaxed expressions of lightheartedness. From the point of view of social intention—to be appealing and inoffensive to others—they are probably not distinguishable. What sets this form apart is mainly the situation in which it is found: a villager is apt to laugh nervously when talking about unhappy or unfortunate experiences. Likewise he will laugh or resort to inconsequential topics when trying to get something from another person or knowing that someone is trying to get something from him, in either case being unsure of how the other person will react; when meeting a person, often of higher status, for the first time and feeling compelled to relate to him, but not knowing quite how. Again, this mode of interaction is clearly not unique to Bang Chan. However, villagers resort to it so frequently, or define so many situations as the kind necessitating its use, that it emerges as one of the most salient modalities of Thai interaction. In a sense, the nervousness that is betrayed indicates some of the internal strain that villagers undergo in maintaining a constant front of politeness.

152 *156 • 828 It should be noted, however, that they are well aware of their uneasiness: they will often admit it to you in more relaxed moments. Also, other villagers in attendance can immediately spot it, and will tell you that the person was nervous. What is so characteristically nice about the villagers, however, is that they will almost never take advantage of a person's nervousness to score a point for themselves. Uneasiness is defined simply as a neutral personality trait, part of the way in which an individual presents himself and not a symptom of psychic weakness. In fact, from the point of view of influencing the purpose or direction of an interaction, it is usually ignored. What is *socially* important is that a person act nicely, not how he feels about the way he acts; the latter is his own business. It might further be noted that the recognition of one's own uneasiness, without at the same time feeling threatened by its exposure, is symptomatic of the villager's relatively strong ego structure. A Bang Chaner can maintain a certain

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front, know that it actually elicits and betrays his anxiety, but have such implicit trust in his own resources that he feels no need to alter his behavior. Simply stated: uneasiness when it occurs is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality.

The actual expressions of nervousness and inconsequential conversation vary considerably. Perhaps their most obvious (and justifiable) expression is when a villager, who wants to get something from another person, for example, a job, a loan, higher rent on land, is uncertain about the other's reaction and approaches him by hedging around the issue with giggles and light, irrelevant comments. This mode of behavior typically occurs when there is no history of reciprocal benefits between the parties or when a middleman cannot be used.[17] Although villagers themselves do not consider such comments "irrelevant" (probably because from a ritualistic point of view they are not), it is hard to define a detailed discussion of a person's buttons or belt buckle as anything but a kind of phatic communion. Sometimes conversations of this type will go on for twenty and thirty minutes, often branching off to include more topical interests such as the size of eggs or the calls of birds, before reaching the point. Frequently they never reach the point, since somewhere along the line the individual recognizes from the tone of the conversation that the other person is not in the proper mood to entertain his request; in this case, the individual will explain that he came simply "to chat." Sometimes the friend will begin to giggle uneasily (particularly if the protagonist's references to him contain an excess of flattery) as he becomes aware of the purpose of the conversation and wishes to evade facing the ultimate issue. Very often, even when the final request comes out, he can avoid it simply by giggling. Under such circumstances a giggle is crucially communicative: it is the person's polite substitute for "No," or "Let us bring this particular topic of conversation to an end." Giggling is a wonderfully effective way of carrying on a "conversation" (for those who can read its "vocabulary") because one can so readily convey his refusal, wariness, and even hostility while at all times maintaining the illusion of friendliness. It is precisely because the villagers' giggling frequently rests on such devious attitudes that it appears

[17] The *quid pro quo* basis of the former would permit a considerably more direct approach. It is not difficult to be frank with a person when both you and he realize that you are asking for an earlier obligation to be repaid or that you are creating a new one which may be called upon later when needed. Villagers are highly responsive to such obligations, often going to considerable effort and personal discomfort to meet them. A middleman, on the other hand, is used precisely to avoid the kind of delicate encounter described here. As a disinterested third party, he can be completely candid in his requests. However, for reasons of secrecy (usually when the request involves some potential competition or envy of other villagers, or perhaps some sharp-dealing) the use of a middleman may be inappropriate.

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A Bang Chan employee who walks out on his superior because he does not like the food he is served or a villager who agrees to lend a person money and then is not at home when the person calls for the loan can easily account for his actions by saying that circumstances had changed.

It must be noted, and this is crucial, that there is generally no animosity felt toward the employer with the unpalatable food, toward the fleeing[21] employee, or toward the unreliable creditor. Villagers are thoroughly conditioned to the possibility of such events and accept them simply as part of the inauspicious nature of life. That they are in fact considered inauspicious rather than results of the willful or malevolent intentions of others is not accidental. Bang Chaners faced with a breakdown in the fulfillment of commitments can of course point to the individual who directly caused it. But there is no satisfaction to be gained from this. The person who broke his obligation must have had his own good reason, and beyond this, there were probably other factors, unknown to both parties, that caused the breakdown. For most Bang Chaners, all human intentions are forever set within a framework of cosmic, and particularly moral, unpredictabilities.[22] If things do not work out the way one expects, it is most likely due to the inauspiciousness of the time, place, and persons involved. The proper time is particularly important. It is precisely for these reasons that the more important events in a person's life—marriage, trying to win a lottery or a maiden's heart, taking an important trip—are so often preceded by ceremonial attempts to decide the cosmologically auspicious conditions for effecting the event. These involve consultations with monks, shamans, and other religious practitioners, and highly ritualized forms are followed to select the appropriate conditions. (See Textor 1960 and 1962 for systematic discussions of the various kinds of problems and practices associated with this complex.) The kind of occurrences discussed above are not of this order of significance, but they do partake of the same cognitive assumptions that lead to such highly institutionalized practices. Thus, whereas most Occidentals would point exclusively to the actions of the other person as being both the necessary and sufficient cause of the interactional breakdown, Bang Chaners, who have considerably less confidence in human capacities, would really not be sure. To them, human volition represents only one of several indeterminate and uncontrollable factors giving rise to events. Who knows what accident, change of heart, sudden windfall—particularly one occasioned by something done by one of the parties several lives earlier—might intervene to alter what had originally been planned and agreed upon?

[21] This is just the term that villagers, with their wonderful sense of hyperbole, apply to such cases. The original Thai word is *sii*.

[22] I am indebted to L. M. Hanks, Jr., for suggesting this line of thought.

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These assumptions about the indeterminate nature of the universe and human actions are so integral to the villagers' cognitive orientations that Bang Chaners often hesitate to make even the most elementary kinds of prediction. Thus, in asking a village lad how he felt about his older brother's forthcoming ordination, I was told, "I don't know." The tone of his reply indicated that he was not evading the question, so I pursued the matter further: "Well, do you feel happy about it? Do you wish you were being ordained together with him?" He answered: "The ordination is not for another three days. I do not know how I will feel at that time. But when that time comes I will know." In another case, I was going up the canal with a villager to attend a "Kathin" being held at the monastery. (A "Kathin" is a fiesta-like merit making ceremony sponsored by a person or group of persons from outside the village at which new robes are presented to the monastery monks. It involves the sponsors, their local hosts, and all villagers who wish to attend.) Although not necessarily an annual event, "Kathins" are held often enough at Monastery Bang Chan so that this villager, who was also a member of the monastery lay committee, was thoroughly familiar with every aspect of them. Simply to make conversation, I asked him: "What is the 'Kathin' going to be like today?" to which he replied, "I do not know. I have not been to the monastery yet today." Assuming that his past experience with "Kathins" provided him with some knowledge of the goings-on, I went on: "Well, do you think there will be many people?" His answer: "I do not know. You never know what a situation is like until you meet it. I have not met this one yet today."

The point of these various illustrations is that they represent a psychological universe of uncertainty and unpredictability. And in this kind of universe—where one hesitates to build up sharply defined expectations and where one is forever aware of the mutability and frailty of the environment—it is not unusual that there should also be a high tolerance for interpersonal nonconformity. What the actual limits are, theoretical or empirical, to this tendency to nonconformity are uncertain. Much of the nonconformity is undoubtedly made possible, in the first instance, by the sociologically simple and relatively undifferentiated nature of Bang Chan society; that is, the actual number of functionally specific tasks and roles—those that require special competencies—are few, and any number of different individuals can perform them. Thus, when a Bang Chan employee walks out on his boss or when a wife walks out on her husband, their actions do not from a functional point of view disable the system. Since the requirements of the role of house servant or farmhand are characteristically simple and understood by all, the departing employee can usually be replaced by another individual. Similarly, since any adult—aunt, grandparents, older sibling—can and often does rear another's children, and

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lying configuration.) However, from the point of view of their etiology in the individual, it is clear that the villagers' tendencies toward loose relationships are related to early childhood experiences. A second source is their philosophical notions concerning the nature of the individual. These notions are largely cultural derivatives of Buddhist doctrine, although at the behavioral level they function simply as unstated premises which guide and tacitly define behavior.[25]

Reference was made earlier to the basic assumptions governing the socialization of the Bang Chan child. When the child enters the world of human beings, he is already a partially formed and psychologically independent individual, with his own *ʔupanidsaj* (ingrained character) and *khwaan* (soul-stuff), not to mention his stock of accumulated merit and demerit from countless previous lives which predetermines his character. The effect of these definitions is not only to award to the child a sense of psychic individuality that is partially[26] independent of any social environment to which he is exposed, but to assign to him a fundamental sense of psychological equality. We are not speaking here of *social* equality. The

[25] From a strict analytic point of view, it would probably be best to consider Buddhist doctrine as an abstract, codified representation of these premises rather than consider the premises as explicit, logically coherent deductions from Buddhist doctrine. To be sure, many Bang Chaners often explain and justify their actions by pointing directly to Buddhist doctrine, sometimes applying its tenets correctly, and sometimes not. But for most, Buddhism is a diffuse, ubiquitous *Weltanschauung*, the precise effects and applications of which the villagers are typically unconscious. It would probably not be incorrect to think of most religious "traditions," particularly the "Great" codified ones, as functioning in this way.

[26] The term "partially" is inserted here to indicate that despite these ontological notions, few villagers, as J. R. Hanks (1959) points out, ever consider "any human child so marvelously endowed . . . from previous existences that training is unnecessary." The child's *ʔupanidsaj*, *khwaan*, merit and demerit, as well as his *winjaan* (psychological motive power), *caj* (heart), and *phroomlikhid* ("the lines of his destiny as established by Brahma") are all crucial predeterminants of his character. But few Bang Chaners ever think of a person's character as due solely to the uncontrolled emergence of these pre-natal forces. Rather, they represent the basic psychological raw material with which parents and other socializing agents must work, and set the limits of these agents' enculturating efforts. What is important is that the limits—the "degrees of freedom" permitted the parents—tend to be narrowly defined. Intensive probing of informants indicates that there is no general agreement on whether these cosmological forces are more or less influential than parental training in shaping a child, although they tend to be invoked more frequently as explanations of negative characteristics and of unusual happenings, positive as well as negative, in the lives of individuals. Also, villagers are inclined to think of them as the reasons behind *particular* characteristics and events, assigning to parental training a more diffuse influence in the development of the child. Thus, when asked why a particular individual grew up to be a *nagkleeng* (an aggressive, daring, sometimes bullying type of person) and how one of their fellow Bang Chaners had grown up to become an admiral in the Thai Navy, informants attributed the character and success of these individuals respectively to their *ʔupanidsaj* and *kam*. (*Kam*, the Thai derivative of *karma*, is the proportion of merit to demerit that a person may have at any particular moment in

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858 828 child is clearly a social inferior, and is due all the prerogatives of his position: he is to be dealt with gently, kindly, and benevolently, with sympathetic regard for his incompetence; correlatively, he must be taught to express deference and obedience to superiors. Rather, the equality awarded the child results from the recognition that in the workings of the cosmic scale it is impossible to ascertain what the child could once have been or eventually will become, and he, like any soul, is always *potentially* of the same value as any other person. It is precisely for this reason that most Bang Chaners, if they mention it at all, are only mildly pleased rather than particularly proud that one of their own grew up to become an admiral in the Thai Navy. It comes as no great surprise that such a thing can happen. To them, it is no more unusual than that the prime minister himself should be a person who was born and reared in a village. (By the same token, the peasant background of these two individuals creates no special sense of personal identification with them on the part of the villagers. They are perceived simply as two unique *individuals*, their peasant roots being viewed as only one of the literally countless factors that made them what they are today.) [27] To a large extent, the equality of the child derives from the premise that he is not so much a child as he is a human being who happens to be at a particular stage in his ontological

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time). When probed further and asked if their parents' training may have had any influence on these individuals, they replied "yes" and "maybe" in the case of the admiral, but disavowed all parental influence in the case of the *nagkleeng*. A few said that the *nagkleeng* became that way because of bad friends.

One villager, phrasing his comment as a personal conjecture, volunteered that [115] the notion of parents being the major influence on a child's character is a "modern" idea. Another informant, the wife of a school teacher and well versed in her husband's teaching training manual (prepared in Bangkok by Western-trained educators) argued that a person's character is dependent "mostly on the influence of the home and school." However, since on other occasions she complained to me that one of her sons "does not have an *ʔupanidsaj* for studying, and there is nothing a parent can do but let the child have his own way," it would suggest that her commitment to the pronouncements of her husband's mentors was not too well internalized.

To avoid confusion, it might be added that from a historical point of view only one of the above cosmological forces (*kam*) is strictly Buddhistic in origin. The others are either Brahmanic (*khwaan* and *phroomlʔkhid*) or traditionally Thai (*ʔupanidsaj*, *winjaan*, and *caj*). Of all the terms, *kam* and *ʔupanidsaj* are the ones most frequently referred to when discussing an individual's character.

[27] It is precisely for this reason, as I indicated in an earlier writing on Thai social [565] structure (see Sharp *et al.* 1956: 163) that Thai society "cannot be said to have a [571] class system in the classical European sense of the term." People identify with others as individuals, not as representatives of social classes. [554]

The very fact that individual peasant boys can climb the social ladder to attain some of the highest social positions of the land, without it even being considered particularly noteworthy, attests to the fundamental equalitarian nature of the ideas underlying the Thai social system despite the obvious emphasis given to status and hierarchy in individual face-to-face relationships.

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career. From an epistemological point of view, there is of course nothing strange about such an approach. What is perhaps somewhat unique, however, is that the villagers actually use it as the point of departure in their treatment of the child.

The practical consequences of these equalitarian notions are manifold. For one thing, with the child defined as a separate and equal soul, the relationship between parent and child takes on a highly instrumental flavor; that is, rather than expressing love toward the child as an end in itself or otherwise treating him in ways that require no further justification (it is assumed that love is characteristically an absolute sentiment, not a means to any other satisfaction) villagers explicitly see the relationship between parent and child in contractual terms. Thus villagers say that they "are going to the trouble" of bringing up their children and "doing good things for them" (just as their own parents "went to the trouble" of bringing them up and "doing good things" for them) so that they will have someone to care for them in their old age and make merit for them when they die. Similarly, they say they love their parents because they are indebted to them for bringing them into the world. The language of the "contract" is poignantly explicit: "When I think of my mother, I think of the debt I owe her for bringing me into the world and feeding me so I would survive"; "Parents who do not teach their children how to *waj* [exhibit respect to the parents] get nothing from them. I did many *bunkhuns* [good things requiring reciprocation] for my daughter, so now she gives me everything"; "When I was three my father gave me to my uncle who fed me and trained me, so I loved my uncle more" (cf. pp. 64–66, L. M. Hanks 1959c, and Phillips 1959 for further documentation of this point).

In and of themselves there is nothing strange about these "contractual" criteria. However, they do reflect a fundamental recognition of the independence of parent and child and of the fact that parent and child have the *option* of fulfilling each other's needs. More specifically, they are expressions of the assumption that there is nothing intrinsic to the parent-child relationship that requires the two persons to be linked together. The relationship clearly is not fortuitous, but neither is it absolute. It functions primarily for the instrumental and symbiotic satisfactions that its participants can gain from it.[28] Lacking the absolute elements of an ultimate

[28] In his paper on "Changes in Family Life" in Bang Chan (1959c) L. M. Hanks notes: "At birth a parent ceremonially formally accepts obligations to an unknown infant soul lightly bound to its body; to this point the new-born one without relation to its parent has been under the protection of a spirit mother. This phrasing contrasts sharply with the Occidental concept of 'flesh and blood.'" In another place in the manuscript, Hanks also comments: ". . . but every case [every kinship tie] is reducible, if one presses the question, to benefits of an older or richer or stronger for the

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1950; and Wheelis 1958.) At best, it would suggest that the Thai informant was faced with a difficult problem external to himself—perhaps finding a job or a spouse, or thinking of his future—and was appraising his ability to deal with that problem. Also, such an appraisal would have a strong constraining element: the necessity to control one's hopes and desires (perhaps for the hypothetical job or spouse) in order to avoid potential pain or disappointment; in essence, "beware of your limitations; do not forget your station." This is in turn supported by certain Buddhist concepts, such as *ʔubeegkhaa*, or stoical indifference to the vicissitudes of life, among others.

Whether there is *any* way to express handily in Thai the Western notion of "the need for self-acceptance" is doubtful. Most villagers are too thoroughly narcissistic to require such a concept in their cognitive maps. Alternatively, there are other more direct ways of saying what "knowing myself" might mean in Thai, for example, "controlling my desires," "knowing whether I have the ability to do the job," or by referring directly to Buddhist doctrine. As such, these statements would be an expression of piety or the bolstering of one's self-confidence (or steeling oneself against failure) rather than psychic introspection.

A similar interpretive problem exists with the completion "his family." Because Thai kinship relations are so strongly influenced by concepts of benevolent superiority and dependent inferiority, most expressions of the need for affiliation with the family immediately imply the related need of succorance: security, support, protection, and sympathy, either as source or beneficiary.

The point of these comments is that the responses must always be first interpreted in the villagers' terms, not ours. Once made, precisely by explanatory notes such as these, these interpretations become part of the "data" and serve as a basis for our analysis. It should be recognized, however, that anthropological mythology (and these particular examples) to the contrary, not *all* the responses are interpretively dissimilar. When a villager says, *"When he hit me, I . . .* must hit him back," he means precisely the same thing we do. The point, therefore, is to be extremely sensitive to the possibility of differential meanings, underscore and explain it when it occurs, and use the native interpretation as a prerequisite and corrective to our own. For a brief but brilliant theoretical discussion of this problem see Bohannan 1959.

The Psychological Meaning of the Responses

The fourth premise concerns the psychological "meaning" of the responses. There are several aspects of this problem which require specification.

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TABLE 19

He was most afraid of . . . *The thing raw is most afraid of is (namely) . . .*		
THREATS TO PHYSICAL WELL-BEING:	61%	poverty. If he had enough, he would not be afraid.
		having nothing to eat. I mean when there is a flood, and all the paddy is lost, and we will starve because there is no rice to eat.
		not having enough to eat.
		having fever; getting sick and having no money.
		fire, because when a house catches fire it is a great loss.
		death.
		snakes. He is not afraid of ghosts. He can walk in the dark. But snakes are dangerous. He does not like to go anywhere after dark.
ACTIONS OF OTHERS:	20%	people. When she had money, she was afraid she would be robbed. When she did not have any, she was in difficulty.
		her father beating her.
MALEVOLENT SPIRITS:	10%	ghosts; but if there were no choice (no place to go, no way to get out of the situation), then she could manage.
		death; of ghosts haunting him. If the ghosts don't haunt him, he is not afraid.

125* 128* 152 156*

topics) it was noted that, "uneasiness, when it occurs, is accepted as a social psychological fact of life; it is not felt as a threat to the integrity of the personality." The data here would tend to reinforce that conclusion. At the same time, however, it must be remembered that 20 percent of the informants do give what is at least symbolic expression to their fear of others, and it would, therefore, be most inappropriate to go to the other extreme and assert that villagers have no anxiety about interpersonal relationships. I also noted in the earlier discussion that "the nervousness that is betrayed indicates some of the internal strain that villagers undergo in having to maintain a constant front of politeness." This appears to be a case of their simply accepting—without worry, shame, or any other secondary anxiety—their own shortcomings. The anxiety that is experienced is just not *felt* as a psychological burden.

One of the responses above, although idiosyncratic, merits attention. This is the response of the villager, age 52, who says that she is frightened by her *karma*: "it depends on *raw*'s mind [or heart]. Some people are afraid of ghosts. They see things and they believe that they see ghosts. That is not right. They see falling leaves and they think that is a ghost. There is nothing when they approach. The most frightening thing is bad *karma*. It

125* 128* 152 828* [822] [775]

4:Phillips E-4,5 (1956-1957) 1966
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follows you. If you kill a living thing in this life, a living thing will kill you in the next life." What is surprising is that there are not more responses of this type, especially from older villagers. The psychological significance of this kind of response is of course most difficult to assess. Although on the surface it is an expression of personal inadequacy—an expression that the informant has not done as well for herself as she could have—its essentially timeless and unpredictable quality (one never knows when the product of bad *kam* will issue) almost takes it out of the sphere of direct emotional import. It is in fact an inordinately intellectualized response, probably just as expressive of the informant's sense of psychological security as it is expressive of her anxiety. Although bad *kam* is an omnipresent and unavoidable anxiety, the fact that one can make merit to reduce such *kam* and the possibility that one might in fact have less bad *kam* than one's anxiety would lead one to believe (one never knows) is a source of considerable psychological comfort.

The next item, *"His greatest problem was . . ."* is somewhat more cerebral and reflective than the preceding one. Villagers are asked to indicate not what frightens them, but what worries and generally concerns them. Thus, although their responses are in many ways similar to those given on the previous item, they are also considerably less extreme. All reference to malevolent spirits, for example, is missing here. Again, the majority of villagers (57 percent) describe as their greatest problem their well-being and survival. Their responses, however, lack the sense of trepidation that colored their earlier replies. Here, twelve villagers phrase their replies in terms of worrying about obtaining money, being rich, having money to spend, and the like, rather than in the more plaintive terms of being anxious about poverty, a response given by only one villager. Thirteen informants also say that they are worried about "making a living" or their "work," responses that are more ambiguous than the above in that it is difficult to determine whether villagers are worried about having sufficient income from the work or are disturbed by difficulties involved in the work itself (how their rice crop is coming along). Nine informants say that they are worried about starving, not having enough to eat; one is worried about illness; one about floods; and none about death or poisonous snakes. The reappearance of the food response should not of course be overlooked.

The second major category, encompassing the responses of 24 percent of the sample, relates to worrying about other people. However, almost half these responses (11 percent of the total) are protective and succoring responses, where ego is concerned with preventing harm to his family. The other 13 percent describe ego's concern about getting along with other people. Two of these responses refer explicitly to the informant's worry over the words he chooses in relating to others or that he speak sensibly.

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774 is recognized to be capricious; and (4) his departure from the body is both cause and effect of the loss of one's wits, steadiness, and equilibrium. If the *khwaan* stays away too long, the individual may become deranged and may die.

*125 *128 152 181 828 In these terms, the seven individuals who say that when they are frightened they would call back their "soul-stuff" seem to be expressing two related needs: a recognition of their ultimate dependence on supernatural forces and, very much like the majority group of informants, a preoccupation with psychological stability. There is in fact implicit to these responses almost an assumption that one of the marks of an adult, civilized "human being" (in its basic ontological sense) is the achievement of stability, orderliness, and stoicism in a universe—both inner and outer—that at any time may regress to a more primitive, chaotic state. The great attention that villagers give to being *riab-rɔɔj* (neat, clean, well-organized in appearance, demeanor, and speech); the fact that they often distinguish between adults and children in terms of the disorganization and randomness of the latter's behavior; the very fact that an individual's *khwaan* is most wayward during childhood; the high value that is placed upon being *chɔɔj* and the negative value that is placed on having a "hot heart" (*caj rɔɔn*) are all expressive of this assumption.

*125 *128 152 There are a few other categories of response to the above item that should be mentioned, although none is held by more than 8 percent of the sample. Four villagers say that the best thing to do when frightened is to run away; three villagers assert that they are never frightened; three do say that they would investigate the cause of the fright, indicating that this response is not completely lacking in Bang Chan; two say that they would comfort themselves; two are simply afraid; and two more have no idea of what to do under the circumstances.

To the item, *"When something worried him, he usually . . ."* 45 percent of the sample responds by saying that they would feel anxious, uneasy, uncomfortable, or unhappy. In essence, they seek no solution to their hypothetical problem, but simply accept the state of anxiety that has been created. For a few of them, the anxiety is extreme: they say they "could not eat, could not sleep, could not work," a response that I have heard several times in Bang Chan from villagers who were actually worrying through a problem. The other major response, held by 40 percent of the sample, is to perseverate over the problem: to keep thinking about it, to think about it constantly, or, as one villager expresses it, *"When something worried him, he usually . . .* thought about it. Sometimes he dreamt of it too."

The major theme of both the above responses is, of course, that although villagers handle their worries in an emotionally meaningful way,

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losing their *khwaam*, as it were—if they release their anger. This is the fear of "letting go" and of regressing to a primitive psychological state. Every impulse of an adult villager is to fight this tendency. Second, by controlling their aggressions, they are not imposing their own problems on others and are maintaining the attitudes of "respect" and tolerance—as well as emotional indifference—that are otherwise so important to them. This consideration obviously does not account for the absence of aggression; it simply points up the fact that the aggression that does exist is dealt with internally, rather than socially. Finally, their aggression control seems to be based upon fear of reprisal. Although in a few instances this may be a realistic fear, it is principally a straightforward projection: they know only too well how painful the reprisals would be of people who hold the feelings of hostility that they themselves hold. This consideration is not inconsistent with my earlier remarks on the difficulty villagers have in investing hostility in others. Rather, it follows directly: the villagers' difficulty is not based upon lack of hostility, but upon the lack of social relationships which are sufficiently meaningful to merit that hostility. Rather than work out their aggressions behaviorally—in and with other human beings—they work them out in the isolation of their own inner psychodynamics.

I have gone into considerable detail here because "aggression" is the one area of the villagers' lives where the meaning of behavior is not at all apparent from its manifestations. Without such background material, the following SCT results would probably also have little significance.

The first item, *"He most often gets angry when . . . ,"* reveals some of those patterns with unexpected clarity. Ostensibly, the item asks informants simply to identify the various sources of aggression. However, the term for "angry" (*krood*) in this sentence explicitly means "angry toward other people." [11] Thus, one would expect villagers to focus on the activities or characteristics of others—or, at minimum, on some dimension of a social relationship—which elicits their ire. However, their most frequent response is to ignore the semantic pressure to refer to others and to dwell on characteristics within themselves that cause their anger. Thirty percent of

[11] The importance of this point becomes apparent when *krood* is contrasted with some of the other "angrys" in the Thai lexicon: *moohoo*, angry at the situation in which one is entangled rather than toward another person; *chun*, angry at the action of another person, but not the person himself, with a suggestion of helplessness (the blast of a radio as one is falling asleep); *chiw*, to *feel* angry at another person, but to conceal its expression; *moohoochunchiw*, angry all the time, at anything, because one has a character trait to be angry; *khumkhaen*, revengeful. That the villagers should have such a rich set of lexical contrasts in this area—and I have excluded terms which are simply variations on the intensity of "angry" ("irritated" *vs.* "enraged")—is not without significance. "Anger" obviously is an emotion to which villagers attend.

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the sample responds in this manner. Thus, they say that they are hostile toward other people when they themselves are "in a bad mood and tired," "are rattled," "have done wrong," or "are old. When one gets old, one's tongue becomes sharp and one gets angry easily." The emphasis on the loss of control or psychic equilibrium can be noted here, as well as the fact that although these disequilibrium forces are in themselves not very extreme, they are presented as ample justification for anger. Even when villagers do mention others, it is not in reference to others' actions so much as it is in reference to the emotions that those actions elicit, that is, "*He most often gets angry at other people when* . . . he is cross, such as, when other people are infuriating or annoying."

TABLE 23

He most often gets angry when . . .
Khon *most often get angry at other people when* . . .

SELF-REFERENCE:	30%	when *raw* make an error in the work. I, too, get angry. she has done something wrong. he is in a temper. he is drinking, drunk. If he is not drunk he does not become angry easily.
OTHERS DO NOT SATISFY SELF:	19%	they disobey him. they are not good to her.
GOSSIP:	23%	people say bad things about him. other people accuse him about something that has no truth.
QUARRELING:	23%	they quarrel. he has no happiness; when other people molest him often.

Related to the above are the responses given by 19 percent of the sample which, although referring to others, focus not on any objective negative quality or action of others (as in the two categories to follow) but on the simple fact that others do not satisfy the wishes and demands of the self. Again, the self—its needs, value, and significance—is primary. Villagers falling in this category say that they are most often angry at others when "people do not do what *raw* have told them to do," "they are not good to her," "people do not do things according to my wish." Informants giving these responses fall in all age and socioeconomic categories, suggesting that they are not necessarily the attitudes of social superordinates, which an older age or "wealthy" economic position might otherwise imply.

The final two categories, each representing 23 percent of the sample, describe as the causes of anger the direct actions of others. In one case,

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Question 29.h. Reasons respondents give for why some old men have not served in priesthood (multiple choice replies).

Immediate deprivation	
Dependents (worry about family, have wives, they have many children)	78
Financial reasons (they are very poor, they have no money, their parents are very poor, in debt)	56
Property (worry about property and profession)	15
Life situation	
Married too young (too early, have wives early, "fell in love, got married, acquired dependents, so could not get ordained")	50
Wrong orientation to life (they believe in a wrong way of life, they are lazy and not religious, they pay too much attention to wordly things, they cannot pray, "they don't think of their parents enough, they think only of themselves, and only of the present")	19
Religious belief system	
Apathy to priesthood (they do not like it, feel indifferent about ordination, have no intention of being ordained)	43
Indifference to Buddhism (they are not true believers, they did not participate in religion, "they aren't sons of Lord Buddha," "they don't love their race or Buddha")	19
Qualification	
Illiteracy, ignorance (they cannot read, they are ignorant, "afraid cannot abide by teachings and discipline," "they cannot read so they are ashamed if they become priest")	21
Personality (they are ruffians, they are disorderly drinking men, they are poorly brought up, they are not good enough, mental disturbance)	11
Background	
Lack of parental supervision (their parents can't control them, "nobody would give the advice and so they did not enter the priesthood)	5
Parental objection ("Some men have quarrels and their parents don't want them ordained," "they cannot receive permission from their parents")	2
Other reasons ("Because such men did not get ordained in previous incarnation, either," "because he has sinned in the past life and has had luck in this life," "they have to be soldiers," "they don't know the merit of sin," "they are too old, their merit did not reach the certain point so they did not have the chance," "they have children and sometimes feel ashamed before sons who have been ordained," "they forget")	8
No Answer	63
Don't know, unascertainable	37

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Chapter V

BIRTH CUSTOMS: THEIR SIGNIFICANCE

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Physiological ideas clarify only part of DÛan's tale. To illuminate other underlying tenets, we begin with the idea of help.

Help

[812] In "Influences on Health" (p.27) it was pointed out that Bang Chan conceived of individuals as unique beings, each with his fate in his own hands, with no bonds nor responsibilities to any other being. In an earthly existence, though, it would be difficult to obtain satisfaction or even life itself under such separatist terms. What relationship was possible between such autonomous beings? How in fact was rebirth brought about? Help (chuai) was the fundamental principle for organizing social interaction. Without help, the villagers saw existence not only as lonely and ineffective but even unrealizable. With it, personal and mutual goals were achieved, and life was enriched. People were "independent agents serving each other because it is mutually beneficial" (Phillips:83).

Responsibility for initiating help lay formally with persons of greater age or higher status. Elders assisted juniors, government officials assisted peasants. They received in return gratitude, obedience, and respect. Parents received care in their old age from the children they had nurtured. In the ordinary walk of life, particularly in a household, though, aid took the form of a continuous give and take with associates. The view of help as the mainspring of social action cut through many a problem of initiating aid or waiting on another to act, for fundamentally, on the cosmic scene, all beings were equally old. The child who helped most by giving over his earnings was loved most by his parents [593] (Phillips:89); when married, children helped their parents less than before marriage, still less if they cooked in separate kitchens in the same house, and much less when they moved to a separate house, for their time and cash went increasingly to maximize their own interests.

The genetic connections of those who did not help in cash, or labor at, say, cremations or cooperative work-parties were forgotten. Degree of help was a measure of kinship solidarity, and even marked the outer boundaries of kinship.

The word "help" turned up over and over again in the context of childbirth. Birth came about because a married couple, already steeped in the knowledge that they had been so helped by their parents, "helped another individual to new life" through the mingling of semen and blood. The midwife's role was merely to "help." When a woman engaged a midwife, her words were, "Will you come to help me?" A baby having trouble breathing right after delivery "had to be helped for half an hour." Most important, only through the reciprocal help of mother and child was rebirth to earthly life implemented at all. Parturition was an active, cooperative venture between 2 autonomous beings. The child set the time for labor to start by "deciding to be born" when his 32 parts were "complete,"[38] and he had worked off sufficient sin in purgatory to permit rebirth. The mother by her labor "helped the child to be born," but she could not succeed unless he actively "helped," too. Though other assistance to her was desirable, such as persons to support her back and press out the infant, only his help was essential. Without it she had a hard or unsuccessful labor. A woman who gave birth successfully without outside help created no stir because it was evident that the baby had been helpful.

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38. Informants were not uniform in opinion here. Some said the khwan (or winyan) was the first "part" to establish itself--arriving at the moment of conception--others that it was the last (Textor:262). In either case it was highly volatile during pregnancy, and the trapping by winnowing at birth was the major means of rooting it in the person. During pregnancy, medicine for wind in the fetus was given "which was not effective if there were no khwan," but whether the khwan was the mother's or the child's was not certain.

153 of making poor milk. Any woman whose milk flowed early and
853 well needed no example, for she was seen as having the habit as an in-born characteristic so deeply ingrained that it came through from a previous incarnation.[43] After nursing was established by the mother, babies were not often given over to another woman's breast because they were reputed to refuse it, "being not used to it."

In sum, the nursing patterns in Bang Chan varied with the previous lactating experience (if any) of the mother, and the ordinal position of her children.

(262 Hauck shows the old way of establishing good eating
846] habits in a baby. "If a mother ate small amounts of many different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time" (1959:14). Through the beneficial effects of the fire, any deleterious qualities of the foods were eliminated (as we shall see in "The Fire of Maturity") and the child had his first experience with these foods in the breast milk.

153 Bang Chan's life was full of secondary opportunities for starting new habits. Every rice crop, every boat purchased, every house built, and all the rites of the life cycle could, if handled properly, start a fresh and fortunate sequence on its way. We shall have more to say of this in discussing maturity.

789 Imitation
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The familiar principle of imitation (Anuman Rajadhon: 154), the influence of like making for like, operated throughout daily life in Bang Chan. An action, event or presence emanated an analogous influence on its surroundings. A woman returned from a visit to the midwife with all possible speed in order to achieve a speedy delivery of her child a few weeks hence. Another pregnant woman visited the temple on the final day of the rainy-season Buddhist

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[829] 43. Bradley's informants gave an example of a deeply ingrained habit: "European and American mothers can better dispense [with the fire-rest] because their own mothers from time immemorial have never been in the practice of the custom, and consequently their constitutions do not at all require it (p.79)."

retreat (ōk phansā) in order that her child would come out (ōk) more easily. Here none sought to divide the worlds of the natural and the supernatural, or to mark off "imitative magic" from the "learning by example of the natural world." A stronger influence came from more powerful agents, so that the effects of the Buddhist temple carried greater effect than the actions of a mere neighbor. Yet any like influence was of aid, especially in a verbal similarity. Thus, an event occurring on a Friday was apt to be auspicious because the Thai name for Friday contains an element identical in sound (though etymologically different) to the word for happiness (wansuk=Friday; suk=happiness), and for the fortunate status of true adulthood (suk=mature, ripe).

Stability in a Floating World

In explaining why some children were "born easily and were easy to raise" (liang ngāi) certain persons simply said, "They were born into the right family. Those born to the wrong family usually die." In defining the "right" family, merit, habituation, and helpfulness converge.

Most families were thought to live together as a group in life after life. In view of the separateness of souls, how was this brought about? The key lay in the conviction that people who made merit together met in future lives. Since most merit-making was undertaken as an enterprise of the nuclear family, sometimes with close kinsmen and friends, they would find each other. Some of the eagerness of friends to help (chuai ngān) with cash or labor was in order to meet in later lives. These persons were used to each other, used to helping each other, and so might marry. Thus, if they lived rightly, the nuclear family, maybe with an infusion of beloved old friends, expected to carry on in the next existence. Although a family's prosperity proved its merit, and its wealth facilitated making more merit, continuity in time was not limited to the wealthy. Proof that a couple had been married in a previous life lay in the birth of a boy as first born. Such a couple was known as a "khū" (pair), and divorce was held to be highly unlikely.

How did a child find its "right" family? After whatever necessary stay in purgatory, the khwan soul of a deceased member roosted in a tree near to its old home, then flew into an accustomed womb. One recalls the start of the blessing (p.48), "Come, khwan! Come my own child!" A woman hoped that the khwan was one previously born to her. "A couple lost its first child. Later the wife was fearing for the life of their sickly second-born." The husband said, "It is according to your sin and merit. If the child is your own child, he will live with you. If not, he cannot."

761 Since only meritorious children were born into the
775 "right family," they were helpful and so easy to raise. The
593 easiest to raise were reincarnations of babies deceased in
the mother's present life. "A girl of three died. Her father
• 829 dreamed he was at her coffin. She asked for water which he
782 gave her, then brought her home. Months later a boy was
born, so easily raised up that people knew it was a rein-
carnation of that girl." Here amiability and the change to
male sex demonstrated merit. In another tale, "a woman lost
many babies at birth. Her husband, thinking it was the same
child trying to be born to that mother, marked the forehead
of the last deceased baby. His surmise proved correct,
because the next baby born had this mark on its forehead."

This assumption that a woman's children were born to her over and over led to a measure of control over the cooperativeness of the child in the womb. A child trained to "good habits" became a meritorious adult who, when reborn, would of course "help" his mother in childbirth. It was advisable to set one's own child into paths of proper behavior, for he could be born again to a descendent, and in all likelihood to oneself.

On the other hand, families were not closed groups. "Like a leech that sticks in one place, then goes to stick somewhere else, so a deceased person may be reborn somewhere else," said a priest. The marriage blessing stated, "May angels, not criminals or beggars, reincarnate as your children." Thus was explained why upright parents might have a disobedient, roaming child. He had roamed into a new family which perhaps he had met during a pleasant casual visit to them in another life. If he did not stay home to make merit with his present family, a wayward child would roam out of it as easily as he came in. Here was the ultimate danger in visiting around too much.

761 Because all individuals lacking in merit died off at
593 birth, some of whom because they got into the wrong family,
782 a selective process continuously weeded out the extremely
[163] non-meritorious so that those who were born usually survived. In fact, Hauck's figure of 90.6 live births (1956:33), the percentage of total pregnancies shows how many meritorious babies were born to the right family!

852 The Winnowing Ceremony

844 This ceremony, described in Dūan's tale, was usually
774 performed shortly after delivery, though it might occur anytime during the first three days of a baby's life. The child, placed on the tray (twins were laid together or separately) was claimed by the mother or the father, who

852 after whoever claimed him, a mother might ask a "wealthy
856 person, of polite, calm, and good character" to do this.
789 The baby also started an association with whatever items were placed on his tray with him. Besides the most common ones mentioned in Dūan's tale were ink and books (which induced learning); gold, rings, jewelry, money (wealth); bergamot thorn, a tin of kaffir lime (sharp wit); and a razor (a good wood-cutter for the fire; said to be a Muslim
852 custom). When the baby was finally transferred from tray
789 to cradle these items were returned to household use. The bamboo cutter, rhizome of phlai, and earth associated with cutting the cord were taken off the tray and buried with the placenta. Their significance lay as part of a binding ritual. The phlai and earth might be taken off ahead of time.

Binding Rituals

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774 Because Bang Chan accorded autonomy to every individual, whatever his age, everyone had the free choice to go wherever his advantage lay. In infancy and childhood, the khwan soul might flee at any time, and could only be re-
[852 captured by a khwan-calling or khwan-ladling rite (Textor: 396-411). After about the age of 8, a tham khwan ceremony helped to bind in and strengthen the khwan soul. In daily life, the fear that a loved one, whatever his age, would withdraw or run away if unhappy, frightened, or over-
829 burdened, dogged people their whole lives. Casual episodes
593 were sometimes viewed with alarm. Once a boy of 10 on his own initiative went off to live a few days with his grandmother only 10 minutes away by boat. His mother complained that he had wandered (pai thiao) and feared it would become a habit. Parents dreaded that grown children would find work away from the village; that daughters would elope; that adopted children or spouses run away; or even that their child, at marriage, would elect to go live with his in-laws. At any time a husband might go into the priesthood leaving his wife and children to fend for themselves, though here the wife had to give her permission and the motive was sympathetically viewed.

A traditional jesting threat was to "go away to the jungle-forest" (pai pā).

The economic and social base for this fear of losing a child to the world was that children were a parental investment with an anticipated return: for the trouble of bearing and raising them, children should work for the family until their marriage. Furthermore, a boy was to bring his parents merit by being ordained, while a girl was to care for them in their old age. If a child moved away

before completing these obligations, the parents lost out on their anticipated reward (cf. L.M. Hanks, 1962).

Since waywardness (pai thīeo) was considered a continuous threat, magical means were taken at the moment of birth to ensure that a child stay close to the family that raised him. The blessing following the winnowing ceremony invoked immovable things: the post, the cat that traditionally never roamed far, the pumpkin that sat and fattened:

> "...Stay at home like the bottom of the house post. Watch the house like a cat. Eat and stay here! Never leave home. Be fat and heavy as the ash pumpkin..."

The most important binding actions utilized, or brought the child into physical contact with, objects long associated with family, in particular the house and land. The umbilical cord was cut on earth or phlai dug from the house-land itself with a bamboo "knife" sliced from one of the deeply sunk house posts. Of these "the knife is the important thing." The phlai also had medicinal purposes. With a feather "from the mother's house" the baby's navel was smeared with cobwebs from a spider whose web indicated long undisturbed residence. They buried the placenta either under some large old tree that stood near the house, or under the house stair. The old family winnowing tray, old clothes, and well-used family possessions were used first before any new furnishings were purchased for the baby. A fire of sakāe wood grown on premises boiled the water for the baby and mother, and heated the mother. Sakāe "was planted when a house was first built so that every generation of occupants would have it available for use at confinement" and also for firewood at other times (cf. McF. 834). All these binding rites assured that the child being rooted to a home terrain, would not wander frightened, and so "would not cry." He also would be at home to participate in the merit-making that would reconstitute the family in another existence.

If a child were born away from home, how was this bond to his locality established? On one to two occasions when the child was born at the Mīnburī Health Center, Hauck (notes, 1954) observed a solution to this dilemma. The mothers returned home, as was customary, within a few hours of delivery and were established by their respective fires. Their babies were winnowed and laid on their trays with the usual auspicious book, pencil, and needle. Neither tray held any bamboo, clod, nor phlai, however, for these had not been used. On one tray, though, was laid a steel knife from the kitchen, mute proof that a family cutting instrument ought to be there. On another occasion, a father asked to be given his child's placenta so as to bury it on the house site. In so far as possible, people in Bang Chan tried to carry on the old rites.

Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

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Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

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Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous magical protective needle.

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"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments, modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1955:155-195). It was sometimes better not to claim competence outside these customary lines. One mɔ̄ said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease.

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Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "woman are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

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"not wanting to help." The mother and baby were seen as having to fend for themselves. The very confidence built up in modern medications led to a conviction that doctors maliciously withheld available, effective medicines. "She died at the Center because she needed medicine but was not given any." Personality factors sometimes were involved: one doctor was considered incompetent, fearful of complicated obstetrical cases, and brutally indifferent to a countryman's views and circumstances--("Since we have no room, why don't you charter a bus to take your parturient wife to Bangkok?"), whereas another was friendly and wise. Since doctors were part of the respected government hierarchy which enjoyed superior knowledge and status, and also of the supposedly compassionate medical tradition, they were expected to be competent, kind, and protecting. Those who failed in winning confidence undermined the status of modern medicine.

The midwives themselves thought of the Minburī Center not only as a recourse if a case were in deep trouble, but also as a personal convenience. One male midwife, who was also a headman, monk and carpenter-contractor, was often too busy to stay with a woman in prolonged labor. To turn her over to another midwife other than a kinsman would damage his reputation. Knowing Minburi well, he found the Center a convenient solution to his dilemma. He had respect for the nurse-mid wife's skills, which he had witnessed, and regarded the doctor as a colleague on his own level, a view probably not reciprocated. The women midwives, too, always considering themselves at bottom volunteers, when faced with pressing home chores and the "impossibility of turning a relative over to another midwife," utilized the impartial service of the nurse-midwife. One cloud impeded the female midwives from making full use of the occasion as an opportunity for observation and so instruction. They refused to identify themselves as midwives out of fear of legal sanctions. Having neither taken the course prescribed by the government for "ancient" midwives nor paid the fee, they were not licensed. Thus, they lived in dread of fines if their calling became known outside the community. They knew they were permitted to deliver babies within the family, but outside those rather hazy boundaries, they took refuge in an old view, "I am not a midwife. I only help out of pity."

All in all, the people of Bang Chan had fitted modern medicine into their broad medical scheme where it could be accepted on its merits, if not blocked off by inconvenience, high cost, and discourtesy.

Hospital Delivery

If modern obstetrical method is demonstrably more effective and easier, let the midwives, mɔ̄, and relatives see it! If amiably received by the doctor or nurse, they will bring in patients, and accompany their relatives. The midwives--and many non-midwives--know the practical difficulties, and will be keen and interested observers. In so far as possible any persons accompanying a patient should be permitted actually to assist in some way. Perhaps the country midwife could be allowed to deliver the baby with nurse or doctor alongside to instruct and comment. Such experience is more effective than a dozen travelling demonstrations-with-a-doll. 006

Discussions with the (non-midwife) mɔ̄ who must handle prenatal disorders and abnormal childbirth should be conducted by the doctor, not the nurse, for doctors are viewed as colleagues on the same level. [759 824]

In sum, everything modern should not be expected to be better than the traditional. The complete rationale underlying some modern behavior cannot be grasped at once. Explanation must be given as the second class doctors do it: in terms that can be understood. The foundation for cooperation between modern and traditional medicine is solid. It is the common objective of healthy mothers and children.

[P. 108 is blank]

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mɔ̄, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mɔ̄ gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mɔ̄. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the tham khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

262 curtailed. About half ate soupy rice rather than rice as
843 usually prepared. All ate fish, but over half ate salted
846 fish only, and about one-fourth ate fresh fish only. Rice and fish were apparently the only foods considered safe by all of these mothers. The only other food eaten by half or more of them was banana of the (4)nam-(4)waa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeaeng (1)liang, a broth made with dried fish, and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some. When asked what foods they considered good for a woman who had recently borne a child, no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the post-partum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

262 Fear of illness from eating incompatible foods after
842 child birth was rather strongly expressed by many informants,
753 even by some who knew of Chinese customs which were different
829 from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home in the village, were not forbidden at the government health and maternity center at Minburi.

126 The 45 mothers who were interviewed during lactation,
262 but after work had been resumed, ate more nearly the usual
846 diet than was the case during the post-partum rest period. As in pregnancy, the mothers apparently had no notion of special dietary needs during lactation, but foods considered undesirable during lactation were mentioned 27 times. The list included 12 kinds of food, and four attributes of food, i.e. sour and hot tastes, fermented foods and raw foods. No food was considered harmful by a majority of mothers, the one which occurred most frequently, jackfruit, being mentioned by 8 only of the 45 informants.

262 Reasons were seldom advanced for considering various
753 foods unsuitable for mothers or children. During pregnancy,
853 the hot-tasting foods, i.e. those made with chili, were said by one informant to injure the baby's complexion. When asked at what age a child could have adult food, mothers might say at one or two years, but often specified without giving a reason, that the child could have anything but the hot-tasting foods. A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby, 1 or 2 months old, ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana"[1] caused

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1. The type of banana most familiar to people in the United States.

concerning its culture and use. Tilapia culture was learned largely by trial and error, and was considered primarily as a source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

More home consumption of eggs would be desirable, but their ready sale and acceptability for barter may present an obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

Milk, as canned, dried or malted milk preparations, was considered an appropriate gift for the priests, who are forbidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to include milk among them. People gladly bought food for the priests and would probably accept on the authority of the head priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headmen were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

The importance of merit making and the relatively large cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

846 Bang Chan. The only other woman in this series who did not
262 restrict her diet postpartum was the wife of a school teacher. She said that women were supposed to eat rice with salt or salt fish at this time but that she ate all kinds of food.

As a rule, a woman's diet was considerably curtailed during the postpartum rest period. Rice and fish were apparently the only foods considered safe by all of the mothers interviewed. About half ate fish, but over half of these ate salted fish only, and about one-fourth ate fresh fish only. The only other food eaten by half or more of the mothers was banana of the (4)nam-(4)waa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeaeng (1)liang, a broth made with dried fish and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some.

When asked what foods they considered good for a woman who had recently borne a child no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the postpartum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

• [229] Fear of illness from eating incompatible foods after childbirth was rather strongly expressed by many informants, even by some who knew of Chinese customs which were different from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home were not forbidden at the government Health and Maternity Center at Minburi.

Diet During Lactation.

853 The term "diet during lactation" as used here refers to
262 foods eaten when the mother had resumed her usual work following the postpartum rest period. The majority of nursing infants were under a year old when the records were obtained. All of the mothers ate rice everyday cooked in the usual way, and almost all had fresh, dried, or salted fish. About two-thirds had vegetables of some kind daily, but 6 women reported that vegetables of any kind were eaten only occasionally. Coconut, which as coconut milk is the basis for many curries, was used often. One nursing mother ate bananas daily, and about two-thirds of these women had bananas either occasionally or frequently. Only five women mentioned eating other fruits.

4:Phillips E-4,5 (1956-1957) 1966
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determined. So frequently the provocative, interesting, or delightfully human life histories found in the anthropological literature (Dyk 1938 and Tirabutana 1958 come immediately to mind) are so simply because they are the products of the more imaginative, articulate, and introspective members of the culture in question. The issue of course is not that a biography elicited from an articulate individual is to be considered ultimately any more or less valuable than one obtained from a more "typical" member of the culture—Kluckhohn's "Mr. Moustache" (1945) is ample evidence of what an articulate interpreter can do with the life history of a relatively inarticulate informant—but rather that it be accurately seen against a background of the psychological responses of the members of the community as a whole.[4]

The final stage of the research program is perhaps the most complex. Following the outlines of a recommendation originally made by Inkeles and Levinson (1954) and Inkeles (1959), it aims at presenting a systematic analysis of the *relationship* between the personality tendencies of the villagers, as determined through the foregoing materials on the one hand, and the functional requirements of Thai peasant society, as determined through ethnographic data, on the other.

An analysis of this type rests on at least three premises: (1) that there is just as likely to be a lack of congruence between the psychological capacities and proclivities of a group of people and the psychological demands that are made upon them by their own social institutions (demands that must be met if the institutions are to be maintained effectively) as there is likely to be a close fit, and that a crucial, empirical task of any culture-personality study is to detail the specific areas of congruence and noncongruence; (2) that human beings can bear considerable psychological strain—precisely how much we really do not know—and still function effectively, maintaining both their prevailing personality patterns and

Mandelbaum 1953, among others). The issue is the extent to which the psychological tendencies of life history informants—their readiness to respond and modes of response in various situations, their assumptions and unconscious premises—are typical of other villagers.

[4] I am reminded here of my own ambivalent reaction to a comment once made by a villager who, intrigued by the fact that I was collecting life histories, said: "I have heard about those people who are telling you their life stories. You're smart—getting interesting ones like them. Some of those people can really *phuud keŋ*." To *phuud keŋ* means to "speak well," but more particularly to speak cleverly, fluently, deceptively, convincingly, or beautifully (in an aesthetic sense). Actually, there were numerous individuals in Bang Chan who, in local terms, could speak considerably more *keŋ* than the life history informants. However, as the villager's remark suggests, the ability to be "keŋ-ful" in one's speech is something to which Bang Chaners give considerable attention, often to the extent of seriously modifying the intellectual content of their speech, and is one more factor that must be dealt with in assessing the content of a biographical document.

4:Phillips E-4,5 (1956-1957) 1966
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various kinds of ants living in Thailand and the United States. (Such are the topics that interest villagers.) The villagers wanted to know the English names for small red ants, normal black ones, and the large, rusty colored variety that are indigenous to the tropics. I named the first two with no difficulty. For the third, I said simply, "a giant ant." The assistant, turning to one of the informants, first gave the literal Thai equivalent of "giant," and then, as if this were the funniest thing he had heard that week, began to repeat, "giant, gi-ant, gi-ant." In a few seconds, they were all bursting with laughter.

Different, yet part of the same psychological constellation, is the whole complex of behaviors associated with the term, *sanug*. *Sanug* is usually translated into English simply as "fun." However, this translation conveys little of the motivational significance of the term. Essentially, *sanug* is a quality inherent in all situations which are not only fun but also emotionally worthwhile. In fact, these two states are often thought of as reciprocals of one another. An activity that is novel, diverting, or that can be done comfortably, is *sanug dii* (good fun); one that is tedious, overdemanding, that lacks the opportunity for frivolity, is not *sanug* and should be avoided. Harvesting rice in coöperative work groups, attending a ceremonial, participating in an election (see Phillips 1958: 45–46), or even taking something as outlandish as a Sentence Completion Test are all *sanug*. (The unifying elements of these diverse activities are either their novelty or the fact that they involve the presence of relatively large numbers of people but require no genuine interchange with them.) On the other hand, going into the army or working for a demanding superior are not *sanug*.

The importance of *sanug* is that it provides the villagers with a standard of value, a measure of how much they wish to commit themselves to a particular activity. The role of this standard should not be underestimated. Villagers who have taken a job in the city, often involving a time-bound daily routine or continuous, sustained attention to a task (work in a small factory, for example) frequently return to the village explaining that they quit "because it wasn't *sanug*. How can you work on a job if there is never any time for fun?" Foreign employers, with their greater concern for the job than with the person who does it and with their annoying tendency to be *cuu cii* (compulsive, fussy, exacting) are a particular target for this indictment, although this is usually based on hearsay rather than personal experience. On the other hand, villagers will often take on free of charge a major job (for example, helping a neighbor build a house) precisely because it is *sanug*. Although there are other considerations operating here—creating or repaying a personal obligation, doing a *bunkhun* ("a goodness") for a neighbor—the "sanug-ful" aspects of the task are always

4:Phillips E-4,5 (1956-1957) 1966
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that it is simply a "story," a description of the plight of other people, not the self. The story-teller or listener has the pleasure of a vicarious experience, but none of the pain of the real life situation. He can laugh over his good fortune in not being the person who was cheated out of his money or who was caught philandering by his wife. On the negative side, these stories also serve as a means by which the participants can express, through identification and projection, some of their own hostilities. The veil of humor provides in fact the ideal dress for hostility: one can be completely unabashed about expressing one's feelings (of wanting to steal, say, or wanting to humiliate), since what is expressed, in a form so exaggerated as to be acceptable, is simply the feeling and not the act itself. The hostility is made even more acceptable by the fact that it is projected onto the person in the story rather than referred to ego himself. In these terms, the telling of these stories probably does have something of the cathartic function cited earlier in the chapter: aggressions and hostilities that are otherwise kept under careful control are here permitted to emerge not only painlessly, but with a bit of relish. Finally, some of the laughter at these stories is probably also based on the feelings of embarrassment evoked in listeners. This is similar to the "there but for the grace of God . . ." motive but is different in that it is not based on personal identification with the person who suffers but rather on a diffuse feeling of discomfort over the expression of aggression—aggression toward anybody. There is embarrassment over things not being as they should be, over one's moral universe being temporarily out of joint. Also, the laughter is probably symptomatic of the listener's uneasiness as he becomes aware that the hostilities portrayed in the story are strikingly similar to those he himself harbors toward others. Embarrassed about his own aggressive impulses, he assuages them with laughter.

The motives for focusing on whimsical topics of conversation are less recondite and defensive than the above. Stories of the type describing "super-dogs" who find buried treasure are told because they are at the same time such outrageous and yet gentle distortions of reality. It is the juxtaposition of incongruous elements that is so appealing here. In ordinary Thai thought, for example, the dog is generally considered to be one of the most inconsequential and worthless of creatures. He is tolerated for his ability to warn of strangers and dispose of refuse, but nothing remotely approximating the feeling of "man's best friend" is associated with him. For such a lowly creature to be the sudden possessor of miraculous power is just too foolish. An elephant, monkey, or cobra perhaps, but not a dog.[11] Only "uncivilized" forest people would accept such a story. Yet, because the dog is such a familiar part of one's environment and also a living creature

[11] Doubt would exist for these creatures too, but because of their mythological and historical significance it would be somewhat tempered.

4:Phillips E-4,5 (1956-1957) 1966
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were at first a series of unrelated incidents—that is, the possible tenuousness of the links between parent and child first came to my attention with the occasional, but wholly unselfconscious, reports from informants on what to my Western ears seemed like rather turbulent childhoods: their frequent movement from family to family while they were still children and their own care, as adults, of friends' or relatives' children. (This suspicion was reinforced and partially verified later while recording life histories). Later it was noticed that, in sharp contrast to the West, villagers tend to be less concerned about the illness of children than the illness of adults; informants with whom this observation was discussed said either that they had not noticed or explained it by saying that since children recover so quickly from sickness there is less need to worry about them. Finally and perhaps most important, it became clear that the request of the villager who stopped me and asked me to take and rear her child was by no means idiosyncratic; the request was made on four separate occasions by different individuals, both within and without Bang Chan. The intent of these requests were difficult to ascertain. Since the requests tended to come up rather suddenly, in the presence of the child, and were always accompanied by laughter, they may well have been said in "jest" or as a threat to the child. On a few occasions the parent took pains to be sure the child understood what was being said, in which case the child responded with screaming. Also, Europeans have traditionally been used as bogey men in the disciplining of children. (I myself have occasionally been addressed as a malevolent spirit by youngsters.) On the other hand, because children of poor families have been known to be given to individuals of high status, and because Occidentals are automatically assigned such status, it is not altogether unlikely that the parent was sounding me out as a potential patron of the child.

The problem with all the above, however, is that it was unknown to what extent they represented typical or deviant attitudes and responses. The Sentence Completion item, *"We want to give our child to him because . . ."* was selected for use in the SCT administered to a larger, representative sample of villagers because, being an extreme phrasing of these attitudes, it might shed light on the villagers' general readiness to accept them as well as their justifications for them. Of the fifty-six informants who responded to the item, 79 percent accepted the premise and 21 percent rejected it, *i.e.*, "I do not want to give my child to anybody." Of the forty-five individuals who accepted the premise, nineteen said it was good for either the child or the parent, *i.e.*, "that person was good, and he wanted that person to teach his child to be good"; "I would get some money by giving it away"; "I could not stand the child anymore." And eighteen said it was justifiable, *i.e.*, "because of poverty"; "I did not have the means to rear the child."

4:Phillips E-4,5 (1956-1957) 1966
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man who wanted their help for the sake of "knowledge." I came to Thailand because a very wealthy American who manufactured automobiles (The Ford Foundation) had decided to make merit by giving money to universities as well as to monasteries and hospitals; I had applied for a fellowship, and he had given me the money.[4]

In my actual contacts with villagers, I tended to be much more docile and unassertive than is my wont, often to the extent of appearing diffident. Although in the relationships with my assistants I did not hesitate to express my opinions and evaluations of things—often in an excitable and seemingly aggressive way, which is one of my "natural" and extremely non-Thai modes of expression—I tried to keep my comments to villagers free of any evaluation. The only time I really let myself go was in laughter, which villagers liked but which they sometimes thought was undignified. To the countless little frustrations that occur in the field—spending an hour with an informant "making rapport" only to be told that he was too tired to take the TAT; seeing an informant get up at the high point of an interview, say "I must go," and simply leave—I responded either with giggling or stoicism, never anger. This latter posture was particularly difficult to maintain. When the owner of the "Cornell Office" asked me for three times the agreed upon cost of rent and board, I answered first by giggling and then by changing the subject, although neither was in any way representative of my genuine feelings. I later paid the original amount through a go-between, and nothing further was said.

Not all my behavior was oriented toward controlling such feelings, and not all of it was by any means intended as a disguise. In fact, the role of being an "interested, uncritical, and mildly bewildered young man" was not only the best way to present myself to the villagers from the point of view of effective research, but was often the way I felt. (The bewilderment was effective to the extent that it often elicited clarifications and specifications from informants who wanted to be sure I understood.) Similarly, my expressions of laughter were quite consistent with village patterns, and they could not easily be feigned. Perhaps one of the most enjoyable aspects of the pose was when I provided villagers with accurate and truthful answers to questions they might ask, but in an idiom that I thought would be most meaningful to them, *e.g.*, Henry Ford's merit-making activities.

[4] The source of my funds was of never-ending interest to the villagers. One Bang Chaner said he understood what the source of my funds was, but did not quite understand how I actually obtained them. "How does the money get into your wallet?" I explained that prior to my departure from the United States, I made arrangements with my benefactor's secretary to have the money deposited in a bank in Bangkok. And whenever I needed money, I would write a check and obtain the *baht* equivalent of the amount I had written. At this explanation, the villager broke out into a broad smile and said: "That's wonderful. It sounds just like Communism!"

125

[789] 22. Have you consulted with a medium frequently, occasionally, seldom, or never?

1. Frequently	7
2. Occasionally	4
3. Seldom	66
4. Never	856

[775] 23. Have you been disturbed by a ghost frequently, occasionally, seldom, or never?

5. Frequently	6
6. Occasionally	8
7. Seldom	55
8. Never	264

[641] 24.a. Excuse me, could you tell me, who is now the prime minister of Thailand? If you know, could you please tell me his name?

1. Correct answer	193
2. Incorrect answer	89
3. DK, cannot recall	111

b. Excuse me, could you tell me, who is now the chief of police of Thailand? If you know, could you please tell me his name?

4. Correct answer	167
5. Incorrect answer	24
6. DK, cannot recall	142

25.a. IF R LIVES IN BC COMMUNE: Who is the district officer in Minburi? If you know, could you please tell me his name?

1. DA, as from Bangkapi	194
2. Correct name of present DO	9
3. Correct name of past DO	—
4. Incorrect name	16
5. DK, cannot recall	111
— No Answer	3

b. IF R LIVES IN KY COMMUNE: Who is the district officer in Bangkapi? If you know, could you please tell me his name?

6. DA, as from Minburi	141
7. Correct name of DO	10
8. Incorrect name	—
9. DK, cannot recall	154
— No Answer	28

[434] [829] [556] 26.a. Throughout the world and here in Bang Chan-Khamo Yao too, it is common among men that there must be some who are rich and some who are poor and some who are neither rich nor poor. How about you yourself? Are you rich, or poor or neither rich nor poor?

1. Rich	2
2. Poor	68
3. Neither	863

b. IF POOR: Here in BC-KY, do you think there are many or few people who are poorer than you?

5. Many	30
6. Few	31
7. Unascertainable	7

125

b. And how about mushroom growing? Do you think mushroom growing yields very good money, good money, or little money? [244]

5. Very good money	68
6. Good money	160
7. Little money	49
8. Unascertainable	56

c. And what about Tilapia. Do you think tilapia raising pays very good money, or good money, or little money? [228]

9. Very good money	15
X. Good money	73
Y. Little money	175
0. Unascertainable	70

39. Do you believe in madiums strongly, somewhat, or not at all? [787]

1. Strongly	12
2. Somewhat	192
3. Not at all	105
4. Unascertainable	24

40.a. Suppose you could do the same work in another rural place and earn ½ more than here. For example, it would be a place 100 kilometers from here. Would you be willing to leave for that place or not? [166]

5. Yes	118
6. No	203
7. Unascertainable	12

.b. IF NO: For what various reasons would you not be willing to go?
(See code at end)

41.a. If you had no land to work in KK-KY would you move to another place or not?

X. Yes	166
Y. No	112
0. Unascertainable	20
— No Answer	39

b. IF NO: For what various reasons?
(See code at end)

42.a. Some people say that, generally speaking people who live in Bangkok have more genuine and lasting happiness than people here in KK-KY. Do you agree or disagree? [369] [829]

1. Agree	136
2. Disagree	134
3. Unascertainable	63

b. IF AGREE: For what various reasons do you agree?

If Agreement (See code at end)

54

125 [369] [829] [793] [792] 42.c. IF DISAGREE: For what various reasons do you disagree?

If Disagreement (See code at end)

43. Do you agree or disagree that all priests are honest and moral men?

X.	Agree	197
Y.	Disagree	90
O.	Undecided	40
—	No Answer	6

[829] 44. Do you think it is right or wrong for a Thai to marry a Chinese?

1.	Right	55
2.	Wrong	182
3.	Unascertainable	91
—	No Answer	5

[775] 45. Do you believe that ghosts bother people? Strongly, somewhat, or not at all?

4.	Strongly	40
5.	Somewhat	136
6.	Not at all	124
7.	Unascertainable	28
—	No Answer	5

[653] 46.a. During the past year, have there been any activities for the public welfare in BC Wat, or not, to which you contributed labor?

1.	Yes	231
2.	No	102

b. IF YES: For what various activities did you contribute labor?

_____

_____

c. During the past year or so, have there been any activities for the public welfare in the wat, or not, to which you contributed money or goods?

1.	Yes	264
2.	No	63
—	No Answer	6

[651] d. IF YES: For what various activities did you contribute money or goods?

_____

_____

47.a. How about activities not connected with the wat or with religious ceremonies in the home. During the past year, have there been any such activities for the public welfare in BC-KY, to which you contributed labor, or not?

1.	Yes	94
2.	No	232
3.	Unascertainable	7

Question 29.h. Reasons respondents give for why some old men have not served in priesthood (multiple choice replies). 125 793 792 828 829

Immediate deprivation	
Dependents (worry about family, have wives, they have many children)	78
Financial reasons (they are very poor, they have no money, their parents are very poor, in debt)	56
Property (worry about property and profession)	15
Life situation	
Married too young (too early, have wives early, "fell in love, got married, acquired dependents, so could not get ordained")	50
Wrong orientation to life (they believe in a wrong way of life, they are lazy and not religious, they pay too much attention to worldly things, they cannot pray, "they don't think of their parents enough, they think only of themselves, and only of the present")	19
Religious belief system	
Apathy to priesthood (they do not like it, feel indifferent about ordination, have no intention of being ordained)	43
Indifference to Buddhism (they are not true believers, they did not participate in religion, "they aren't sons of Lord Buddha," "they don't love their race or Buddha")	19
Qualification	
Illiteracy, ignorance (they cannot read, they are ignorant, "afraid cannot abide by teachings and discipline," "they cannot read so they are ashamed if they become priest")	21
Personality (they are ruffians, they are disorderly drinking men, they are poorly brought up, they are not good enough, mental disturbance)	11
Background	
Lack of parental supervision (their parents can't control them, "nobody would give the advice and so they did not enter the priesthood)	5
Parental objection ("Some men have quarrels and their parents don't want them ordained," "they cannot receive permission from their parents")	2
Other reasons ("Because such men did not get ordained in previous incarnation, either," "because he has sinned in the past life and has had luck in this life," "they have to be soldiers," "they don't know the merit of sin," "they are too old, their merit did not reach the certain point so they did not have the chance," "they have children and sometimes feel ashamed before men who have been ordained," "they forget")	8
No Answer	63
Don't know, unascertainable	37

64

125
369
829

Question 42.b. Reasons for Agreement (multiple choice replies)

Amount of effort in earning a living
- Earn living more easily, lighter work, a farmer has to work too hard, life is hard here--easy there 58
- Can work indoors, needn't work in sun and rain 13
- Other (living is easy if you have money, don't have as many worries as farmers, can trade more easily) 3

Availability of jobs and money
- They have salaries so don't have to worry 11
- Earn more money, earn more money for pleasure, earn money more quickly, can make money in commerce 11
- They have money, they have properties 10
- Can find job more easily 10
- Good occupations 1

Convenience
- More comforts 10
- They can get everything they want, can get everything easily 7
- Can find food more easily, it's more plentiful, food is better 6
- They have communication, transportation, water and light 5
- Everything is convenient 4
- Other (more privacy, children have a better chance for education, many pleasures, better living, no troubles) 5

Other Reasons
- More civilized, they have "knowledge," they can write, they govern the country, Bangkok is progressive, wherever you live you are happy if you behave well 8

No Answer 8

Question 42.c. Reasons for Disagreement (Multiple choice replies)

Cost of Living (Cost of living too High, must spend too much money, everything more expensive, food is expensive there) 34

Availability of jobs and money (Easier to make living here, no way of earning money there, hard to find a job there) 23

Dangers of Bangkok life (Fires, traffic, wars, too much fighting there, cheating, robberies, bandits) 17

No security (Poor people starve there, occupation is not permanent, economically less secure) 14

Urban Atmosphere (It's too crowded, the weather is bad, the air is bad, it's too noisy, too many mosquitoes, no kindness) 14

Integration in Bang Chan, lack of it in Bangkok (Work is harder here--but you have peace of mind, people have no strength or unity there, plenty of friends and relatives here, can live in own house here) 12

Bang Chan is O.K. (There is plenty of food (vegetables) here, life is easier and more convenient here) 9

Specific qualifications needed (Don't have enough knowledge, education, or experience to be happy there, must be a skilled worker) 7

Question 42.c. (Cont'd)

Need for Money in Bangkok (Only happy there when have plenty of money)	6	125
Amount of effort in earning a living (Have to work every day there	4	369
Other reasons (Too many poor people there, many illnesses there, the life of the people there depends on the farmer, people from Bangkok always go to the country when anything bad happens, people can be happy both places, different people have different hearts)	12	829
No Answer	4	
Don't know	5	

Question 46.b. For what various activities did you contribute labor? 125

Earth work		653
Earth work at Wat	18	
Earth work at Mosque	7	
Earth work, unspecified (digging dirt, filling low places, digging Klong, loading and unloading earth and bricks)	53	
Cement Work		
Cement work at Wat (moved cement bags, laid concrete floor)	12	
Cement work, unspecified (building cement sidewalks, helped make concrete, poured concrete)	14	
Building and Repairs		
Building sala (pavilion, repairing pavilion)	51	
Building mosque (repairing Surao porch)	8	
Built priest house, construction work in wat, latrine in Wat, repair crematorium	8	
Building bridge	21	
Building road	13	
Constructionwork, unspecified (carried posts, repair a building, carpentry)	7	
Services		
At Wat fair (helped cook and serve, helped manage, sweeping)	27	
At Surao fair (helped cook and serve)	3	
Services, unspecified (boiled water, cooked, carried water)	15	
Guilding the gold leaf, miscellaneous labor at footprint guilding festival)	7	
Priest's funeral (cooked, helped at cremation)	7	
Other (served at Katlin ceremony, solicited money for Wat)	3	

Question 46.d. For what various activities did you contribute money or goods? 125

		431
To the Wat, unspecified	19	
Contribution, unspecified	19	651
Construction activities		
To build pavilion (sala), to repair pavilion	57	
To make path, build street on Wat grounds	27	

*128 426 511 operators reporting their debt situation, 37 had no debt of any kind, 15 had long-term debts only, 23 had credit purchases only, and 19 had both long-term debts and credit purchases. Frequency distributions of credit purchases and of long-term loans are shown in Tables 61 and 62 respectively.

426 • 829 511 The debt situation in Bangchan can be best revealed by quoting directly some of the remarks made by villagers as follows:

"Rice farmers must have debts. Whoever can so manage to avoid debts should be placed on the financially sound list."

"I have been thinking, all day and all night, of the way to avoid debts -- and all in vain. They finally come to a total of one thousand baht with five hundred baht interest every year. I clear them all every year also. Those who cannot clear this kind of debts are sure dead."

"I always pay cash -- afraid of debts."

"Money-flower[8] (a direct translation of the Thai word for interest) is really a peculiar kind of flower. It blooms best in times of drought and flood."

426 511 ooo Apparently, the term "debts" as used in the above quotations refers primarily to credit purchases. It is not difficult to see how these credit purchases have become institutionalized in the rural areas of Thailand. Writing

8. Thai word for interest is dorg-bia (lit., flower of money).

[TEXT CONTINUED ON PAGE 349]

581 It was not felt necessary to marry. Because of the strong
589 economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married.
[593] One group of grown siblings of both sexes stated they were "too happy together to marry."

836 Pre-marital chastity was more or less observed. If a girl became pregnant before marriage, her parents brought pressure,
848 usually successful, on the boy to marry her. The occasional illegitimate child was raised without stigma in the girl's family, though problems arose during pregnancy and delivery (cf. "cone of wood" below). The mother later found a husband. One father was angered because he felt his daughter's pregnancy wrecked her chances for a marriage of prestige. He was conspicuous for his social aspirations towards city ways.

864 Information on human sexual matters was gathered by the
• 831 young sometimes by accidental observation of parents and others, through hints from hearing cursing, and by conversations with grandparents, older siblings, and friends of the same sex. Men joked on sex matters at the all-male rice-uprooting parties. Being antithetic to the ascetic prescriptions of Buddhism, sex talk was highly charged. Sex was never discussed in mixed company.

Residence

592 The nuclear family of husband, wife, and unmarried children was the primary social and productive unit, but other resident
[591] kinship units larger and smaller also occurred. After marriage, the couple usually lived for a time in the house of the parents of one spouse or the other; then, as soon as they could afford it, set up housekeeping in their own house. Of a sample of 96 families in Bang Chan, 30 set up independent households at once after marriage, 16 after one year, and the rest, a few per year, on throughout 10 years; 15 of the families never had a house of their own but lived with other relatives (Janlekha:37). Of 298 families, 59.4 per cent lived independently as a nuclear family, while 34.9 per cent lived with other relatives in the house. (The remaining were single persons living alone, or priests at the temple in the "ecclesiastical family.") The average size of the households (not necessarily the nuclear families) was 5.7 persons, with a range of 1 to 14, the median
361 being 6 (ibid. 28-29). The house of a new couple was usually built adjacent to parents or relatives, and certainly within calling distance or sight of some other household. Social
621 patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
57 the steps in the Buddhist winnowing ceremony and performed
[852] them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khao in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
[774] "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist,
[782] meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the
[17] poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

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[834] experience. Procreation was viewed as dangerous and contaminating. The behavior that hid sexual phenomena at
[562] the same time by constant prescriptions kept sexuality much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (fāk thong: to deposit gold). On returning home, she went as
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795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclos-
[562] ed room, if there were one, while in the Buddhist house-hold "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khao contained "7

4:Phillips E-4,5 (1956-1957) 1966
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538 231 ("Who knows what he was in earlier lives and what powers he brought with him into this one?"), there is enough reality about the tale to make people want to listen. Moreover, it is wish-fulfilling fantasy; people laugh because reality has been outraged, but with a lingering desire that it really could be.

522 538 The kinds of stories outlined above do not exhaust the villagers' stock of conversational humor. There are also tall stories without the supernatural touch, broad burlesques, "dirty" jokes,[12] and the countless epigrams that work their way into almost any conversation; the last are not so much topics of conversation as they are means of punctuating a point. However, enough has been said to indicate that in its cognitive stylization and social psychological purposes, Bang Chan humor is not too different from Western humor. It is rather the content, frequency, and evaluation of the humor that is so distinctive. That the content should be distinctive is of course self-evident, since all humor is rooted in the implicit and familiar premises of workaday, cultural life. In fact the very essence of a joke is seeing the culturally familiar in an entirely new light. This may help to explain, incidentally, why it is always so painfully self-defeating to try "to explain" the content of a joke: its entire effect is dependent on the listener's implicit

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522 831 538 081 [12] Sexual and scatological humor in Bang Chan pose some special problems. On the one hand, because villagers take such a matter-of-fact approach to sex, there are actually few jokes and stories that aim explicitly at being titillating or risqué. For most Bang Chaners, sex is something to be experienced and enjoyed in private, not snickered about barracks-style; there is no *sanug* in *talking* about sex (although there may be in playing with tabooed words, especially if cleverly done). Also, villagers seem to lack any interest in lewdness for its own sake. Not only Bang Chan, but Thai culture in general, is striking for its relative absence of attempts to edify sex: there is nothing in Thai literature or art, for example, approximating the exaggerated bawdiness of Rabelais or the graphic sensuality of the kind of sculpture found at Khajuraho and Konarak in India.

On the other hand, sexual situations are very often used as vehicles for portraying the foibles and stupidities of people. Villagers particularly enjoy stories of individuals of either sex who devise ways for seducing the unsuspecting, or of individuals who manage to outwit their spouses while philandering with their lovers; the more complex their machinations, the more amusing the stories. However, it is the social psychological, not the sexual, dimensions of these tales that form the major bases of their appeal.

Finally, it should be noted that villagers tend to distinguish between what could be called "genital" and "anal" modes of humor. The latter type has considerably fewer taboos associated with it. Thus, whereas most villagers would avoid going into descriptive detail in reporting the physical aspects of a tale of sexual conquest, they would have few qualms about discussing (and often with acoustical detail) such things as people who pass air in public or who otherwise get themselves into compromising anal situations. (Interestingly, J. Marvin Brown in his linguistic work with Thai informants, often including female university students, reports in a personal communication that he encountered difficulty in obtaining the various Thai terms for sexual organs and acts, but that the terms for anal and excretory behavior were given with little hesitation.)

This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

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Marriage

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As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Minburi to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

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Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.[4] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:62) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

[702] [793] 584 583 581

4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

[832] [775]

562 789 [754] [787] love philters, and they might be "sealed up" in childbirth or attacked by khun, their capacities to "liang" were inalienable. If any woman tried to tamper with men's magic, a severe sanction fell on her. She became the host of the phī krasū who lived from faeces like a dog.[59] On the other hand in a legendary case a man who tried to perform one of the women's rites to the Rice Mother was destroyed.[60] Furthermore, the Buddhist sanction of sinfulness fell on any man using magic for evil purposes.

562 791 [755] [793] The single channel where women might operate in the men's field of curing, power, clairvoyance, etc. was as a medium (khon song), through possession by a spirit. If possessed by a male mō, she could do everything a mō could do. Men were never mediums. Bang Chan's only medium was possessed by a male mō.[61] During seances she talked and sat like a man, and gave out cures and advice to an eager clientele. Only while wearing the yellow robe of an ordained priest did a man enjoy a generalized eufunction comparable to a woman's nurturing capacity. His powers in many respects were far greater than hers, but limited in her speical province.

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[832] [156] [688] [626] [593] 59. My finding is based on Textor's interesting facts (pp. 305-330). He described the hosts of phī krasū as married women ("never a maiden") in their 30's or 40's, who were "invariably" trying to learn love magic. Such women were, however, violating their sexual function as nurturant and worse, their status as "auk" women, ritually established by the holy fire! Ostracism by the community, implemented by fear of contagion through spittle, lasted even unto the deathbed. The phī krasū's daughter alone was immune while giving the devoted care which was every mother's due in her old age, for Bang Chan desired no alienation of this filial duty even out of fear of the terrible sanction on the mother.

[539] [776] 60. The legend ran that once a man instead of a woman went into the rice field to perform the ritual inviting of the Rice Goddess to stay there and be cared for with food and offerings during her pregnancy. The goddess he met was not an immature and tender child-like spirit, but the adult, pregnant being who was powerful, flirtatious, and frightening. Dazzled by her beauty he fell in love with her, and ran away with her, vanishing forever. The goddess, affronted because an improper person arrived to deal with her, destroyed him.

[825] [787] 61. In Bangkok, monkey, cats, or spirits may also possess women.

4:Phillips E-4,5 (1956-1957) 1966
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152 571 ritualized, ways of expressing hostility. What is significant about these particular procedures is that their very formalism serves to keep the aggression controlled and within bounds. Thus, everybody knows precisely how to behave when a buffalo disappears in the middle of the night and an intermediary arrives the next day to arrange the price for its return. Similarly, the aggressor, his victim, and everyone else present knows what is meant when someone calls a dog by the name of a person who is within hearing range and claims it was simply a slip of the tongue. The victim might respond by stealing his antagonist's boat and returning it a few weeks later, after his adversary has suffered sufficient anxiety. Note that in all these cases a face-to-face confrontation is either avoided or concealed.

152 571 754 Related to the above is the use of magical aggression. Textor (1960) points out that magical aggression—from one *person* to another *person*—is on the wane in Bang Chan. Also, it is clear from his exhaustive inventory of the magical practices in the village that interpersonal aggression has a very minor part in what is otherwise an extremely elaborate belief and ritual system: there are no more than three or four supernatural "objects," out of more than one hundred and seventy, that even suggest witchcraft, and although these objects are considered highly potent, they are rarely used. Even in the most extreme case—a young man using the oil from the chin of a corpse to induce hysteria in a maiden who has rebuffed his advances[9]—the victim is held partially responsible for having succumbed to the magic, a consideration that diminishes the "magical" implications of the ritual.[10]

152 571 832

152 762 Finally, a word should be said about the most convoluted way of expressing aggression. This is suicide, a procedure which, obviously, is applicable to only a small number of people. Nevertheless, during the relatively brief period that I was in the field, three Bang Chaners (out of a population of 1,771) attempted to do away with themselves by hanging. They always selected a conspicuous place (a tree on the Minburi highway or over the main canal) and were always unsuccessful. The aggression here is convoluted not only because it is turned inward, but also because it is

[9] This blending of sex and aggression does not have the same meaning in Bang Chan as it has in the West. Although the young man is concerned with punishing the girl for not responding to him, he is more concerned with breaking down her defenses and equilibrium, the very factors which denied him access. In English terminology, he wants to "unhinge" her, with all the duality that such symbolism might imply.

[789] [10] While magical aggression between people is relatively minor, magical means of averting aggression by non-human forces is not. In fact, the largest number of magical practices in Bang Chan relate to protecting the health and welfare of the organism from malevolent spirits, accidents, and dangerous animals. These data, of course, are quite consistent with the SCT data on "anxiety," presented in the preceding section.

The Pre-natal Baby

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843
[833]
[774]

The baby's body "started as a hair." After conception it was necessary that the father, with his semen during intercourse "strengthen" the baby. There was less, if any, intercourse in the last weeks of pregnancy, though no prohibition against it. Food eaten by the mother, "transformed into blood," built the baby's body. For the first 3 months the child was a "clump of blood." By the third month the mother felt a shaking (sàan) at the clump. This was the "khwan soul flitting in and out of the baby's heart." The picture of pre-natal growth was expressed by the chant at the tonsuring ceremony:

> "The body of a child inside its mother's womb grows gradually like droplets of oil coagulating at the end of the yak's hair. The 5 apertures appear, the nose, 2 ears, and 2 eyes; and then the hair, hands, and feet. The infant's hands embrace its placenta from which it sucks water day and night. There it sits on its mother's faeces while her newly eaten foods pack closely on its head. Its chin rests upon its knees, its face is turned toward the mother's back as it leans back against her belly. It looks like a monkey in the rain, sitting, waiting, trying to warm itself in a hole at the foot of a tree" (S.S.).

[826]

Before birth (and after), the baby was weak and tender (ɔ̀n), with especially soft, thin skin.

The Pregnant Woman

In pregnancy, a woman saw herself as moving toward the fulfillment of her long adumbrated female office[23] of nurturer. The essence of her femaleness, to be "soft and yielding, to lengthen life by nourishing others" was heightened.

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23. To paraphrase Fortes: "office," subsuming both status and role, means "calling, occupation, or life-task." It serves "instrumental or utilitarian ends," yet also has the "other dimension of duty and responsibility enjoined, sanctioned and above all symbolized in ceremonial or ritual forms placing it in the moral order" (Fortes:62).

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562

overlap at all. Magic was wielded by men to gain power over spirits, persons, elements, and forces. It had either social or personal benefits. The role of highest social benefit, corresponding to the liang di in women, was the khwan-specialist (mǫ khwan) who conducted the life-cycle, khwan-strengthening (thām khwan) (for persons and for the rice) and many other ceremonies for the mature khwan. This role demanded men of the highest qualifications in probity, erudition, and personal dedication. Men also had the formulae for curing, house- or boat-blessing, invoking guardian spirits (sān phrs phūm), etc. Men could make protective amulets to render the wearers safe from bullets, knives, spirits, and all sorts of hostile forces in the world. [791] [156]

On the other hand men's magical objectives could be aggressive and hostile. The gamut of amulets, missiles, love-oil, and incantations (Textor:passim) showed the potential for attack and why the converse need for invulnerability was so strong. Men had a nurturing (liāng) role, but only for non-human beings, e.g. buffalo, pet birds, and guardian spirits of house and land. Subverting this role for hostile ends, they obtained possession of the ghost of a recent corpse by gathering the drop of oil at the chin, and nourishing it (liāng) for use in sorcery. For a man, nourishing something gave control. [754]

All of the powers of men's magic were available to women on request for any purpose, hostile or not, but the "owner" had to be the mediating agent. [424]

A woman's magical knowledge was linked exclusively to her female task. It did not give power over people. It could not be destructive. No female sorceress existed in Bang Chan. No woman feared the magic of another woman in childbirth nor at any time. A woman's magic was devoted solely to promoting the processes of growth and life. Thus it controlled the searing heat of the fire, invoked the Spirits of the 4 elements, and helped at various points in childbirth. It handled the soul of the Rice Goddess and of Mother Sū, guardian of children. It restored any frail and wandering khwan to its proper bodily abode. Such was a woman's magic. [754]

To insure separateness the respective provinces of magical activity were ringed with sanctions. Contact with a woman's skirt, undergarments, or menstrual blood completely negated any of a man's protective amulets (re tattooing, cf. Textor: 102). Though this reflected the traditional avoidance between sexual phenomena and Buddhism, it might also indicate a tacit moral evaluation of the magical powers of men and women: the powers for growth were ultimately ascendant over those for power, for men had nothing that undid a woman's powers. Though women were easily prey to men's magical control, as by [841] [834] [754]

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
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844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclosed room, if there were one, while in the Buddhist house-
[562] hold "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khăo contained "7

581 589 [593] It was not felt necessary to marry. Because of the strong economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married. One group of grown siblings of both sexes stated they were "too happy together to marry."

• 836 848 Pre-marital chastity was more or less observed. If a girl became pregnant before marriage, her parents brought pressure, usually successful, on the boy to marry her. The occasional illegitimate child was raised without stigma in the girl's family, though problems arose during pregnancy and delivery (cf. "cone of wood" below). The mother later found a husband. One father was angered because he felt his daughter's pregnancy wrecked her chances for a marriage of prestige. He was conspicuous for his social aspirations towards city ways.

864 831 Information on human sexual matters was gathered by the young sometimes by accidental observation of parents and others, through hints from hearing cursing, and by conversations with grandparents, older siblings, and friends of the same sex. Men joked on sex matters at the all-male rice-uprooting parties. Being antithetic to the ascetic prescriptions of Buddhism, sex talk was highly charged. Sex was never discussed in mixed company.

Residence

592 [591] The nuclear family of husband, wife, and unmarried children was the primary social and productive unit, but other resident kinship units larger and smaller also occurred. After marriage, the couple usually lived for a time in the house of the parents of one spouse or the other; then, as soon as they could afford it, set up housekeeping in their own house. Of a sample of 96 families in Bang Chan, 30 set up independent households at once after marriage, 16 after one year, and the rest, a few per year, on throughout 10 years; 15 of the families never had a house of their own but lived with other relatives (Janlekha:37). Of 298 families, 59.4 per cent lived independently as a nuclear family, while 34.9 per cent lived with other relatives in the house. (The remaining were single persons living alone, or priests at the temple in the "ecclesiastical family.") The average size of the households (not necessarily the nuclear families) was 5.7 persons, with a range of 1 to 14, the median being 6 (ibid. 28-29). 361 The house of a new couple was usually built adjacent to parents or relatives, and certainly within calling distance or sight of some other household. 621 Social patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

[P. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

• 84 [775] [774] [789] A soul desiring rebirth flew into the womb of a woman at conception. By care and imitative magical practices, both parents helped the fetus grow but the mother gave the baby its body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of several days was taken beside a hot fire, the purpose of which was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

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The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman. The comparable ceremony of maturation for men, when they too were changed from "raw" to mature, compassionate, and strong males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

793 788 562 [688]

844 This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

128 844 846 369 178 The understanding of, and the attitudes toward, modern medicine are given along with findings accounting for acceptance or rejection of modern hospital care for parturients. Accepting the changes that were observed in the practices surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

829 57 602

The genetic connections of those who did not help in cash, or labor at, say, cremations or cooperative work-parties were forgotten. Degree of help was a measure of kinship solidarity, and even marked the outer boundaries of kinship.

844 829 57 [842]

The word "help" turned up over and over again in the context of childbirth. Birth came about because a married couple, already steeped in the knowledge that they had been so helped by their parents, "helped another individual to new life" through the mingling of semen and blood. The midwife's role was merely to "help." When a woman engaged a midwife, her words were, "Will you come to help me?" A baby having trouble breathing right after delivery "had to be helped for half an hour." Most important, only through the reciprocal help of mother and child was rebirth to earthly life implemented at all. Parturition was an active, cooperative venture between 2 autonomous beings. The child set the time for labor to start by "deciding to be born" when his 32 parts were "complete,"[38] and he had worked off sufficient sin in purgatory to permit rebirth. The mother by her labor "helped the child to be born," but she could not succeed unless he actively "helped," too. Though other assistance to her was desirable, such as persons to support her back and press out the infant, only his help was essential. Without it she had a hard or unsuccessful labor. A woman who gave birth successfully without outside help created no stir because it was evident that the baby had been helpful.

844 [826]

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38. Informants were not uniform in opinion here. Some said the khwan (or winyan) was the first "part" to establish itself--arriving at the moment of conception--others that it was the last (Textor:262). In either case it was highly volatile during pregnancy, and the trapping by winnowing at birth was the major means of rooting it in the person. During pregnancy, medicine for wind in the fetus was given "which was not effective if there were no khwan," but whether the khwan was the mother's or the child's was not certain.

794 84 [115] [826]

000 in Bang Chan tried to carry on the old rites.

948 The Cone of Wood
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372 When a child was conceived out of wedlock, the first problem raised was, "Who will build the wood pile?" The actual father had to come forward and identify himself, for he and no one else could perform this duty. A child could not be born without the father giving this assistance.

593 This cone of wood represented a "womb" towards which
• 84 a father actively played out his role. His child was in it.
789 While building it, his behavior affected the child, just as
372 his wife's behavior acted on the child in her womb. If the pile were incomplete before the onset of labor or gave out before the fire-rest was terminated, the child would "never finish any task in its life." The very manifestation of industriousness involved in collecting the wood, though, made the unborn child industrious. Gathering a quantity of wood for this big pile was not easy. Old houses had plenty of wood, for they stood in thick groves, but new houses sometimes stood bare and stark in the fields. He placed spiny Indian jujube or Chinese date (phutsā) and Manila tamarind (ma khām thēt) all over the outside to protect
[824] this "womb" from invasion by malevolent spirits. Thus he also protected his wife's womb. Sakāe wood was preferred because it was smokeless. Collecting a mixture of woods was easier, but then the fire smoked. Mixed or all sakae, whichever the constitution of the pile for a woman's first confinement set the pattern for all her later ones.

At the onset of labor, the father had to open the way for his child to come out of the womb, so the pile was tipped over in a direction paralleling the position of the Great Snake. This astrological orientation was exactly that of the woman in labor. Unless the mother's head and the apex of the fallen wood pile coincided with the direction of the head of the Snake, with the open end of womb and cone below, "with and not against the lie of the snake's scales," the child would have to struggle against these scales as he came out. By tipping the cone of wood properly the father helped his child to an easy exit.

The thorns protected the womb and the baby inside from all evil spirits during the months of pregnancy. With the onset of labor, the holy cord which surrounded the mother took over this function, and kept away such dangerous spirits as phi krasū and, if the baby died at birth, the violent New Baby Ghost (cf. Textor:261).

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in the khwan khaŏ "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mŏ or to the Minburi Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or "face" was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

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Though living like other elder citizens of the community, in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mŏ was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (tham achIp (Mc.F. 990)) when others who had equal or more experience were not so considered?

The Role of the Mɔ̄

756 844 A mɔ̄ never delivered the baby and never even touched a woman in labor, for this was not part of his specialty. If labor were slow, or weakness were setting in, he came to give a decoction to raise the fire element within the body, speed up the winds and so strengthen the contractions. He also gave holy water for general strength and to clear out, if such there were, any obstructing spirit or magical disease object like khun. Because of his experience, though, he might stand beside the midwife or other woman instructing; for instance, "Pull now!" "Watch out for the eyes!" His advice was more often sought after childbirth if fever or swollen body were in evidence, for these were the results of "inadequate outflow of blood and fishy-water." Because they were called in case of debility, the mɔ̄ were the ones who suggested when it was advisable to send a parturient to the Minburī Health Center.

756 84 No priest-mɔ̄ was ever called for childbirth because of the contact with a woman's genital area, though they were consulted on menstrual and pre-natal irregularities.

759 The Specialty of the Midwife

Midwives were called mɔ̄ tamyāā (doctor-expert-in-occultism; pounding, as in a mortar [McF. 365] crouching, [McF. 682]). There were 4 or 5 women, both Buddhist and Muslim, and 2 or 3 Buddhist men, who had delivered 100 or so babies apiece. They ranged in age from 50 to 70. Dozens of women had delivered babies one or more times but were not accorded the title of midwife. [192]

759 845 The foundation of their specialty was a greater than usual manual skill, developed over long experience. "We have only our hands," said one woman. The more expert could handle certain mal-positions, and did not hesitate, but only with permission, to put the hand into the vagina to turn the baby or "unstop the blood." They were better judges of the progress of labor, whether normal or slow, and of the symptoms of debility. They were more likely to keep calm in the face of extreme suffering where the parturient's relatives, over-eager in their desire to help, sometimes inflicted

overlap at all. Magic was wielded by men to gain power over spirits, persons, elements, and forces. It had either social or personal benefits. The role of highest social benefit, corresponding to the liāng dī in women, was the khwan-specialist (mō khwan) who conducted the life-cycle, khwan-strengthening (thām khwan) (for persons and for the rice) and many other ceremonies for the mature khwan. This role demanded men of the highest qualifications in probity, erudition, and personal dedication. Men also had the formulae for curing, house- or boat-blessing, invoking guardian spirits (sān phrs phūm), etc. Men could make protective amulets to render the wearers safe from bullets, knives, spirits, and all sorts of hostile forces in the world.

On the other hand men's magical objectives could be aggressive and hostile. The gamut of amulets, missiles, love-oil, and incantations (Textor:passim) showed the potential for attack and why the converse need for invulnerability was so strong. Men had a nurturing (liāng) role, but only for non-human beings, e.g. buffalo, pet birds, and guardian spirits of house and land. Subverting this role for hostile ends, they obtained possession of the ghost of a recent corpse by gathering the drop of oil at the chin, and nourishing it (liāng) for use in sorcery. For a man, nourishing something gave control.

All of the powers of men's magic were available to women on request for any purpose, hostile or not, but the "owner" had to be the mediating agent.

A woman's magical knowledge was linked exclusively to her female task. It did not give power over people. It could not be destructive. No female sorceress existed in Bang Chan. No woman feared the magic of another woman in childbirth nor at any time. A woman's magic was devoted solely to promoting the processes of growth and life. Thus it controlled the searing heat of the fire, invoked the Spirits of the 4 elements, and helped at various points in childbirth. It handled the soul of the Rice Goddess and of Mother Sū, guardian of children. It restored any frail and wandering khwan to its proper bodily abode. Such was a woman's magic.

To insure separateness the respective provinces of magical activity were ringed with sanctions. Contact with a woman's skirt, undergarments, or menstrual blood completely negated any of a man's protective amulets (re tattooing, cf. Textor: 102). Though this reflected the traditional avoidance between sexual phenomena and Buddhism, it might also indicate a tacit moral evaluation of the magical powers of men and women: the powers for growth were ultimately ascendant over those for power, for men had nothing that undid a woman's powers. Though women were easily prey to men's magical control, as by

BANG CHAN

146 pictured as bowlegged in Chutima's report (1939) are, however,
142 clearly so, and represent more extreme cases than we encountered among the children in Bang Chan in 1952-53. If the incidence of bowleggedness among children in Thailand is indeed decreasing, an investigation into possible causes of the change would be of interest.

142 To the nutrition specialist on the team, who was not Thai, the knee joints appeared to be large. Moreover, although the term "knock knees" was not included on the schedule, it was entered frequently by the physician under comments (Appendix B, Table 22).A Whether this condition is related to heredity,
[516] nutritional status, or to some other environmental influence such as the life-time habit of squatting on the heels, is not known.

146 The physician's estimate of general appearance and vitality were recorded early in the examination, before he sought for specific signs. About 80% of all persons examined were rated as "good," and less than 1% as "poor." About half of all persons rated as "good" in general appearance and vitality were without clinical signs, as compared to about 30% of those rated "fair." Of persons with 3 or more possible signs of malnutrition, however, about 2/3 were rated "good" (Appendix B, Tables 23 and 24).A As has been observed frequently, such a general appraisal is not correlated with the presence or absence of clinical signs possibly associated with malnutrition. Clearly, in Bang Chan, there is little or no malnutrition of the sort that causes marked apathy.

In summary, a variety of possible signs of malnutrition were noted both in the school children and the persons in the random sample of village households. More than half of the total number examined had one or more signs possibly due to malnutrition, but the only clearly defined deficiency disease encountered was one case of beri beri[1] in a 49-year old man.

Reproductive Function in Females

• 84 Menstrual History. - Information concerning menstrual
125 history was obtained from girls and women in the random sample of village households, and from mothers of the infants and small children whose growth and food patterns were studied.

145 Most of the women from whom information on age at menarche was obtained were under 40 years of age. A few could

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1. History of beriberi among nursing mothers and their
[149] infants was obtained in several instances, and cases of beriberi, in both sexes, were seen among persons not included in the population samples which were examined.

A [see p. 71-Am.] B [see pp. 72, 73-Analyst]

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

[P. 1]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

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Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 50 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygymous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap. V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

597 Adoption was fairly common, though not always of lasting satisfaction. On the other hand, in this watery domain, the
842 trouble (lambak) in raising children, mostly involving
855 ceaseless tending, was such that a childless woman was accorded a little surface envy as one who had missed or avoided a lot of trouble. The attitude towards twins was
845 ambivalent. "Twins are unlucky because there are more mouths to feed, more labour, trouble, and not enough milk. With twins, a poor family will never rise again." "No one will marry a twin for fear of begetting twins." "If twins are of a different sex, one must die." Yet others considered twins lucky "because they could be nursed at the same time, and given the same things."

855 Wealth differences also affected these attitudes,
842 especially if babies came in close succession. Comments
184 heard were: "Why do poor people have more children than the rich?" "Many visitors come bringing gifts to a rich parturient because she is respected. No one likes to talk to a poor person." "Those who have a baby oftener than every 3 years will never be rich. Fortunately, 4 of my 7 children died." The increasing cost of raising children was a concern. In one of the few families that had plans for their children's education, the father underwent a vasectomy after his 9 fine children were born, because he "feared he would not be able to feed them all." His wife, reassured that the operation had not "hurt" her husband, "was glad he had done so."

847 Abortifacients and Contraceptives

[779] Episodes concerning abortifacients were whispered about both Muslims and Buddhists. A Buddhist who induced abortion was seen as impeding an individual's rebirth and disobeying a religious prohibition on taking life, tenets which did not obtain among the Muslims. Abortifacient medicines to be used with abdomen-pressing were quietly sold by Muslims.[6] "Unmarried Muslim girls use them mostly," reported one Buddhist, "and they almost die in the process." A Buddhist curer had similar expensive medicine, but "unlike the Muslims, he will
842 not destroy the baby." Chinese boat-vendors also carried contraceptive medicines (ya) which were secretly discussed by wives. A husband reported his wife as saying, "Old ways

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6. Fraser (193) reports that in the Muslim village of Rusembilan, abortions were openly practiced, (as if part of a Muslim cultural heritage).

are more reliable than the new," implying familiarity with both. One Buddhist headman earnestly sought of the field-worker information on medicines, or "mechanical devices" about which he had heard, but bemoaned the costliness.

To the concepts underlying childbirth, both as physiological processes and their meanings in Bang Chan's world view, we devote the next chapter.

7. Hauck (1956) finds that the number of pregnancies compared to the years of marriage is so low as to suggest (1) relatively low fertility in many cases, or (2) the existence of some (unknown) method of birth-control (pp. 31-32). She finds an unusual feature of menstrual history as compared to western standards in a somewhat older age at menarche (median and modal age was 15, with a range from 13-19 years). The onset of menopause occurred anywhere from 36-55 or even later, which is somewhat later than in western societies (pp. 30-31).

Chapter III

PREGNANCY AND PARTURITION

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Conception

Conception occurred when a khwan-soul flew into the womb of a woman during sexual intercourse. "A father and a mother are equally important because there is no birth in the world without both. An infant is the product of both sexes," said a priest in a Bang Chan sermon.[21]

The little being in the womb from the moment of conception was a specific individual who had lived many times before, meritful or sinful according to its previous actions. Desire for rebirth was in itself evidence of inadequate merit to effect release from incarnation. Though this life was to some extent a fresh start, his character (nisai) and heart (čhai) were already largely formed through his store of merit and ingrained habit from former existences.[22]

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[779] 21. The teachings of the Buddha state: "Rebirth takes place when a father and a mother come together, and it is the mother's period, and the one to be born is present" (Suriyabongse:20).

22. He bore with him the last ideas spoken to him at his most recent death. The Visuddhi-Magga tells how this carry-over occurs. One of the categories of karma, was the "close at hand, karma remembered at the point of death [which] springs up with [a person] in rebirth" (Warren:246). As King Mongkut lay dying, everyone in the room called out "arahat!" in his ear incessantly so that by "remembering it at the point of death" he might be reborn an Arahat (E.R.E. "Siam": 487). Another pertinent category of karma was the "habitual": "karma that has become habitual through frequent repetition. This brings on rebirth when [other] forms are absent" (Warren:246). Here is the basis for the inborn character, heart and ingrained habit (cf. J.R. Hanks, 1959, and the section below on "Habit" (khoei).

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The Pre-natal Baby

The baby's body "started as a hair." After conception it was necessary that the father, with his semen during intercourse "strengthen" the baby. There was less, if any, intercourse in the last weeks of pregnancy, though no prohibition against it. Food eaten by the mother, "transformed into blood," built the baby's body. For the first 3 months the child was a "clump of blood." By the third month the mother felt a shaking (saan) at the clump. This was the "khwan soul flitting in and out of the baby's heart." The picture of pre-natal growth was expressed by the chant at the tonsuring ceremony:

> "The body of a child inside its mother's womb grows gradually like droplets of oil coagulating at the end of the yak's hair. The 5 apertures appear, the nose, 2 ears, and 2 eyes; and then the hair, hands, and feet. The infant's hands embrace its placenta from which it sucks water day and night. There it sits on its mother's faeces while her newly eaten foods pack closely on its head. Its chin rests upon its knees, its face is turned toward the mother's back as it leans back against her belly. It looks like a monkey in the rain, sitting, waiting, trying to warm itself in a hole at the foot of a tree" (S.S.).

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Before birth (and after), the baby was weak and tender (ɔ̃n), with especially soft, thin skin.

The Pregnant Woman

In pregnancy, a woman saw herself as moving toward the fulfillment of her long adumbrated female office[23] of nurturer. The essence of her femaleness, to be "soft and yielding, to lengthen life by nourishing others" was heightened.

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23. To paraphrase Fortes: "office," subsuming both status and role, means "calling, occupation, or life-task." It serves "instrumental or utilitarian ends," yet also has the "other dimension of duty and responsibility enjoined, sanctioned and above all symbolized in ceremonial or ritual forms placing it in the moral order" (Fortes:62).

The genetic connections of those who did not help in cash, or labor at, say, cremations or cooperative work-parties were forgotten. Degree of help was a measure of kinship solidarity, and even marked the outer boundaries of kinship.

The word "help" turned up over and over again in the context of childbirth. Birth came about because a married couple, already steeped in the knowledge that they had been so helped by their parents, "helped another individual to new life" through the mingling of semen and blood. The midwife's role was merely to "help." When a woman engaged a midwife, her words were, "Will you come to help me?" A baby having trouble breathing right after delivery "had to be helped for half an hour." Most important, only through the reciprocal help of mother and child was rebirth to earthly life implemented at all. Parturition was an active, cooperative venture between 2 autonomous beings. The child set the time for labor to start by "deciding to be born" when his 32 parts were "complete,"[38] and he had worked off sufficient sin in purgatory to permit rebirth. The mother by her labor "helped the child to be born," but she could not succeed unless he actively "helped," too. Though other assistance to her was desirable, such as persons to support her back and press out the infant, only his help was essential. Without it she had a hard or unsuccessful labor. A woman who gave birth successfully without outside help created no stir because it was evident that the baby had been helpful.

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38. Informants were not uniform in opinion here. Some said the khwan (or winyān) was the first "part" to establish itself--arriving at the moment of conception--others that it was the last (Textor:262). In either case it was highly volatile during pregnancy, and the trapping by winnowing at birth was the major means of rooting it in the person. During pregnancy, medicine for wind in the fetus was given "which was not effective if there were no khwan," but whether the khwan was the mother's or the child's was not certain.

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home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

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To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Mīnburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 2 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccesibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grew up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

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In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Mīnburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

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147 duration and regularity of menstrual periods, and intervals between periods (Table 12).

Table 12

Characteristics of Menstrual Periods of Women in Bang Chan

	Percentage of Respondents in Each Category			
Duration, days	Under 3	3 or 3+(a)	4 or 4+(a)	5 or more
91 respondents	6	78	11	5
Interval	**Short**	**Usual(b)**	**Long**	
101 respondents	0	84	16	
Regularity		**Regular**	**Irregular**	
102 respondents		89	11	

(a) A plus sign indicates variability of period, as 3-4 days.

(b) usual - approximately 1 lunar month.

While the usual variations were encountered, a large majority of responses were similar. Thus the typical woman in Bang Chan menstruated at regular intervals of about 1 lunar month, for a period of approximately 3 days. While the sample is small, the only unusual feature of menstrual history as compared to western standards appears to be a somewhat older age at menarche.

892 Pregnancies. - Most married women in Bang Chan have children. The range in number of pregnancies for a given number of years of marriage is great, however (Table 13), and suggests either 1) relatively low fertility in many cases, or 2) the existence of some method of birth control of which the research workers, including the Thai physician, had no information. Zimmerman (1931, p. 230) has commented that in Thailand the birth rate did not seem to be under human control. He said that rural Thai did not know about birth control nor practice any form of it to any extent.

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This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

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Marriage

As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Minburi to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

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Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.* Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:87) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

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*. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

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The Pre-natal Baby

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The baby's body "started as a hair." After conception it was necessary that the father, with his semen during intercourse "strengthen" the baby. There was less, if any, intercourse in the last weeks of pregnancy, though no prohibition against it. Food eaten by the mother, "transformed into blood," built the baby's body. For the first 3 months the child was a "clump of blood." By the third month the mother felt a shaking (sàn) at the clump. This was the "khwan soul flitting in and out of the baby's heart." The picture of pre-natal growth was expressed by the chant at the tonsuring ceremony:

> "The body of a child inside its mother's womb grows gradually like droplets of oil coagulating at the end of the yak's hair. The 5 apertures appear, the nose, 7 ears, and 2 eyes; and then the hair, hands, and feet. The infant's hands embrace its placenta from which it sucks water day and night. There it sits on its mother's faeces while her newly eaten foods pack closely on its head. Its chin rests upon its knees, its face is turned toward the mother's back as it leans back against her belly. It looks like a monkey in the rain, sitting, waiting, trying to warm itself in a hole at the foot of a tree" (S.S.).

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Before birth (and after), the baby was weak and tender (ɔ̀n), with especially soft, thin skin.

The Pregnant Woman

In pregnancy, a woman saw herself as moving toward the fulfillment of her long adumbrated female office[23] of nurturer. The essence of her femaleness, to be "soft and yielding, to lengthen life by nourishing others" was heightened.

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23. To paraphrase Fortes: "office," subsuming both status and role, means "calling, occupation, or life-task." It serves "instrumental or utilitarian ends," yet also has the "other dimension of duty and responsibility enjoined, sanctioned and above all symbolized in ceremonial or ritual forms placing it in the moral order" (Fortes:82).

• 843 She was "more sensitive, tender, and delicate," and more vulnerable to outside influences, both good and bad. For her goal of nourishing a beautiful child, her greater sensitivity gave her the means. Because of the physical unity of mother and child, her every sight, sound, touch, taste or smell, every thought and action reacted on the child. Out of compassion she sought out beautiful sights and avoided ugly ones; she behaved virtuously and tenderly. As the tonsure-chant put it:

> "A child's skin is as soft as cotton. His mother dares not eat hot-tasting foods lest they burn this tender skin and make him suffer. Awake or asleep, she is careful in sitting and reclining lest he be hurt inside. She is merciful, and sensitive for her child. His pain is like that of a tiny helpless bird being clubbed by savage hunters. She will not taste incompatible foods, nor the sweet nor the peppery, even though she thirsts for them...." (S.S.).

She took every opportunity to associate herself with words or actions which implied success in situations analogous to parturition. For instance, in order that her child would "come out" more easily she cooked and ate a lotus bud, carried by monks and chanted over, especially those used at the termination of Buddhist Lent, when the monks "came out" (ɔ̀k) of their sequestration (Textor:169-170).

The father, too, shared in the responsibility, for it took both a father and a mother to bring forth a child. Quarrels were avoided for they made for a quarrelsome child. A man was particularly enjoined to help by keeping his wife in a happy mood. The father's industriousness in collecting wood for his wife's post-partum fire made for an industrious child. As a good example for the child and for their own "merit," a pregnant woman and her husband chanted prayers (mon;skt:mantra) at night together before retiring. Thus their child would be "easy to raise" (Textor 1966:87).

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On the other hand, pregnancy was a period of uncertainty when a woman was easily upset emotionally. Because childbirth was "like a war" when a woman might die, "defeated by her pregnancy"(phaethong), she felt uneasy.[24] If she were frightened, her child's khwan would fly off in terror. The baby died in the womb if its khwan did not return. Because of increased sensitivity and vulnerability her elements and those of the baby were frequently thrown off balance. Wind easily entered through the thin skin of her stomach where she carried the unborn child. It caused pre-natal disorders all the way from queasiness and minor vomiting in early pregnancy to miscarriage and death. "A woman felt dizziness and numbness because of wind in the fetus. In a month she suffered a miscarriage."

A pre-natal pain that did not seem to be a labor-pain was diagnosed as the very dangerous naen, "a thick lump of blood and wind that moved quickly." As in other illnesses, element harmony was restored by medicines, holy water, and by modifications of diet.

Women knew of possible supernatural invasions of the womb during pregnancy. If a woman had beforehand lost a baby at birth or through miscarriage, and the body had not been properly buried, she might be seriously troubled by its restless ghost, fully as powerful, it must be remembered, as an adult's.

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24. The image of battle was traditional (cf. Anuman Rajadhon: 108). Phaethong (McF: 599), a combination of food craving and vomiting (Anuman Rajadhon:115) paralleled the dola-duka of Ceylon (cf. Obeyesekere), but without the hostilities built in by the Sinhalese.

843 [775] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phi tai thang klom, caused "the worst of all possible deaths." The phi krasu spirit,[25] entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). The supernatural disease missile called "khun" might also strike. "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extra pain occurring just before the baby comes out." To protect themselves, women wore extra talismans or had 7 dots tattooed under the arm.

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843 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 7 visible teeth, which indicated it was a non-human, yak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of woman giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (McF.48). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb sat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

Sometimes these aberrancies were viewed as desirable sources of supernatural power, but on other occasions, they were seen as a sign of demerit, caused embarrassment, and were suffocated at once (if alive), and buried. 845 847

If a woman died pregnant, her body was at once brought to the temple where the unborn child was removed surgically. The usual solacing sermon, rites "to lead the deceased to live in her right place in the next world," and cremation took place, with the fetus laid beside its mother so that it "would come out normally." The mother and child were separated to prevent a ghost which was double-powered. No prayers were chanted at home before exsection "lest they make the power of the spirit stronger." Moreover, any violent or premature death caused an angry ghost. The ghost of a premature child had a heavy load of sin, for its stay in purgatory, where sin was worked off, had been interrupted (Textor:262). An unscrupulous mɔ̄ was eager to get possession of any ghost for use in sorcery, and a double ghost was stronger than any other. Ghosts were obtained by plundering the mortuary chambers of the temple prior to cremation. By feeding (liang) it, a mɔ̄ controlled it. The ghost of a male infant was preferable because it was "stronger than that of a female." In the light of this situation, not only should the body of a pregnant woman never be left alone " so that no one can get at them (sic)," but a pregnant woman herself ought not to be alone.[26] The behavior towards the Rice Goddess, Mother Posop, who was "pregnant" when the grains in the stalk filled out, illuminated many of these attitudes: "Mae Posop feels weak, hungry, and uneasy. She is eager to taste sour and sweet foods. She is a woman and beautiful in her pregnancy." To allay her hunger the 845 766 [775] 845 775 754 775 843 782 [754] 843 782 776

26. In Cambodia, a pregnant woman might be murdered, even by her husband, so that the murderer might gain the malevolent power that possession of her now double soul would afford. (E.R.E. "Cambodia": p.159). This specific statement was not found in Bang Chan but might be part of the shadowy background to local reluctance to leave a pregnant woman alone. [171]

1: Hanks E-5 (1953-1954) 1964 . AO7 Central Thai AO7

843 782 776 farmers brought to the fields an offering of two kinds of bananas (kluai hŏm and kluai namwâ), sugar cane, taro, young coconut and cakes; and fresh earth burned and offered with oranges and other kinds of fruit."[27] She was also given the things "dear to women": new clothing, perfume, face-powder, hair lotion and a mirror. In the annual harvest ritual, when some woman (never a man) escorted the Goddess from the field to the rice bin, participation was forbidden to a pregnant woman because "the Goddess-Mother might be jealous of the woman's heightened beauty" and so be malevolent. Also, "being now emotionally weak and easily upset, a woman might be frightened by seeing the Goddess, who, after all, is close to being a spirit (phî).

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843 262 The prominence of food cravings in this traditional description leads to a consideration of diet in pregnancy.

Diet in Pregnancy[28]

As long as everything went well, pregnant women "ate as usual." The underlying premise was that each woman early in childhood had established a regular diet suitable to her individual make-up of elements, and eliminated foods that because they did not agree with her or were disliked, were judged "not compatible." A woman could eat as usual because the ordinary daily foods, rice, coconut, etc., were "safe." The modifications introduced to beautify and protect the mother and baby were made on the basis of the properties and

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27. The goddess was following traditional "defeated by one's pregnancy" (phêethông [Mc.F: 599]) symptoms of desiring "sour, salty, or strange things such as burnt earth." Like any woman, her craving for sweets indicated that a heavenly creature was to be born; for fruits, that she would bring forth an animal; for burnt earth, that the god Brahma would be born (Anuman Rajadhon 1961:115-116).

[114] 28. This section does not purport to present a dietary study in modern nutritional terms. Hauck's study (1959) of maternal and child health gives information on foods eaten, craved, disliked, or viewed as "good for" or "not good for" women during child-bearing, and also on illnesses found among pregnant women, including beri-beri, nausea, cramps, and fainting. The data here add to her information on behavior and stress traditional views as to the purpose of the dietary injunctions.

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qualities of foods. Chili peppers were avoided because they "burned the baby's skin." The cooling kluai namwa banana ensured a cool-tempered child. The fact that one woman ate cobra curry and suffered heat, while another took it comfortably, indicated, however, that what was bad for one might not be bad for another. Individuality of constitutional make-up explains why views varied considerably on proper diet in pregnancy and lactation (cf. Hauck 1959:2,16). Those who were eying urban ways added to the variety by occasionally following modern medical advice. A schoolteacher, for instance, ate eggs regularly and during pregnancy----not the "old way."

Women were urged to eat a great deal for they were eating for 2.[29] Cravings were not compelling, but to increase food intake, preferences were indulged, even when involving out-of-season fruits, expensive, or "dangerous" items (Hauck, 1959:14).[30] "A pregnant woman can eat any kind of food because she is sailing on a tremendous ocean [a traditional phrasing, cf. Anuman Rajadhon:108)]. No one can predict whether she will live or die. One wants to eat chicken and kills it herself. Another has dreams and nightmares about craving certain food." She who flouted the Buddhist prohibition on taking life and killed a chicken to eat was not critisised. She was shouldering

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29. "To increase the appetite" was of frequent concern (cf. Hauck, 1959:27, and Sharp et al., 1953:256-260). Food in quantity and the appetite to consume it was one of the main props of social relationships and of personal security (L.M. Hanks, 1963). [571]

30. Some of the likes and dislikes mentioned turned out to be a recitation of the traditional food injunctions set down in the old "textbook," Promcindas, quoted by Phya Anuman Rajadhon (116). That fresh fish tastes and odors were the most frequent dislikes (Hauck, 1959:14) should be seen alongside the following "symptom of pregnancy sickness: if the mother desires to eat meat and fish and raw things----a creature of hell has come to be born" (ibid:116). Such an idea might well discourage the eating of fresh fish and underlie Yong Chutima's statement that "women were supposed to eat less meat than men" (quoted in Hauck, et al.,1958:42), and found as a prevalent attitude in Cha Chung Sao (H.M.H.). The out-of-season fruits, Chinese noodles (an expensive or party fare) and hot foods (dangerous) fit certain craving-categories of Obeyesekere (pp. 338-339).

843 262 [184] sin for the sake of nourishing the child. Some Thai village women followed a local Chinese belief that eating a female chicken gave strength during pregnancy. Eating a rooster, though, caused miscarriage through "estopic gestation." Thai Muslims recommended chicken whole-heartedly.

843 278 Medicines

Beginning early in pregnancy, one or more kinds of medicine (yā) were taken. These hot-tasting medicines of ginger, galanga, pepper, and such in 28 per cent alcohol were either bought from the big selection at a Chinese drugstore, or were made up at home from alcohol or water and an envelope of ingredients. A woman made the choice herself with the advice of experienced persons. Even the Muslims who ordinarily frowned on alcohol permitted their women to take it at this time. A few women, though, said they "did not like to get drunk," so took their medicines in hot water. The quantity varied from two to six spoonfuls per day, with big increases as delivery approached, e.g. "two big cups a day of it during the ninth month."

The primary purpose of medicine was to increase the appetite, but there were other reasons. Fragrant Medicine (yā hauaum) cured wind. One Muslim midwife's mixture "stimulated the amniotic fluid." Other preparations had more general objectives. One label advertised "strength and good blood to men and beauty to women;" another promised to "maintain the mother's body and make the inner organs do their work properly" (H.M.H.).

In the last months, the reason for the medicines was to build up the body's heat. This purpose was not affected by hot tastes, which burned but did not necessarily raise the heat, but rather by alcohol, cobra, and specific decoctions. A label cautioned, though, "Not to be used by pregnant women with fever," lest the increment of heat be excessive. Snake Brand medicine, an exceedingly hot concoction used primarily post-partum, was occasionally taken in mild dosage during pregnancy. (Used full strength it caused miscarriage, so was rumored to induce abortion). The heat raised the body's temperature far above the ordinarily desired coolness so as to implement birth.

844 826 The Physiology of Birth

At parturition the body's usual needs were reversed. The child could not be ejected under the normal, cool condition of the body. The pushing and pulling winds inside the body that ordinarily circulated slowly had to be

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speeded up with heat to the point of blasts. The strength of the contractions of labor was in direct proportion to the speed of the winds' circulation. The great pushes of the expulsive lom beng "broke down" the sac with the amniotic fluid (nam thūn hua: water-that-supports-the-head-of-the-child), and forced out the child, water, and the placenta.

After the child was out, the mother was cold, weak, and exhausted. Her uterus was full of harmful fluids. Heat was needed more than ever not only to warm her but to give the winds "the power and push" to drive out three undesirable birth-waters: "The blood that looks like ordinary blood but is bad,"; the amniotic and abdominal body water (nām khram:refuse water); and the pale, viscous, repugnant "fish-water" (nam khāo plā). Therefore, a hot fire was built, close to which the mother lay (yu fai), turning all sides of her body towards the flame. She bathed in or drank hot or warm boiled water (nam suk: cooked, or ripe, water). She ate safe foods like rice and dried fish,[31] and kluai nam bananas, continued to take alcoholic medicines of the hottest sort, such as Snake Brand, and occasionally might be given cobra or other hot curries to eat. For a first-born, a woman stayed eleven or nine days by the fire (always an odd number), with stays shorter for each successive child, but never less than five days.

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Complications sometimes developed because of inadequate control of the heat. A "headache and a hot body" indicating "stagnation of the blood and the fishy-smelling-water," was cured by a heat-producing decoction. Rashes often occurred, causing small boils that might develop into sores. To soothe these, turmeric was painted on. In the most dangerous cases the heat "drove the bad blood to the heart, to the face or belly" where it was recognized by serious swelling, with resulting madness or death. In fact, one mō felt that the

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31. The reasons for rejecting fresh fish during pregnancy ("lest a creature of hell be born") would not hold after parturition. Yet fresh fish was rejected then too "as bad for the womb." One suspects that the less odorous dried fish was substituted so that the odor of fresh fish, like air-borne, incompatible food, would not affect adversely the "fish-smelling" post-partum discharge (nam khāo plā). In Hauck's list of foods "bad for mother during the post-partum rest," the reasons are apparent: Sour tastes did not dry out the body, but built up water; egg was too cooling; jackfruit brought in wind; glutinous rice and the sugar of sweets "wet the uterus;" fruits did not give strength and were excessively cooling (cf. Hauck,1959:18).

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Chapter IV

THE BIRTH OF A CHILD

843 [592] [342]

Dūan and her husband, Song, had a 2 year old son, Chai.[32] They lived and worked with her widowed mother, Lek, and her unmarried sister, Mī. The comfortable house stood high on piles, surrounded by rice fields. On a nearby mound lived Sāi, 60 years old and full of energy, the youngest sister of her grandmother.

Now Dūan noticed that again her menses had stopped. Her mother had described before her marriage what this meant. With happiness in her eyes, as the first time, she told her husband, then her mother, and at the first opportunity, her husband's parents. There was no reason to keep her pregnancy secret. Since she and Song would be happy to have either a boy or a girl, she did not seek out the ritual means which existed to induce a child of a particular sex.

During the months of anticipation, Dūan worked along as usual in farming and house-keeping. Lek reminded her of prudent behavior. "Women are easily upset when pregnant. It is up to you to put yourself in a cheerful mood. Everything you do will affect the infant in your womb. If you see a scarred person, your child will be scarred. Be calm, look only at pleasant things and avoid jerky motions. Do not overeat, lest the child be a glutton. If you sleep during the day and are inactive, you will also have a lazy child. Some girls are trying to be like Bangkok people, pleading that they cannot do heavy work in the last few weeks of pregnancy, but that will cause a difficult labor."

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To increase her appetite, early in her pregnancy Dūan visited a Chinese pharmacist to get medicine. He had so

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32. This account puts together data from several informants. Particularly illuminating phrasings are quoted exactly, over and above the conversations, which, though fictionalized, are also direct transcriptions.

843 278 many kinds she hardly knew which to choose. He also had all-purpose kits for mother and baby, even one with 14 different kinds of medicine "to control the body's temperature and keep the organs functioning"(H.M.H.). She decided on one of the favorites, pickled medicine (ia dawaung), and from then on took a spoonful twice a day. She avoided all peppery-hot foods which would "damage the delicate complexion of the infant in the womb, burn off its hair, and maybe even kill it." Some women said they craved sweet, hot, or sour foods, but Dūan did not. A friend who had never eaten cobra curry so longed for its hot taste during her pregnancy that her mother gave her a small dish. She could not resist secretly finishing the whole pot! What heat and sleeplessness! To cool herself, she had sat in the canal. The baby, saved only because its mother drank the water from a young coconut fruit, "could resist the cobra heat because it was 6 months along, but even so, it shed its skin at birth." But another woman, pregnant 7 months with her third child, also craved cobra curry, ate a lot, and said she did not feel hot. Nothing at all happened! The second woman was nearer to delivery, so stood the heat better, but more important, each individual was different. Because of virtue and sin in former lives each woman--and man, too--was born under different astral confluences and had lived and suffered differently.

843 262

843 759 About the seventh month, Dūan pondered who should help her at her delivery. Some of her friends were delivered by their own mothers, but Lek had undertaken the delivery of another daughter's child, and the baby had died in an hour. Dūan suspected that her mother, therefore, would prefer not to do it, and knew that she herself would feel uneasy. So she decided for safety's sake to ask a midwife. She and Song could well afford the ceremonial offering with its customary 20 or so baht, even though the midwife said it was "as you please." A great many women never consulted with a midwife beforehand at all, but just sent word to the nearest one when the pains started or when trouble was encountered. Midwives varied in their capabilities, however, and Dūan wanted not only a good one but someone she knew well. Muslim midwives were said to be skilled, but they happened to live too far from her. Dūan decided to ask her elder aunt, Sāi, who was a well known midwife. Everything was right about Sāi She had experienced hands, a true desire to help, and effective magic; and she was a relative. Best of all, her own babies had eaten and slept well, had cried little, and now were grown to maturity. With such proof of merit, capabilities, and fortunate relations with supernatural powers, what better person to help Dūan start her baby on its earthly existence? Actually, if something happened, and Sāi could not come, Dūan knew she would not be alone or unassisted. Almost every woman, and quite a few men, had

seen childbirth not once, but many times, so willing hands abounded. So, one day, Dūan went to Sāi. "Will you help me, and come when I call you? Please do not go far at that time." Sāi agreed, knowing in her heart she had expected to care for Dūan. No day could be calculated because the baby decided when to be born. Dūan came home very fast, for doing so would help ensure a fast delivery.

As the weeks passed, Song, the new child's father, collected outside the house a great cone of sakāe firewood from their land. This wood was for the post-partum fire beside which Dūan would lie for many days. As the fire had to be very hot, a great deal of wood was needed, all to be collected beforehand. Song also covered the outside of the pile with thorny woods to keep away evil spirits. On her part, Dūan knew that everything needed for delivery was ready in the house as part of the regular household staples or utensils. Nothing need be bought except possibly a little Borneo camphor to mix with lemon grass for faintness, and alum. The midwife should never bring anything with her because it was essential to use what was in the house. Anything lacking could be quickly borrowed after the pains started. The little cushion on which the baby was to lie was cut, and half-filled with kapok. It was not sewn up, lest it induce by example a closed-up exit from the womb, or suggest a mal-placed or deformed baby which had to be delivered onto a pillow. No one wanted to prepare for such an unhappy event. No clothing was bought for the child ahead of time for then the child might die, and all would have to be destroyed.

Dūan felt at ease and yet somewhat frightened at the prospect of the pain ahead. At an ordination she attended one night she listened again to the chant she had heard many times:

> "In childbirth a woman has pain all over her body...She is losing her soul and feels so frightened, despairing, and suffering that she throws herself up and down from time to time as if her mind were terribly wounded by the poisonous arrow of a hunter. She is uneasy and moans loudly as if a big mountain had fallen down upon her, and she is supposed to wait for death. She does not recover even if massaged by someone. She does not think of her pain, but tries to save the child's life, when, after the pushing wind comes, he is born" (S.S.).

On other occasions she pondered the deep satisfaction of her maternal role, then laughed in recalling a crafty woman who

843
844 "faked labor pains to hold down her errant husband!" or so a sour mother-in-law said (Hauck,ibid.).

844
789 Finally, one day, Dūan felt uncomfortable and decided not to go out to plow. Lek prepared for her hot-tasting medicine. When Song came in at eleven from work, he went to the garden, to the little house of the family's protecting spirit (gān phra phūm), lighted incense and offered flowers, asking that it and the ancestors help his wife and keep away evil ghosts. He also prayed for help of the ancestors. Mī went to ask Sāi not to go far away that day and to ask in what exact direction to push over the woodpile. Sāi replied, "Push it over in the direction the snake lies today, so that Dūan and the wood lie parallel with their heads and its apex in the same direction to the north and east. Never let them be to the south and west." A passing boatman saw the wood go over. "There's news to tell!" he said. "The child is being born!" Dūan thought she ought to send away her little son, but he refused to go, and stayed by his mother the whole time. Song's sister came by for a visit, but stayed to help after getting word to their parents. It was no time for visitors, especially men, but any helpers, male or female, were welcome. Lek prepared the all-important ceremonial gift, the khwan khāo (soul-rice), for the midwife, which validated, and insured the use of, her private magic. She put a bunch of bananas, 7 betel pepper leaves, 7 areca nuts, flowers, incense sticks, a candle, and 20 baht into a bowl filled with dry rice grains. A little later she strung the holy thread around the 4 walls of the house. On each side she attached "yan," (Skr.: yantra). These protective cloths, about 10 inches square with magical letters and drawings, kept away the terrifying phī krasū spirits, seen as lights at night, who, attracted by bad smell and blood, would creep up the housepost, eat Dūan's blood, intestines, and faeces through her anus. Then Mī went again to Sāi to report that "the pain was increasing." These words were the signal to Sāi that it was time for her come.

[431]
[782]

As Dūan was to profit from the magic, it was better that she herself hand the midwife the khwan khāo bowl. Sāi lit the incense and offered the bowl in gratitude to the teacher who had given her her magic. She whispered in the direction of Dūan's head, "All good spirits in the high heavens and in the locality, help and do not obstruct at this delivery! Give happiness to mother and baby!" Placing the bowl on a high place to the side of Dūan's head, she said, "My teacher is long since dead, but will hear this request, and will pass the request and the khwan khāo to her teacher, and so on, back all those thousands

by instruction from a ritually[71] approached teacher. "One cannot accidentally learn. One has to ask to be taught." As a practitioner in this field, the title "mɔ̄" signalized expertise; where teaching was involved, the title was khrū (teacher [McF. 183]) or ācān (professor [McF.990]). Speech was the key to this tradition, in spite of sacred books and wall-carvings in the temples.[72] Modern education, being book-and-teacher based, shared in this aura. There, even today, listening is more comfortable than reading.

Techniques of the practical, natural world were learned not by teaching but pragmatically by observation, example and experience. Eyes were the key. "I know because I saw," said a midwife. At the highest level of achievement in the natural world one was expert (nak), e.g. convict (nak thōt, an expert in being punished) a tourist (nak thīeo, an expert in roaming around).[73] Within the natural world, an intense pragmatism reigned always emphasizing visual phenomena. People were keenly

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71. To speak ritually one held in the hand the trio of incense, flowers, and a candle. This was the way to cross over from the profane to the sacred world, to inform (bɔ̄k) or make a request of, a sacred being (a teacher, priest, king, or deity). The tiny flame of the offering invoked holy fire, and so had the effect of making one's words compelling, for no one could gainsay a request under such circumstances. A husband about to deliver his wife held incense, flower, and candle in hand as he requested the help of ancestors and spirits. (Bishop Pallegoix saved the existence of his mission by thus approaching the King [Pallegoix, Vol. 2:201]). The trio of offerings, whether at the 4 corners of the lying-in fire-floor, or in "bat phlī krathong" at a "tham khwan" rite, or even in an ordinary khwan khao made all actions and words compelling.

72. Because words, immaterial and invisable, lay at the base of occultism, words as continuous agents of power permeated Bang Chan's ordinary daily life. This was why words, verbal play, and punning initiated action: pregnant women attended the monks' "coming out of retreat" (ɔ̄k phansā) so that the child would "come out" (ɔ̄k) easily.

73. It should not be forgotten that most activities in the supernatural world had their technical sides, and the term "nak" was used there too. A curer had to learn his herbs; a dancer, his steps; and a master of ceremonies, the words of the chants.

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
571 the steps in the Buddhist winnowing ceremony and performed
[852] them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khāo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
[774] "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist,
[782] meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the poor. On the other hand, the Muslims had taken over many
[177] Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 Completely Muslim was the stress on physical and
[783] moral purification as an objective of every rite, and conversely, the prevalence of the idea of defilement.
[304] "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate pro-
[764] cedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before
[831] burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and
[834] contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality
[562] much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (fāk
[273] khong: to deposit gold). On returning home, she went as fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim mid-
795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclos-
[562] ed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khāo contained "7

262 888 understood that her merit helped her not to be hungry. Once she asked an eminent layman about eating at night. He said, "If you are not hungry, do not eat. If you feel hungry, it is better to eat. If someone invites you to eat, it is sinful to refuse."

261 Even young adults had a strong revulsion against gluttony. One of the symptoms of a man who went mad and had to be committed to an institution was that "he ate too much." A woman was despised because "she ate in secret. She stole eggs from her husband, sold them in the market, and then spent the cash on food which she ate there, instead of bringing it home." Definitions of a glutton were, "A 'with-rice' eater," or simply as "one who eats alone." These comments highlight the counsels of eating in moderation and in company. On the other hand, a full stomach was valued for "home is where one eats one's fill."

262 562 262 [220] [853] At maturity, when farm and other tasks were shared as equals, men and women ate almost the same food. The old proscription against animal food for women was somewhat relaxed, but not entirely. To sustain farmers during the seasons of hard work, however, extra quantities of rice and rice alone, were considered essential. "With-rice" was pleasant but not so necessary. Any shift away from a diet of rice as ordinarily cooked in Bang Chan was construed as a shift either in occupation or in health. For example an eminent citizen who gave up farming took to eating (3)khaaw (3)tom often. This soupy rice, a staple dish for infant feeding, had interesting socioeconomic connotations. It was served as a light lunch to cooperative farm-workers to be followed at the day's end by a real meal. It was also "delicate" food, suitable for the sick, for city-people, for those who did not toil with their hands and backs. Consequently, when this man ate this "delicate food" more often, he was consciously or unconsciously serving notice on the community that he was not going to do farm work any more, for (3)khaaw (3)tom could not possibly have sustained a farmer's strength. Caustic villagers hinted that he was putting on airs.

262 843 846 Among conditions in which some change from the usual diet was found were pregnancy, post parturition and lactation. Relatively few foods were generally considered to be tabooed under any of these conditions, but many women preferred to limit intake to "safe" foods if there were any possibility that certain foods might cause harm.

[124] Information was obtained from 42 mothers about the food they ate during the post-partum rest period. Two said they ate as usual, but for the remainder, the diet was considerably

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[192] 1. Literally "beautiful rice." For method of cooking, see p. 33.

262 curtailed. About half ate soupy rice rather than rice as
843 usually prepared. All ate fish, but over half ate salted
846 fish only, and about one-fourth ate fresh fish only. Rice and fish were apparently the only foods considered safe by all of these mothers. The only other food eaten by half or more of them was banana of the (4)nam-(4)waa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeaeng (1)liang, a broth made with dried fish, and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some. When asked what foods they considered good for a woman who had recently borne a child, no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the post-partum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

262 Fear of illness from eating incompatible foods after
846 child birth was rather strongly expressed by many informants,
753 even by some who knew of Chinese customs which were different
829 from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home in the village, were not forbidden at the government health and maternity center at Minburi.

126 The 45 mothers who were interviewed during lactation,
262 but after work had been resumed, ate more nearly the usual
846 diet than was the case during the post-partum rest period. As in pregnancy, the mothers apparently had no notion of special dietary needs during lactation, but foods considered undesirable during lactation were mentioned 27 times. The list included 12 kinds of food, and four attributes of food, i.e. sour and hot tastes, fermented foods and raw foods. No food was considered harmful by a majority of mothers, the one which occurred most frequently, jackfruit, being mentioned by 8 only of the 45 informants.

262 Reasons were seldom advanced for considering various
753 foods unsuitable for mothers or children. During pregnancy,
853 the hot-tasting foods, i.e. those made with chili, were said by one informant to injure the baby's complexion. When asked at what age a child could have adult food, mothers might say at one or two years, but often specified without giving a reason, that the child could have anything but the hot-tasting foods. A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby, 1 or 2 months old, ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana"[1] caused

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1. The type of banana most familiar to people in the United States.

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
Bang Chan

SUMMARY

124 Information on health, care, and diet of mothers and small
125 children in Bang Chan, Thailand, was obtained primarily by interview, although some direct observations were made. In general, three areas of inquiry were included in this study: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project.

In all, 66 mothers of young children were interviewed. Information on diet during pregnancy, postpartum, and lactation was obtained from women who were either in the stage under discussion or had only recently passed through it.

The description of child feeding practices is based on records obtained concerning 57 children from birth to two years of age, a majority of whom were visited from 5 to 7 times.

Information on growth in height and weight is based on observations made on 71 children, most of whom were weighed and measured 6 or 7 times. Observations were made for 30 of these children both before and after weaning.

843 During pregnancy most women in Bang Chan continued to eat as usual. A few expressed cravings for certain foods, and a minority thought some kinds of food should not be eaten during pregnancy.

846 During the postpartum rest period most women ate a very restricted diet. Rice and fish, with salt, were the foods considered by all informants to be appropriate for this period.

853 As a rule, diet during lactation, after the mother resumed her usual work, was the customary family diet. A minority of informants mentioned foods which should not be eaten by a nursing mother.

164 Evidence of the need to improve diets in this region was
146 provided by the occasional occurrence of beriberi or the history of beriberi among mothers as well as by medical inspection and family dietary studies.

853 Breast feeding was the rule in Bang Chan. For a majority of infants observed, breast feeding was continued into the second year, and some were breast fed for more than two years. Few received animal milk after weaning.

124 Information on growth in height and weight is based on obser-
125 vations of 71 children, most of whom were weighed and measured 6 or 7 times. For 30 of these children, observations were made both before and after weaning.

HEALTH AND GENERAL CARE OF MOTHERS

145 Information obtained on menstrual history of girls and women in Bang Chan has been reported previously (Hauck, 1956). The median and modal reported age at menarche was 15 years with a range from 13 to 19 years.

163 Most married women in Bang Chan had children, and of 438 pregnancies reported by 84 mothers, over 90 per cent resulted in live births (Hauck, 1956).

• 843 Clinical History and Complaints During Pregnancy.
164 Most of the women interviewed reported no history of disease which might affect, or be affected by, nutritional status.

Four women had a history of beriberi; 3, a history of malaria; and one had active tuberculosis of which she later died. In relation to the current pregnancy, 6 women had minor complaints such as nausea in early pregnancy, faintness, and leg cramps. The physician considered these as probably physiological. Of the 4 women with more serious complaints, one who said she had pain in the abdomen and legs and difficulty in walking had manifest beriberi when seen a few days after delivery.

844 Delivery and Care of Mothers After Childbirth.
846 Information was obtained from 49 mothers concerning
125 delivery and care after childbirth. For 43 of these women, ages reported were as follows:

Reported Age (years)	Number of Mothers
20 or under	7
21-25	11
26-30	13
31-35	8
36-40	6
over 41	1

The mothers interviewed had borne from 1 to 13 children. For 8 of them, this was the first child; but 25, a majority,

Exposure of Infants to Sunlight.

854 Even during the rainy season sunshine was usually abundant in Bang Chan, but taking a baby out of doors at an early age was generally thought to involve some risk. Many houses had low or wide eaves, and an infant was usually kept in a cradle in the house where sunlight could not penetrate. When old enough to hold up its head while sitting astride an older person's hip, the infant might be carried about the compound by parents or older siblings. As the question was worded ("When did you take the baby outside the house?" or "At what age did you take the baby with you when you went out for pleasure?") the answer did not mean that the baby was taken out with any degree of regularity at the specified age. Most of the babies in this series had been taken outdoors by the time they were 3 months old, but 4 were a year or older when first exposed to [144] sunshine. Nevertheless, the physician found no evidence of rickets among the infants he examined.

One informant, a school teacher's wife, said she thought that taking the baby into the sunshine was not harmful; in fact she believed it made the baby stronger than usual. She thought, however, that too much exposure to sunshine might "bring cold into the baby" and she spoke of the beret as a protection against this.[1] In Bang Chan, an otherwise naked infant might wear a beret when being taken out of doors.

MATERNAL DIET

Diet During Pregnancy.

843 Of 31 mothers who furnished some information on diet during 242 pregnancy, 17 were pregnant when interviewed, and the remainder [125] had young infants, in most cases under 3 months of age. Eighteen of the interviews were based on schedule 4 (Appendix p. 53) and provided fairly detailed information on the kinds of foods eaten. Other informants gave more general information, such as foods craved or disliked.

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[191] 1. Wellin (1956) mentioned the small woolen cap made or bought by mothers in the Valley of Ica, Peru, for the infant to wear. The cap was put on soon after birth and was worn, off and on, for many months. The function of the cap was to prevent the entrance of cold via the fontanel, which was defined as a particularly vulnerable point of entry. Wellin noted that all infants he saw in maternity wards in the Valley of Ica wore woolen caps.

In general, the diet during pregnancy seemed to be about the same as at other times. Rice cooked in the usual way (see glossary, Appendix p. 51) and fish of some kind formed the basis of the diet. A majority had green vegetables[1] either daily or frequently. Foods which seemed to be generally acceptable, although they were eaten less often, included vegetables other than green ones, pork, bananas, coconut, other fruit, fresh beef, and egg. 843 843 262

Eight women spoke of foods which they craved during pregnancy. Fruit in general, or specific fruits such as oranges, pomelo, guava, rambutan, and mangosteen, were most often mentioned. One woman said she craved Chinese noodles, and one, chilies.

When asked whether they disliked any foods during pregnancy, 5 women mentioned fish or the odor of fish, but in 3 instances the objection was limited to early pregnancy when the informants experienced some nausea. Three said they disliked vegetables, and one, hot tasting foods.

Four informants said that hot tasting foods (i.e. foods containing chili peppers) were bad for a pregnant woman; one considered dried and salted fish harmful "because of their fishy odor." One informant thought eggs were bad for a woman during pregnancy. Eggs were, however, the only food mentioned by anyone in Bang Chan as being good for pregnant women. The informant, a woman school teacher, said she ate them often anyway, hence did not alter her intake during pregnancy.

Diet During the Postpartum Rest Period.

Of the 43 mothers from whom we obtained information about the food they ate during the postpartum rest period, only 3 said they ate as usual. One of these said she believed that if a mother ate small amounts of many different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time. This woman worked outside the community and may not have acquired her belief about eating a variety of foods within the village. In any event, since her child died at five days of age, one would not expect this mother's eating behavior to have a liberalizing effect on the custom in 846 262

1. Most of the pregnant women were interviewed toward the end of the rainy season when swamp cabbage and (2)phag (2)ka-(2)cheed, the most popular leafy vegetables, were available. From our subsequent experience with the family dietary survey, one would expect that when canals were low, green vegetables would be eaten infrequently by pregnant women as well as by other members of the family.

Three reported eating eggs daily,[1] and about two-thirds of the women had them either occasionally or frequently. Animal foods other than fish or eggs were eaten infrequently by most nursing women.

Our questions about ideas concerning foods during lactation did not uncover any firmly established traditional behavior. No food was considered harmful by a majority of informants. In response to the question as to foods which should not be eaten during lactation, however, 12 kinds of food and 4 attributes of food (sour, hot tasting, raw, fermented) were mentioned 27 times. Jackfruit, the item which occurred most frequently, was mentioned 8 times, corn, 3 times, swamp cabbage and pork, twice each; other items such as legumes, beef, poultry, egg, pineapple, and chico, once only. When asked if they disliked any foods at this time 4 women mentioned a dislike for vegetables. One mother said that cooked foods (in contrast to raw ones) were good for a lactating woman. Our question about foods craved during lactation brought little response.

To sum up, the mother's diet during pregnancy and lactation often approximated the usual diet in Bang Chan. A few women said they craved certain foods during pregnancy and some mentioned foods disliked at that time. A number of food items and attributes of food were considered by some informants to be undesirable during pregnancy and lactation, but no item was mentioned so frequently as to be considered tabooed. During the postpartum rest period, however, a greatly restricted diet was common. Mothers apparently had no idea of special dietary needs during pregnancy or lactation.

FEEDING PRACTICES FROM BIRTH TO TWO YEARS OF AGE

This description of feeding practices is based on 256 interviews concerning 57 infants and small children. The majority of them were visited from 5 to 7 times each. Since, insofar as possible, we saw the babies at 3-month intervals, changes in feeding practices will be described by 3-month periods or multiples thereof. If each visit to a child is considered as unity, the 8 age groups from birth to two years included from 17 to 41 children each with 6 of the age groups including more than 30 individuals. Thus the data obtained may be assumed to provide a reasonable picture of baby feeding practices in Bang Chan, 1952-54, and of significant deviations therefrom.

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1. This does not mean that the mother ate a whole egg at one meal. Frequently one or two eggs might be used to prepare food for the entire family.

262 843 Reasons were seldom advanced for considering certain foods unsuitable for mothers or children. During pregnancy the hot-tasting foods, i.e. those made with chili, were said by one informant to injure the baby's complexion. When asked at what 262 855 753 age a child could have adult food, mothers might say at one or two years but often specified, without giving a reason, that they could have anything but the "hot-tasting" foods (foods seasoned with chili). Two mothers said the child could have "hot tastes" at one year, whereas one said not until the child was 3 years old. A majority did not specifically mention hot tasting foods either to include or to exclude them.

853 A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby 1 or 2 months old ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana", (3)kluaj (5)hausum[1], caused constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

753 The belief that eggs would cause dental caries and should 262 therefore be omitted from children's diets was expressed by the 853 mother in a poorly nourished family of low economic status.
855

862 Opinions varied as to when children could be given "adult food". This was often, but not always, the age considered appropriate for weaning. As the question was worded it apparently implied that the child "could eat food as prepared for adults in the family" and did not necessarily exclude breast feeding, since children who "could have adult food" might still be nursing. The age at which a child could have adult food was sometimes related to stage of maturity as "when he can sit", "when he has teeth", or "when he can say (1)plaa (fish)".

262 Traditional and Modern Concepts of Rice Versus "With-Rice" in the Diet. - Rice is not only the basis of the adult diet in Thailand, but it has traditionally been regarded as the strength giving food par excellence. A portion of Chutima's (1939) description of the "old system" of diet follows:

> "Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal.

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1. The type of banana most familiar to people in the U.S.A.

779 family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

84 A soul desiring rebirth flew into the womb of a woman at
[775] conception. By care and imitative magical practices, both
[774] parents helped the fetus grow but the mother gave the baby its
[789] body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of
846 several days was taken beside a hot fire, the purpose of which
392 was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman.
793 The comparable ceremony of maturation for men, when they too
789 were changed from "raw" to mature, compassionate, and strong
562 males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to
[688] nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

• 844 This view of the role of women in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

[128] New careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

128 The understanding of, and the attitudes toward, modern
844 medicine are given along with findings accounting for
846 acceptance or rejection of modern hospital care for parturients.
369 Accepting the changes that were observed in the practices
178 surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

000 For persons interested in introducing changes in the

278 [563] The Chinese druggists, many of whom stocked among their traditional pharmacopeia a few modern medications, gave out occasionally to their customers information derived from the manufacturer's instructions for use. People with minor indispositions sometimes sought a druggist's advice. He suggested traditional or modern remedies, depending on the wishes of the customer. Thus, the druggists also acted as a bridge to the use of modern remedies.

484 Facets of Social Life Pertinent to Childbearing:

Communication and Transportation

People went to Minburī, and less often to Bangkok, to buy, sell, work, or visit relatives. A few adults had never been outside Bang Chan.

494 [484] [206] [493] Along the road buses passed Bang Chan every two or three hours during the daytime only. Minburī was a ten minute ride, Bangkok, an hour. Minburī had no taxis, and no telephone existed to call a taxi from Bangkok. Two or three persons owned bicycles.

505 484 Within Bang Chan, transportation varied with the season. From June to February travel was entirely by boat, even to a neighbor. A message to a local midwife, for instance, could be carried quickly by a speedy peddler in his skiff. If an emergency trip to the Minburī Health Center appeared necessary, a person could be rowed fairly comfortably along the canal that bordered the road. Going by boat to Bangkok, a whole day's row away, or four hours by the motor boat from Minburī, was not considered convenient even for passenger traffic, much less for a sick person or a woman in labor.

484 844 [494] The inconvenient time of year was the three month dry season. Boats then could hardly go on the canal that ran through the middle of Bang Chan, while the smaller canals became muddy or even dry. Walking barefoot over sharp stubble in tropical sun was hard. To transport a woman in labor, assuming she could stand it, an improvised stretcher could be made, but to subject her to the jolting bus was usually foolhardy. It was not customary to flag down passing cars. If things went wrong for a woman in labor during the hot, dry season, there was practically no chance of getting her to a hospital, and none of getting modern help to her.

243 433 Work Habits in the Economy

Because of the annual flood the land was admirably suited to growing a single bounteous crop of rice. After all needs for

close touch with each other's activities and needs.

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time.

Wealth Differences:

Way of Life

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable.

Housing

342 The type of house, whether big or lowly, made a difference in the comfort and care of women. The big houses were teak-paneled and floored with a good roof of thatch, tile or corrugated iron. Their high piles insured dryness during flood season. The sleeping and living space was a single airy open room, often with one or two sides balustraded rather than solid, and protected from the weather by the roof's overhang. The kitchen was sometimes a separate room. There was always one small enclosed room, perhaps ten feet square, or larger, with a door and a window. This room was used for keeping valuables under lock, and whenever privacy was desired: as a marriage chamber for bride and groom, or as a quiet room for a senile parent. Because of its almost solid walls, it was poorly ventilated and hot. Childbirth took place in this little room, if convenient, or out in the main part of the house. The fire-rest was in this room so that the dreaded wind could be kept out. [844]

342 The poor lived in modest earth-floored cottages of bamboo 184 frame, thatch sides and roof, with one or two raised wood plat- 352 forms for sleeping and sitting. In the rainy season, these 844 cottages could be damp. In fact, one October the water was observed ankle deep inside a house, and the wife splashed around at her chores. Under the latter conditions, a woman in childbirth would be moved to some kinsmen's house. Delivery took place on one of the sleeping platforms, and post-partum rest was on a plank raised off the earth floor, unless space permitted that the plank and temporary fire-floor be placed on the platform. On one observed occasion reed mats as protection from drafts were temporarily set up, making an enclosure about three feet high within which a mother lay in her post-partum rest period.

Cash

434 426 [556] Cash was short to everyone. The poor felt very poor and the rich did not feel rich. This was because the rice-money, which came in a lump sum once or twice a year, was at once turned over to clear debts, to make large purchases of agricultural equipment, to repair the house, or to perform elaborate ceremonies. What was left over was not kept around the house for day-to-day expenses for fear of robbery, but was immediately loaned out. Thus cash was not available for emergencies 434 which in childbirth might mean taxis or hospital care. Being 844 rich or poor made little difference in Bang Chan, however, as 556 to the quality of the obstetrical help given.

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 50 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygynous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap.V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

828 753 or fainting, and also such localized trauma as abcesses. Similar behavior followed the influence of malevolent magical amulets, incantations, and love magic. Natural intrusions may be exemplified by the seasonal influences of rain, which brought on too much water element; of heat, which increased fire; and of wind, which cooled too much or brought in certain fevers, e.g. north fever (khai nüa). An accident was a natural cause of disequilibrium. A cut might let out the air or a soul.

774 [116] [953] Any lost soul, if not restored, meant death. Souls were lost from falls or frights or from spirit attack, a condition recognized by persistent crying, hysteria, and unconsciousness. The exits were at the top of the head, the palms of the hands, and the soles of the feet, the latter 2 sometimes localized at the 2 thumbs and the 2 great toes. One of the old beliefs associated an element with one of the four čhŭttaphŭt souls (Textor:130). When one of these souls was lost one whole element was gone. Loss of the khwan soul was more frequent than any other, especially during childhood. Its care [844] throughout life was very much in mind. The khwan[18] played an especially prominent part during childbirth.

755 [262] [757] If a person were only slightly sick, he might first try to overcome his physical complaint by attention to diet. Very rarely did he by himself buy some medicine at a drug store. If it were a case of a child's lost khwan, women performed the rite for its recovery. When the khwan of an adult was affected, man performed a strengthening rite (than khwan), or a priest gave a holy water bath. If the person were very ill, holy cotton thread (sāi sin) was tied at wrist, ankle, and neck so as to shut off the soul exits. An elder relative or spouse might also "bon," i.e. vow food or liquor in return for the help of supernatural beings; or, with Buddhist "sacred things" in mind, promise the ordination of the afflicted person, or oneself, or some interested relative. In this case, the relatives had long since turned for help from the arts of medicine.

278 755 The Arts of Medicine

Medical knowledge comprised on the one hand a pharmacology of materia medica, and on the other, the far more important

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18. The conceptualization of this soul was Brahmanic in source, rather than Buddhist (cf. Martinie, 1952:370).

843 262 [184] sin for the sake of nourishing the child. Some Thai village women followed a local Chinese belief that eating a female chicken gave strength during pregnancy. Eating a rooster, though, caused miscarriage through "estopic gestation." Thai Muslims recommended chicken whole-heartedly.

843 278 Medicines

Beginning early in pregnancy, one or more kinds of medicine (yā) were taken. These hot-tasting medicines of ginger, galanga, pepper, and such in 28 per cent alcohol were either bought from the big selection at a Chinese drugstore, or were made up at home from alcohol or water and an envelope of ingredients. A woman made the choice herself with the advice of experienced persons. Even the Muslims who ordinarily frowned on alcohol permitted their women to take it at this time. A few women, though, said they "did not like to get drunk," so took their medicines in hot water. The quantity varied from two to six spoonfuls per day, with big increases as delivery approached, e.g. "two big cups a day of it during the ninth month."

The primary purpose of medicine was to increase the appetite, but there were other reasons. Fragrant Medicine (yā hauaum) cured wind. One Muslim midwife's mixture "stimulated the amniotic fluid." Other preparations had more general objectives. One label advertised "strength and good blood to men and beauty to women;" another promised to "maintain the mother's body and make the inner organs do their work properly" (H.M.H.).

In the last months, the reason for the medicines was to build up the body's heat. This purpose was not affected by hot tastes, which burned but did not necessarily raise the heat, but rather by alcohol, cobra, and specific decoctions. A label cautioned, though, "Not to be used by pregnant women with fever," lest the increment of heat be excessive. Snake Brand medicine, an exceedingly hot concoction used primarily post-partum, was occasionally taken in mild dosage during pregnancy. (Used full strength it caused miscarriage, so was rumored to induce abortion). The heat raised the body's temperature far above the ordinarily desired coolness so as to implement birth.

• 844 826 The Physiology of Birth

At parturition the body's usual needs were reversed. The child could not be ejected under the normal, cool condition of the body. The pushing and pulling winds inside the body that ordinarily circulated slowly had to be

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speeded up with heat to the point of blasts. The strength of the contractions of labor was in direct proportion to the speed of the winds' circulation. The great pushes of the expulsive lom beng "broke down" the sac with the amniotic fluid (nam thūn hua: water-that-supports-the-head-of-the-child), and forced out the child, water, and the placenta.

After the child was out, the mother was cold, weak, and exhausted. Her uterus was full of harmful fluids. Heat was needed more than ever not only to warm her but to give the winds "the power and push" to drive out three undesirable birth-waters: "The blood that looks like ordinary blood but is bad,"; the amniotic and abdominal body water (nām khram:refuse water); and the pale, viscous, repugnant "fish-water" (nam khāo plā). Therefore, a hot fire was built, close to which the mother lay (yu fai), turning all sides of her body towards the flame. She bathed in or drank hot or warm boiled water (nam suk: cooked, or ripe, water). She ate safe foods like rice and dried fish,[31] and kluai nam bananas, continued to take alcoholic medicines of the hottest sort, such as Snake Brand, and occasionally might be given cobra or other hot curries to eat. For a first-born, a woman stayed eleven or nine days by the fire (always an odd number), with stays shorter for each successive child, but never less than five days.

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Complications sometimes developed because of inadequate control of the heat. A "headache and a hot body" indicating "stagnation of the blood and the fishy-smelling-water," was cured by a heat-producing decoction. Rashes often occurred, causing small boils that might develop into sores. To soothe these, turmeric was painted on. In the most dangerous cases the heat "drove the bad blood to the heart, to the face or belly" where it was recognized by serious swelling, with resulting madness or death. In fact, one mō felt that the

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31. The reasons for rejecting fresh fish during pregnancy ("lest a creature of hell be born") would not hold after parturition. Yet fresh fish was rejected then too "as bad for the womb." One suspects that the less odorous dried fish was substituted so that the odor of fresh fish, like air-borne, incompatible food, would not affect adversely the "fish-smelling" post-partum discharge (nam khāo plā). In Hauck's list of foods "bad for mother during the post-partum rest," the reasons are apparent: Sour tastes did not dry out the body, but built up water; egg was too cooling; jackfruit brought in wind; glutinous rice and the sugar of sweets "wet the uterus;" fruits did not give strength and were excessively cooling (cf. Hauck,1959:15).

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seen childbirth not once, but many times, so willing hands abounded. So, one day, Dūan went to Sāi. "Will you help me, and come when I call you? Please do not go far at that time." Sāi agreed, knowing in her heart she had expected to care for Dūan. No day could be calculated because the baby decided when to be born. Dūan came home very fast, for doing so would help ensure a fast delivery.

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As the weeks passed, Song, the new child's father, collected outside the house a great cone of sakāē firewood from their land. This wood was for the post-partum fire beside which Dūan would lie for many days. As the fire had to be very hot, a great deal of wood was needed, all to be collected beforehand. Song also covered the outside of the pile with thorny woods to keep away evil spirits. On her part, Dūan knew that everything needed for delivery was ready in the house as part of the regular household staples or utensils. Nothing need be bought except possibly a little Borneo camphor to mix with lemon grass for faintness, and alum. The midwife should never bring anything with her because it was essential to use what was in the house. Anything lacking could be quickly borrowed after the pains started. The little cushion on which the baby was to lie was cut, and half-filled with kapok. It was not sewn up, lest it induce by example a closed-up exit from the womb, or suggest a mal-placed or deformed baby which had to be delivered onto a pillow. No one wanted to prepare for such an unhappy event. No clothing was bought for the child ahead of time for then the child might die, and all would have to be destroyed.

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Dūan felt at ease and yet somewhat frightened at the prospect of the pain ahead. At an ordination she attended one night she listened again to the chant she had heard many times:

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> "In childbirth a woman has pain all over her body...She is losing her soul and feels so frightened, despairing, and suffering that she throws herself up and down from time to time as if her mind were terribly wounded by the poisonous arrow of a hunter. She is uneasy and moans loudly as if a big mountain had fallen down upon her, and she is supposed to wait for death. She does not recover even if massaged by someone. She does not think of her pain, but tries to save the child's life, when, after the pushing wind comes, he is born" (S.S.).

On other occasions she pondered the deep satisfaction of her maternal role, then laughed in recalling a crafty woman who

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844 "faked labor pains to hold down her errant husband!" or so a sour mother-in-law said (Hauck,ibid.).

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789 Finally, one day, Dūan felt uncomfortable and decided not to go out to plow. Lek prepared for her hot-tasting medicine. When Song came in at eleven from work, he went to the garden, to the little house of the family's protecting spirit (san phra phūm), lighted incense and offered flowers, asking that it and the ancestors help his wife and keep away evil ghosts. He also prayed for help of the ancestors. Mī went to ask Sāi not to go far away that day and to ask in what exact direction to push over the woodpile. Sāi replied, "Push it over in the direction the snake lies today, so that Dūan and the wood lie parallel with their heads and its apex in the same direction to the north and east. Never let them be to the south and west." A passing boatman saw the wood go over. "There's news to tell!" he said. "The child is being born!" Dūan thought she ought to send away her little son, but he refused to go, and stayed by his mother the whole time. Song's sister came by for a visit, but stayed to help after getting word to their parents. It was no time for visitors, especially men, but any helpers, male or female, were welcome. Lek prepared the all-important ceremonial gift, the khwan khāo (soul-rice), for the midwife, which validated, and insured the use of, her private magic. She put a bunch of bananas, 7 betel pepper leaves, 7 areca nuts, flowers, incense sticks, a candle, and 20 baht into a bowl filled with dry rice grains. A little later she strung the holy thread around the 4 walls of the house. On each side she attached "yan," (Skr.: yantra). These protective cloths, about 10 inches square with magical letters and drawings, kept away the terrifying phi krasū spirits, seen as lights at night, who, attracted by bad smell and blood, would creep up the housepost, eat Dūan's blood, intestines, and faeces through her anus. Then Mī went again to Sāi to report that "the pain was increasing." These words were the signal to Sāi that it was time for her come.

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As Dūan was to profit from the magic, it was better that she herself hand the midwife the khwan khāo bowl. Sāi lit the incense and offered the bowl in gratitude to the teacher who had given her her magic. She whispered in the direction of Dūan's head, "All good spirits in the high heavens and in the locality, help and do not obstruct at this delivery! Give happiness to mother and baby!" Placing the bowl on a high place to the side of Dūan's head, she said, "My teacher is long since dead, but will hear this request, and will pass the request and the khwan khāo to her teacher, and so on, back all those thousands

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of generations, to the hermit Phra KhulĪmān, who first discovered this magic. He got it from Phra In (Indra). He will make it good."

Dūan was sitting in the main part of the house. Her mother was seated behind her, arms under Dūan's arms, pressing down on the abdomen with every pain. She, Song, and others had taken turns thus supporting Dūan's back all afternoon. Dūan hoped it would not be like the first time when she had screamed with the pain of the tender spot where they constantly pushed. Their toes, digging into her thigh, also had left large bruises. Some women in the area had tried arm ropes, hung from the ceiling, on which to pull, and some women tried lying flat, but sitting while someone pressed was the usual way. Sāi examined Dūan, and announced that labor was not very far along. She moved Dūan around so she faced another direction. "No wonder you are having a hard time," she said. "Your feet were pointing toward the <u>sān phra phūm</u> spirit house and you were not properly in line with today's direction of the celestial prince-snake (<u>Chao Nāk</u>). By turning you thus, the baby will be born with, and not against, the scales that lie on the <u>nāk's</u> back. The snake's direction differs each hour of the day, each day in the week, month, and season in the year. Today is Monday, so your head must be in the east, but Sundays, for instance, it must be to the north. You must also not face the Great Ghost (<u>phī lūang</u>).[33] Another being to respect is the <u>Chao Krung Phā Li</u> (cf. Textor:487-490). Offerings to him must be at the feet or sides. If offered at the head, he would be angry at your disrespect, and you would have a fever and a terrible time. My grandfather taught me this from his Pali book. His was more accurate than the books in Thai one sees in the market."

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Song was asked to boil up several kettles of water using this <u>sakāi</u> wood. Husbands always did that. "I was recently asked," said Sāi, "to help at a woman's fourth child. I had been there for all the other 3, and for every one her husband was absent, gambling, I heard. He said he did not want to stay there because it was an awful sight. So it is, but there must be a man around, the husband; if he is dead, or gone, then a father or brother. I refused to accept that case because of the husband's neglect."

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The winds that circulated in Duan's body were not speeding

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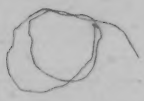
33. Textor (378,423) relates that it makes a complete circle of all directions throughout 24 hours, and its direction of the moment must be avoided.



• 844 fast enough to break the amniotic sac. Sāi made her a
[278] medicine of mung bean and sugar, both of which wet the uterus, and murmured some magic words to help. Later she worked with her hands at the vagina, twisting the sac a bit to break it. Suddenly the sac ruptured.

Now the child was almost there. The head showed well. Sāi sat down directly in front of DÛan to do the pressing herself. With one hand she held or gently pulled on the
[789] baby, with the other she pressed on the abdomen with every contraction. As she started in, she said magic words. She worked for an hour--no midwife would press more than that--until at last the child was out. A little boy! With her finger Sāi removed the blood from his mouth, and pucked out the lips. Breathing was slow in coming, so she shook him vigorously, then laid him down. Quickly she chewed up an onion and spit it over his body. "Ah-h-h!" A cry, though not very strong! Seeing the new baby appear, Chai, who up to then had been constantly near his mother, rushed precipitously from the house, and refused to come in for hours, in spite of Song and Lek's coaxing.

[787] Everyone had observed an auspicious circumstance: the cord was looped around the baby's neck! This imitation of the holy cord (mongkhon) placed around head and neck in Brahman rites of passage was a rare and good sign. "A cord looped thus could never kill a baby," someone said.

Since the placenta was slow in coming, Sāi prepared to cut the cord while DÛan rested and sipped the fiery snake brand medicine. Depending on circumstances she might cut it
[278] before or after the placenta was out. Taking a rhizome of phlai (McF. 804), a traditional healing root she laid it on a clod of soil brought in from outside. From one of the
[412] old bamboo house beams, someone had sliced with a knife a sharp-edged, tapering sliver to serve as a cutter. The cord was stroked 3 times, starting near the baby's stomach "to remove the dirt." Then "something that is in the umbilical cord" was pushed back towards the baby's stomach "to prevent
[778] a flow of blood." She measured the cord from the baby's abdomen to his knee, and tied off 2 places in it with the holy unspun cotton cord used ordinarily in rituals. Laying the part between the 2 knots on the phlai on its bed of soil, and saying her magic "w'nyān a sam pa nō," she cut
[757] the cord with the bamboo cutter. With a chicken feather which had to come "from the mother's yard," she collected a few spider webs from the rafters, mixed them with coconut oil, and painted them around and on the cord-stump, also "to stop the blood-flow." While doing this, Sāi said, "One midwife I know severs the cord by tying it with the thread at 3 places, then burns it with a flame."

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Lek watched over the baby, while Sāi turned towards Dūan. "One looks to the mother first, unless the baby needs help more." First Sāi gave Dūan medicine for the placenta. She rubbed her hands with alum and tried unsuccessfully to work down (klōm) the slippery placenta. Then she told Dūan to get on her hands and knees, and exert all the force she could. Dūan crept around the floor but it still did not come. Sāi then tried hitting Dūan's back 3 times with Dūan's own pillow. Finally she gave Dūan a leaf of betel pepper to chew, hoping to induce a wind-producing nausea and so push out the placenta. In the end Dūan resumed her sitting position and it was pressed out. So the baby would not get pimples, the placenta was cleaned carefully, then put into an old pot, mixed with 2 dishes of salt, and set aside.

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While Lek sewed up the partially completed cushion, Sāi laid the baby along her legs, and washed him with soap. Sometimes she washed the baby before the cord was cut, if the placenta came quickly. She used salt to remove the greasy fat from his body, though would have preferred "fermented tamarind to protect him from pustules that enlarge to sores (rōk phuphōng)." "Soft tissue like a stomach covering his head! What a good sign of progress and fortune!" she exclaimed. She powdered him with face powder (dinsōphōng), and painted his abdomen with turmeric,[34] "so wind will not make him cry." Covering him with a little piece of old cloth, she laid him on Lek's old winnowing tray (kradong).

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It was the moment to winnow (rōn) the baby, and link it to home and family. While Lek got the holy unspun cord, others placed on the tray with the baby all manner of traditional things to influence the progress and well-being of the child during his lifetime. Sāi put on the phlai, the clod of soil, and the tapered bamboo she had used to cut the cord "because they will never be used again," but actually these things had a far deeper meaning to all present. Song laid on a school exercise book and pencil, so that his son would have knowledge and a good memory. Mī got a needle for sharp wit. If the baby had been a girl, the needle would have given sewing skills. When all was in readiness, Dūan had to decide on the ones to raise the child aloft, catch the tray as it was dropped, and bless him as the holy thread was tied on. She had to choose these persons carefully, for the child

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34. Other mixtures (used also on the mother) were lime-bergamot lemon; or phlai (if possible the one on which the cord was cut), wānnaa (acorus calamus) (Textor:64-66) and mahāhing (asafoetida) with burned betel leaf. These were all to keep out wind.

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844 989 852 would later manifest their characteristics. Much as Dūan loved her own mother, Lek ought not to winnow the child because she had had the misfortune to lose 3 babies in infancy. An older person was desirable, for longevity, too, indicated virtue, and the child would then also live long. Of all the women present, besides her mother, Sāi was the one Dūan trusted and respected most, and Sāi had raised healthy babies. Dūan turned to her. "Please winnow and bless the baby." She wanted, as every mother did, to catch and so claim the child for herself.

Sāi seated herself close to Duan, picked up and raised high the tray with the little boy and the auspicious items. Waving the tray in a circular motion slowly from left to [539] right, clockwise, she recited the old words: "Three days a spirit child; on the fourth day, a human child! Whose child is this? Is this the child of a female pot? Of a jar? Come, take this child!" Three times Sāi chanted these old words and on the third, Dūan cried out, "Mine!" The tray with the child was gently tossed in her direction. She caught it as it slid toward her. Then Sāi took the [774] holy thread and tied some around each of the child's wrists and ankles to seize and "welcome" its soul (khwanrapkhwan), giving the while the traditional blessing. "Come, khwan! [539] Come my own child! Stay well and eat well! Do not get sick or have fever! Be cool and happy! Feed your father and mother until they are old. Hold the walking stick with the gold head, or the stick with jewels on its top! Stay at home like the bottom of the house post! Watch the house like a cat! Eat and stay here! Never go roaming! Be fat as the golden ash pumpkin, heavy as the long melon, strong as an elephant in must! Be the head priest when ordained and the leader of men when you leave the priesthood! Come, khwan!"[35] Thus Dūan claimed the child for herself and for her family, to nourish and raise. Because such a fine person as Sāi had started this son on its life-habits, and Dūan was already sparing no efforts in assuring his progress, he would be a good boy, and reciprocate her pain and effort.

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[539] 35. Another version added the words, "Have the strength of Hanuman! Hold the stick with the iron head! Be a student." For a girl, "If you have a family, keep cool and happy! Earn your livelihood (tham mā hā kin)! Have enough to use and eat! Do not lower (taa) your face, or eyes," i.e. "don't be poorer than your friend." A China-born Thai woman's blessing was "Mother, nourish, and care for this child. Do not let it be hurt or have fever."

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The next step was to prepare for Dûan's post-partum days of rest beside the holy fire. Before the baby arrived the fire-floor had been prepared, but not lighted. Song had chopped down a banana tree, and quartered and trimmed the trunk into four good planks. Along a wall inside their house he had laid them in a square about three feet on each side and 18 inches deep. He remembered that at Chăi's birth, the fire had to be in a corner, because of the direction of the celestial Snake. Lek picked up a large round basket and went out to get the soil, which had to come from the north side of the house. Three full baskets she was to get, no less, but there could have been five. She heaped the soil into the frame, smoothing it to a good fire floor. After she poured in the last load, she picked up three handfuls of earth and put them back in the basket. Quickly she took them back to the spot she had been digging and tossed the three handfuls one by one onto the earth, murmuring to the spirit of the land that she was returning the earth she had taken. Back in the house, in each of the four corners of the fireplace, Săi planted a little banana leaf bowl containing rice, sticks of incense, a candle, and flowers. "Some persons add areca nut and betel pepper leaves, but I was not taught to do it that way," she commented. A fire of the sakae wood was laid, and the placenta and cord in the pot placed at the back where they could dry with the heat. To prepare Dûan's bed, Song searched the house for a smooth plank about 14-16 inches wide. Not one! So he ran over to a neighbor and borrowed a good one. He cut two banana trunk sections to set this plank up so that it was as high as, and two or so hand spans from, the fireplace. Săi checked that firewood, woodpile, and plank were all parallel to the celestial Snake. Then the fire and the incense in the corners were lit.

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Meanwhile Săi had been washing the lower part of Dûan's body and legs with warm, boiled water. She painted Dûan's abdomen with turmeric, lime, and alcohol, putting a little on the hands and arms, and now gave her a fresh shirt. "To cure the womb" Săi also gave her a "filtrate" of tamarind, salt, and water to drink, the same potion people also gave to the cherished buffalo on the rare occasions when a calf was born. Finally, she asked Dûan to lie on the floor a moment. Putting her foot on Dûan's hip she pressed hard, three times on each side, to "close the hipbone" and get the pelvis back into place again.

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The genetic connections of those who did not help in cash, or labor at, say, cremations or cooperative work-parties were forgotten. Degree of help was a measure of kinship solidarity, and even marked the outer boundaries of kinship.

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The word "help" turned up over and over again in the context of childbirth. Birth came about because a married couple, already steeped in the knowledge that they had been so helped by their parents, "helped another individual to new life" through the mingling of semen and blood. The midwife's role was merely to "help." When a woman engaged a midwife, her words were, "Will you come to help me?" A baby having trouble breathing right after delivery "had to be helped for half an hour." Most important, only through the reciprocal help of mother and child was rebirth to earthly life implemented at all. Parturition was an active, cooperative venture between 2 autonomous beings. The child set the time for labor to start by "deciding to be born" when his 32 parts were "complete,"[30] and he had worked off sufficient sin in purgatory to permit rebirth. The mother by her labor "helped the child to be born," but she could not succeed unless he actively "helped," too. Though other assistance to her was desirable, such as persons to support her back and press out the infant, only his help was essential. Without it she had a hard or unsuccessful labor. A woman who gave birth successfully without outside help created no stir because it was evident that the baby had been helpful.

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30. Informants were not uniform in opinion here. Some said the khwan (or winyan) was the first "part" to establish itself--arriving at the moment of conception--others that it was the last (Textor:262). In either case it was highly volatile during pregnancy, and the trapping by winnowing at birth was the major means of rooting it in the person. During pregnancy, medicine for wind in the fetus was given "which was not effective if there were no khwan," but whether the khwan was the mother's or the child's was not certain.

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844 In view of the stake of a child in the successful outcome of his own birth, [39] under what circumstances might a child not be helpful? This was explained by merit (bun) and habit (khoei).

Merit

782 828 761 844 Since merit, gained through virtuous behavior, determined a person's character, circumstances, health, and longevity, the merit of mother and child set the course of childbirth. It will be recalled that persons who lacked merit because of previous sins were cruel, lived short lives, and had to endure suffering, while meritorious persons enjoyed success, kindly natures, and long life. Yet an outwardly fortunate person might be at the point of merit-exhaustion, when suffering commenced. Any mother who suffered greatly lacked merit. In one case, "7 babies of a woman died young while the eighth and subsequent ones lived, proving she had to suffer greatly to work off some misdeed in former existences. She was given the trouble of bearing and feeding the child, and the child did not have enough merit to grow up, and so to feed her in return." Her punishment was to bear non-meritorious children who could not live. A woman's premature[40] death in childbirth was caused only by her own lack of merit.

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[171] 39. By way of contrast, consider how parturition is pictured in the United States. The active role is played by the midwife or doctor, or some other outsider, who "delivers," i.e. "liberates," the child from the womb, or frees the mother and baby from one another. "A child is born" presents the child as completely passive; in "to have a baby" the mother is relatively so. The most active English renderings are "to bear a child" and "to give birth to a child." It is noteworthy that modern anaesthetics have tended to increase the passivity of the mother.

40. The idea of a natural term of life was described in the Visuddhi-Magga: "The Karma that caused conception has ripened to a termination, although the dependence for continuing the series constituting the term of life be not exhausted. Death by the exhaustion of the natural term of life occurs when the span of life, the nutritive powers... proper to any given grade of existence come to an end..." (Warren:262).

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A midwife or doctor could not be blamed, unless it was felt they did not help as much as they could have.

A child lacking in merit died. Such individuals, for some reason, did enough at their own birth. Words of comfort to a surviving mother were, "your baby did not have enough merit to live." If particularly sinful, it died after making delivery unusually painful. "Once a child was born dead, but it teased the midwife by moving its legs a bit. Consequently, its death was not the fault of the midwife." The child's lack of merit was proved by its death and its maliciousness. There was no hostility towards any child born in a hard delivery, for if both mother and child survived, the demerit that caused the suffering was the mother's. 761 782 845

On the other hand, a meritorious woman with a meritorious baby had a short, easy delivery. Such a child was considerate: "he will not hurt his mother, will help her to bear him easily, and will live." 844 782

A woman who safely came through childbirth felt deep satisfaction and new security. Bearing a child in itself did not bring any merit, though it was an act of mercy. Merit could come later with the ordination of a son. However, why one woman had successful or short labor, and another not, was unequivocally clear and accepted. If delivery were normal, she was confident of her and her child's store of merit. If not, she bore the anguish, convinced that she had brought it on herself in some previous life. Since sins were worked off with pain, every thrust made her future lives happier. Fear was minimized, for if death came, it was merit-determined. [154] [761]

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844 Moreover, her life would some day begin again. Whether birth was rapid or slow, the experience of the suffering deepened her sense of compassion and, as will be shown, brought her closer to fulfillment of her life role.*1

Habit

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[761] If mutual help organized relationships, habit (khoei) stabilized them. Khoei means "to be used to, accustomed to, habituated." A first occurrence was an example and set the pattern for all subsequent occurrences. With one performance one was accustomed to an action. For instance, shortly after the temple was built 2 people died, deaths in Bang Chan "always occurred in pairs;" it was the temple's "habit." Moreover, "the head priest could never expel a priest because he had never done so." Again, a few women saw to it that during this period their babies were given a few grains of rice (even though they were far too young to be offered new rice regularly), so that "later on, if they got sick, they could always at least eat rice," for "they would be used [171] to it." "Glutinous rice was not good for babies in Bang Chan, but in North Thailand (where it was a staple] it could be eaten because people were used to it." Someone had set the example which started the custom.

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844 *1. Bang Chan's Buddhist phrasing of the meaning of pain and
154 death in childbirth seems to indicate that childbirth occurred
171 under psycho-cultural conditions that induced relaxation and
114 reduced fear and pain. An "easy" delivery lasted 2 hours. According to a modern medical theory, ©Dick-Read: Childbirth Without Fear, passim) lack of fear of childbirth leads to mental and physical relaxation which in turn reduces pain and labor. Dr. Dan Bradley observed that labor was shorter among Siamese women than among non-Siamese. "Facts seem to prove that parturition is both shorter and easier to Siamese mothers than is usual to Europeans and Americans" (Bradley, 1865:79). We accept his first-hand observation because he had 40 or more years of experience in delivering babies, both Thai and non-Thai (missionary wives, etc.), and suggest that it may be taken as proof of mental and physical relaxation derived from lack of fear. Although the missionary women may have been frightened because they were in a far country, Dick-Read argues that fear of childbirth has long been present among American women and this fear has the effect of longer, harder labor.

153 of making poor milk. Any woman whose milk flowed early and
853 well needed no example, for she was seen as having the habit as an in-born characteristic so deeply ingrained that it came through from a previous incarnation.[43] After nursing was established by the mother, babies were not often given over to another woman's breast because they were reputed to refuse it, "being not used to it."

In sum, the nursing patterns in Bang Chan varied with the previous lactating experience (if any) of the mother, and the ordinal position of her children.

Hauck shows the old way of establishing good eating
[262] habits in a baby. "If a mother ate small amounts of many
[846] different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time" (1959:14). Through the beneficial effects of the fire, any deleterious qualities of the foods were eliminated (as we shall see in "The Fire of Maturity") and the child had his first experience with these foods in the breast milk.

153 Bang Chan's life was full of secondary opportunities for starting new habits. Every rice crop, every boat purchased, every house built, and all the rites of the life cycle could, if handled properly, start a fresh and fortunate sequence on its way. We shall have more to say of this in discussing maturity.

789 Imitation
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The familiar principle of imitation (Anuman Rajadhon: 154), the influence of like making for like, operated throughout daily life in Bang Chan. An action, event or presence emanated an analogous influence on its surroundings. A woman returned from a visit to the midwife with all possible speed in order to achieve a speedy delivery of her child a few weeks hence. Another pregnant woman visited the temple on the final day of the rainy-season Buddhist

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[829] 43. Bradley's informants gave an example of a deeply ingrained habit: "European and American mothers can better dispense [with the fire-rest] because their own mothers from time immemorial have never been in the practice of the custom, and consequently their constitutions do not at all require it (p.79)."

retreat (ʔòk phanāi) in order that her child would come out (ʔòk) more easily. Here none sought to divide the worlds of the natural and the supernatural, or to mark off "imitative magic" from the "learning by example of the natural world." A stronger influence came from more powerful agents, so that the effects of the Buddhist temple carried greater affect than the actions of a mere neighbor. Yet any like influence was of aid, especially in a verbal similarity. Thus, an event occurring on a Friday was apt to be auspicious because the Thai name for Friday contains an element identical in sound (though etymologically different) to the word for happiness (wanasuk- Friday; suk-happiness), and for the fortunate status of true adulthood (suk-mature, ripe).

Stability in a Floating World

In explaining why some children were "born easily and were easy to raise" (liəŋ ŋaai) certain persons simply said, "They were born into the right family. Those born to the wrong family usually die." In defining the "right" family, merit, habituation, and helpfulness converge.

Most families were thought to live together as a group in life after life. In view of the separateness of souls, how was this brought about? The key lay in the conviction that people who made merit together met in future lives. Since most merit-making was undertaken as an enterprise of the nuclear family, sometimes with close kinsmen and friends, they would find each other. Some of the eagerness of friends to help (chuai dəən) with cash or labor was in order to meet in later lives. These persons were used to each other, used to helping each other, and so might marry. Thus, if they lived rightly, the nuclear family, maybe with an infusion of beloved old friends, expected to carry on in the next existence. Although a family's prosperity proved its merit, and its wealth facilitated making more merit, continuity in time was not limited to the wealthy. Proof that a couple had been married in a previous life lay in the birth of a boy as first born. Such a couple was known as a "khûu" (pair), and divorce was held to be highly unlikely.

How did a child find its "right" family? After whatever necessary stay in purgatory, the khwan soul of a deceased member roosted in a tree near to its old home, then flew into an accustomed womb. One recalls the start of the blessing (p.48), "Come, khwan! Come my own child!" A woman hoped that the khwan was one previously born to her. "A couple lost its first child. Later the wife was fearing for the life of their sickly second-born." The husband said, "It is according to your sin and merit. If the child is your own child, he will live with you. If not, he cannot."

761 Since only meritorious children were born into the
775 "right family," they were helpful and so easy to raise. The
593 easiest to raise were reincarnations of babies deceased in
829 the mother's present life. "A girl of three died. Her father
782 dreamed he was at her coffin. She asked for water which he gave her, then brought her home. Months later a boy was born, so easily raised up that people knew it was a reincarnation of that girl." Here amiability and the change to male sex demonstrated merit. In another tale, "a woman lost many babies at birth. Her husband, thinking it was the same child trying to be born to that mother, marked the forehead of the last deceased baby. His surmise proved correct, because the next baby born had this mark on its forehead."

This assumption that a woman's children were born to her over and over led to a measure of control over the cooperativeness of the child in the womb. A child trained to "good habits" became a meritorious adult who, when reborn, would of course "help" his mother in childbirth. It was advisable to set one's own child into paths of proper behavior, for he could be born again to a descendent, and in all likelihood to oneself.

On the other hand, families were not closed groups. "Like a leech that sticks in one place, then goes to stick somewhere else, so a deceased person may be reborn somewhere else," said a priest. The marriage blessing stated, "May angels, not criminals or beggars, reincarnate as your children." Thus was explained why upright parents might have a disobedient, roaming child. He had roamed into a new family which perhaps he had met during a pleasant casual visit to them in another life. If he did not stay home to make merit with his present family, a wayward child would roam out of it as easily as he came in. Here was the ultimate danger in visiting around too much.

761 Because all individuals lacking in merit died off at
593 birth, some of whom because they got into the wrong family,
782 a selective process continuously weeded out the extremely non-meritorious so that those who were born usually survived. In fact, Hauck's figure of 90.6 live births
[163] (1956:33), the percentage of total pregnancies shows how many meritorious babies were born to the right family!

859 The Winnowing Ceremony

844 This ceremony, described in Dûan's tale, was usually
774 performed shortly after delivery, though it might occur anytime during the first three days of a baby's life. The child, placed on the tray (twins were laid together or separately) was claimed by the mother or the father, who

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called out "Mine!" ("khŏng chan" [female speaking] or "phom" [male speaking]). Never did a parent say "ours!"[44] Sometimes the mother might ask a relative or friend present to claim the child, and so become a godparent.

As the first human step to control the volatile khwan, the first objective of winnowing a baby was to seize it (kan rap khwan) and so "complete" the child's person.[45] By tying holy thread at the wrist and ankle soul-exits, the khwan which had flitted in and out of the womb was given root. It was still flighty, but now it had a life-long home.

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Secondly, the child was given membership in a human family. Connection through blood and semen did not establish kinship. At first, the child hovered between corporeal and non-corporeal existence. "The child is not fully human for the first 3 days." This period was under the supernatural control of Mother Sī, for babies "never died during the first 3 days after birth. They might be born dead or they died 6 or 7 days later." The shock of dropping the child on the tray "made him forget his life as a spirit." When someone cried "mine!" the child finally cut his relationship with the spirit-world. As an old woman explained, "The ties are the important part [of the ceremony]. They show that the child belongs to someone. Once a tie fell off one wrist. The child cried and cried until it was restored," fearing its lost khwan would attach itself elsewhere. The claiming set up kinship as a contract before witnesses. Whoever announced responsibility for the child's care, and this was usually the mother, deserved reciprocal care in old age. Other relatives would also help to bring him through to maturity. He would not be so frightened of an evil spirit because of family support, nor of the "ghost of an ancestor" who would be recognized as a relative.

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Third, the ceremony strengthened the child. By giving him through the ties a stable khwan, he "grew better, cried less, and did not get sick."

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The incorporation of as many auspicious elements as possible into the ritual was customary. Since the child took

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44. A winnowing tray (basket) had the capacity to "trap" spirits. It could seize or trap not only the khwan soul, but, at New Year's, one of the fun ghosts (Textor:171).

45. There is no convenient way of expressing "ours" in Thai in this restricted sense (id.).

Chapter VI

MIDWIFE AND หมอ

759 In Bang Chan it was easy to ask, "Who has delivered babies?" The answer would run into dozens of names. To respond to "Who are the midwives?" an informant would give the names of 6 or 8 persons, then add, "Some people call them professional midwives but some do not. X is not a midwife but she knows how. Y delivers babies, but only out of pity. Z has delivered 30 babies or more, but she is not a midwife." If asked, "Are there doctors among those who deliver babies? " he would say, "หมอ (doctors) never deliver babies."

Before a definition of a midwife is given, a general picture of midwifery in Bang Chan is needed.

• 844 ### The Practice of Midwifery

Normal childbirth, a cooperative venture between mother and child, was not an illness. It called only for the help of kin or neighbors. Anyone who had seen or experienced childbirth at least once before was considered a possible, though not necessarily competent, "deliverer" of a child. [593] The husband was supposed to be present to assist; failing whom a father or brother should attend. Consequently a good many men had witnessed birth. The spectacle was disliked, however. Anyone, though, young or old, male or female, kin or not, might offer or be asked to help. Private magic was [779] not essential, though it was necessary for someone with incense, flowers, and a candle in hand to inform (บอก), the Lord Buddha, the ancestors, and the ordinary protective spirits of the land and home and so enlist their help. The customary post-partum rituals and blessings were not esoteric. Enough popular astrological knowledge was known, or quickly and freely available from a priest at the temple, to orient the woman in labor. Consequently, many a woman was delivered by her mother or other kin. One poor farmer and masseur, with the assistance of his sister, delivered all [759] but one of his own children. On another occasion, a visiting kinsman, by chance a medical orderly in the Royal Thai Navy, safely delivered a relative. In all these cases the cost or "gift" was less, or non-existent, and the convenience

1: Hanks E-5 (1953-1954) 1964 AO7 Central Thai AO7

greater, for relatives were at hand. Some of these ordinary persons developed skills of considerable consequence. 844

If difficulties developed, then a more experienced person, preferably a midwife, was needed. But many a midwife assisted at normal births. Because difficulties might arise from a deficiency of merit either in the mother or the child (one could never know which), many women preferred to have in attendance, for peace of mind, either a midwife or an experienced person to insure the presence of expert help. Sometimes they were engaged in advance, more often just sent for "as pain is increasing," it being not always certain whether the case was normal or not. 844 759

A few women were delivered at the Mīnburī Health Center. These were rarely normal cases. The Center was turned to as a last resort in dire circumstances, with the result that sometimes the woman died in the boat on the way. A few persons of rather more modern outlook, such as wealthy farmers, teachers, and traders, had been delivered there and recognized its usefulness. 844 [845] [847]

The midwives lived in all parts of the community, with 3 in the populous central temple area. No one was more than a half-hour's paddle, or an hour's walk from the home of some midwife. What was desired, however, was a particular person, even though he might not be the most accessible one. 759

Since midwives were all heads of large families their clientele was mostly their kinsmen. They also took care of non-kin who lived in their locality. A daughter or other close relative who had married out would be attended wherever she was, if she did not return home for confinement. 759 597 602

In choosing a midwife, a parturient sought out not only skill but favored a kinsman over a non-kinsman, a close relative over a distant one, a near person over a far.[63] Occasionally, to sustain an image of progressiveness, social superiority or of wealth display, a midwife from outside Bang Chan was imported. Sometimes proximity, convenience, and

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63. A male and 2 female kinsmen-midwives were called by the man's sister to deliver her, and all came. He did not deliver her because she was "too close a relative," but he said a brother "could deliver a sister."

The Role of the หมอ

756 844 A หมอ never delivered the baby and never even touched a woman in labor, for this was not part of his specialty. If labor were slow, or weakness were setting in, he came to give a decoction to raise the fire element within the body, speed up the winds and so strengthen the contractions. He also gave holy water for general strength and to clear out, if such there were, any obstructing spirit or magical disease object like khun. Because of his experience, though, he might stand beside the midwife or other woman instructing: for instance, "Pull now!" "Watch out for the eyes!" His advice was more often sought after childbirth if fever or swollen body were in evidence, for these were the results of "inadequate outflow of blood and fishy-water." Because they were called in case of debility, the หมอ were the ones who suggested when it was advisable to send a parturient to the Minbur Health Center.

756 84 No priest-หมอ was ever called for childbirth because of the contact with a woman's genital area, though they were consulted on menstrual and pre-natal irregularities.

759 [192] ## The Specialty of the Midwife

Midwives were called หมอ tamyâ (doctor-expert-in-occultism; pounding, as in a mortar [McF. 365] crowshing, [McF. 682]). There were 4 or 5 women, both Buddhist and Muslim, and 2 or 3 Buddhist men, who had delivered 100 or so babies apiece. They ranged in age from 50 to 70. Dozens of women had delivered babies one or more times but were not accorded the title of midwife.

759 845 The foundation of their specialty was a greater than usual manual skill, developed over long experience. "We have only our hands," said one woman. The more expert could handle certain mal-positions, and did not hesitate, but only with permission, to put the hand into the vagina to turn the baby or "unstop the blood." They were better judges of the progress of labor, whether normal or slow, and of the symptoms of debility. They were more likely to keep calm in the face of extreme suffering where the parturient's relatives, over-eager in their desire to help, sometimes inflicted

by instruction from a ritually[71] approached teacher. "One cannot accidentally learn. One has to ask to be taught." As a practitioner in this field, the title "mɔ̄" signalized expertise; where teaching was involved, the title was khrū (teacher [McF. 183]) or ācān (professor [McF.990]). Speech was the key to this tradition, in spite of sacred books and wall-carvings in the temples.[72] Modern education, being book-and-teacher based, shared in this aura. There, even today, listening is more comfortable than reading. 759 778 894

Techniques of the practical, natural world were learned not by teaching but pragmatically by observation, example and experience. Eyes were the key. "I know because I saw," said a midwife. At the highest level of achievement in the natural world one was expert (nak), e.g. convict (nak thōt, an expert in being punished) a tourist (nak thīao, an expert in roaming around).[73] Within the natural world, an intense pragmatism reigned always emphasizing visual phenomena. People were keenly 759 812

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71. To speak ritually one held in the hand the trio of incense, flowers, and a candle. This was the way to cross over from the profane to the sacred world, to inform (bɔ̀k) or make a request of, a sacred being (a teacher, priest, king, or deity). The tiny flame of the offering invoked holy fire, and so had the effect of making one's words compelling, for no one could gainsay a request under such circumstances. A husband about to deliver his wife held incense, flower, and candle in hand as he requested the help of ancestors and spirits. (Bishop Pallegoix saved the existence of his mission by thus approaching the King [Pallegoix, Vol. 2:201]). The trio of offerings, whether at the 4 corners of the lying-in fire-floor, or in "hat phlī krathong" at a "thaa khwan" rite, or even in an ordinary khwan khao made all actions and words compelling. [788] 782 [844]

72. Because words, immaterial and invisable, lay at the base of occultism, words as continuous agents of power permeated Bang Chan's ordinary daily life. This was why words, verbal play, and punning initiated action: pregnant women attended the monks' "coming out of retreat" (ɔ̀k phansā) so that the child would "come out" (ɔ̀k) easily. [191] 789 [843]

73. It should not be forgotten that most activities in the supernatural world had their technical sides, and the term "nak" was used there too. A curer had to learn his herbs; a dancer, his steps; and a master of ceremonies, the words of the chants.

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to make use of modern facilities one suffered confusing and unhappy experiences. Bangkok traffic was dizzying, even if one knew just where to go. Hospitals had beds, not mats, and the personnel were strangers. Foods were often unfamiliar or violated traditional injunctions concerning heating and cooling. People were brusque, impersonal, and overbearing to country people. One woman complained, "I am afraid of the doctor there. She scolds me and does not treat me like city people. She will not explain what the sickness is." Minburī's clinic was small, set up in more familiar terms, and the staff known personally to many villagers.

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Finally, there was the problem of finding an experienced escort, i.e. someone who "knew the way." More was involved than just convenience. In all walks of Bang Chan's life, no one ever presented himself to a school, to a household, anywhere, without a personal introduction from someone who had been there before, and so was accustomed (khoei) to it. It was not hard to find someone who had been to the Minburī Health Center, but it was difficult to find one who had been to a hospital in Bangkok, knew what to do, and had the time, money, and inclination to act as escort. The latter was always a relative by blood or marriage or the sick person's mo himself (Hanks and Hanks, 1955: 160). Actually, five or ten persons might accompany an ill person, only one of which was acting as the recognized go-between. Many of those who had been to a hospital or clinic as patients had previously accompanied others merely as escort, or to visit (Goldsen and Ralis 1955:31).

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Who had actually tried modern medicine for one reason or another? About a third of the household heads had used some modern clinic or hospital for treatment or hospitalization (Goldsen and Ralis 1955:31). Use was more frequent among (1) the literate, (2) those exposed to the mass media of radio and movies, (3) those accepting certain urban ways, and (4) those having greater contacts with the city in the way of visits, but users were not of a noticeably higher economic level (ibid:37). Women went no more frequently than men (ibid:32). No figures indicated how many of these occasions were for childbirth, but our interviews point to a small number. Taking the will for the deed, two women teachers who appeared to be the first to plan ahead to be delivered at the Minburī Health Center--but who did not get there because labor was too quick--seemed to be viewing the use of modern methods as a means to higher status.

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Why was modern obstetrics so largely eschewed? What had been Bang Chan's experience, unfavorable or favorable, that colored their attitudes? First, home was the most convenient place for care. Bangkok was ruled out categorically as too far. In fact, Minburī might be too far if labor manifested its normal celerity as the case of the two teachers showed, or if complications had developed. Furthermore, a Chinese resident of Bang

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Chan during a period of residence in Bangkok was delivered at the Women's Hospital and at a later pregnancy at the Minburī Center. With her last baby, however, she elected to be delivered at home by the local midwife as more convenient in order to assure from her bed supervision and proper care for her other children. One young woman of very high social and economic standing preferred to import a midwife from a community six kilometers down the canal, and bear her child in her own home rather than attempt getting to a hospital.

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Moreover, basically the Minburī Health Center was seen as a place for sick people, while normal childbirth was not a medical matter. To plan ahead for medical care there was to invite an abnormal delivery. The Center also suffered a poor reputation for success because difficult cases, hopelessly advanced, were the usual ones brought in. "At the Center are many ghosts," people said.

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Some comments were genuinely favorable. The cleanliness of the hospital was greatly appreciated. Anyone who witnessed the skill of the doctor or nurse-midwife held it in respect.

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Techniques of delivery were sometimes mistrusted, sometimes admired. "They pull out the child with their hands, which is dangerous." "The fecal pump is unnecessary." "One may not crawl during labor." A mǭ-midwife who witnessed the nurse-midwife at work said approvingly, "She can force a baby out, but our midwives can only press harder," and "The hospital knows when a baby will come." The stopping of the flow of birth fluids by an injection was resented as affecting strength adversely, yet the injection that "made the placenta come so fast I couldn't notice it," or "gave the mother strength when the baby was stronger than she" was liked. The pills for pain were enthusiastically received. The hospital's closed windows "protected the baby from wind element," but the journey home dangerously exposed it and the mother to cooling wind. The dietary recommendations during recovery appeared wrong: eggs, which were "too cooling," or fruit, which "gave no strength." The suggestion of a nurse that scissors be used to cut the cord was resented as uncomprehending of village living problems ("we haven't any!" and "scissors always rust") and also as unwise ("rust gives tetanus poisoning").

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Another criticism was the lack of personal warmth and pity manifested by modern physicians and nurses, unlike the attentive, reassuring mǭ. By forbidding abdomen-pressing, they were accused of "not doing enough," even of

"not wanting to help." The mother and baby were seen as having to fend for themselves. The very confidence built up in modern medications led to a conviction that doctors maliciously withheld available, effective medicines. "She died at the Center because she needed medicine but was not given any." Personality factors sometimes were involved: one doctor was considered incompetent, fearful of complicated obstetrical cases, and brutally indifferent to a countryman's views and circumstances--("Since we have no room, why don't you charter a bus to take your parturient wife to Bangkok?"), whereas another was friendly and wise. Since doctors were part of the respected government hierarchy which enjoyed superior knowledge and status, and also of the supposedly compassionate medical tradition, they were expected to be competent, kind, and protecting. Those who failed in winning confidence undermined the status of modern medicine.

The midwives themselves thought of the Mīnburī Center not only as a recourse if a case were in deep trouble, but also as a personal convenience. One male midwife, who was also a headman, mō and carpenter-contractor, was often too busy to stay with a woman in prolonged labor. To turn her over to another midwife other than a kinsman would damage his reputation. Knowing Mīnburī well, he found the Center a convenient solution to his dilemma. He had respect for the nurse-mid wife's skills, which he had witnessed, and regarded the doctor as a colleague on his own level, a view probably not reciprocated. The women midwives, too, always considering themselves at bottom volunteers, when faced with pressing home chores and the "impossibility of turning a relative over to another midwife," utilized the impartial service of the nurse-midwife. One cloud impeded the female midwives from making full use of the occasion as an opportunity for observation and so instruction. They refused to identify themselves as midwives out of fear of legal sanctions. Having neither taken the course prescribed by the government for "ancient" midwives nor paid the fee, they were not licensed. Thus, they lived in dread of fines if their calling became known outside the community. They knew they were permitted to deliver babies within the family, but outside those rather hazy boundaries, they took refuge in an old view, "I am not a midwife. I only help out of pity."

All in all, the people of Bang Chan had fitted modern medicine into their broad medical scheme where it could be accepted on its merits, if not blocked off by inconvenience, high cost, and discourtesy.

Chapter VIII

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CHANGES

In studying change in the customs surrounding childbirth in Bang Chan, we have D.B. Bradley's description of birth in Bankok in 1865 as a base-line on which to project our findings. Since most of the population of Bang Chan (Thai, with a few Laotians, Mon, Muslims, and Chinese) stems from Bangkok, we may reasonably assume that the parallels derive from a true historical connection. Bradley's description fitted Bang Chan as if written today:

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"Siamese theory in regard to the part which external and internal fire plays in the functions of life and health is made to work powerfully...There is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which, if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child...[Thus a woman lies by the fire]... exposing all parts of her body, and more particularly her abdomen, to that drying process, so that the uterus shall be forced to shrink up quickly to its normal dimensions, and the sanguineous streams which had been diverted to support the child before birth, shall, by fire, be driven backward to their more usual limitations, all which is...a sine qua non to a sound constitution and good health in the future..." (Bangkok Calendar, 1865:78-84).

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Bradley showed that some behavior one might call "change" today was a recognized alternative in 1865. For instance, in Bang Chan a few women "are made too unhappy (klum) by the fire so cannot use it. They should take extra amounts of pickled medicine" (yā dong). Bradley wrote, "a few delicate females...who cannot endure [this] usual treatment, are compelled, against all their ...fears of the consequences, and all the importunities of their

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friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of ...medicines" (p. 81).[74]

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The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: fai chut) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Minburi Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered net-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

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Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (suk) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a mɔ̌ did the same (with the possible exception of the sponging with tepid water), that as a mɔ̌-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorization, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calendar, 1871:107-108).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1920's.

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home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

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To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Mīnburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 2 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccessibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grew up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

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In addition to prestigeful changes were those due to individual circumstance, taste or preference, and conveniences unaffected by social aspirations. One woman rejected going to the Mīnburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

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are less eaten today because they are too expensive."

A slight trend towards depersonalization might be part of the aping of urban behavior, or idiosyncratic, or of more general significance.[76] The Minburi Health Center may have been used to avoid certain face-to-face situations. A woman whose labor was prolonged was taken there by her (male) midwife who had to get to a meeting. He preferred the impartiality of the Center to turning her over to another midwife. A woman took up the hot ashes container so "others would not have to wait on her." Another appeared to have obtained a midwife from outside the community rather than seek out someone inside and closer at hand. A very poor woman used no boiled water because of inadequate help in the household to prepare it. Whatever the circumstances of her social isolation, ordinarily kin or neighbors would have seen to it that this job was done. This episode too was watched by neighbors who commented that since her health remained good, boiling might be unnecessary. Finally, to advertise certain medicines, a firm handed out YAD, the magically inscribed cloth, to suspend on the holy cord that surrounded the mother. This was a long way from the personally inscribed "yan" of old.

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A final reason for the acceptance of change was the larger number of choices of behavior because of a broader horizon. Bang Chan had never been an isolated community, for pilgrimages and visiting through easy boat-travel had been for decades part of its life. Yet the growing number of literates, the establishment of bus and other transportation services to the city, the experience, for a few, of work in Bangkok or of military service in Korea, the continuous association with non-Thai, (Chinese, Muslims, a Cambodian, and now the Americans), and the now somewhat diversified economy of the community all led to the increased familiarity with other ways of doing things. Patterns of childbirth were already reflecting this awareness.

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Unchanging in the scene at childbirth was the necessity of supernatural assistance, and heat to ripen and restore the mother.

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76. I feel this evidence is slight, and set it down merely as a point for future observation.

1: Hanks E-3 (1953-1954) 1964 AO7 Central Thai AO7

Chapter IX

GUIDES FOR THE INTRODUCTION OF CHANGES

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The government of Thailand provides in Bangkok and in other centers of the country up-to-date facilities for training in modern midwifery. It has also created in some places special opportunities for the traditional midwives to upgrade their skills. One of the objectives of the Minburi Health Center was to carry on a certain amount of instruction in modern views. For reasons that have been explained, no one in Bang Chan ever had or even sought modern instruction. The midwives of whom we have spoken grew up entirely in the folk tradition.

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On the basis of the material presented at length in the previous pages, a few suggestions are here advanced which may be of help to these public programs in maternal and child health.

1. Build a program around the idea that it will help women in their age-old role of caring for, raising, and nourishing (liang) children. Emphasize that through new techniques they may increase their strength and care better for themselves and the babies.

2. Change existing practices as little as possible.

3. When a change is offered, ask that the midwife, mother, or whoever observed it watch for certain results which allow them to judge it in relation to the old. The idea is strong that aspects of the natural world can be analyzed and considered pragmatically, then legitimately utilized as a basis for modifying customary behavior.

4. Pay special attention to the places where the old and the new come into conflict and seek ways to resolve these conflicts.

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As an example, let us consider these points in relation to cutting the umbilical cord. Modern instruction recommends the use of scissors--neat, sterilizable, handy--to avoid infection while cutting the cord. People in Bang Chan wish to avoid this infection, too, but for them scissors are unsatisfactory for several reasons: they are scarce, they rust--and

844 178 177 412 this rust is believed to cause tetanus--and they are unsuitable for the ritual objective at the moment of cutting. It will be remembered that cutting the cord on a rhizome of phlai or soil with a bamboo sliver from the housepost guarantees that a child will not roam away from home. Could the bamboo sliver be dipped in "heating" alcohol, or passed over the flame of a holy fire? Could the old family kitchen-knife--long associated with the household--be substituted and dipped in the beneficial heat of boiling water? Such a knife once was substituted on the winnowing tray. Might the phlai or soil be covered with a boiled, clean, old cloth? If modern science succeeds in coming up with an acceptable substitute, one sees the possibility of a very small change making a big difference in the amount of tetanus poisoning observed (Hauck, 1956:41). One should then ask the midwives to watch as to whether the new method reduced the infection called "death because of a red or green face and clenched fists."

262 [261] In diet "the concept that a good choice of food is important to the health of both mother and child" (Hauck, 1959:2) was very much shared by modern science and by traditional ideas but the basis of choice was entirely different.77 Modern science has ascertained that certain foods are beneficial because of certain nutrients, while old beliefs have set up certain foods as desirable because of properties of heating, cooling, compatibilities with the elements, etc. The nature of these properties should be collected and listed. If dietary deficiencies in Bang Chan are noted, the foods that combine the needed beneficial qualities in both systems should be stressed. A hot-tasting tonic (yā) with appropriate dietary supplements, to be taken daily during pregnancy, and another kind during the post-partum period, might be acceptable. The period of the fire-rest is the best 372 846 place to initiate dietary changes for whatever is done by the fire becomes a habit beneficial to mother and child. The use of boiled water should be encouraged as "making for [illegible]." Again, disturbance of customs is minimized, and the presence or absence of "increased strength" and healthiness can be observed experientially.

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77. Hauck felt the concept was lacking, but it appears only that the grounds of choice were different.

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, despite some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist [illegible], whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every [illegible] gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amicably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different [illegible]. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the thaa khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

759 the slight differences in ministrations. "The Muslim mid-
795 wife massages more than the Buddhist." The women easily
844 entered into reciprocal courtesies. The Muslim woman knew
571 the steps in the Buddhist winnowing ceremony and performed
[852] them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the khwan khâo in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

795 Certain fundamental ideas of the Muslims led to rein-
779 terpretations of familiar Buddhist terms and activities.
[774] "Khwan" referred to the soul, but with no implication of reincarnation. "Bun," meaning "merit" to the Buddhist,
[782] meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the
[177] poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

795 Completely Muslim was the stress on physical and
[783] moral purification as an objective of every rite, and
[304] conversely, the prevalence of the idea of defilement.
[764] "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate pro-
[831] cedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before
[834] burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and
[562] contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

795 The events surrounding childbirth illustrated the
843 differing viewpoints between Muslim and Buddhist. In the
844 seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to secure her services (fâk
[273] thong: to deposit gold). On returning home, she went as fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim mid-
795 wife prescribed large doses of liquor before and during
844 parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclos-
[562] ed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim khwan khâo contained "7

The Muslim khwan khao contained " 7 items"--a young (or ripe) coconut with its water; thread or "a skein of yarn"(used not to tie in the khwan but "for the teacher"); 7 pieces or areca nut; 7 betel pepper leaves; one "heavy" (15 gram) yellow wax candle; one "bag" of incense; rice; and 30 baht in money.[78] The khwan khao was not offered with the idea of its reaching phra In (Indra) ultimately, but rather the local princely spirits of the land, chao thi, thao thao, and Mae Thorani (Mother Earth). It was waved 3 times by the midwife over the abdomen of the woman in labor with the prayer: "Spirits of the land, Mother Earth, may the delivery be easy!" The khwan khao was then placed at the mother's head. The woodpile was knocked over so as to point to Mecca, which was west, a direction avoided by the Buddhists. "When nearly ready to deliver, a Muslim midwife turns the mother's face in the direction where the family's hens hatch their chicks. If they have no chicken, then in any direction."[79] If delivery were slow, a Buddhist monk was called to "shift the mother to new places" until the baby came out.

Muslim women lay post-partum by a fire for the usual physiological reasons. In making up the fireplace, instead of a cluster of incense, flowers, and a candle, this purely Hindu-Brahman-Buddhist trio, they sprinkled salt "to keep away evil spirits" on the dirt at the corners. Salt, oil, or alcohol was spewed over the fire and the woman's body, or only magic was recited, "to control the poison of the fire." "Of these, salt is best," said a Muslim midwife, but "whichever a midwife used first has to be continued for the rest of her life as her way of doing things, because the habit has been started that way." The Muslim magic for controlling the fire was "In ning In tan in fai asan hai." "So be it, stove, rocks (or mountains), fire, be cool, may a blessing rest to you," though "In" is the Pali-Buddhist "mystical word." The placenta was not put in a pot beside the fire, but was washed by the midwife several times until perfectly clean, then was mixed with salt and buried in the dirt directly under the fire. When the fire was finally destroyed, the placenta was dug up, washed again, and immediately buried (not in a pot), with the

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78. There was some evidence that the thread and incense were included only when a Muslim midwife was delivering a Buddhist woman.

79. To the Muslims this was an act of imitative magic. The Buddhists saw the action of a setting hen as a quick source of information for the parturient's orientation. The hen always avoided the direction of the phi luang (Textor:378).

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shiai and bamboo cutter under the house "so the child would not roam away from home." The circumcision (ahiko) performed up to the eleventh year, allied a child to a human group. "Circumcision is to accept the new-born baby into the status of human beings" In a corresponding ceremony for girls, the To Iman "cut a little piece of the labia." However, some Muslims had the full winnowing ceremony performed. If it were not, the child was raised aloft in the midwife's hands with the words, "Mother Si, Mother Sak, may this child be cool and happy!" The new-born baby was then laid in a cloth cradle. Fruits were hung over the tray or cradle. If a lactating Muslim mother accepted another's child to nurse, the 2 babies had to be of the same sex "lest later in life they marry, in which case their would be an incestuous, brother-sister marriage." The Buddhists entertained no such idea, so nursed babies of either sex as needed. A Muslim view of colostrum as "like pus from a sore" carried a more negative overtone than the Buddhist's statement: "At first the mother's milk is too dilute to be useful."

At the annual homage of a Muslim midwife to her teacher each of her patients of the year sent a kilogram of sugar, one coconut, one or 2 liters of glutinous rice, and a hen (if a baby girl had been born) or a rooster (if a boy). The chicken was killed by the midwife and made into curries for mosque officials (men) invited to the ceremony. The incense and candles were burned "while she thinks of her teacher."

124 Information on growth in height and weight is based on obser-
125 vations of 71 children, most of whom were weighed and measured 6 or 7 times. For 30 of these children, observations were made both before and after weaning.

HEALTH AND GENERAL CARE OF MOTHERS

145 Information obtained on menstrual history of girls and women in Bang Chan has been reported previously (Hauck, 1956). The median and modal reported age at menarche was 15 years with a range from 13 to 19 years.

161 Most married women in Bang Chan had children, and of 438 pregnancies reported by 84 mothers, over 90 per cent resulted in live births (Hauck, 1956).

843 Clinical History and Complaints During Pregnancy.
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Most of the women interviewed reported no history of disease which might affect, or be affected by, nutritional status.

Four women had a history of beriberi; 3, a history of malaria; and one had active tuberculosis of which she later died. In relation to the current pregnancy, 6 women had minor complaints such as nausea in early pregnancy, faintness, and leg cramps. The physician considered these as probably physiological. Of the 4 women with more serious complaints, one who said she had pain in the abdomen and legs and difficulty in walking had manifest beriberi when seen a few days after delivery.

Delivery and Care of Mothers After Childbirth.

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846 Information was obtained from 49 mothers concerning
125 delivery and care after childbirth. For 43 of these women, ages reported were as follows:

Reported Age (years)	Number of Mothers
20 or under	7
21-25	11
26-30	12
31-35	6
36-40	6
over 41	1

The mothers interviewed had borne from 1 to 12 children. For 8 of them, this was the first child; but 35, a majority,

had 2 to 4 children. In each case, the information obtained related to the most recent delivery.

Delivery. - In Bang Chan delivery usually took place at home. Four of the mothers we interviewed went to the home of a relative or relative-in-law. In two of these instances the relative was also the midwife; in the others the mother was apparently seeking a place where she could be more satisfactorily looked after than at home.

Three women went to the Health Center at Minburi, about 3 miles from the center of the Bang Chan community, to have their babies. Two of these mothers expected to be delivered at home but were taken to the Health Center when labor proved long. All 3 returned home either on the day of delivery or the next day and lay by the fire. Two others, both school teachers, told us in advance that they expected or hoped to go to the Health Center, but when labor began they were unable to do so because their babies came so quickly. Aside from the 3 who went to the Minburi Health Center, only one of those interviewed went outside the community to have her baby. Informants usually considered the delivery uncomplicated; although, as noted, some labors were long.

Traditional midwives, who were not professionally trained but had learned from other traditional midwives before them, attended most of the mothers. One woman who was alone delivered the baby herself, one said she had no midwife but did not specify other help, and 2 had the help of women who did not ordinarily practice midwifery. The 3 women who were delivered at the Health Center had professionally trained help. Obstetrics as practiced in Bang Chan has been described by Hanks (1959).

Care of Mother During Postpartum Rest Period. - Traditional behavior during the postpartum rest period has been described by Hanks (1959).

Lying by the fire. - The ancient custom of (2)juu (1)faj[1] (literally to be by the fire) after childbirth was still observed by most women in Bang Chan. The chief difference between the practice as we observed it and as it was described in the Bangkok Calendar[2] for 1865 was in the length of the period. In former times this was as much as a month after the birth of the first child, with shorter periods for successive

1. See Appendix, p. 51 for glossary of Thai terms.

2. The unsigned article entitled "Siamese Obstetrics" was presumably written by the Rev. Dan Beach Bradley, M.D., a Protestant missionary who compiled the Calendar.

BANG CHAN

164 among children in Bang Chan is not known. One thing which
[146] residents of Bang Chan appeared to have in common with other populations which have been reported to be relatively caries free, was low intake of sugar, particularly in a form which would be apt to adhere to the teeth.

Adults up to 44 years of age, in the random sample, retained most of their teeth. A few adults in Bang Chan have
[301] had missing teeth crowned. More sound than missing teeth were found to be crowned, however, i.e. in this community a crowned tooth appears to have cosmetic value.

759 A variety of serious illnesses were found to occur among
[164] residents of Bang Chan. As a rule, local traditional practitioners were consulted first, but most persons reported to have been seriously ill eventually received treatment by outside practitioners with some training in modern medicine.

[744] The majority of mothers in childbirth were attended by
[745] local traditional midwives, but a few difficult cases were taken to the government Health Center in the nearby town of Minburi, where a trained midwife was in attendance.

165 Of 438 pregnancies reported by 84 mothers, over 90%
[163] resulted in live births. Of the 397 living children born to these women, 81% survived at the time of interview. Within the first month of life, 7% had died, and a total of 11% died within the first year. Tetanus was prominent among causes of death of infants under one month of age. Infantile beriberi caused some deaths among older infants. In a majority of cases, the cause of death of infants could not be clearly identified, but fever, debility and convulsions were the symptoms most commonly described.

146 Almost half of the persons examined for possible signs of nutritional deficiency, 46% of the school children and 47% of the family sample, were free of such signs. The remainder, slightly more than one half of persons examined, had from 1 to 7 signs each. In general, more of the children and adolescents than the adults were free of possible signs of malnutrition, and the larger percentages of persons with 2 or more signs were in the groups of older persons examined. Signs most often noted, namely changes in tongue, lips, skin and hair, and absence of knee and ankle jerk, might reasonably be associated with apparent deficiencies of riboflavin, vitamin A and thiamine
[164] in the diet. The only clearly defined deficiency disease observed among residents of Bang Chan during the field study was beriberi.

14 Hemoglobin values of 11.5 g or less per 100 ml. were

BANG CHAN

Table 14

163 Relation of Live Births to Total Pregnancies as Reported by 84 Women in Bang Chan

	Number of mothers	Total cases	Percentage of total pregnancies
Pregnancies	84	438	100
Miscarriages	23	33	7.5
Deaths in utero	4	4	0.9
Stillbirths	3	4	0.9
Live births	84	397	90.6

Illness and Injury

759 Medical Services Available to Residents of Bang Chan. - Within the community of Bang Chan, about 6 traditional "doctors" and 15 traditional midwives practiced their skills. Three of the traditional practitioners were Buddhist priests. The others earned their living chiefly by farming. In addition, two or three persons who were skilled at massage, and at least one medium had some reputation for success in treating sick persons.

743 The nearest source of trained medical assistance was Minburi, the market town about 3 miles from Bang Chan. The staff of the Minburi Health Center, which was under Thai government auspices, included a first-class doctor, a dentist and a nurse-midwife. One or two beds were available for the use of critically ill patients until they could be taken to a hospital in Bangkok. For less critical illnesses, the second-class doctors who operated private clinics in Minburi seemed to get more patronage from residents of Bang Chan than did the doctor at the Health Center.

• 844 The majority of women in Bang Chan were delivered at home, by the traditional midwives. During 1952-53 we learned of two pregnant women who planned to go to the Minburi Health Center for delivery, but time did not permit them to carry out their plans. Some cases of prolonged or difficult labor were, [743] however, brought from Bang Chan to the Health Center, where a labor room and a delivery room were available in a separate wooden building. Facilities were very simple. Patients lay on

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344 [743] mats on the floor as most of them would have done at home. Relatives were welcome; indeed they were supposed to come and help.

164 12 Nature and Incidence of Illness and Injury, and Treatments Sought by Residents of Bang Chan. - Evidence concerning the nature of illness and injury in Bang Chan was obtained in connection with the clinical examination of school children and persons in the random sample of village households; from questions in two types of structured interviews with household heads: 1) in the entire village, and 2) in one hamlet, KY-7; and from the field notes of workers associated with the Cornell Thailand Project.

164 In connection with the clinical examination, information was obtained from heads of 30 of the 31 households whose members were examined (See schedule in Appendix A).[1] In this group, none reported any accident or injury, and 26 said that no member had been ill within the year. Illness was reported as occurring in 4 households only. In one of these, a 49-year old man reported loss of sensation over the extremities and other symptoms which led the physician in the research group to conclude that he had beriberi. As treatment, this man had used an herb recommended by a priest, a native medicine given him by a neighbor and had gone to a private clinic at Minburi where he received an injection.[1] In another family, a 39-year old man who had asthma, took an advertised remedy which he purchased from a drugstore. Two children in the third family had fever for 8 days, for which a traditional practitioner prescribed herbs. In the fourth family, a 1-year old child with eczema was taken first to a traditional practitioner, then to a private clinic in Minburi where he was given an injection.

164 128 On the basis of other observations, however, we believe that illness and injury are more common in Bang Chan than is suggested by the replies to this particular inquiry. For example, no mention was made in one of the households surveyed of a baby who had been too ill to be weighed and measured, when team members called, and who recovered in a day or two without outside help. Coming as they did at the end of the clinical examination which was new to most of these people, perhaps the questions asked seemed relatively unimportant. No attempt was made to probe beyond the person's reply to the questions as stated.

164 Replies to questions in connection with an intensive

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1. From casual observation, one is led to believe that the villagers have considerable confidence in "injections," although the nature of the injection received or desired, is not usually specified.

A [see p.51 - Analyst]

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165 Deaths of infants a few days old, with a description of lockjaw, inability to suck, stiff back and clenched hands, were recognized as due to tetanus. The common practice of native midwives is to place the cord over a hard rhizome or clod of earth and to cut it with a tapered piece of bamboo. Thus, infection with the tetanus organism may occur from contact with the soil. Note that 12 of 26 deaths reported for infants under 1 month, were diagnosed as tetanus or probably tetanus. Zimmerman (1931) summarized important causes of death in Siam, based on the physician's diagnosis made after symptoms were described by the head of the household. Of 1800 deaths which occurred in the 18 months preceding the survey, 2% were diagnosed as tetanus. For the Central area, 3.8% of 495 deaths were from tetanus. Most, if not all of the cases of infantile tetanus could be prevented if native midwives learned to avoid contact of the cord with earth or a soil-coated rhizome. By using sterile scissors for cutting the cord instead of tapered bamboo which must be pressed against another surface to accomplish the cutting, contact with soil could be avoided. Of 335 household heads interviewed, 220 owned scissors of some kind (Ralis, 1955).

Infants several months old, who had some of the symptoms of infantile beriberi, as convulsions and almost voiceless crying, were considered as cases of infantile beriberi only if the mother had syuptoms of beriberi, such as numbness or tingling in the extremities, or difficulty in walking, at the time. One mother had lost 3 infants at 3 or 4 months of age, with similar symptoms, but described the symptoms of beriberi in herself at the time of the death of the last baby only. The other two cases were therefore listed as convulsions, cause unknown. The occurrence of infantile beriberi reflects the unsatisfactory nutriture of the mother, whose milk is therefore low in thiamine content. To prevent deaths from infantile beriberi, the general level of nutrition in the village, and particularly the food habits of pregnant and nursing women, should be improved.

Note also the number of deaths from "debility." As the Joint FAO/WHO Expert Committee on Nutrition (1951) has pointed out, the number of early deaths from "congenital debility" becomes insignificant where the health and nutritional status of pregnant women approaches the optimal.

Intestinal Parasitism and Bowel Habits

126 Intestinal Parasitism. - All school children were pro-
125 vided with tin containers labelled with their names, and asked
164 to bring a stool sample to school. Fourth grade children whose first stool samples were negative, were asked to bring a second specimen. Parasites were found in some of these second

597 Adoption was fairly common, though not always of lasting satisfaction. On the other hand, in this watery domain, the 842 trouble (lambàk) in raising children, mostly involving 855 ceaseless tending, was such that a childless woman was accorded a little surface envy as one who had missed or avoided a lot of trouble. The attitude towards twins was • 845 ambivalent. "Twins are unlucky because there are more mouths to feed, more labour, trouble, and not enough milk. With twins, a poor family will never rise again." "No one will marry a twin for fear of begetting twins." "If twins are of a different sex, one must die." Yet others considered twins lucky "because they could be nursed at the same time, and given the same things."

855 Wealth differences also affected these attitudes, especially if babies came in close succession. Comments 842 heard were: "Why do poor people have more children than the 184 rich?" "Many visitors come bringing gifts to a rich parturient because she is respected. No one likes to talk to a poor person." "Those who have a baby oftener than every 3 years will never be rich. Fortunately, 4 of my 7 children died." The increasing cost of raising children was a concern. In one of the few families that had plans for their children's education, the father underwent a vasectomy after his 9 fine children were born, because he "feared he would not be able to feed them all." His wife, reassured that the operation had not "hurt" her husband, "was glad he had done so."

847 Abortifacients and Contraceptives

[779] Episodes concerning abortifacients were whispered about both Muslims and Buddhists. A Buddhist who induced abortion was seen as impeding an individual's rebirth and disobeying a religious prohibition on taking life, tenets which did not obtain among the Muslims. Abortifacient medicines to be used with abdomen-pressing were quietly sold by Muslims.[6] "Unmarried Muslim girls use them mostly," reported one Buddhist, "and they almost die in the process." A Buddhist curer had similar expensive medicine, but "unlike the Muslims, he will 842 not destroy the baby." Chinese boat-vendors also carried contraceptive medicines (yà) which were secretly discussed by wives. A husband reported his wife as saying, "Old ways

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6. Fraser (193) reports that in the Muslim village of Rusembilan, abortions were openly practiced, (as if part of a Muslim cultural heritage).

826 [764] [763] [754] [752] [845]

As to the gross structure of the body, some persons learned about the skeleton when, in preparing corpses for cremation, the undertaker stripped the decaying flesh from the bones, usually in the presence of relatives and spectators of all ages. Occasional autopsies because of suspected sorcery, and surgical removal of a fetus from a deceased mother by caesarian section led to some knowledge of organs and blood vessels. Male and female masseurs of considerable competence were trained in the Chinese neuro-muscular system. A system of "origins," e.g. that the elbow-origin was in the arm pit, and the chest originated at the spine, might relate to the Chinese concept of linkage points on the body, in particular, acupuncture. In Bang Chan's popular conceptualization, the protecting skin which enclosed the body was thin at the top of the head and especially so at the stomach area. An old image also persisted that the body cavity itself was a relatively undivided space extending from neck to pelvis. Inside the cavity, food dropped from the top, faeces packed down at the bottom. Through the body curculated slowly the blood; several kinds of water (nâm) (McF. 453) e.g., the nâm khraam (refuse-water) (ibid. 453) in the abdomen; and several winds (lom) (ibid. 728) e.g., the pushing lom bêng (ibid. 487), and the pulling lom chhawat (ibid. 287). The small hair-whorls noted on the head, hip, or shoulder were construed as minor vortices of these currents, or as souls (khwan).

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Foremost in people's minds were the elemental constituents of the body. The human body, along with every animal, plant, or mineral in the world, was made up of 4 elements (thât): earth, fire, water, and wind (air).[19] This ancient four-fold view, also familiar to the Greeks, had mixed in Bang Chan with the traditional five-element Chinese system (metal, earth, fire, water, wood) because gold, iron, and wood were also spoken of as constitutional elements, and there may have been others. Some persons said that the proportions of the 4 major elements were the same for everyone, others, that they varied for different temperaments, which were also affected by the presence or absence of elements other than the basic 4.

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19. "The body, comprising about a bushel of powdery earth-element, is held together by half a bushel of juicy water-element, and propped up by the windy-element. The fiery element digests what is eaten or drunk and preserves the body". (Visuddhi-Magga. [Warren:157-158]).

843 [775] She might also be troubled by the ghost of anyone who had died violently. This ghost, a phī tai thang klom, caused "the worst of all possible deaths." The phi krasū spirit,[25] entering through her anus, also might cause death by consuming her faeces, organs or the child's entrails. It was more dangerous during and after childbirth than during pregnancy (Textor:304-320). The [753] supernatural disease missile called "khun" might also strike. "If the mother is under 9 months pregnant, the baby inside can protect (itself). If this happens during the ninth month, the doctor uses holy water to extract it at the time of birth." Khun was recognized by "extra pain [751] occurring just before the baby comes out." To protect themselves, women wore extra talismans or had 7 dots [304] tattooed under the arm.

843 • 845 There was no assumption that what was born was inevitably to be human. When people said of a woman who had died pregnant, "the child ate the mother;" or, at a miscarriage, "the mother ate her child," or if many of a couple's children died, "they eat their children," the charge might be merely the comment of a vituperous neighbor, but the reality of vicious, autonomous beings, human or otherwise, in the womb was unmistakable. A certain woman died pregnant. The fetus, removed surgically, was observed to have 7 visible teeth, which indicated it was a non-human, yak (giant). However, a child might also be the soul of an angel in the form of a falling star that entered the womb in the advanced stages of pregnancy. "If such a baby lives it is pure and is a very wonderful child." Episodes were described of women giving birth to "gold," "jewels," "a monkey," "a fish's stomach," and a mouse-like "Golden Child." Sometimes these

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[771] [783] [514] [262] 25. This spirit ate like a dog, not like a human being, in eating faeces and putrid meat (McF.46). No revulsion nor idea of filth and contamination was found in Bang Chan's attitudes about faeces or urine. The infant in the womb sat peaceably on the mother's faeces. It was lucky to dream of faeces. In daily life human and animal excretions, like sins at the festival of Loy Krataung, were carried away by the canal waters. Bang Chan Buddhists recognized a need for cleansing, but not for purification. Since neither faeces nor sins were filthy the water was not contaminated. Even putrid meat was not disgusting in the context of the perishability of the flesh, but as food it was revolting. Muslims, however, had built in contamination to their concept of sin, so required purification.

Sometimes these aberrancies were viewed as desirable sources of supernatural power, but on other occasions, they were seen as a sign of demerit, caused embarrassment, and were suffocated at once (if alive), and buried.

If a woman died pregnant, her body was at once brought to the temple where the unborn child was removed surgically. The usual solacing sermon, rites "to lead the deceased to live in her right place in the next world," and cremation took place, with the fetus laid beside its mother so that it "would come out normally." The mother and child were separated to prevent a ghost which was double-powered. No prayers were chanted at home before exsection "lest they make the power of the spirit stronger." Moreover, any violent or premature death caused an angry ghost. The ghost of a premature child had a heavy load of sin, for its stay in purgatory, where sin was worked off, had been interrupted (Textor:262). An unscrupulous mɔ̄ was eager to get possession of any ghost for use in sorcery, and a double ghost was stronger than any other. Ghosts were obtained by plundering the mortuary chambers of the temple prior to cremation. By feeding (liang) it, a mɔ̄ controlled it. The ghost of a male infant was preferable because it was "stronger than that of a female." In the light of this situation, not only should the body of a pregnant woman never be left alone " so that no one can get at them (sic)," but a pregnant woman herself ought not to be alone.[26] The behavior towards the Rice Goddess, Mother Posop, who was "pregnant" when the grains in the stalk filled out, illuminated many of these attitudes: "Mae Posop feels weak, hungry, and uneasy. She is eager to taste sour and sweet foods. She is a woman and beautiful in her pregnancy." To allay her hunger the

26. In Cambodia, a pregnant woman might be murdered, even by her husband, so that the murderer might gain the malevolent power that possession of her now double soul would afford. (E.R.E. "Cambodia": p.159). This specific statement was not found in Bang Chan but might be part of the shadowy background to local reluctance to leave a pregnant woman alone.

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A midwife or doctor could not be blamed, unless it was felt they did not help as much as they could have.

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A child lacking in merit died. Such individuals, for some reason, did enough at their own birth. Words of comfort to a surviving mother were, "your baby did not have enough merit to live." If particularly sinful, it died after making delivery unusually painful. "Once a child was born dead, but it teased the midwife by moving its legs a bit. Consequently, its death was not the fault of the midwife." The child's lack of merit was proved by its death and its maliciousness. There was no hostility towards any child born in a hard delivery, for if both mother and child survived, the demerit that caused the suffering was the mother's.

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On the other hand, a meritorious woman with a meritorious baby had a short, easy delivery. Such a child was considerate: "he will not hurt his mother, will help her to bear him easily, and will live."

A woman who safely came through childbirth felt deep satisfaction and new security. Bearing a child in itself did not bring any merit, though it was an act of mercy. Merit could come later with the ordination of a son. However, why one woman had successful or short labor, and another not, was unequivocally clear and accepted. If delivery were normal, she was confident of her and her child's store of merit. If not, she bore the anguish, convinced that she had brought it on herself in some previous life. Since sins were worked off with pain, every thrust made her future lives happier. Fear was minimized, for if death came, it was merit-determined.

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greater, for relatives were at hand. Some of these ordinary persons developed skills of considerable consequence. 844

If difficulties developed, then a more experienced person, perferably a midwife, was needed. But many a midwife assisted at normal births. Because difficulties might arise from a deficiency of merit either in the mother or the child (one could never know which), many women preferred to have in attendance, for peace of mind, either a midwife or an experienced person to insure the presence of expert help. Sometimes they were engaged in advance, more often just sent for "as pain is increasing," it being not always certain whether the case was normal or not. 844 759

A few women were delivered at the Minburī Health Center. These were rarely normal cases. The Center was turned to as a last resort in dire circumstances, with the result that sometimes the woman died in the boat on the way. A few persons of rather more modern outlook, such as wealthy farmers, teachers, and traders, had been delivered there and recognized its usefulness. 844 743 [845] [847]

The midwives lived in all parts of the community, with 3 in the populous central temple area. No one was more than a half-hour's paddle, or an hour's walk from the home of some midwife. What was desired, however, was a particular person, even though he might not be the most accessible one. 759

Since midwives were all heads of large families their clientele was mostly their kinsmen. They also took care of non-kin who lived in their locality. A daughter or other close relative who had married out would be attended wherever she was, if she did not return home for confinement. 759 571 602

In choosing a midwife, a parturient sought out not only skill but favored a kinsman over a non-kinsman, a close relative over a distant one, a near person over a far.[63] Occasionally, to sustain an image of progressiveness, social superiority or of wealth display, a midwife from outside Bang Chan was imported. Sometimes proximity, convenience, and

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63./ A male and 2 female kinsmen-midwives were called by the man's sister to deliver her, and all came. He did not deliver her because she was "too close a relative," but he said a brother "could deliver a sister."

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in the khwan khăo "gift" handy cash. The income was about 40 to 200 baht ($2.00 to $20.00) per year.

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The duties of a midwife were not time consuming if all went well. There was practically no pre-natal care, and a few hours of care was given for only three days after birth. If complications arose, though, the midwife spent long hours away from home. In fact the husband of one midwife grumbled, "You don't receive anything, and just waste time. Sometimes you stay away over night, and no one watches the house or the children."

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In their social role, midwives felt personal but not group solidarity. A solid bond existed between an older midwife and the particular younger one to whom he or she had given training and magic. Those related by blood or marriage sometimes worked together, and even turned over cases to each other if outside demands became pre-eminent. If in trouble on a case, midwives did not call on each other unless as close, affectionate relatives but turned rather for help from a mŏ or to the Minburi Health Center. Yet sometimes rivalry was severe. If the family of the parturient felt that no progress was being made with one midwife, they called in another and another. Each did his utmost and then stepped down when it had to be admitted, "My magic is not enough." The final expert who brought mother and baby through before the deposed midwives glowed inwardly with pride and skill and satisfaction that the magic of his particular teacher had proved effective. The sharpness of the competition reverberated through the words, "I pushed the other midwives down." Community standing or 'face' was not lost by an unsuccessful case because of the midwives' fundamental role as helpers only, their faith in their own experiences, and again, the conviction that the course of childbirth was merit-determined.

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Though living like other elder citizens of the community, in their social role they were more respected. Known as selfless donors of time and energy for the sake of others, whose successes gave proof of merit and nurturing capacity, they were viewed as assets to the community. In spite of competition considerable affection was evident between some. They were elders before a sea of youth, old friends who had for years lived and farmed side by side, met at ceremonies, and shared many experiences.

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If the case were in difficulty sometimes a mŏ was called, sometimes a midwife or even both. What was the nature of their respective specialties? What in fact made certain midwives "professionals" (tham ăchîp [Mc.F. 990]) when others who had equal or more experience were not so considered?

The Role of the หมอ

756 844 A หมอ never delivered the baby and never even touched a woman in labor, for this was not part of his specialty. If labor were slow, or weakness were setting in, he came to give a decoction to raise the fire element within the body, speed up the winds and so strengthen the contractions. He also gave holy water for general strength and to clear out, if such there were, any obstructing spirit or magical disease object like khun. Because of his experience, though, he might stand beside the midwife or other woman instructing; for instance, "Pull now!" "Watch out for the eyes!" His advice was more often sought after childbirth if fever or swollen body were in evidence, for these were the results of "inadequate outflow of blood and fishy-water." Because they were called in case of debility, the หมอ were the ones who suggested when it was advisable to send a parturient to the Minburi Health Center.

756 84 No priest-หมอ was ever called for childbirth because of the contact with a woman's genital area, though they were consulted on menstrual and pre-natal irregularities.

759 The Specialty of the Midwife

Midwives were called หมอ tamyaa (doctor-expert-in-occultism; pounding, as in a mortar [McF. 365] crouching, [McF. 682]). There were 4 or 6 women, both Buddhist and Muslim, and 2 or 3 Buddhist men, who had delivered 100 or so babies apiece. They ranged in age from 50 to 70. Dozens of women had delivered babies one or more times but were not accorded the title of midwife. [192]

759 845 The foundation of their specialty was a greater than usual manual skill, developed over long experience. "We have only our hands," said one woman. The more expert could handle certain mal-positions, and did not hesitate, but only with permission, to put the hand into the vagina to turn the baby or "unstop the blood." They were better judges of the progress of labor, whether normal or slow, and of the symptoms of debility. They were more likely to keep calm in the face of extreme suffering where the parturient's relatives, over-eager in their desire to help, sometimes inflicted

severe injury, such as bruising by excessive pressing, or even in hysteria pulling the child to pieces in their effort to get it out.[66] [759 845]

Secondly, a midwife offered success, not only as proof of competence, but as a substantive asset. It will be remembered that the initial shape of an event set the invariable pattern for its subsequent occurrences. Thus a parturient was virtually certain of successful childbirth if she called on a person who had the habit (khoŋi) of success. It could not turn out otherwise. We have also seen that these successful midwives were good nourishers (liaŋ dii). A new mother wanted to associate herself with such a fortunate sequence. Once established, a midwife's reputation was not unduly tarnished by the loss occasionally of a mother or baby. She might explain, "The woman did not do as I said," or "I was not given permission to do what I could have done, for her family feared she would be even more hurt by my putting my hand into the vagina." Death was, of course, only due to the running-out of the deceased's merit. [761]

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66. To give something of the measure of their skill: if the feet of the baby appeared first, one man "straightened the legs by hand inside, held the chin carefully as the head came through," while another said, "Do not press or reach into the vagina. Let the baby come naturally." If an arm came first, or it were a breech presentation ("the baby is turned over"), the procedure was to "pull and press lightly," but it was conceded that neither the mother nor child could be saved. Expulsion of the placenta was frequently difficult. "It may take 7 hours or stay in 7 days or more. Some die when it is left in, but some do not." The technique of removal was to give a medicine, press, pull with the hands rubbed with alum for a better grip, with the woman in a crawling position. Some reached into the vagina to locate it. One woman had analyzed her practice so as to know when to expect trouble: namely, in the later pregnancies and childbirths, i.e. the sixth and seventh, say, rather than in the early ones during a woman's younger years.

As to mortality, one "professional" man estimated 30 deaths of babies out of 238 deliveries in 50 years. Hauck (1956) reported 90.6% live births (pp. 32-33), 7% of the babies dying in the first month, 11% within the first year (pp. 39-41). One should remember that the professionals had a greater proportion of difficult cases. One woman had delivered over 100 babies and "all lived." [165] [163]

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743 Chan during a period of residence in Bangkok was delivered
844 at the Women's Hospital and at a later pregnancy at the
178 Minburī Center. With her last baby, however, she elected
[759] to be delivered at home by the local midwife as more convenient in order to assure from her bed supervision and proper care for her other children. One young woman of very high social and economic standing preferred to import a midwife from a community six kilometers down the canal, and bear her child in her own home rather than attempt getting to a hospital.

Moreover, basically the Minburī Health Center was seen
[845] as a place for sick people, while normal childbirth was not a medical matter. To plan ahead for medical care there was to invite an abnormal delivery. The Center also suffered a poor reputation for success because difficult cases, hopelessly advanced, were the usual ones brought in. "At the Center are many ghosts," people said.

743 Some comments were genuinely favorable. The cleanli-
759 ness of the hospital was greatly appreciated. Anyone who
178 witnessed the skill of the doctor or nurse-midwife held it in respect.

Techniques of delivery were sometimes mistrusted,
75 sometimes admired. "They pull out the child with their
844 hands, which is dangerous." "The fecal pump is unneces-
743 sary." "One may not chawl during labor." A mō-midwife
178 who witnessed the nurse-midwife at work said approvingly, "She can force a baby out, but our midwives can only press harder," and "The hospital knows when a baby will come." The stopping of the flow of birth fluids by an injection was resented as affecting strength adversely, yet the injection that "made the placenta come so fast I couldn't notice it," or "gave the mother strength when the baby was stronger than she" was liked. The pills for pain were enthusiastically received. The hospital's closed windows "protected the baby from wind element," but the journey home dangerously exposed it and the mother to cooling wind. The dietary recommendations during recovery appeared wrong: eggs, which were "too cooling," or fruit, which "gave no strength." The suggestion of a nurse that scissors be used to cut the cord was resented as uncomprehending of village living problems ("we haven't any!" and "scissors always rust") and also as unwise ("rust gives tetanus poisoning").

75 Another criticism was the lack of personal warmth and
844 pity manifested by modern physicians and nurses, unlike
178 the attentive, reassuring mō. By forbidding abdomen-pressing, they were accused of "not doing enough," even of

family. Babies lacking in merit died at their birth, just as mothers whose merit had run low suffered or died in childbirth.

A soul desiring rebirth flew into the womb of a woman at conception. By care and imitative magical practices, both parents helped the fetus grow but the mother gave the baby its body. Parturition was a joint effort of mother and child, the course and outcome of which was determined by their respective stores of merit. After delivery the child was blessed, his soul seized and tied in, and ritual means taken that he not wander from home throughout life. A post-partum rest of several days was taken beside a hot fire, the purpose of which was both physiological, i.e. to dry the uterus, and ritual, to bring about full "ripe" adulthood.

The fire, which was consecrated, strengthened a woman and made her a better nourisher, mature, more compassionate, and eligible to handle magic and the tender souls of living creatures. Thus she was fitted for her life-calling as a woman. The comparable ceremony of maturation for men, when they too were changed from "raw" to mature, compassionate, and strong males for their calling of fatherhood and leadership, was ordination into the Buddhist priesthood. Only those men and women who had undergone their respective rites of maturation were eligible to handle magic. Men's magic gave power, control and could be aggressive. Women's magic was limited to nurturing purposes, and could never be destructive. The respective areas of magical competence and right were autonomous and rigidly separated on pain of severe sanctions.

This view of the role of woman in life and the events of childbirth in the earthly and cosmic scene, had the effect of giving women in childbirth a positive, secure, and relaxed outlook, and an understanding and acceptance of suffering so that they had little fear.

How careers in midwifery, whether professional or amateur were established, and the nature of the specialty and of a practice are discussed.

The understanding of, and the attitudes toward, modern medicine are given along with findings accounting for acceptance or rejection of modern hospital care for parturients. Accepting the changes that were observed in the practices surrounding childbirth proved to be a means of expressing partial withdrawal from the old life of a farmer and a step towards the glitter of urban ways. In the desire to be seen as progressive, the fire rest had been shortened, market products substituted for the consecrated fire, and other urban ways introduced.

For persons interested in introducing changes in the

This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

Marriage

As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Minburi to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.[4] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:62) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

Diet in Body Maintenance and Curing

261 262 753 Because food created fire, the daily diet could be a source of illness or a therapeutic means. Every food had known properties for heating or cooling, and for other effects as well. Guava fruit, alcohol, and turtle or cobra curry were heating. Eggs were cooling. Depending on the occasion, ice and iced concoctions were over-heating or over-cooling. They were always "dangerous during menstruation." Banana varied according to the variety: kluai hɔ̂m (fragrant banana) was undesirably cooling and caused either diarrhea or constipation (Hauck, 1959:27); kluai nam wa was less deleterious (salaeng) while kluai nam was good for the sick or for parturients (Boonlong).

252 262 [758] [846] Properties in food changed in cooking. Boiling made rice "ripe" (suk) and so available as nourishment (Anuman Rajadhon:77). Even the method of cooking varied the properties. For the sick and for parturients, the banana variety called kluai hak suk was good if baked, but not if cooked in syrup (Boonlong).

262 753 827 Some foods were "incompatible" with, and so aggravated, certain illnesses. Air-borne food in the form of smell was incompatible with, and compounded, a condition of wind excess. Death or blindness ensued. On the other hand, asafetida might be tied to the wrist of a new-born baby so that the smell, an established carminative, might cure the excess wind in his stomach manifested as flatulence.

262 [774] [782] Beneficial foods were encouraged. Of all these none surpassed rice, the main sustenance of the body, "the only true food" (Yong Chutima, in Hauck, 1959:27) and source of "strength" to the farmer. Rice was a safe food. It never disturbed elements. Eating rice, as compared with meat, had no overtone of taking life. One could eat one's fill without any sin. Most of all, rice nourished the human khwan, for each grain contained a part of the khwan of the divine Rice Mother. Furthermore, any food offered ritually to a spirit or to make merit acquired strengthening properties, and was afterwards given to priests, children, or to the sick.

[776] Foods with known dangers were avoided. "Kluai tāni banana, a variety full of seeds, was never eaten because it contained a female ghost (phi)." Jackfruit was avoided by lactating women as a direct source of wind-excess. Fruit in general was not dangerous but "did not give enough strength for a rice farmer. It was all right for an orchardist."

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speeded up with heat to the point of blasts. The strength of the contractions of labor was in direct proportion to the speed of the winds' circulation. The great pushes of the expulsive lom beng "broke down" the sac with the amniotic fluid (nam thūn hua: water-that-supports-the-head-of-the-child), and forced out the child, water, and the placenta.

After the child was out, the mother was cold, weak, and exhausted. Her uterus was full of harmful fluids. Heat was needed more than ever not only to warm her but to give the winds "the power and push" to drive out three undesirable birth-waters: "The blood that looks like ordinary blood but is bad,"; the amniotic and abdominal body water (nām khram:refuse water); and the pale, viscous, repugnant "fish-water" (nam khāo plā). Therefore, a hot fire was built, close to which the mother lay (yu fai), turning all sides of her body towards the flame. She bathed in or drank hot or warm boiled water (nam suk: cooked, or ripe, water). She ate safe foods like rice and dried fish,[31] and kluai nam bananas, continued to take alcoholic medicines of the hottest sort, such as Snake Brand, and occasionally might be given cobra or other hot curries to eat. For a first-born, a woman stayed eleven or nine days by the fire (always an odd number), with stays shorter for each successive child, but never less than five days.

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Complications sometimes developed because of inadequate control of the heat. A "headache and a hot body" indicating "stagnation of the blood and the fishy-smelling-water," was cured by a heat-producing decoction. Rashes often occurred, causing small boils that might develop into sores. To soothe these, turmeric was painted on. In the most dangerous cases the heat "drove the bad blood to the heart, to the face or belly" where it was recognized by serious swelling, with resulting madness or death. In fact, one mō felt that the

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31. The reasons for rejecting fresh fish during pregnancy ("lest a creature of hell be born") would not hold after parturition. Yet fresh fish was rejected then too "as bad for the womb." One suspects that the less odorous dried fish was substituted so that the odor of fresh fish, like air-borne, incompatible food, would not affect adversely the "fish-smelling" post-partum discharge (nam khāo plā). In Hauck's list of foods "bad for mother during the post-partum rest," the reasons are apparent: Sour tastes did not dry out the body, but built up water; egg was too cooling; jackfruit brought in wind; glutinous rice and the sugar of sweets "wet the uterus;" fruits did not give strength and were excessively cooling (cf. Hauck,1959:15).

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• 846 758 278 [82] heat could be better controlled by medicine alone, saying "I do not prohibit a fire, but if called because of difficulties such as a temporary paralysis, I always take the patient off the fire and prescribe a decoction, or recommend more pickled medicine (yā dong)." "Damage to the thigh ligaments," treated by a masseur, was said to result from insufficient rest by the fire. If the baby died, the mother did not curtail her fire-rest but finished it out as planned. As will be seen later, the fire-rest had far deeper meaning than just physiological restoration.

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The next step was to prepare for Dūan's post-partum days of rest beside the holy fire. Before the baby arrived the fire-floor had been prepared, but not lighted. Song had chopped down a banana tree, and quartered and trimmed the trunk into four good planks. Along a wall inside their house he had laid them in a square about three feet on each side and 18 inches deep. He remembered that at Chāi's birth, the fire had to be in a corner, because of the direction of the celestial Snake. Lek picked up a large round basket and went out to get the soil, which had to come from the north side of the house. Three full baskets she was to get, no less, but there could have been five. She heaped the soil into the frame, smoothing it to a good fire floor. After she poured in the last load, she picked up three handfuls of earth and put them back in the basket. Quickly she took them back to the spot she had been digging and tossed the three handfuls one by one onto the earth, murmuring to the spirit of the land that she was returning the earth she had taken. Back in the house, in each of the four corners of the fireplace, Sāi planted a little banana leaf bowl containing rice, sticks of incense, a candle, and flowers. "Some persons add areca nut and betel pepper leaves, but I was not taught to do it that way," she commented. A fire of the sakae wood was laid, and the placenta and cord in the pot placed at the back where they could dry with the heat. To prepare Dūan's bed, Song searched the house for a smooth plank about 14-16 inches wide. Not one! So he ran over to a neighbor and borrowed a good one. He cut two banana trunk sections to set this plank up so that it was as high as, and two or so hand spans from, the fireplace. Sāi checked that firewood, woodpile, and plank were all parallel to the celestial Snake. Then the fire and the incense in the corners were lit.

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Meanwhile Sāi had been washing the lower part of Dūan's body and legs with warm, boiled water. She painted Dūan's abdomen with turmeric, lime, and alcohol, putting a little on the hands and arms, and now gave her a fresh skirt. "To cure the womb" Sāi also gave her a "filtrate" of tamarind, salt, and water to drink, the same potion people also gave to the cherished buffalo on the rare occasions when a calf was born. Finally, she asked Dūan to lie on the floor a moment. Putting her foot on Dūan's hip she pressed hard, three times on each side, to "close the hipbone" and get the pelvis back into place again.

846 789 782 Now that the fire was going nicely and Dūan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sāi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dūan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaichiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dūan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

846 [757] [853] As Dūan was resting quietly, Sāi made three "taping fruits" (lūk prakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dūan's legs to cure the birth wound (phlae). The other two were set aside for use on subsequent days. Sāi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dūan, on the side away from the fire.

787 827 With satisfaction of a job well done, Sāi and Lek sat together for a quiet chew of betel. "Lek," said Sāi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that best

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[273] [262] 36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

[263] [776] 37. The deities addressed were mae phra phlōeng and mae phra phai. Another Pali-Thai magic formula to control fire was: "Phra Mōk Khan Lā Nō will extinguish the fire from hell, na mō phut tha ya." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mō...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Texter 1960:483-485).

date of all, Seo Hā Day, one Saturday in April, which was the fifth day of the waxing moon of the fifth month, in the year of the Big Snake. That boy is truly blessed. He will be the best and most respected doctor or teacher. He is in school now and people are always telling him he is bright. Chāi came on a Monday, so he'll be charming, but, alas, always roaming away from home! This new little son has his mother's features, which is as desirable as a daughter's having her father's features. Still, no one knows what characteristics come from a parent. One more thing, Dūan. Now you may take medicine as you please." Shortly after, Sāi took leave until the next day.

The new mother turned her face toward the fire and tried to sleep. It was night. Lek was close by, and Song slept in his mosquito net near Chāi's cradle. The fire was so hot it kept waking Dūan. Though the smoke made her eyes smart it kept the mosquitoes away. In spite of the discomfort, Dūan was eager to have the fire as hot as she could stand it, for this heat and that of the medicine would dry her uterus, rid her of the bad blood and waters of childbirth, restore her strength and stimulate her milk. She forced herself to drink as much hot boiled water as possible to keep out the dreaded wind element that might get into her body and cool her. When, however, the fire was overpowering, she dripped water from a handy jar with a cloth.

The next day, Sāi returned. With warm, boiled water she bathed Dūan--this time the upper part of her body also--and the baby. The boiled water was much more important for the mother, but being available, was used for the baby, too. Sāi washed the soiled clothing and the baby's little cloths. Turmeric was again painted on both Dūan's and the baby's abdomen, head, and neck to protect from wind. Sāi questioned and examined Dūan. Measuring a handspan down from Duan's groin, she pressed outward gently. "I want to see if these particular ligaments on the thigh are joined. They are often damaged and do not heal if the time by the fire is too short. Some mothers cannot walk at all. They have to call a masseur for regular treatment." To "make the ligaments well," she tapped Duan's body all over with the second of the tapping-fruit balls and had her sit on one while bathing. She massaged the muscles, stiff from lying quietly near the fire, by pressing in the ball with her hands and even feet. Medicinal herbs were warmed and laid on Dūan's breasts so that the "useless early milk [colostrum] which would give diarrhea" could be worked out and thrown away. "The real milk is not ready for the baby until the third day," Sāi said, "but if the baby is crying much, and if there is milk some mothers start nursing on the second day."

Almost from the moment of his birth, whenever the baby

853 cried, Lek had dribbled from her finger warm boiled water into his mouth. Now she mashed up for him a little kluai namwā banana, honey, and water. Song happened to pass as he was going to work and saying, "Let me give it to my son this first time," took the child in his arms, and pushed it gently in with his fingers. "This variety of banana does not cool, or give diarrhea because its tissue is harder. Uncooked is better than baked because it is easier for the baby to swallow," said Lek, "but baked food is incompatible if wind is in the body." Then she painted medicine on the baby's tongue with a feather.

Dūan turned to Lek. "Who would be the best person to start my child on good nursing habits?" Lek mentioned a relative who had much milk for her handsome child. This woman gladly came to give the baby his first suck.

Sāi came the third day for the same duties. It was the last day for her, unless something serious happened. Dūan's milk came in somewhat that day. She asked, "Is it true, as people say, that the 2 breasts give milk of different consistency, that one is water and the other rice?" Sāi answered, "That is an old saying. The important thing is to feed from both breasts at each [278] nursing. Here is medicine for the baby of honey, charred betel leaf, and water. Give it 3 times a day to cool his neck. His medicine is mostly to cool him slowly; yours is to keep you hot on the inside, while the fire warms • 846 you outside. Both are to keep out wind. Dūan, I would suggest 13 days by the fire, but you are the one to decide. It was 15 for your first child, but each time can be less. Be sure it is an odd number of days. My, women are certainly making it short these days! My first fire-rest was 27 days. And think of all the changes coming in! That trader-woman across the canal is using one of those small hot-ashes pots on her stomach. She is lying on a mat under her net, with her new baby. Her 2 other little children come in and out! No fire at [177] all! I have heard they use rubber hot water bottles and electric warming devices in Bangkok. Well, it probably is all right provided there is heat, but to have plenty of milk and strength to work in the fields, then you have to lie by a real fire. The longer you stay, the stronger you are. Bangkok ladies do not have to farm! They want the fire for the fine pale golden color it gives their skin (cf. footnote, p. 71)! Well, now I shall take my final leave." She reached up and took her khwan khāo bowl. Smiling, she left the house.

From then on, Lek and Mī were certainly busy, caring for both children, doing things for Dūan, boiling up quantities of water, and cooking. Song put the wood on

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the fire for her during the first day or so, lest in her straining, Dūan's womb "move to a new place," but Duan did it herself thereafter. The smoke was harder on others than for her for she was on the floor. She could leave the plank to bathe and to relieve herself through a crack in the floor. As soon as Chāi got over being frightened of her turmeric-yellow stomach, he often came and lay beside her on the plank, though it was a squeeze! She took her medicine and often sipped hot water, feeling very modern with her brand-new thermos bottle. Constantly turning her back or front to the fire, she poked or dripped water on the flames to make coals. Once she tossed on a dry palm leaf, and as it flared up, put a cloth over her head to trap the smoke and heat. Though a rash developed on her body, she was complimented by Lek on the care she was taking of the heating and drying process. Unfortunately, a neighbor who wanted to help brought in some of the wood one day. Not remembering that to make noise with the wood caused diseased red eyes in the baby, she dropped the bundle with a crash! Alas, "sang" disease, of course, came at once. So the near-by mō who always cared for them had to be called, but he used no medicine. "For eyes red from 'sang'," he said, "never use any eye-medicine as drops, or they will be permanently damaged or blind. Such eyes have not enough resistance to win over the strength of the medicine. A drop of mother's milk, any mother's, in the eyes is the cure."

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Uterus pain was said to last one day for the first child, 2 days for the second, and so forth, increasingly. As Dūan seemed to be in considerable pain, Lek resorted to an old cure: she secretly took the bamboo knife and the phlai from the baby's tray and put them under Duan's plank bed without telling her. Slowly the pain diminshed.

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If anyone spoke of uterus pain to her during the fire period, Dūan would suffer still more. If a visitor spoke of the hotness of the fire, little boils would appear on her body. The fire, being thus made too hot, would have to be put out, and Duan "would be weak for a long time." This was because actions or even words occurring beside the holy fire set a new and permanent pattern. Neighbor's children were kept away lest they inadvertently exclaim about the heat.

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A few relatives with gifts of banana, turmeric, and face powder dropped in, but visitors mostly stayed away. "It is an ugly sight," said Dūan, "lying here with only a cloth over me, half naked and yellow, and I fear there might be an unpleasant smell."

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The winnowing tray, with the baby on a pillow now covered with a plastic cloth, rested on a low table, the legs of which stood in bowls of water to keep away ants. At first an old dome-shaped fish trap had been set over it to prevent draft and

854 mosquitos, but then Song bought in Mīnburī a bamboo frame with be-flowered netting. He also bought little mits to tie onto the baby's hands, so the fingers would not be sucked. Not every baby got these! Most of the time the baby lay naked, but was wrapped when nursed. One cool day they put over him a thick blanket. Lek, Dūan, or Song bathed him in boiled water 3 times a day and always after his excretions, which were wiped off with cloths. Then fresh cloth was put under him. On the seventh day since he was thriving, [856] he was bathed in ordinary rain water. Every day Lek vigorously squeezed his fingers and legs "to make them straight," which made him yell each time. To speed the drying of the [278] cord, a charred leaf of betel pepper was applied for a while to his navel on which Dūan spit saliva several times a day.

853 Dūan's milk supply was only fair. For milk stimulation they pressed her nipples and kept the fire hot. She was [262] also taking daily a special nursing curry of banana flower and vegetables (khaèng līang). One day she ate a cobra curry. A neighbor offered to help nurse the baby but Duan [854] refused. "It is a pitiful sight to see one's child at another's breast." Whenever the baby wailed he was given boiled water but was not necessarily at once picked up. If his crying continued, however, Dūan washed her breasts with warm water, pressed out and threw away a little milk, moistened the baby's lips with water, then lifted him on the pillow to her plank. She laid him beside her and leaned over him to nurse, though occasionally took him in her arms. He was nursed about 10 times a day, and also received honey, boiled water, and a bit of banana, too. [278] One day the baby cried a lot, so they painted him with turmeric and gave him baked cobra tail in alcohol to warm him up.

846 As to her own diet, Dūan followed the usual practice 262 of limiting herself rigidly to rice with salt, dried fish, and baked klūai namwā banana. Egg was too cooling: "like glutinous rice, it brought pus to the unhealed cord and the vaginal wound." Dūan also avoided "jam" bean which caused madness, fruit, and sweets. Whatever she ate affected her child by secreting into her milk. If she were sick, he would be so too. If he alone became ill, she must watch the foods both he and she ate. All these food instructions would stop only when nursing stopped a year or two later.

846 Duan decided to stay only 11 days by the fire, though Sāi had said 13 and she would have liked to stay longer. However, she wanted to get back to work because the transplanting season was approaching. Besides, the

wood was getting low. Friday (wan suk:day of happiness) was the best day of all to leave the fire, but for her, Friday happened to fall on the fourteenth day after delivery. It was better to come off on another day than to risk taking such an important step on an even-numbered day. Even numbers were always associated with the even corners of a coffin.

Usually the fire period went off safely, but not this time! One day, the heat "seemed to come up suddenly" and choke Dūan. She rose gasping and ran to the window for air. Horrified at the terrible danger of cool air, Lek hastened to get her back to the board. Then by accident Dūan dripped too much water on the fire and put it out! Later, Dūan was almost unconscious, felt unhappy (klum) and as if "the fire were burning inside her." Lek called both Sai and the mō. As the mō entered, Lek handed him the expected offering of incense, flowers, candle, and a baht and a half for his khwan khāo. He prayed to his teacher, then made holy water and a decoction both of which he gave Dūan to drink, saying, "The bad blood and the fish-water did not flow out well, a common trouble after childbirth. Since your body is not cold and the fire has not been out a half-day, you could start the fire up again. But as it is never good to put out the fire like this, I am taking you off it. Take a pot of salt, heat it well and wrap it in a cloth. Put that on your abdomen. Drink no cold water, or you will die."

Dūan was sad that she had to leave the fire early and on an even-numbered day, but one always wanted to obey a mō. All had gone so well when Chāi was born! That time she had taken the usual steps, choosing a Friday to come off the fire. Now she could not choose. Her formal leave of the fire was as before: The mō prepared earth holy water (nammon thoranisān), some of which she drank, and some he sprinkled on the fire. She then knelt down facing the fire and touched her forehead to the floor 3 times, asking the Mother of the Fire to bless her and her child, and to keep them well. She went outside to bathe, first with warm water to cleanse her body, then with holy water, and put on a clean skirt. Returning to the house she seated herself quietly, for she was not supposed to do anything for a time. Others in the family broke up the fireplace. The baby was taken off the winnowing tray. Warm water mixed with the holy water was dropped in his mouth. After being bathed in the holy water, he was laid in a little cradle made of a long cotton scarf, spread apart with sticks, and swung between 2 houseposts.

Now that the fire-period was over, they stopped all boiling of the water for the baby and Dūan. Rain water was substituted, but whenever the baby seemed sickly, boiled water was used. When their rain-water ran out, they got some at the temple. Both Dūan and the baby continued taking medicine for many weeks.

846 [789] Seven days after the end of the fire period, Dūan sent a message to the mǭ to look in his book as to what direction from the house she should bury the phlai, the bamboo knife, and the pot with the now dried placenta and cord. She already knew some of the procedure: burying should take place on a Monday or a Friday; south was right during the first three months of the lunar calendar, November, December, January; and the full moon of the twelfth month (October) was especially good, for the moon waned thereafter. Chāi had been born in October, so north was right for him, but for a girl it would have been east. Song or Lek or anyone could bury the pot, but most mothers did it themselves. If it were buried in the wrong direction, the baby would die, and if not under a tree, he would leave them and their home, and roam. The instructions came. With the things in her hand, she walked toward a big jackfruit tree. Beside it was a sakāe. Either was good, so she chose the sakāe which, being nearer the house, might strengthen by that much the roots that would keep her boy at home. After burying the pot and all, she returned directly to the house, remembering to pick, as she came, a fruit, a vegetable, a leaf, and then a piece of wood, all useful things. In the house she added them to the usual household stores. By doing so, and by using them up shortly, she ensured that her new son would be a good worker, who on returning home would always bring something to add to the requirements and wealth of the household. Once buried, the placenta, "like ashes," was ignored and the spot forgotten.

846 262 [461] [753] [757] 862 Within a month after childbirth, Dūan was back at farm work, even to the back-straining pounding of rice in the big mortar. For three months she avoided fruits, particularly guava and jackfruit. Then, since the baby was thin, she gave up vegetables, especially gourds, corn, and the green plants that grew in the canal. One day, because she carelessly ate some salted field crabs, the baby got thrush on its tongue. They cured him by smearing the milky juice of a peel of klūai nam banana on the cloth sheet covering his cushion, then wiping this on his tongue (cf. Anuman Rajadhon 1961:153). So the year passed, and then another. Not long after his third birthday, Dūan realized she was pregnant again, so took steps to wean him. She painted her nipples with "black medicine" (yā dam), a bitter and hot tasting ointment made from the boraphed rhizome (McF; 474). Then she sent the child over to her mother's older sister's house for four nights. To make quite sure, she followed an old ritual way, too. She boiled an egg hard and peeled it. Holding the egg behind her back, she turned her face away from her son, and handed it to him behind her so that she could not see his face. "Henceforth, you shall not nurse any more," she said. Without looking at him, she walked

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A major clustering of first experiences, and so of habit formation, was in intra-uterine existence. Every experience of the mother was shared by the fetus. After birth, a baby daily formed habits of eating, sleeping, and crying, and later, as a child, habits of respect, obedience, truth-telling, etc. To create good habits efforts were bent to control and ameliorate any first experience: to make it as correct as possible; to seek out favorable astrological moments; to ask auspicious, skilled, or learned persons to be part of the initial action. An example was the establishment of nursing. When the baby was put to the breast the first time, the objective was not nourishment but to establish a good habit, viz. copious and strong sucking from an ample milk supply. Only after this first nursing did breast-milk as nourishment become important. If on this occasion he did not nurse well, he would have the habit of eating poorly all his life. Moreover, whatever the mother's experience with her first-born, it would not only be repeated every time he nursed, but set the nursing pattern for all subsequent children she bore. For her first-born, though, a mother would have had no previous experience of making milk. She had to be taught, or shown, how to make good milk, just as the baby had to be taught to suck, and later taught to eat rice. Consequently, the first-born baby was almost always first nursed by another person (not necessarily a kinswoman) with copious milk. Then 2 or 3 days later, because the example had been set, good milk came in and the mother started nursing. What was to be avoided at all costs was a first suck of colostrum, which appeared to be "unfit, early milk" from an insufficiently lactating breast. This would be a poor precedent. Until a mother decided her milk was right for nursing, a baby subsisted usually on honey and water, and maybe a little crushed banana. If a woman were not satisfied with her nursing capacities for her first-born child, when the second child was born she might ask another lactating woman to give the baby a first nursing so as to improve her own habit.[42] One woman flatly said her own milk was always unfit as proved by her babies' health, so she used a bottle of (canned) cow's milk from the start. She felt she had the habit

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42. Bradley (79-80) felt that the dehydration attendant on lying by the hot fire significantly reduced the quantity and quality of the milk.

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153 of making poor milk. Any woman whose milk flowed early and
853 well needed no example, for she was seen as having the habit as an in-born characteristic so deeply ingrained that it came through from a previous incarnation.[43] After nursing was established by the mother, babies were not often given over to another woman's breast because they were reputed to refuse it, "being not used to it."

In sum, the nursing patterns in Bang Chan varied with the previous lactating experience (if any) of the mother, and the ordinal position of her children.

Hauck shows the old way of establishing good eating
(262 habits in a baby. "If a mother ate small amounts of many
846 different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time" (1959:14). Through the beneficial effects of the fire, any deleterious qualities of the foods were eliminated (as we shall see in "The Fire of Maturity") and the child had his first experience with these foods in the breast milk.

153 Bang Chan's life was full of secondary opportunities for starting new habits. Every rice crop, every boat purchased, every house built, and all the rites of the life cycle could, if handled properly, start a fresh and fortunate sequence on its way. We shall have more to say of this in discussing maturity.

789 Imitation
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The familiar principle of imitation (Anuman Rajadhon: 134), the influence of like making for like, operated throughout daily life in Bang Chan. An action, event or presence emanated an analogous influence on its surroundings. A woman returned from a visit to the midwife with all possible speed in order to achieve a speedy delivery of her child a few weeks hence. Another pregnant woman visited the temple on the final day of the rainy-season Buddhist

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[829] 43. Bradley's informants gave an example of a deeply ingrained habit: "European and American mothers can better dispense [with the fire-rest] because their own mothers from time immemorial have never been in the practice of the custom, and consequently their constitutions do not at all require it (p.79)."

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Even after the child was out, the pile of wood was still a drying womb to be treated carefully. It was also the wood for a consecrated fire. To drop a piece of this wood carelessly both injured and desecrated. If this happened a disease of the eyes "sang," came at once for which no male medical powers had any remedy. The only cure was in women's hands, that essence of maternity, "a drop of mother's milk--any mother's." The larger implications of this linking of fire and maternity are dealt with in the next section.

The Fire of Maturity

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In the events surrounding the birth of the child, the significant step for the woman personally was the post-partum rest period by the fire (yū fai). Far more was at stake than just drying the uterus. The fire rest was one of the series of rites of the life-cycle which marked the course of an individual from birth to death. The others were the cutting of the umbilical cord, first head shaving, top-knot tonsure, ordination (for men), marriage, and cremation. Through the consecrated fire a woman formally achieved full maturity: she became suk (cooked, ripe, mature). Maturity did not come just by bearing a child. The fire brought about the transformation.[46] [885]

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How was mature womanhood viewed? What was the essential female role and office? Bang Chan saw a woman as one who "feeds and lengthens lives." As the custodian of growth she was, first, the guardian of the vital, essential khwan soul, and especially of the immature, flighty khwan of growing persons. [774]

Secondly, a woman was a donor of nourishment (liāng).[47] Her primary responsibility was to nurture children and other tender beings. She nourished the fetus with her blood. After [827]

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46. "The fiery element digests what is eaten or drunk...and cooks the body and gives it its beauty of complexion. And the body thus cooked is kept free from decay" (Warren:157-158).

47. All the deities "concerned with the welfare of our bodies and our khwan" were maternal (Māē), e.g. Rice, Water, Earth, "Mother-Goddess" (Māē Sū), and several Mother-Princesses (Chao Māē). Fire, and maybe wind, were both female (māē) and male (phra) (Textor:485). To these deities, "higher" than ordinary spirits, Bang Chan "owed more." [776]

Only when the youngster was satiated did she gobble the remainder.[50] Parents often commented that girls in general were obedient and good, but boys were not. Everyone spoke, however, of exceptions. The capacity to play the female role grew with the child. It was not completed with the physiological maturity of first menstruation but only with ritual maturity.

The rituals to fit a woman for her office, described as "directly related to the welfare of the child," had 4 specific purposes. They perfected her as a compassionate being; restored and strengthened her body; improved her capacities as a nourisher; and strengthened her own khwan. The key to each of these aims was the holy fire.[51] Because actions taken by the fire were immediately and permanently effective, every effort was made to induce auspicious happenings. Words spoken by the fire had compelling effect so even ordinary speech became magical. Speaking of the fire's hotness so raised its heat that a mother was burned. For this reason, uninformed or careless visitors like children or foreigners were a danger.

According to Buddhist thinking, suffering developed compassion. Through the discomfort of pregnancy, followed by the anguish of childbirth and the heat of the fire, a woman became compassionate and so achieved the guide-line for moral behavior. Then a woman was sure to be touched with pity for the younger or less fortunate. One teacher despite the inconvenience went home twice a day from school to nurse her new baby because she "pitied" him too much to hire a wet-nurse. It was "pitiful" to see a child at another woman's breast for it implied that its mother was either unwilling or unable to nurse it. Thus, babies were rarely nursed by others than their own mothers.

The fire also strengthened a woman by ridding her of bad blood and foul fluids. Wind and Fire, the 2 spirit guardians of the elements necessary to the occasion, were invoked to assist in the drying of the uterus. In addition, strengthening

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50. Boys too fed their younger siblings but their purpose was a power-play: "to assure obedience in the future" (cf. Hanks and Phillips:648).

51. This fire was kept entirely separate from the one for cooking and boiling of water. It was ritually lit and ritually extinguished at the end of the fire-rest.

In addition, strengthening foods like rice and fish, the staples for stout farmers, were stressed. Fruit, "which gave no strength," and vegetables (except for the nursing curry mentioned below) were avoided.

The holy fire also transformed a woman into a better nourisher. It gave her new, lasting beneficial nursing habits. As one man explained, "the very nature of water is changed by boiling over a fire. It becomes suk (ripe)." Similarly, a woman's body, her very nature, was permanently changed to suk by the fire's heating. The fire, in fact, made suk all the food she ate beside it. Since this food was turned into milk, her breast milk became suk and so more nourishing, and did not disturb elements.[52] "Food eaten while lying by the fire, when eaten later on (during lactation) by the mother, does not cause diarrhea in the baby." Jackfruit ordinarily caused wind-trouble during lactation, but one woman ate it during the fire-rest, and at once "got used to it, so she could eat it all the time." To make themselves better nourishers, some women spoke of the desirability of "eating a bit of every kind of food." The "nursing curry" (kaeng lIang) was a mixture of vegetables.

Finally, the consecrated fire strengthened a woman's own khwan. She could better withstand convulsion if attacked by a spirit.[53] She was able thereby to handle a khwan even without the special magic that existed for it.

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52. To be nourishing even the daily rice had to be made suk by boiling (Anuman Rajadhon:77). It may be that no food was considered nourishing unless suk, either naturally (like ripe fruit) or by cooking.

53. "...when 'involuntarily' entered by ghosts...maidens in the 17-25 age bracket tend to convulse more violently than do women of more advanced years"(Textor:406). "Maidens" were presumably not married and so not suk.

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156 (riak khwan). Theirs was an augmented personal potency[55] in nurture not unlike the mana so widespread in the Asian-Pacific area.[56] The best midwives were liang dī, though not all liang
[759] dī were midwives. This societal peak was not an unattainable ideal. In the community, certain women were pointed out as liang dī and some of them recognized in themselves the validity of this title.

562 The association of rice, motherhood, and khwan now stands
774 clear. Rice made suk by cooking over a fire, was the essential
776 food not only for the body but for the khwan. Growth and life
262 depended on the nourished khwan. Rice came from a maternal figure, the Rice Goddess, Mae Phosop (cf. J.R. Hanks, 1960). Human mothers, too, when made suk, gave suk nourishment: the milk of the breast was merely transformed rice. Whenever rice was eaten throughout human adulthood, the Rice Mother continued her nourishment, for in each grain was a bit of her khwan, nourishing to the human khwan. The rice-bowl and ladle, used in many a ceremony, stood for the maternal care given a human
[782] khwan, and by extension, personal care throughout life. Whenever the rice bowl with offerings (khwan khao: soul-[of]-rice) was presented by a parturient or by a sick person, loving care comparable to maternal care was being requested.

182 The idea of re-birth, of a fresh start within the pure
885 area encircled by the holy cord, with auspicious words and
• 846 consecrated fire, was deep in every life-cycle rite. The particular circumstance of the fire of parturition was a
562 forthright cooking to bring out and increase a woman's
372 essential femaleness, to transform her from a youthful, partial giver into a complete, mature donor of nourishment. Such was the satisfaction of women in this female role that many said they would like to be reborn as women. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:375) for a quick run-down on a definition of mana.

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to be reborn as men. All women were eager to undergo the post-partum fire at least once. After that modifications might be entertained.[57] Whether the baby lived or died was not pertinent, for the benefits of the fire were for the mother.

Comparison of Male and Female Maturation Rites

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The parallel ritual that fitted men to perform their masculine role was ordination into the Buddhist priesthood. The well-documented Buddhist ends should not be permitted to eclipse this other personal goal. Just as the fire prepared a woman for motherhood, so ordination changed an immature youth into a man ready for marriage and fatherhood. He too was transformed from raw (dip) to ripe (suk). Men gained compassion through denial and suffering. Since their natures were seen as hard (khaeng), strong, bent on gain, influence, and power, possibly destructive and concupiscent, the severest deprivations were invoked: the renouncement of the gratifications of sex and food. Of the 2, the deprivation of food involved the greatest break with previous habits, for since babyhood, food had been a symbol of maternal care. Hence, a man was cast on his own. His only refuge and support was the Buddha, the law, and the Brotherhood. This self-denial induced the suffering that, coupled with knowledge gained from study of the scriptures, led to compassion. The suffering in no way

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57. The fire-rest though desirable was not obligatory. In 1865, Bradley said it could be "dispensed with in times of civil commotion, for fear of the enemy" and "no damages whatever were suffered whatever to mother or child" (p.79). Like other life cycle rites it was postponed if not convenient (saduak). Also in times of peace, "a few mothers here and there cannot lie by the fire," and a few say, "they will not" (ibid:p.79). Bang Chan would accept this viewpoint freely as reflecting an individual, constitutional set of elements, or as an autonomous decision of an individual. The woman would never feel herself as competent as a ritually mature person though.

Chapter VII

ATTITUDES TOWARD MODERN MEDICINE AND MIDWIFERY

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Modern and traditional medicine appeared to Bang Chan to have much in common. Both subscribed to a belief in disruptive intrusions. In typhoid and cholera, the old scheme postulated intrusions of fire and earth. Boils involved a spirit attack or excess of fire For these same disorders, new medicine spoke instead of virus or bacterial infection. Such concepts as nutritional deficiencies, insect transmission, and pollution, however, were alien to the old views as disease agents.

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Modern medicines paralleled the old decoctions. Antibiotics, ointments, or pain-pills were appreciated for their efficacy, but evoked no surprise, for every plant in the world was said to have some therapeutic value. Injections were similar to the sub-cutaneous magical protective needle.

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"Old" medicine did not feel threatened because people were not convinced that the modern was better. The 2 systems were viewed as different, each having its own specialties. The difference was sometimes phrased as "Old medicine cares for old ailments, modern medicine for new ones." Spirit possession and khun attack, for instance, were old ailments; poliomyelitis, gonorrhea, and maybe diphtheria, new (J.R. Hanks, 1955:155-195). It was sometimes better not to claim competence outside these customary lines. One MD said he could cure gonorrhea, but the young men preferred a city doctor. Sometimes, though, one could not be sure what was a new disease.

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Another phrasing of the proper place for modern medicine was that because of varying "habit," differing social stations required differing medical techniques. "Modern medicine is only good for delicate city people or other kinds of farmers, but does not give enough strength for rice-farmers." The orchardists below Bangkok who "had the habit of eating a lot of fruit," and the teachers and traders of Bang Chan (who went to the second class practitioners, and occasionally to modern doctors) were assumed to have different physical needs than farmers. The post-partum fire was clung to as strength-making: "woman are weak if no fire." The hot ashes chamber, introduced from Bangkok, was for the most part used by non-farm women.

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Chapter VIII

CHANGES

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In studying change in the customs surrounding childbirth in Bang Chan, we have D.B. Bradley's description of birth in Bankok in 1865 as a base-line on which to project our findings. Since most of the population of Bang Chan (Thai, with a few Laotians, Mon, Muslims, and Chinese) stems from Bangkok, we may reasonably assume that the parallels derive from a true historical connection. Bradley's description fitted Bang Chan as if written today:

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> "Siamese theory in regard to the part which external and internal fire plays in the functions of life and health is made to work powerfully...There is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which, if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child...[Thus a woman lies by the fire]... exposing all parts of her body, and more particularly her abdomen, to that drying process, so that the uterus shall be forced to shrink up quickly to its normal dimensions, and the sanguineous streams which had been diverted to support the child before birth, shall, by fire, be driven backward to their more usual limitations, all which is...a sine qua non to a sound constitution and good health in the future..." (Bangkok Calendar, 1865:76-84).

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Bradley showed that some behavior one might call "change" today was a recognized alternative in 1865. For instance, in Bang Chan a few women "are made too unhappy (klua) by the fire so cannot use it. They should take extra amounts of pickled medicine" (yā dong). Bradley wrote, "a few delicate females...who cannot endure [this] usual treatment, are compelled, against all their ...fears of the consequences, and all the importunities of their

friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of ...medicines" (p. 81).[74]

The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: *fai chut*) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Minburi Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered mat-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (*suk*) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a *mo* did the same (with the possible exception of the sponging with tepid water), that as a *mo*-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorisation, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calender, 1871:187-189).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1920's.

178 a new way was a woman bearing her first child because she
184 was not yet ritually matured. This she wanted to be.
372 Moreover, her self-interest led her to try to profit as
846 much as possible from the experience of elders by first
885 following the old way. By incorporating the experience of successful child-bearers into her own and the baby's life and by asking them to initiate actions auspiciously, she augmented by that much her own competence, and laid the groundwork for her future progress. Self-responsibility engendered respect for elders. Thus there was no split between old and young over innovations. Experience gave grounds both for conservatism and for changing, but at different age levels.

178 Secondly, changes were adopted by the rich who,
184 spending their money rather conspicuously, sought to main-
556 tain and enhance their social position. Their wealth and position were in themselves unquestioned as signs of merit earned in another incarnation.

178 The changes being introduced to Bang Chan were of two
564 kinds: first the prestigeful, and second, those giving no increment of esteem, i.e. idiosyncratic changes of taste or convenience; or those reflecting individual circumstances. The prestigeful innovations were oriented towards the use of market novelties, modern medical care, urban standards of cleanliness and beauty, and other ways termed "progressive" associated with the city of Bangkok, cynosure of the eyes of the rich. These values were leading certain families away from their original occupation of farming, into the fields of teaching, trading, carpentering, cottage-industry, etc. Since these new occupations brought in steady cash and large land holders, too, had a good income, an association was found of
372 wealth, prestige, urban interests, and innovation. Com-
846 ment on the hot ashes container (fai chut) indicated that
178 it was a strong symbol of prestige and progress. To use it was "to get away from ignorance and the old way of doing things." It was "cleaner, not hot or ugly, and more convenient." One teacher took it up after reading an advertisement in the newspapers that described glowingly its more efficient healing effect. On the other hand, one woman abandoned the fai chut because "it was not hot enough to rid her of stiff muscles," so she went back to the use of the fire. "It is all right for rich Bangkok ladies who want to avoid a scar, but it does not give
177 enough strength for a farmer." She had no urban preten-
178 sions. Also in this prestigeful aggregate, observed here
278 and there, were the market novelties mentioned above:
854 bed, mat, and mosquito net instead of the plank-bed; kits of medicine from the Chinese pharmacist instead of the old

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home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

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To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Mīnburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 2 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccessibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grew up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

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In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Mīnburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

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are less eaten today because they are too expensive."

A slight trend towards depersonalization might be part of the aping of urban behavior, or idiosyncratic, or of more general significance.[76] The Minburi Health Center may have been used to avoid certain face-to-face situations. A woman whose labor was prolonged was taken there by her (male) midwife who had to get to a meeting. He preferred the impartiality of the Center to turning her over to another midwife. A woman took up the hot ashes container so "others would not have to wait on her." Another appeared to have obtained a midwife from outside the community rather than seek out someone inside and closer at hand. A very poor woman used no boiled water because of inadequate help in the household to prepare it. Whatever the circumstances of her social isolation, ordinarily kin or neighbors would have seen to it that this job was done. This episode too was watched by neighbors who commented that since her health remained good, boiling might be unnecessary. Finally, to advertise certain medicines, a firm handed out yan, the magically inscribed cloth, to suspend on the holy cord that surrounded the mother. This was a long way from the personally inscribed "yan" of old.

[743] [571] [812]

A final reason for the acceptance of change was the larger number of choices of behavior because of a broader horizon. Bang Chan had never been an isolated community, for pilgrimages and visiting through easy boat-travel had been for decades part of its life. Yet the growing number of literates, the establishment of bus and other transportation services to the city, the experience, for a few, of work in Bangkok or of military service in Korea, the continuous association with non-Thai, (Chinese, Muslims, a Cambodian, and now the Americans), and the now somewhat diversified economy of the community all led to the increased familiarity with other ways of doing things. Patterns of childbirth were already reflecting this awareness.

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Unchanging in the scene at childbirth was the necessity of supernatural assistance, and heat to ripen and restore the mother.

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76. I feel this evidence is slight, and set it down merely as a point for future observation.

844 178 122 412 this rust is believed to cause tetanus--and they are unsuitable for the ritual objective at the moment of cutting. It will be remembered that cutting the cord on a rhizome of phlai or soil with a bamboo sliver from the housepost guarantees that a child will not roam away from home. Could the bamboo sliver be dipped in "heating" alcohol, or passed over the flame of a holy fire? Could the old family kitchen-knife--long associated with the household--be substituted and dipped in the beneficial heat of boiling water? Such a knife once was substituted on the winnowing tray. Might the phlai or soil be covered with a boiled, clean, old cloth? If modern science succeeds in coming up with an acceptable substitute, one sees the possibility of a very small change making a big difference in the amount of tetanus poisoning observed (Hauck, 1956:41). One should then ask the midwives to watch as to whether the new method reduced the infection called "death because of a red or green face and clenched fists."

262 In diet "the concept that a good choice of food is important to the health of both mother and child" (Hauck, 1959:2) was very much shared by modern science and by traditional ideas but the basis of choice was entirely different.[77] Modern science has ascertained that certain foods are [261] beneficial because of certain nutrients, while old beliefs have set up certain foods as desirable because of properties of heating, cooling, compatibilities with the elements, etc. The nature of these properties should be collected and listed. If dietary deficiencies in Bang Chan are noted, the foods that combine the needed beneficial qualities in both systems should be stressed. A hot-tasting tonic (yā) with appropriate dietary supplements, to be taken daily during pregnancy, and another kind during the post-partum period, might be acceptable. The period of the fire-rest is the best 372 place to initiate dietary changes for whatever is done by • 846 the fire becomes a habit beneficial to mother and child. The use of boiled water should be encouraged as "making for [illegible]th." Again, disturbance of customs is minimized, and the presence or absence of "increased strength" and healthiness can be observed experientially.

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77. Hauck felt the concept was lacking, but it appears only that the grounds of choice were different.

The Muslim khwan khao contained " 7 items"--a young (or ripe) coconut with its water; thread or "a skein of yarn"(used not to tie in the khwan but "for the teacher"); 7 pieces of areca nut; 7 betel pepper leaves; one "heavy" (15 gram) yellow wax candle; one "bag" of incense; rice; and 30 baht in money.[78] The khwan khāo was not offered with the idea of its reaching phrá In (Indra) ultimately, but rather the local princely spirits of the land, chao thī, chao thān, and Mae Thoranī (Mother Earth). It was waved 3 times by the midwife over the abdomen of the woman in labor with the prayer: "Spirits of the land, Mother Earth, may the delivery be easy!" The khwan khāo was then placed at the mother's head. The woodpile was knocked over so as to point to Mecca, which was west, a direction avoided by the Buddhists. "When nearly ready to deliver, a Muslim midwife turns the mother's face in the direction where the family's hens hatch their chicks. If they have no chicken, then in any direction."[79] If delivery were slow, a Buddhist mō was called to "shift the mother to new places" until the baby came out.

Muslim women lay post-partum by a fire for the usual physiological reasons. In making up the fireplace, instead of a cluster of incense, flowers, and a candle, this purely Hindu-Brahman-Buddhist trio, they sprinkled salt "to keep away evil spirits" on the dirt at the corners. Salt, oil, or alcohol was spewed over the fire and the woman's body, or only magic was recited, "to control the poison of the fire." "Of these, salt is best," said a Muslim midwife, but "whichever a midwife used first has to be continued for the rest of her life as her way of doing things, because the habit has been started that way." The Muslim magic for controlling the fire was "ōm ming ōm fūn ōm fai sawā hai." "So be it, stove, rocks (or mountains), fire, be cool, may a blessing rest to you," though "ōm" is the Pali-Buddhist "mystical word." The placenta was not put in a pot beside the fire, but was washed by the midwife several times until perfectly clean, then was mixed with salt and buried in the dirt directly under the fire. When the fire was finally destroyed, the placenta was dug up, washed again, and immediately buried (not in a pot), with the

78. There was some evidence that the thread and incense were included only when a Muslim midwife was delivering a Buddhist woman.

79. To the Muslims this was an act of imitative magic. The Buddhists saw the action of a setting hen as a quick source of information for the parturient's orientation. The hen always avoided the direction of the phī lūang (Textor:378).

262 might provide clues to ways in which the diet may be improved.
128 Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

128 At the end of Chart 2, sources of water for drinking and food
312 preparation have been included, not only because water is
271 properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

271 Untreated water was the customary beverage with meals.
• 346 Ordinarily no distinction was made in source of drinking water
353 for children and adults although boiled water was given to mothers and infants to drink during the post partum rest
358 period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink
272 hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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114 1. See Sharp et al., 1953, pp. 193-196 for a list of 32
136 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits
244 grown in Bang Chan, and p. 295 for 11 fruits known to be used
245 but not grown there; pp. 296-298 for 41 vegetables grown in
262 Bang Chan, and pp. 299-300 for 24 other vegetables used.

824 2. (4)Khlyb was the term used in Bang Chan for an uni-
252 dentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

114 3. Golden and Ralis, 1957, p. 57. The answers to:
126 "Do you drink tea frequently, occasionally, seldom or never?"
272 were: often, 22; occasionally, 68; seldom, 158; never, 85.

262 888 understood that her merit helped her not to be hungry. Once she asked an eminent layman about eating at night. He said, "If you are not hungry, do not eat. If you feel hungry, it is better to eat. If someone invites you to eat, it is sinful to refuse."

261 Even young adults had a strong revulsion against gluttony. One of the symptoms of a man who went mad and had to be committed to an institution was that "he ate too much." A woman was despised because "she ate in secret. She stole eggs from her husband, sold them in the market, and then spent the cash on food which she ate there, instead of bringing it home." Definitions of a glutton were, "A 'with-rice' eater," or simply as "one who eats alone." These comments highlight the counsels of eating in moderation and in company. On the other hand, a full stomach was valued for "home is where one eats one's fill."

262 562 262 [220] At maturity, when farm and other tasks were shared as equals, men and women ate almost the same food. The old proscription against animal food for women was somewhat relaxed, but not entirely. To sustain farmers during the seasons of hard work, however, extra quantities of rice and rice alone, were considered essential. "With-rice" was pleasant but not so necessary. Any shift away from a diet of rice as ordinarily cooked in Bang Chan- was construed as a shift either in occupation or in health. For example an eminent citizen who gave [955] up farming took to eating (3)khaaw (3)tom often. This soupy rice, a staple dish for infant feeding, had interesting socio-economic connotations. It was served as a light lunch to cooperative farm-workers to be followed at the day's end by a real meal. It was also "delicate" food, suitable for the sick, for city-people, for those who did not toil with their hands and backs. Consequently, when this man ate this "delicate food" more often, he was consciously or unconsciously serving notice on the community that he was not going to do farm work any more, for (3)khaaw (3)tom could not possibly have sustained a farmer's strength. Caustic villagers hinted that he was putting on airs.

262 843 846 Among conditions in which some change from the usual diet was found were pregnancy, post parturition and lactation. Relatively few foods were generally considered to be tabooed under any of these conditions, but many women preferred to limit intake to "safe" foods if there were any possibility that certain foods might cause harm.

[126] Information was obtained from 42 mothers about the food they ate during the post-partum rest period. Two said they ate as usual, but for the remainder, the diet was considerably

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[192] 1. Literally "beautiful rice." For method of cooking, see p. 33.

262 curtailed. About half ate soupy rice rather than rice as
843 usually prepared. All ate fish, but over half ate salted
846 fish only, and about one-fourth ate fresh fish only. Rice and fish were apparently the only foods considered safe by all of these mothers. The only other food eaten by half or more of them was banana of the (4)nam-(4)waa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeaeng (1)liang, a broth made with dried fish, and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some. When asked what foods they considered good for a woman who had recently borne a child, no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the post-partum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

262 Fear of illness from eating incompatible foods after
842 child birth was rather strongly expressed by many informants,
153 even by some who knew of Chinese customs which were different
829 from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home in the village, were not forbidden at the government health and maternity center at Minburi.

124 The 45 mothers who were interviewed during lactation,
262 but after work had been resumed, ate more nearly the usual
846 diet than was the case during the post-partum rest period. As in pregnancy, the mothers apparently had no notion of special dietary needs during lactation, but foods considered undesirable during lactation were mentioned 27 times. The list included 12 kinds of food, and four attributes of food, i.e. sour and hot tastes, fermented foods and raw foods. No food was considered harmful by a majority of mothers, the one which occurred most frequently, jackfruit, being mentioned by 8 only of the 45 informants.

262 Reasons were seldom advanced for considering various
753 foods unsuitable for mothers or children. During pregnancy,
853 the hot-tasting foods, i.e. those made with chili, were said by one informant to injure the baby's complexion. When asked at what age a child could have adult food, mothers might say at one or two years, but often specified without giving a reason, that the child could have anything but the hot-tasting foods. A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby, 1 or 2 months old, ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana"[1] caused

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1. The type of banana most familiar to people in the United States.

[146] [221] higher calorie intake in these periods. In general, the level of calories, phosphorus and thiamine and to some extent the protein varied with the rice consumption. The greater consumption of fish when fish ponds were drained during Round IV, accounted for the relatively higher protein content of the diets of both groups at this time, even though calorie intake was not at its peak. During this period, animal foods provided 45 and 53% of the total protein intake of Groups A and B respectively, whereas for the year as a whole, 37 and 40% of the protein intake of these groups was of animal origin.

The relatively high vitamin A and C intakes of families in Group A, during Round I as compared to other periods, was associated with a higher consumption of green leafy vegetables, and the use of sweet potatoes in quantity by one family. During Round II, families in Group A had few green vegetables, and their average intake of vitamin A was very low. The use of papaya, obtained as a gift, by one family in Group B during Round II raised the average ascorbic acid intake for this group substantially. Better average intakes, by one or both groups, of vitamin A, thiamine, riboflavin and calcium during the first Round, were not such as to provide liberal body stores to be called upon when food supplies of these nutrients were low.

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SOME RECOMMENDATIONS FOR IMPROVEMENT OF DIET AND NUTRITURE AMONG RESIDENTS OF BANG CHAN

[164] Attempts to improve nutritional status in Bang Chan should be directed both toward increasing the supply and intake of certain nutrients and toward improvement of sanitary conditions so that intestinal infestation, diarrhea and other related illnesses will not lead to needless loss or increased requirement of nutrients.

Solution of the related problems of disposal of human excreta and provision of a year-round safe water supply are [164] in the province of the sanitary engineer. Intestinal para- [312] sitism was common, but little can be done through treatment of individuals so long as the water supply is contaminated. [271] Rain water was preferred for drinking, so provision of adequate and sanitary storage for rain water, coupled with sterilization of water from ponds and canals when rain water is not available, would do much to ensure safe drinking [846] water. The custom of giving mother and infant boiled water [853] only, during the post-partum rest period, provides a starting point for extending use of boiled water to other ages and conditions.

3:Hauck et al. D-5 (1952-1954) 1959 AO7 Central Thai AO7
Bang Chan

SUMMARY

124 Information on health, care, and diet of mothers and small
125 children in Bang Chan, Thailand, was obtained primarily by interview, although some direct observations were made. In general, three areas of inquiry were included in this study: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project.

In all, 66 mothers of young children were interviewed. Information on diet during pregnancy, postpartum, and lactation was obtained from women who were either in the stage under discussion or had only recently passed through it.

The description of child feeding practices is based on records obtained concerning 57 children from birth to two years of age, a majority of whom were visited from 5 to 7 times.

Information on growth in height and weight is based on observations made on 71 children, most of whom were weighed and measured 6 or 7 times. Observations were made for 30 of these children both before and after weaning.

843 During pregnancy most women in Bang Chan continued to eat as usual. A few expressed cravings for certain foods, and a minority thought some kinds of food should not be eaten during pregnancy.

846 During the postpartum rest period most women ate a very restricted diet. Rice and fish, with salt, were the foods considered by all informants to be appropriate for this period.

853 As a rule, diet during lactation, after the mother resumed her usual work, was the customary family diet. A minority of informants mentioned foods which should not be eaten by a nursing mother.

164
146 Evidence of the need to improve diets in this region was provided by the occasional occurrence of beriberi or the history of beriberi among mothers as well as by medical inspection and family dietary studies.

853 Breast feeding was the rule in Bang Chan. For a majority of infants observed, breast feeding was continued into the second year, and some were breast fed for more than two years. Few received animal milk after weaning.

A small, rather flavorless banana was given to young babies, sometimes before they were put to the breast. This type of banana and soupy rice were the only supplementary foods given before 6 months of age. Protein-rich foods, chiefly fish and egg, were generally introduced in small amounts during the second half of the first year. Few infants were given vegetables before one year of age, and even then none had them daily. At two years of age, some children had not yet been given green vegetables. Late introduction of vegetables into the child's diet may be due to the fact that vegetables were often prepared as hot curries which were considered unsuitable for young children. 853

A child was usually allowed foods commonly eaten by adults by the time he was weaned, although a few informants specified that the child could have anything but "hot tasting" foods, i.e. foods containing chili. A minority of informants mentioned other foods as not good for younger babies.

Except for dietary restrictions while the mother was lying by the fire, postpartum, no well established dietary taboos connected with the feeding of mothers or babies were encountered. The concept that a good choice of food is important to the health of both mother and child seemed to be entirely lacking. 846 • 853 262

Many of the young children in Bang Chan failed to gain, or even lost, weight in the intervals between observations. Almost all infants appeared to gain steadily up to 6 months of age, but stationary weight or weight loss for periods of from 1 to 7 months was observed in most children at some time. These periods were noted more frequently among children from 2 to 3 years old than among younger ones. Such experiences were not more common after weaning than at other times, but the cause or causes of growth failure could not be determined from the information available. 145

Some approaches to improvement in the diet of Thai mothers and children are suggested. Improvement in the diets of mothers and small children would probably parallel any improvement in the general family dietary, since food is prepared at one time for all members of the family. 252

124 Information on growth in height and weight is based on obser-
125 vations of 71 children, most of whom were weighed and measured 6 or 7 times. For 30 of these children, observations were made both before and after weaning.

HEALTH AND GENERAL CARE OF MOTHERS

145 Information obtained on menstrual history of girls and women in Bang Chan has been reported previously (Hauck, 1956). The median and modal reported age at menarche was 15 years with a range from 13 to 19 years.

163 Most married women in Bang Chan had children, and of 438 pregnancies reported by 84 mothers, over 90 per cent resulted in live births (Hauck, 1956).

843 Clinical History and Complaints During Pregnancy.

164 Most of the women interviewed reported no history of disease which might affect, or be affected by, nutritional status.

Four women had a history of beriberi; 3, a history of malaria; and one had active tuberculosis of which she later died. In relation to the current pregnancy, 6 women had minor complaints such as nausea in early pregnancy, faintness, and leg cramps. The physician considered these as probably physiological. Of the 4 women with more serious complaints, one who said she had pain in the abdomen and legs and difficulty in walking had manifest beriberi when seen a few days after delivery.

844 Delivery and Care of Mothers After Childbirth.

846 125 Information was obtained from 49 mothers concerning delivery and care after childbirth. For 43 of these women, ages reported were as follows:

Reported Age (years)	Number of Mothers
20 or under	7
21-25	11
26-30	12
31-35	6
36-40	6
over 41	1

The mothers interviewed had borne from 1 to 12 children. For 8 of them, this was the first child; but 25, a majority,

had 2 to 4 children. In each case, the information obtained related to the most recent delivery.

Delivery. - In Bang Chan delivery usually took place at home. Four of the mothers we interviewed went to the home of a relative or relative-in-law. In two of these instances the relative was also the midwife; in the others the mother was apparently seeking a place where she could be more satisfactorily looked after than at home.

Three women went to the Health Center at Minburi, about 3 miles from the center of the Bang Chan community, to have their babies. Two of these mothers expected to be delivered at home but were taken to the Health Center when labor proved long. All 3 returned home either on the day of delivery or the next day and lay by the fire. Two others, both school teachers, told us in advance that they expected or hoped to go to the Health Center, but when labor began they were unable to do so because their babies came so quickly. Aside from the 3 who went to the Minburi Health Center, only one of those interviewed went outside the community to have her baby. Informants usually considered the delivery uncomplicated; although, as noted, some labors were long.

Traditional midwives, who were not professionally trained but had learned from other traditional midwives before them, attended most of the mothers. One woman who was alone delivered the baby herself, one said she had no midwife but did not specify other help, and 2 had the help of women who did not ordinarily practice midwifery. The 3 women who were delivered at the Health Center had professionally trained help. Obstetrics as practiced in Bang Chan has been described by Hanks (1959).

Care of Mother During Postpartum Rest Period. - Traditional behavior during the postpartum rest period has been described by Hanks (1959).

Lying by the fire. - The ancient custom of (2)juu (1)faj[1] (literally to be by the fire) after childbirth was still observed by most women in Bang Chan. The chief difference between the practice as we observed it and as it was described in the Bangkok Calendar[2] for 1865 was in the length of the period. In former times this was as much as a month after the birth of the first child, with shorter periods for successive

1. See Appendix, p. 51 for glossary of Thai terms.

2. The unsigned article entitled "Siamese Obstetrics" was presumably written by the Rev. Dan Beach Bradley, M.D., a Protestant missionary who compiled the Calendar.

846 births, until with the seventh child it might be dispensed with altogether without harm. In Bang Chan women who observed (2)juu (1)faj rested for an odd number of days, from 5 to 15 in this series. Seven or 9 days was most common. An odd number of days was considered good; an even number, bad. A wood fire was customary, although in 2 instances a charcoal brazier was used. One woman lay near a charcoal brazier and used a hot ashes chamber[1] also. With one exception (a non-Thai), even those who did not lie by the fire, but who used the hot ashes chamber, rested an odd number of days.

846 372 The traditional ideas on which the custom of lying by the fire was based were described in the Bangkok Calendar (Bradley, 1865):

> "The Siamese theory in regard to the part, which external and internal fire plays in the functions of life and health, is made to work powerfully in these circumstances. It teaches that there is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in the circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child."

The author, however, attributed deficiency in milk production to the practice of lying by the fire:

846 853

> "Now it is very remarkable that these last sequences, which are guarded against at so much expense of ease and comfort by the custom, are postively and directly brought about by following it. The mothers have but little milk for their babes during the month, and that of a poor quality. Consequently the attendant nurses have to feed them from the hour of their birth with honey, rice-water, and the pulp of soft bananas. This is their almost entire living for the first two or three days, and a large portion of it during the first month."

846 Of the 5 women we interviewed who did not lie by the fire, 3 used a hot ashes chamber regularly throughout the postpartum rest period, one used it occasionally, and one used both the hot ashes chamber and a hot water bottle. This latter woman

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1. A small metal box in which sticks of fuel were burned. The box was wrapped in cloth and placed on the mother's abdomen.

had lived outside the village and returned to the home of her mother, a traditional midwife, for delivery. Eight other women who were delivered by the same midwife observed (2)juu (1)faj. Two of these 5 women who, by using a hot ashes chamber, ventured to take a step away from the tradional practice were non-Thai (Chinese and Mon). Another, a woman aged 40, was having her 12th child. When we interviewed this woman during pregnancy she said she expected to lie by the fire, but when we visited her after the baby was born she was using a hot ashes chamber. The wife of one of the school teachers, who had observed the traditional (2)juu (1)faj with her first 5 children, said she found "the new way" more convenient; but by using it she had incurred the displeasure of some of the older women, especially her grandmother.

Activity and bathing. - Activity appeared to be rather limited during the postpartum period, but the respondents said they could move about to get some things for themselves, to eliminate, etc. We saw women sit up on the plank which served as bed to nurse the baby, change the cloths under it, and help to weigh and measure it (i.e. to assist us). Because of the warmth of the fire, and to avoid the smoke, the women turned from side to side frequently.

Bathing was customary during the postpartum rest period. For the first three days this was one of the midwife's responsibilities in care of the mother (Hanks, 1959).

Medications. - The 46 women who told us about medications used after childbirth had a total of 63 medicines; i.e., many used more than one kind. With one exception these were taken internally, and all preparations taken internally were mixed with alcoholic liquor (28% alcohol). Of the medications used, only one was prescribed from the Health Center, 4 were home remedies, and the remainder commercial preparations.[1] Two popular brands, snake brand and (1)jaa (1)dauaung, accounted for 60 per cent of the total.

Milk stimulation. - As already noted, lying by the fire was thought to be favorable to milk secretion. One woman commented that, since she was not a good milk producer, she must lie by the fire more than 7 days. Six women spoke of the hot water which they drank during the postpartum rest period as good for milk production. A large majority of the women mentioned taking (1)kaeaeng (1)liang, a broth made with dried

1. According to the label, some of these were supposed to be useful for menstrual and other complaints, as well as for childbirth. Some were even recommended for treatment of various disorders in men as well as women.

853 fish and vegetables, when asked if they did anything to stimulate milk secretion. Other preparations, each mentioned once or twice, were cobra curry, fried (3)kuj (1)chaaj flower, pork soup with (3)kuj (1)chaaj leaves, dried peas and peppers cooked in palm sugar syrup. Some of the medications used were reputed to stimulate milk flow. Three women spoke of peacock brand medicine and one of a Chinese medicine in this connection. With respect to the Chinese medicine, another informant said she took it "to remove the serum which interferes with milk secretion." One midwife put herbs on her daughter's breast and expressed and discarded the "early milk" which was considered bad for the baby. No association appeared to be made between putting the baby to the breast and stimulation of milk flow.

846 312 Drinking water. - Information concerning sources of drinking water used by the mothers was obtained from 46 mothers of young babies. Of these, 20 used canal water, 23 rain water, and 3 used either one. In general, there was a relation between season and source of water used. Most of the mothers whose babies were born between March and October drank rain water, whereas from November to February a majority drank canal water. Some families had enough water jars to preserve rain water for much of the dry season, whereas others had few or no jars and, therefore, could save only small amounts of rain water on a day-to-day basis. In all instances, the water, whatever its source, was boiled for the mother during the postpartum rest period. Forty-six women said they drank the water hot; one said it was warm. One popular traditional midwife said, however, that if the mother had her baby in the hospital, use of boiled water for drinking and bathing was not necessary.

CONDITION AND CARE OF BABIES AT BIRTH AND IN EARLY INFANCY

125 All information to be reported concerning condition and care of babies at birth and in early infancy relates to infants who were under one year of age when first visited. Thirty infants were seen when they were under 3 months of age.

Condition at Birth.

164 165 The condition of the baby at birth was generally described as satisfactory. One infant who died on the third day, before we saw the mother, was said to have cyanosis, failed to cry at birth, and needed to be "helped" for about one-half hour afterward. Three infants had congenital defects: umbilical hernia, inguinal hernia on the right side, and hemangioma on the right groin.

In general, the diet during pregnancy seemed to be about the same as at other times. Rice cooked in the usual way (see glossary, Appendix p. 51) and fish of some kind formed the basis of the diet. A majority had green vegetables[1] either daily or frequently. Foods which seemed to be generally acceptable, although they were eaten less often, included vegetables other than green ones, pork, bananas, coconut, other fruit, fresh beef, and egg. 843 262

Eight women spoke of foods which they craved during pregnancy. Fruit in general, or specific fruits such as oranges, pomelo, guava, rambutan, and mangosteen, were most often mentioned. One woman said she craved Chinese noodles, and one, chilies.

When asked whether they disliked any foods during pregnancy, 5 women mentioned fish or the odor of fish, but in 2 instances the objection was limited to early pregnancy when the informants experienced some nausea. Three said they disliked vegetables, and one, hot tasting foods.

Four informants said that hot tasting foods (i.e. foods containing chili peppers) were bad for a pregnant woman; one considered dried and salted fish harmful "because of their fishy odor." One informant thought eggs were bad for a woman during pregnancy. Eggs were, however, the only food mentioned by anyone in Bang Chan as being good for pregnant women. The informant, a woman school teacher, said she ate them often anyway, hence did not alter her intake during pregnancy.

Diet During the Postpartum Rest Period.

Of the 42 mothers from whom we obtained information about the food they ate during the postpartum rest period, only 2 said they ate as usual. One of these said she believed that if a mother ate small amounts of many different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time. This woman worked outside the community and may not have acquired her belief about eating a variety of foods within the village. In any event, since her child died at five days of age, one would not expect this mother's eating behavior to have a liberalizing effect on the custom in 846 262

1. Most of the pregnant women were interviewed toward the end of the rainy season when swamp cabbage and (2)phag (2)ka-(2)cheed, the most popular leafy vegetables, were available. From our subsequent experience with the family dietary survey, one would expect that when canals were low, green vegetables would be eaten infrequently by pregnant women as well as by other members of the family.

Bang Chan. The only other woman in this series who did not restrict her diet postpartum was the wife of a school teacher. She said that women were supposed to eat rice with salt or salt fish at this time but that she ate all kinds of food.

As a rule, a woman's diet was considerably curtailed during the postpartum rest period. Rice and fish were apparently the only foods considered safe by all of the mothers interviewed. About half ate fish, but over half of these ate salted fish only, and about one-fourth ate fresh fish only. The only other food eaten by half or more of the mothers was banana of the (4)nam-(4)wa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeaeng (1)liang, a broth made with dried fish and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some.

When asked what foods they considered good for a woman who had recently borne a child no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the postpartum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

[329] Fear of illness from eating incompatible foods after childbirth was rather strongly expressed by many informants, even by some who knew of Chinese customs which were different from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home were not forbidden at the government Health and Maternity Center at Nimburi.

Diet During Lactation.

The term "diet during lactation" as used here refers to foods eaten when the mother had resumed her usual work following the postpartum rest period. The majority of nursing infants were under a year old when the records were obtained. All of the mothers ate rice everyday cooked in the usual way, and almost all had fresh, dried, or salted fish. About two-thirds had vegetables of some kind daily, but 8 women reported that vegetables of any kind were eaten only occasionally. Coconut, which as coconut milk is the basis for many curries, was used often. One nursing mother ate bananas daily, and about two-thirds of these women had bananas either occasionally or frequently. Only five women mentioned eating other fruits.

Three reported eating eggs daily,[1] and about two-thirds of the women had them either occasionally or frequently. Animal foods other than fish or eggs were eaten infrequently by most nursing women. 853 262

Our questions about ideas concerning foods during lactation did not uncover any firmly established traditional behavior. No food was considered harmful by a majority of informants. In response to the question as to foods which should not be eaten during lactation, however, 13 kinds of food and 4 attributes of food (sour, hot tasting, raw, fermented) were mentioned 27 times. Jackfruit, the item which occurred most frequently, was mentioned 8 times, corn, 3 times, swamp cabbage and pork, twice each; other items such as legumes, beef, poultry, egg, pineapple, and chico, once only. When asked if they disliked any foods at this time 4 women mentioned a dislike for vegetables. One mother said that cooked foods (in contrast to raw ones) were good for a lactating woman. Our question about foods craved during lactation brought little response.

To sum up, the mother's diet during pregnancy and lactation often approximated the usual diet in Bang Chan. A few women said they craved certain foods during pregnancy and some mentioned foods disliked at that time. A number of food items and attributes of food were considered by some informants to be undesirable during pregnancy and lactation, but no item was mentioned so frequently as to be considered tabooed. During the postpartum rest period, however, a greatly restricted diet was common. Mothers apparently had no idea of special dietary needs during pregnancy or lactation. 443 853 262 [144]

FEEDING PRACTICES FROM BIRTH TO TWO YEARS OF AGE

This description of feeding practices is based on 256 interviews concerning 57 infants and small children. The majority of them were visited from 5 to 7 times each. Since, insofar as possible, we saw the babies at 3-month intervals, changes in feeding practices will be described by 3-month periods or multiples thereof. If each visit to a child is considered as unity, the 8 age groups from birth to two years included from 17 to 41 children each with 6 of the age groups including more than 30 individuals. Thus the data obtained may be assumed to provide a reasonable picture of baby feeding practices in Bang Chan, 1953-54, and of significant deviations therefrom. 125 953

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1. This does not mean that the mother ate a whole egg at one meal. Frequently one or two eggs might be used to prepare food for the entire family.

251 One family stored cooked food in a basket which was hung from the ceiling. One homemaker frequently covered such foods with a basket, and in one instance a homemaker, who usually took no precautions to protect cooked foods, used a basin to cover food left on a table.

271 312 Source and Treatment of Water For Drinking and Culinary Purposes. - From the time the dietary survey was begun, on May 26, 1953, through January 18, 1954, all families used rain water for drinking.

Of the 14 survey days, spaced at about weekly intervals, between January 28, 1954 through May 8, 1954, canal water was used for drinking on 7 days, water from fish ponds on 4, and rain water on 3 days. No distinction was made in source of drinking water for children and adults.

312 744 [846] All families used canal water for washing vegetables, cooking, and washing dishes, on the survey days from May 26, 1953 through March 18, 1954. On the 6 survey days between March 24 and May 8, 1954, 4 families used water from the fish pond for these purposes. In no instance was the water treated in any way before being used, although alum is known to be used, at times, in the village, to settle or clear water, and boiled water is given mothers and infants to drink during the post partum rest period.

514 Disposal of Excreta. - Of 30 families from whom information was obtained, 20 had pits for toilet use, only one of which was equipped with a cover. One other family had a flush latrine. Of the 8 families who had no special place which was used for toilet purposes, 4 reported that family members urinated on the compound, 3 that they used the fields, and 1 that either compound or field might be used for urination. One reported that the compound was used for defecation as well as urination; the remaining 7 said they went to the field to defecate.

Six families with pit latrines covered feces in some way: 3 used earth, 2 ashes, and 1 either earth or ash. A majority of those who used either an uncovered pit or had no designated place, reported that no attempt was made to cover feces. From six families, no information was obtained on this point. Various materials were mentioned as being used in the manner in which western peoples use toilet paper. Cocoanut husks were mentioned most frequently (25 times), and other materials in this order: paper (newspaper 9 times, straw paper once), wood (4 times) and water (3 times).

From the information available, custom and convenience rather than sanitary considerations appear to determine practices that are followed. If improved practices are

597 Adoption was fairly common, though not always of lasting
842 satisfaction. On the other hand, in this watery domain, the
855 trouble (lambik) in raising children, mostly involving
ceaseless tending, was such that a childless woman was
accorded a little surface envy as one who had missed or avoid-
845 ed a lot of trouble. The attitude towards twins was
ambivalent. "Twins are unlucky because there are more mouths
to feed, more labour, trouble, and not enough milk. With
twins, a poor family will never rise again." "No one will
marry a twin for fear of begetting twins." "If twins are of
a different sex, one must die." Yet others considered twins
lucky "because they could be nursed at the same time, and
given the same things."

855 Wealth differences also affected these attitudes,
842 especially if babies came in close succession. Comments
184 heard were: "Why do poor people have more children than the
rich?" "Many visitors come bringing gifts to a rich parturient
because she is respected. No one likes to talk to a poor
person." "Those who have a baby oftener than every 3 years
will never be rich. Fortunately, 4 of my 7 children died."
The increasing cost of raising children was a concern. In
one of the few families that had plans for their children's
education, the father underwent a vasectomy after his 9 fine
children were born, because he "feared he would not be able
to feed them all." His wife, reassured that the operation had
not "hurt" her husband, "was glad he had done so."

• 847 Abortifacients and Contraceptives

[779] Episodes concerning abortifacients were whispered about
both Muslims and Buddhists. A Buddhist who induced abortion
was seen as impeding an individual's rebirth and disobeying a
religious prohibition on taking life, tenets which did not
obtain among the Muslims. Abortifacient medicines to be used
with abdomen-pressing were quietly sold by Muslims.[6] "Un-
married Muslim girls use them mostly," reported one Buddhist,
"and they almost die in the process." A Buddhist curer had
similar expensive medicine, but "unlike the Muslims, he will
842 not destroy the baby." Chinese boat-vendors also carried
contraceptive medicines (ya) which were secretly discussed
by wives. A husband reported his wife as saying, "Old ways

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6. Fraser (1913) reports that in the Muslim village of Bussembilan, abortions were openly practiced, (as if part of a Muslim cultural heritage).

Sometimes these aberrancies were viewed as desirable sources of supernatural power, but on other occasions, they were seen as a sign of demerit, caused embarrassment, and were suffocated at once (if alive), and buried.

If a woman died pregnant, her body was at once brought to the temple where the unborn child was removed surgically. The usual solacing sermon, rites "to lead the deceased to live in her right place in the next world," and cremation took place, with the fetus laid beside its mother so that it "would come out normally." The mother and child were separated to prevent a ghost which was double-powered. No prayers were chanted at home before exsection "lest they make the power of the spirit stronger." Moreover, any violent or premature death caused an angry ghost. The ghost of a premature child had a heavy load of sin, for its stay in purgatory, where sin was worked off, had been interrupted (Textor:262). An unscrupulous mɔ̄ was eager to get possession of any ghost for use in sorcery, and a double ghost was stronger than any other. Ghosts were obtained by plundering the mortuary chambers of the temple prior to cremation. By feeding (liang) it, a mɔ̄ controlled it. The ghost of a male infant was preferable because it was "stronger than that of a female." In the light of this situation, not only should the body of a pregnant woman never be left alone " so that no one can get at them (sic)," but a pregnant woman herself ought not to be alone.[26] The behavior towards the Rice Goddess, Mother Posop, who was "pregnant" when the grains in the stalk filled out, illuminated many of these attitudes: "Mae Posop feels weak, hungry, and uneasy. She is eager to taste sour and sweet foods. She is a woman and beautiful in her pregnancy." To allay her hunger the

26. In Cambodia, a pregnant woman might be murdered, even by her husband, so that the murderer might gain the malevolent power that possession of her now double soul would afford. (E.R.E. "Cambodia": p.159). This specific statement was not found in Bang Chan but might be part of the shadowy background to local reluctance to leave a pregnant woman alone.

APPENDIX

MUSLIM CUSTOMS IN BANG CHAN

The small Muslim minority in Bang Chan though maintaining its identity, lived scattered through every hamlet, with the heaviest concentration around the mosque at the southern edge of the village. The occasional inter-marriage of Buddhist and Muslim was eventually amicably adjusted to the community and the religion. Some Buddhists manifested a veiled hostility in calling the Muslims "stingy." One said, "Muslims have expensive medicine to induce abortion, after which they might kill the baby. A Buddhist would use this medicine to help deliver, but would not dare take life." The Muslim reputation as a source for powerful magic, especially for love and sorcery, bespeaks some edginess in the relations between the 2 ethnic groups, but Buddhists sometimes sought out the benefit of this magic.

In spite of these separatist tendencies, the Muslims were fully Thai citizens, and participated as equals with the Buddhists in the economic, political and much of the social life. The 2 groups were in many respects interdependent. The Muslims did not object to taking life, so acted as butchers for the Buddhists. Muslims were frequent patients of Buddhist mɔ̄, whether priests or lay. The only Muslim who did a little curing was the To Iman, head of the mosque, but few if any Buddhists came to him for cures. Because every mɔ̄ gave an annual ceremony of homage to his teacher attended by everyone who had benefited from those powers during the year, Muslims and Buddhists met amiably at several large feasts. These festivals were public displays, very competitive in feeling, of the success of the different mɔ̄. One became the largest of the village-wide festivities. Buddhist women attended the Muslim female midwife, teacher-rites, and vice versa. Buddhists and Muslims, especially the prominent families, attended each other's home ceremonies, such as weddings, tonsures, and that part of the ordination held in the home (the thaam khwan). Separate kitchens were established at large Buddhist ceremonies so that Muslims could safely adhere to their one dietary regulation, the avoidance of pork. No such arrangements had to be made at Muslim ceremonies for Buddhists had no food taboos, and loved Muslim cooking.

Midwifery was an area of frank, harmonious interchange, with midwives of either religion often attending women of the other. Buddhist male midwives were allowed by the Muslim husbands to attend their wives, though female attendance was preferred. Satisfaction was expressed by Buddhist women over

581 It was not felt necessary to marry. Because of the strong
589 economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married.
[593] One group of grown siblings of both sexes stated they were "too happy together to marry."

836 Pre-marital chastity was more or less observed. If a girl became pregnant before marriage, her parents brought pressure, usually successful, on the boy to marry her. The occasional
848 illegitimate child was raised without stigma in the girl's family, though problems arose during pregnancy and delivery (cf. "cone of wood" below). The mother later found a husband. One father was angered because he felt his daughter's pregnancy wrecked her chances for a marriage of prestige. He was conspicuous for his social aspirations towards city ways.

864 Information on human sexual matters was gathered by the
831 young sometimes by accidental observation of parents and others, through hints from hearing cursing, and by conversations with grandparents, older siblings, and friends of the same sex. Men joked on sex matters at the all-male rice-uprooting parties. Being antithetic to the ascetic prescriptions of Buddhism, sex talk was highly charged. Sex was never discussed in mixed company.

Residence

592 The nuclear family of husband, wife, and unmarried children was the primary social and productive unit, but other resident kinship units larger and smaller also occurred. After marriage,
[591] the couple usually lived for a time in the house of the parents of one spouse or the other; then, as soon as they could afford it, set up housekeeping in their own house. Of a sample of 96 families in Bang Chan, 30 set up independent households at once after marriage, 16 after one year, and the rest, a few per year, on throughout 10 years; 15 of the families never had a house of their own but lived with other relatives (Janlekha:37). Of 298 families, 59.4 per cent lived independently as a nuclear family, while 34.9 per cent lived with other relatives in the house. (The remaining were single persons living alone, or priests at the temple in the "ecclesiastical family.") The average size of the households (not necessarily the nuclear families) was 5.7 persons, with a range of 1 to 14, the median
361 being 6 (ibid. 28-29). The house of a new couple was usually built adjacent to parents or relatives, and certainly within calling distance or sight of some other household. Social
621 patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

70

000 in Bang Chan tried to carry on the old rites.

The Cone of Wood

•848 372 When a child was conceived out of wedlock, the first problem raised was, "Who will build the wood pile?" The actual father had to come forward and identify himself, for he and no one else could perform this duty. A child could not be born without the father giving this assistance.

593 84 789 372 This cone of wood represented a "womb" towards which a father actively played out his role. His child was in it. While building it, his behavior affected the child, just as his wife's behavior acted on the child in her womb. If the pile were incomplete before the onset of labor or gave out before the fire-rest was terminated, the child would "never finish any task in its life." The very manifestation of industriousness involved in collecting the wood, though, made the unborn child industrious. Gathering a quantity of wood for this big pile was not easy. Old houses had plenty of wood, for they stood in thick groves, but new houses sometimes stood bare and stark in the fields. He placed spiny Indian jujube or Chinese date (phutsā) and Manila tamarind (ma khām thē?) all over the outside to protect [824] this "womb"-from invasion by malevolent spirits. Thus he also protected his wife s womb. Sakāē wood was preferred because it was smokeless. Collecting a mixture of woods was easier, but then the fire smoked. Mixed or all sakay, whichever the constitution of the pile for a woman's first confinement set the pattern for all her later ones.

At the onset of labor, the father had to open the way for his child to come out of the womb, so the pile was tipped over in a direction paralleling the position of the Great Snake. This astrological orientation was exactly that of the woman in labor. Unless the mother's head and the apex of the fallen wood pile coincided with the direction of the head of the Snake, with the open end of womb and cone below, "with and not against the lie of the snake's scales," the child would have to struggle against these scales as he came out. By tipping the cone of wood properly the father helped his child to an easy exit.

The thorns protected the womb and the baby inside from all evil spirits during the months of pregnancy. With the onset of labor, the holy cord which surrounded the mother took over this function, and kept away such dangerous spirits as phī krasū and, if the baby died at birth, the violent New Baby Ghost (cf. Textor:261).

[p. i]

SUMMARY

On the assumption that a woman's physical and mental condition at childbirth is a product of her life-long daily habits and ideas as well as any particular injunctions set up to insure well-being in pregnancy and parturition, the cultural scene was searched to ascertain all possible relevancies.

The farmers of Bang Chan lived in a tropical, rice-growing terrain, annually flooded by the monsoon run-off. Food was plentiful even if cash was not. Except for better housing and equipment, and a greater enjoyment of market novelties, the rich lived much like the poor. The work in the fields by women paralleled that by men. Sharp physical demands, especially at planting and harvest, made them muscular.

At marriage the partners were fully mature and no woman was married against her wishes. The birth of a child was welcomed as leading to higher personal, social, and economic status.

The underlying concepts which explain why the food and other injunctions, both pre-natal and post-partum, and the ritual behavior took their particular forms, are explained.

The human body, harboring multiple immaterial souls, was seen as composed of earth, fire, water, and wind. Illness was caused by intrusive disruption of these four elements, or by soul loss. Food and medicines had properties which could be used to restore balance in the elements. The traditional curers or exorcisers had magical and herbal remedies obtained ritually from a teacher. Since Buddhist phrasings, often read from old texts in weekly sermons, molded Bang Chan's conception of life, the ultimate cause of health or illness was the presence or absence of merit. This determined one's kam (karma), the balance sheet of virtuous actions which one added to, or reduced by sinning throughout successive existences over eons of time.

The Buddhist cosmic view of individuals as separate autonomous beings brought it about that help was the only dynamic relationship possible between people. The bonds established by helping people, on this earth, especially in the tasks of feeding priests, lasted on into successive incarnations. Thus, meritorious people met again and might marry again. Families had continuity over time, and babies were born into the "right"

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 60 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygymous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap.V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

852 844 774 [608]

called out "Mine!" ("khǭng chan" [female speaking] or "phom" [male speaking]). Never did a parent say "ours!"[44] Sometimes the mother might ask a relative or friend present to claim the child, and so become a godparent.

As the first human step to control the volatile khwan, the first objective of winnowing a baby was to seize it (kan rap khwan) and so "complete" the child's person.[45] By tying holy thread at the wrist and ankle soul-exits, the khwan which had flitted in and out of the womb was given root. It was still flighty, but now it had a life-long home.

852 851 774

Secondly, the child was given membership in a human family. Connection through blood and semen did not establish kinship. At first, the child hovered between corporeal and non-corporeal existence. "The child is not fully human for the first 3 days." This period was under the supernatural control of Mother Sǖ, for babies "never died during the first 3 days after birth. They might be born dead or they died 6 or 7 days later." The shock of dropping the child on the tray "made him forget his life as a spirit." When somone cried "mine!" the child finally cut his relationship with the spirit-world. As an old woman explained, "The ties are the important part [of the ceremony]. They show that the child belongs to someone. Once a tie fell off one wrist. The child cried and cried until it was restored," fearing its lost khwan would attach itself elsewhere. The claiming set up kinship as a contract before witnesses. Whoever announced responsibility for the child's care, and this was usually the mother, deserved reciprocal care in old age. Other relatives would also help to bring him through to maturity. He would not be so frightened of an evil spirit because of family support, nor of the "ghost of an ancestor" who would be recognized as a relative.

852 [774]

Third, the ceremony strengthened the child. By giving him through the ties a stable khwan, he "grew better, cried less, and did not get sick."

[856] [789]

The incorporation of as many auspicious elements as possible into the ritual was customary. Since the child took

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[415] [776]

44. A winnowing tray (basket) had the capacity to "trap" spirits. It could seize or trap not only the khwan soul, but, at New Year's, one of the fun ghosts (Textor:371).

45. There is no convenient way of expressing "ours" in Thai in this restricted sense (id.).

phlai and bamboo cutter under the house "so the child would not roam away from home." The circumcision (akiko) performed up to the eleventh year, allied a child to a human group. "Circumcision is to accept the new-born baby into the status of human beings" In a corresponding ceremony for girls, the To Iman "cut a little piece of the labia." However, some Muslims had the full winnowing ceremony performed. If it were not, the child was raised aloft in the midwife's hands with the words, "Mother Sī, Mother Sāk, may this child be cool and happy!" The new-born baby was then laid in a cloth cradle. Fruits were hung over the tray or cradle. If a lactating Muslim mother accepted another's child to nurse, the 2 babies had to be of the same sex "lest later in life they marry, in which case theirs would be an incestuous, brother-sister marriage." The Buddhists entertained no such idea, so nursed babies of either sex as needed. A Muslim view of colostrum as "like pus from a sore" carried a more negative overtone than the Buddhist's statement: "At first the mother's milk is too dilute to be useful."

At the annual homage of a Muslim midwife to her teacher each of her patients of the year sent a kilogram of sugar, one coconut, one or 2 liters of glutinous rice, and a hen (if a baby girl had been born) or a rooster (if a boy). The chicken was killed by the midwife and made into curries for mosque officials (men) invited to the ceremony. The incense and candles were burned "while she thinks of her teacher."

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

career. From an epistemological point of view, there is of course nothing strange about such an approach. What is perhaps somewhat unique, however, is that the villagers actually use it as the point of departure in their treatment of the child.

The practical consequences of these equalitarian notions are manifold. For one thing, with the child defined as a separate and equal soul, the relationship between parent and child takes on a highly instrumental flavor; that is, rather than expressing love toward the child as an end in itself or otherwise treating him in ways that require no further justification (it is assumed that love is characteristically an absolute sentiment, not a means to any other satisfaction) villagers explicitly see the relationship between parent and child in contractual terms. Thus villagers say that they "are going to the trouble" of bringing up their children and "doing good things for them" (just as their own parents "went to the trouble" of bringing them up and "doing good things" for them) so that they will have someone to care for them in their old age and make merit for them when they die. Similarly, they say they love their parents because they are indebted to them for bringing them into the world. The language of the "contract" is poignantly explicit: "When I think of my mother, I think of the debt I owe her for bringing me into the world and feeding me so I would survive"; "Parents who do not teach their children how to *waj* [exhibit respect to the parents] get nothing from them. I did many *bunkhuns* [good things requiring reciprocation] for my daughter, so now she gives me everything"; "When I was three my father gave me to my uncle who fed me and trained me, so I loved my uncle more" (cf. pp. 64–66, L. M. Hanks 1959c, and Phillips 1959 for further documentation of this point).

In and of themselves there is nothing strange about these "contractual" criteria. However, they do reflect a fundamental recognition of the independence of parent and child and of the fact that parent and child have the *option* of fulfilling each other's needs. More specifically, they are expressions of the assumption that there is nothing intrinsic to the parent-child relationship that requires the two persons to be linked together. The relationship clearly is not fortuitous, but neither is it absolute. It functions primarily for the instrumental and symbiotic satisfactions that its participants can gain from it.[28] Lacking the absolute elements of an ultimate

[28] In his paper on "Changes in Family Life" in Bang Chan (1959c) L. M. Hanks notes: "At birth a parent ceremonially formally accepts obligations to an unknown infant soul lightly bound to its body; to this point the new-born one without relation to its parent has been under the protection of a spirit mother. This phrasing contrasts sharply with the Occidental concept of 'flesh and blood.'" In another place in the manuscript, Hanks also comments: ". . . but every case [every kinship tie] is reducible, if one presses the question, to benefits of an older or richer or stronger for the

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Lek watched over the baby, while Sāi turned towards Dūan. "One looks to the mother first, unless the baby needs help more." First Sāi gave DŪan medicine for the placenta. She rubbed her hands with alum and tried unsuccessfully to work down (klōm) the slippery placenta. Then she told DŪan to get on her hands and knees, and exert all the force she could. DŪan crept around the floor but it still did not come. Sāi then tried hitting Dūan's back 3 times with DŪan's own pillow. Finally she gave DŪan a leaf of betel pepper to chew, hoping to induce a wind-producing nausea and so push out the placenta. In the end DŪan resumed her sitting position and it was pressed out. So the baby would not get pimples, the placenta was cleaned carefully, then put into an old pot, mixed with 2 dishes [751] of salt, and set aside.

While Lek sewed up the partially completed cushion, Sāi laid the baby along her legs, and washed him with soap. Sometimes she washed the baby before the cord was cut, if the placenta came quickly. She used salt to remove the greasy fat from his body, though would have preferred "fermented tamarind to protect him from pustules that enlarge to sores (rōk phuphōng)." "Soft tissue like a stomach covering his head! What a good sign of progress and fortune!" she exclaimed. She powdered him with face powder (dinsōphōng), and painted his abdomen with turmeric,[34] "so wind will not make him cry." Covering him with a little piece of old cloth, she laid him on Lek's old winnowing tray (kradong). [787] [278]

844 789 852

It was the moment to winnow (rōn) the baby, and link it to home and family. While Lek got the holy unspun cord, others placed on the tray with the baby all manner of traditional things to influence the progress and well-being of the child during his lifetime. Sāi put on the phlai, the clod of soil, and the tapered bamboo she had used to cut the cord "because they will never be used again," but actually these things had a far deeper meaning to all present. Song laid on a school exercise book and pencil, so that his son would have knowledge and a good memory. Mī got a needle for sharp wit. If the baby had been a girl, the needle would have given sewing skills. When all was in readiness, DŪan had to decide on the ones to raise the child aloft, catch the tray as it was dropped, and bless him as the holy thread was tied on. She had to choose these persons carefully, for the child

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34. Other mixtures (used also on the mother) were lime-bergamot lemon; or phlai (if possible the one on which the cord was cut), wānnam (acorus calamus) (Textor:84-86) and mahāhing (asafoetida) with burned betel leaf. These were all to keep out wind.

844 989 •852 would later manifest their characteristics. Much as Dūan loved her own mother, Lek ought not to winnow the child because she had had the misfortune to lose 3 babies in infancy. An older person was desirable, for longevity, too, indicated virtue, and the child would then also live long. Of all the women present, besides her mother, Sāi was the one Dūan trusted and respected most, and Sāi had raised healthy babies. Dūan turned to her. "Please winnow and bless the baby." She wanted, as every mother did, to catch and so claim the child for herself.

Sāi seated herself close to Duan, picked up and raised high the tray with the little boy and the auspicious items. Waving the tray in a circular motion slowly from left to right, clockwise, she recited the old words: "Three days [539] a spirit child; on the fourth day, a human child! Whose child is this? Is this the child of a female pot? Of a jar? Come, take this child!" Three times Sāi chanted these old words and on the third, Dūan cried out, "Mine!" The tray with the child was gently tossed in her direction. She caught it as it slid toward her. Then Sāi took the [774] holy thread and tied some around each of the child's wrists and ankles to seize and "welcome" its soul (kānrapkhwan), [539] giving the while the traditional blessing. "Come, khwan! Come my own child! Stay well and eat well! Do not get sick or have fever! Be cool and happy! Feed your father and mother until they are old. Hold the walking stick with the gold head, or the stick with jewels on its top! Stay at home like the bottom of the house post! Watch the house like a cat! Eat and stay here! Never go roaming! Be fat as the golden ash pumpkin, heavy as the long melon, strong as an elephant in must! Be the head priest when ordained and the leader of men when you leave the priesthood! Come, khwan!"[35] Thus, Dūan claimed the child for herself and for her family, to nourish and raise. Because such a fine person as Sāi had started this son on its life-habits, and Dūan was already sparing no efforts in assuring his progress, he would be a good boy, and reciprocate her pain and effort.

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[539] 35. Another version added the words, "Have the strength of Hanuman! Hold the stick with the iron head! Be a student." For a girl, "If you have a family, keep cool and happy! Earn your livelihood (tham mā hā kin)! Have enough to use and eat! Do not lower (tam) your face, or eyes," i.e. "don't be poorer than your friend." A China-born Thai woman's blessing was "Mother, nourish, and care for this child. Do not let it be hurt or have fever."

761 Since only meritorious children were born into the
775 "right family," they were helpful and so easy to raise. The
593 easiest to raise were reincarnations of babies deceased in
829 the mother's present life. "A girl of three died. Her father
782 dreamed he was at her coffin. She asked for water which he gave her, then brought her home. Months later a boy was born, so easily raised up that people knew it was a reincarnation of that girl." Here amiability and the change to male sex demonstrated merit. In another tale, "a woman lost many babies at birth. Her husband, thinking it was the same child trying to be born to that mother, marked the forehead of the last deceased baby. His surmise proved correct, because the next baby born had this mark on its forehead."

This assumption that a woman's children were born to her over and over led to a measure of control over the cooperativeness of the child in the womb. A child trained to "good habits" became a meritorious adult who, when reborn, would of course "help" his mother in childbirth. It was advisable to set one's own child into paths of proper behavior, for he could be born again to a descendent, and in all likelihood to oneself.

On the other hand, families were not closed groups. "Like a leech that sticks in one place, then goes to stick somewhere else, so a deceased person may be reborn somewhere else," said a priest. The marriage blessing stated, "May angels, not criminals or beggars, reincarnate as your children." Thus was explained why upright parents might have a disobedient, roaming child. He had roamed into a new family which perhaps he had met during a pleasant casual visit to them in another life. If he did not stay home to make merit with his present family, a wayward child would roam out of it as easily as he came in. Here was the ultimate danger in visiting around too much.

761 Because all individuals lacking in merit died off at
593 birth, some of whom because they got into the wrong family,
782 a selective process continuously weeded out the extremely
[163] non-meritorious so that those who were born usually survived. In fact, Hauck's figure of 90.6 live births (1956:33), the percentage of total pregnancies shows how many meritorious babies were born to the right family!

859 The Winnowing Ceremony

844 This ceremony, described in Dũan's tale, was usually
774 performed shortly after delivery, though it might occur anytime during the first three days of a baby's life. The child, placed on the tray (twins were laid together or separately) was claimed by the mother or the father, who

called out "Mine!" ("khǒng chan" [female speaking] or "khom" [male speaking]). Never did a parent say "ours!"[44] Sometimes the mother might ask a relative or friend present to claim the child, and so become a godparent.

As the first human step to control the volatile khwan, the first objective of winnowing a baby was to seize it (kan rap khwan) and so "complete" the child's person.[45] By tying holy thread at the wrist and ankle soul-exits, the khwan which had flitted in and out of the womb was given rest. It was still flighty, but now it had a life-long home.

Secondly, the child was given membership in a human family. Connection through blood and semen did not establish kinship. At first, the child hovered between corporeal and non-corporeal existence. "The child is not fully human for the first 3 days." This period was under the supernatural control of Mother Sǔ, for babies "never died during the first 3 days after birth. They might be born dead or they died 6 or 7 days later." The shock of dropping the child on the tray "made him forget his life as a spirit." When someone cried "mine!" the child finally cut his relationship with the spirit-world. As an old woman explained, "The ties are the important part [of the ceremony]. They show that the child belongs to someone. Once a tie fell off one wrist. The child cried and cried until it was restored," fearing its lost khwan would attach itself elsewhere. The claiming set up kinship as a contract before witnesses. Whoever announced responsibility for the child's care, and this was usually the mother, deserved reciprocal care in old age. Other relatives would also help to bring him through to maturity. He would not be so frightened of an evil spirit because of family support, nor of the "ghost of an ancestor" who would be recognised as a relative.

Third, the ceremony strengthened the child. By giving him through the ties a stable khwan, he "grew better, cried less, and did not get sick."

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852 856 789 after whoever claimed him, a mother might ask a "wealthy person, of polite, calm, and good character" to do this. The baby also started an association with whatever items were placed on his tray with him. Besides the most common ones mentioned in Nan's tale were ink and books (which induced learning); gold, rings, jewelry, money (wealth); bergamot thorn, a tin of kaffir lime (sharp wit); and a razor (a good wood-cutter for the fire; said to be a Muslim custom). When the baby was finally transferred from tray to cradle these items were returned to household use. The 852 789 bamboo cutter, rhizome of phlai, and earth associated with cutting the cord were taken off the tray and buried with the placenta. Their significance lay as part of a binding ritual. The phlai and earth might be taken off ahead of time.

Binding Rituals

829 1714 Because Bang Chan accorded autonomy to every individual, whatever his age, everyone had the free choice to go wherever his advantage lay. In infancy and childhood, the khwan soul might flee at any time, and could only be recaptured by a khwan-calling or khwan-leading rite (Textor: 996-1111). After about the age of 8, a thom khwan ceremony [852] helped to bind in and strengthen the khwan soul. In daily life, the fear that a loved one, whatever his age, would withdraw or run away if unhappy, frightened, or overburdened dogged people their whole lives. Casual episodes 829 were sometimes viewed with alarm. Once a boy of 10 on his 593 own initiative went off to live a few days with his grandmother only 10 minutes away by boat. His mother complained that he had wandered (pai thiao) and feared it would become a habit. Parents dreaded that grown children would find work away from the village; that daughters would elope; that adopted children or spouses run away; or even that their child, at marriage, would elect to go live with his in-laws. At any time a husband might go into the priesthood leaving his wife and children to fend for themselves, though here the wife had to give her permission and the motive was sympathetically viewed.

A traditional jesting threat was to "go away to the jungle-forest" (pai pa).

The economic and social base for this fear of losing a child to the world was that children were a parental investment with an anticipated return: for the trouble of bearing and raising them, children should work for the family until their marriage. Furthermore, a boy was to bring his parents merit by being ordained, while a girl was to care for them in their old age. If a child moved away

before completing these obligations, the parents lost out on their anticipated reward (cf. L.M. Hanks, 1962).

Since waywardness (pai thiaw) was considered a continuous threat, magical means were taken at the moment of birth to ensure that a child stay close to the family that raised him. The blessing following the winnowing ceremony invoked immovable things: the post, the cat that traditionally never roamed far, the pumpkin that sat and fattened:

> "...Stay at home like the bottom of the house post. Watch the house like a cat. Eat and stay here! Never leave home. Be fat and heavy as the ash pumpkin..."

The most important binding actions utilized, or brought the child into physical contact with, objects long associated with family, in particular the house and land. The umbilical cord was cut on earth or phlai dug from the house-land itself with a bamboo "knife" sliced from one of the deeply sunk house posts. Of these "the knife is the important thing." The phlai also had medicinal purposes. With a feather "from the mother's house" the baby's navel was smeared with cobwebs from a spider whose web indicated long undisturbed residence. They buried the placenta either under some large old tree that stood near the house, or under the house stair. The old family winnowing tray, old clothes, and well-used family possessions were used first before any new furnishings were purchased for the baby. A fire of sakae wood grown on premises boiled the water for the baby and mother, and heated the mother. Sakae "was planted when a house was first built so that every generation of occupants would have it available for use at confinement" and also for firewood at other times (cf. Mcf. 834). All these binding rites assured that the child being rooted to a home terrain, would not wander frightened, and so "would not cry." He also would be at home to participate in the merit-making that would reconstitute the family in another existence.

If a child were born away from home, how was this bond to his locality established? On one to two occasions when the child was born at the Minburi Health Center, Hauck (notes, 1954) observed a solution to this dilemma. The mothers returned home, as was customary, within a few hours of delivery and were established by their respective fires. Their babies were winnowed and laid on their trays with the usual auspicious book, pencil, and needle. Neither tray held any bamboo, clod, nor phlai, however, for these had not been used. On one tray, though, was laid a steel knife from the kitchen, mute proof that a family cutting instrument ought to be there. On another occasion, a father asked to be given his child's placenta so as to bury it on the house site. In so far as possible, people in Bang Chan tried to carry on the old rites.

the slight differences in ministrations. "The Muslim midwife massages more than the Buddhist." The women easily entered into reciprocal courtesies. The Muslim woman knew the steps in the Buddhist winnowing ceremony and performed them as desired. One Buddhist mother dispensed, however, with the winnowing "because the midwife was Muslim." A Buddhist woman made up the *Ahsan khăn* in the fashion specified by the Muslim midwife and participated in the latter's teacher-rite.

Certain fundamental ideas of the Muslims led to reinterpretations of familiar Buddhist terms and activities. "*Khwan*" referred to the soul, but with no implication of reincarnation. "*Bun*," meaning "merit" to the Buddhist, meant charitable giving in the sense of tithes, for Islam prescribed that a portion of one's income be given to the poor. On the other hand, the Muslims had taken over many Buddhist practices: for one, the acceptance of Buddhist holy water as a cure for spirit attack.

Completely Muslim was the stress on physical and moral purification as an objective of every rite, and conversely, the prevalence of the idea of defilement. "Circumcision is to cleanse the body before growing up," it was said. Muslim mortuary rites were elaborate procedures for purification. When a Muslim baby died, the Buddhist midwife said, "The body was cleaned before burial," implying thorough measures beyond his ordinary experience. Procreation was viewed as dangerous and contaminating. The behavior that hid sexual phenomena at the same time by constant prescriptions kept sexuality much more in mind. Muslims separated males from females, for example, at feasts. No Muslim male ever became a midwife.

The events surrounding childbirth illustrated the differing viewpoints between Muslim and Buddhist. In the seventh month of her pregnancy, a Muslim woman called on on her chosen midwife, and gave her a gift of betel pepper leaves and areca nut to assure her services (*fāk thong* to deposit gold). On returning home, she went as fast as possible "to insure fast delivery." Since Muslims frowned on liquor, their medicines were made up of hot-tasting spices in hot water. Yet one Muslim midwife prescribed large doses of liquor before and during parturition. For labor and delivery, a Muslim was stricter about utilizing the privacy of the small enclosed room, if there were one, while in the Buddhist household "it could be anywhere" in the house. Muslim men, except for husband, brother, or father, were excluded from the scene. The Muslim *khwan khăn* contained "]

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In Bang Chan when donations for a new school
building warranted buying the foundation materials, so that
volunteer labor was solicited for their installation, some of
the money went into food, despite additional donations of
food. This was in no way misappropriation. Helping to cook
was as important as helping to dig the holes.

The spirit-offering, or the portions eaten by a partic-
ipant as a sacrament, were actually tiny bits of each food.
Afterward, the entire lay-out, pork, sweetmeats and all, was
eaten. Because all this was holy food, it was felt to be
especially strengthening, so was usually given to children,
but might be eaten by family members and occasionally, priests.
The pork was cut up and eaten with a hot sauce, or put into a
"with-rice" dish. It was especially appropriate with liquor.

The use of food ritually was not limited to the ceremon-
ial season nor to big events. The same purposes underlay the
use of a hard-boiled egg eaten in the ceremony that was de-
signed to restore a child "sick from temporary loss of its
soul," and in another performed in order to wean a baby.

The benefits of a (l)ngaan accrued to every participant
down to the last worker and contributor according to the degree
of assistance. With status in this and in later lives at
stake, no one hesitated to plunge into debt or even to sell
land. For the sake of economy two different ceremonies might
be performed on the same day, for example a child's topknot
cutting at a daughter's wedding.[1] The saving was in time and
expense for food preparation, but such multiple ceremonies
were performed less often than one might expect.

One assistance in the financing was that every invited
guest made a contribution, customarily 5 to 10 baht, which
helped defray the costs. In 1952, household heads reported
these contributions as totalling from 30 to 1,000 baht, with
an average of 3[illegible]) for the year (Janlekha, 1955). Of 96 house-
hold heads who provided information on special expenses during
the 5-year period March, 1948 through February, 1953, 36 had
given (l)ngaan with net expenditures (costs minus contribu-
tions) ranging from -10[2] to 15,000 baht. The average net cost
was [illegible],341 baht (Janlekha, 1955). These figures might repre-
sent a single (l)ngaan or several events.

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1. Every desired ritual could be carried out at little cost. Thus a priest-candidate whose father was dead, was included in the pre-ordination festivities planned for a friend; and on one occasion five bodies were cremated at the same ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

435 Some information as to the cost in baht of the larger
196 ceremonies held in 1954, and their scale, was obtained from
[124] the school teacher's diary. Examples follow:

[192] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[744] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[895] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000. Guests gave 2300.
[581] B: Rite of forgiveness after elopement: a meal, with 5 bottles of liquor.
[184] C: Moslem: 2 buffalo slaughtered. 400 guests.

585 Arranged marriages could be large merit-making affairs,
222 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
[581] sugar cane, fruits, sweetmeats and other things. At more modest weddings and the rite of forgiveness for a couple who had eloped, food might differ from the usual fare only by including the three essentials of a wedding: pork, chicken and alcohol.

273 Increased consumption of alcoholic beverages during the
196 ceremonial season was indicated by the sales of one local
[93]

1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan [792] was always included at cremations, and often others from a [914] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauck, et al: 42-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny kluai nam, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" kluai nam wā. Here orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plus--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (wiset:powerful) or natural (tām thammachāt) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "khun"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paroxysm, flatulence, convulsion,

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16. Phillips (p. 65) reported that parents did not give their child a disliked medicine because "it offends him.... It is better not to give it to him than hurt his feelings."

17. This small skin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely pained (cf. Textor:116-127). Suspected khun was one of the few reasons why a family would authorize so grave a violation of the body of a deceased member as an autopsy.

Now that the fire was going nicely and Dūan was "ready to warm her body," the all-important prayer and incantation "to control the hotness and poison" of the fire had to be pronounced lest the mother's body be "swollen or burned." Sāi took raw rice, salt, and alcoholic liquor[36] in her mouth, chewed them, and sprayed them over the fire and over Dūan's body three times, saying "Spirit of the Fire and Wind, may both mother and baby be cool and happy!" and murmuring her secret formula with ancient Pali words about "great fire" and "death."[37] With the shoulder cloth (sabaichiang) that she always wore to the temple draped diagonally over her left shoulder and under her right arm, Dūan knelt and faced the fire. Praying for happiness to the Mothers of the Fire, Fire-floor, and Wind, and finally to the Lord Buddha, the Holy Brotherhood of Priests, and the Sacred Law, she bowed, hands clasped, and touched the floor three times with her forehead. Then she rose and lay down on the plank with the holy fire on her right side.

As Dūan was resting quietly, Sāi made three "taping fruits" (lūk prakhop), balls of tamarind leaves, phlai, and salt wrapped in cloth. One was put well up between Dūan's legs to cure the birth wound (phlāe). The other two were set aside for use on subsequent days. Sāi painted the baby's tongue with alcoholic medicine, and from her fingers dropped a little honey and boiled water into his mouth. Then she laid him on his tray on the floor close by Dūan, on the side away from the fire.

With satisfaction of a job well done, Sāi and Lek sat together for a quiet chew of betel. "Lek," said Sāi, "has it occurred to you on what a good day this boy has been born? It is a Saturday, so he will have power. Nothing, nobody, can hurt him! Once I delivered a boy on that best

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36. Alcohol was heating; rice, strengthening. Salt appears to be drying.

37. The deities addressed were māe phra phlōeng and māe phra phai. Another Pali-Thai magic formula to control fire was: "Phra Mōk Khan Lā Nō will extinguish the fire from hell, na mō phut tha ya." Phra Mogdallana, one of the two most faithful disciples of Buddha, caused the fires of hell to go out (cf. Anuman Rajadhon 1961:137). The na mō...etc. was a traditional phrase to prevent spiritual dangers and is a repetition of the names of the Buddha in five incarnations, past and future (cf. Textor 1960:483-485).

date of all, Sao Hā Day, one Saturday in April, which was the fifth day of the waxing moon of the fifth month, in the year of the Big Snake. That boy is truly blessed. He will be the best and most respected doctor or teacher. He is in school now and people are always telling him he is bright. Chāi came on a Monday, so he'll be charming, but, alas, always roaming away from home! This new little son has his mother's features, which is as desirable as a daughter's having her father's features. Still, no one knows what characteristics come from a parent. One more thing, Dūan. Now you may take medicine as you please." Shortly after, Sāi took leave until the next day.

The new mother turned her face toward the fire and tried to sleep. It was night. Lek was close by, and Song slept in his mosquito net near Chāi's cradle. The fire was so hot it kept waking Dūan. Though the smoke made her eyes smart it kept the mosquitoes away. In spite of the discomfort, Dūan was eager to have the fire as hot as she could stand it, for this heat and that of the medicine would dry her uterus, rid her of the bad blood and waters of childbirth, restore her strength and stimulate her milk. She forced herself to drink as much hot boiled water as possible to keep out the dreaded wind element that might get into her body and cool her. When, however, the fire was overpowering, she dripped water from a handy jar with a cloth.

The next day, Sāi returned. With warm, boiled water she bathed Dūan--this time the upper part of her body also--and the baby. The boiled water was much more important for the mother, but being available, was used for the baby, too. Sāi washed the soiled clothing and the baby's little cloths. Turmeric was again painted on both Dūan's and the baby's abdomen, head, and neck to protect from wind. Sāi questioned and examined Dūan. Measuring a handspan down from Duan's groin, she pressed outward gently. "I want to see if these particular ligaments on the thigh are joined. They are often damaged and do not heal if the time by the fire is too short. Some mothers cannot walk at all. They have to call a masseur for regular treatment." To "make the ligaments well," she tapped Duan's body all over with the second of the tapping-fruit balls and had her sit on one while bathing. She massaged the muscles, stiff from lying quietly near the fire, by pressing in the ball with her hands and even feet. Medicinal herbs were warmed and laid on Dūan's breasts so that the "useless early milk [colostrum] which would give diarrhea" could be worked out and thrown away. "The real milk is not ready for the baby until the third day," Sāi said, "but if the baby is crying much, and if there is milk some mothers start nursing on the second day."

Almost from the moment of his birth, whenever the baby

853 cried, Lek had dribbled from her finger warm boiled water into his mouth. Now she mashed up for him a little kluāi namwā banana, honey, and water. Song happened to pass as he was going to work and saying, "Let me give it to my son this first time," took the child in his arms, and pushed it gently in with his fingers. "This variety of banana does not cool, or give diarrhea because its tissue is harder. Uncooked is better than baked because it is easier for the baby to swallow," said Lek, "but baked food is incompatible if wind is in the body." Then she painted medicine on the baby's tongue with a feather.

Dūan turned to Lek. "Who would be the best person to start my child on good nursing habits?" Lek mentioned a relative who had much milk for her handsome child. This woman gladly came to give the baby his first suck

Sāi came the third day for the same duties. It was the last day for her, unless something serious happened. Dūan's milk came in somewhat that day. She asked, "Is it true, as people say, that the 2 breasts give milk of different consistency, that one is water and the other rice?" Sāi answered, "That is an old saying. The important thing is to feed from both breasts at each nursing. Here is medicine for the baby of honey, charred betel leaf, and water. Give it 3 times a day to cool his neck. His medicine is mostly to cool him slowly; yours is to keep you hot on the inside, while the fire warms you outside. Both are to keep out wind. Dūan, I would suggest 13 days by the fire, but you are the one to decide. It was 15 for your first child, but each time can be less. Be sure it is an odd number of days. My, women are certainly making it short these days! My first fire-rest was 27 days. And think of all the changes coming in! That trader-woman across the canal is using one of those small hot-ashes pots on her stomach. She is lying on a mat under her net, with her new baby. Her 2 other little children come in and out! No fire at all! I have heard they use rubber hot water bottles and electric warming devices in Bangkok. Well, it probably is all right provided there is heat, but to have plenty of milk and strength to work in the fields, then you have to lie by a real fire. The longer you stay, the stronger you are. Bangkok ladies do not have to farm! They want the fire for the fine pale golden color it gives their skin (cf. footnote, p. 71)! Well, now I shall take my final leave." She reached up and took her khwan khāo bowl. Smiling, she left the house.

[278] 846 [177]

From then on, Lek and Mī were certainly busy, caring for both children, doing things for Dūan, boiling up quantities of water, and cooking. Song put the wood on

854 mosquitos, but then Song bought in Mīnburī a bamboo frame with be-flowered netting. He also bought little mits to tie onto the baby's hands, so the fingers would not be sucked. Not every baby got these! Most of the time the baby lay naked, but was wrapped when nursed. One cool day they put over him a thick blanket. Lek, Dūan, or Song bathed him in boiled water 3 times a day and always after his excretions, which were wiped off with cloths. Then fresh cloth was put under him. On the seventh day since he was thriving
[856] he was bathed in ordinary rain water. Every day Lek vigor-
ously squeezed his fingers and legs "to make them straight,"
which made him yell each time. To speed the drying of the
[278] cord, a charred leaf of betel pepper was applied for a
while to his navel on which Dūan spit saliva several times
a day.

853 Dūan's milk supply was only fair. For milk stimulation
they pressed her nipples and kept the fire hot. She was
[262] also taking daily a special nursing curry of banana flower
and vegetables (khaēng līang). One day she ate a cobra
curry. A neighbor offered to help nurse the baby but Duan
[854] refused. "It is a pitiful sight to see one's child at
another's breast." Whenever the baby wailed he was given
boiled water but was not necessarily at once picked up. If
his crying continued, however, Dūan washed her breasts with
warm water, pressed out and threw away a little milk,
moistened the baby's lips with water, then lifted him on
the pillow to her plank. She laid him beside her and
leaned over him to nurse, though occasionally took him in
her arms. He was nursed about 10 times a day, and also
received honey, boiled water, and a bit of banana, too.
[278] One day the baby cried a lot, so they painted him with
turmeric and gave him baked cobra tail in alcohol to warm
him up.

846 As to her own diet, Dūan followed the usual practice
262 of limiting herself rigidly to rice with salt, dried fish,
and baked klūai namwā banana. Egg was too cooling:
"like glutinous rice, it brought pus to the unhealed cord
and the vaginal wound." Dūan also avoided "jam" bean
which caused madness, fruit, and sweets. Whatever she ate
affected her child by secreting into her milk. If she
were sick, he would be so too. If he alone became ill,
she must watch the foods both he and she ate. All these
food instructions would stop only when nursing stopped a
year or two later.

846 Duan decided to stay only 11 days by the fire,
though Sāi had said 13 and she would have liked to stay
longer. However, she wanted to get back to work because
the transplanting season was approaching. Besides, the

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775 Moreover, her life would some day begin again. Whether birth
844 was rapid or slow, the experience of the suffering deepened her sense of compassion and, as will be shown, brought her closer to fulfillment of her life role.[41]

Habit

153 If mutual help organized relationships, habit (khōei)
82 stabilized them. Khōai means "to be used to, accustomed to,
853 habituated." A first occurrence was an example and set the pattern for all subsequent occurrences. With one performance one was accustomed to an action. For instance, shortly after
[761] the temple was built 2 people died, deaths in Bang Chan "always occurred in pairs;" it was the temple's "habit." Moverover, "the head priest could never expel a priest because he had never done so." Again, a few women saw to it that during this period their babies were given a few grains of rice (even though they were far too young to be offered any rice regularly), so that "later on, if they got sick, they could always at least eat rice," for "they would be used
[171] to it." "Glutinous rice was not good for babies in Bang Chan, but in North Thailand [where it was a staple] it could be eaten because people were used to it." Someone had set the example which started the custom.

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844 41. Bang Chan's Buddhist phrasing of the meaning of pain and
154 death in childbirth seems to indicate that childbirth occurred
171 under psycho-cultural conditions that induced relaxation and
114 reduced fear and pain. An "easy" delivery lasted 2 hours. According to a modern medical theory, ©Dick-Read: Childbirth Without Fear, passim) lack of fear of childbirth leads to mental and physical relaxation which in turn reduces pain and labor. Dr. Dan Bradley observed that labor was shorter among Siamese women than among non-Siamese. "Facts seem to prove that parturition is both shorter and easier to Siamese mothers than is usual to Europeans and Americans" (Bradley, 1865:79). We accept his first-hand observation because he had 40 or more years of experience in delivering babies, both Thai and non-Thai (missionary wives, etc.), and suggest that it may be taken as proof of mental and physical relaxation derived from lack of fear. Although the missionary women may have been frightened because they were in a far country, Dick-Read argues that fear of childbirth has long been present among American women and this fear has the effect of longer, harder labor.

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A major clustering of first experiences, and so of habit formation, was in intra-uterine existence. Every experience of the mother was shared by the fetus. After birth, a baby daily formed habits of eating, sleeping, and crying, and later, as a child, habits of respect, obedience, truth-telling, etc. To create good habits efforts were bent to control and ameliorate any first experience: to make it as correct as possible; to seek out favorable astrological moments; to ask auspicious, skilled, or learned persons to be part of the initial action. An example was the establishment of nursing. When the baby was put to the breast the first time, the objective was not nourishment but to establish a good habit, viz. copious and strong sucking from an ample milk supply. Only after this first nursing did breast-milk as nourishment become important. If on this occasion he did not nurse well, he would have the habit of eating poorly all his life. Moreover, whatever the mother's experience with her first-born, it would not only be repeated every time he nursed, but set the nursing pattern for all subsequent children she bore. For her first-born, though, a mother would have had no previous experience of making milk. She had to be taught, or shown, how to make good milk, just as the baby had to be taught to suck, and later taught to eat rice. Consequently, the first-born baby was almost always first nursed by another person (not necessarily a kinswoman) with copious milk. Then 2 or 3 days later, because the example had been set, good milk came in and the mother started nursing. What was to be avoided at all costs was a first suck of colostrum, which appeared to be "unfit, early milk" from an insufficiently lactating breast. This would be a poor precedent. Until a mother decided her milk was right for nursing, a baby subsisted usually on honey and water, and maybe a little crushed banana. If a woman were not satisfied with her nursing capacities for her first-born child, when the second child was born she might ask another lactating woman to give the baby a first nursing so as to improve her own habit.[42] One woman flatly said her own milk was always unfit as proved by her babies' health, so she used a bottle of (canned) cow's milk from the start. She felt she had the habit

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42. Bradley (79-80) felt that the dehydration attendant on lying by the hot fire significantly reduced the quantity and quality of the milk.

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153 of making poor milk. Any woman whose milk flowed early and
853 well needed no example, for she was seen as having the habit as an in-born characteristic so deeply ingrained that it came through from a previous incarnation.[43] After nursing was established by the mother, babies were not often given over to another woman's breast because they were reputed to refuse it, "being not used to it."

In sum, the nursing patterns in Bang Chan varied with the previous lactating experience (if any) of the mother, and the ordinal position of her children.

Hauck shows the old way of establishing good eating
[262] habits in a baby. "If a mother ate small amounts of many
[846] different kinds of foods while lying by the fire, the child would not get diarrhea when he ate these foods for the first time" (1959:14). Through the beneficial effects of the fire, any deleterious qualities of the foods were eliminated (as we shall see in "The Fire of Maturity") and the child had his first experience with these foods in the breast milk.

153 Bang Chan's life was full of secondary opportunities for starting new habits. Every rice crop, every boat purchased, every house built, and all the rites of the life cycle could, if handled properly, start a fresh and fortunate sequence on its way. We shall have more to say of this in discussing maturity.

789 Imitation
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The familiar principle of imitation (Anuman Rajadhon: 154), the influence of like making for like, operated throughout daily life in Bang Chan. An action, event or presence emanated an analogous influence on its surroundings. A woman returned from a visit to the midwife with all possible speed in order to achieve a speedy delivery of her child a few weeks hence. Another pregnant woman visited the temple on the final day of the rainy-season Buddhist

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[829] 43. Bradley's informants gave an example of a deeply ingrained habit: "European and American mothers can better dispense [with the fire-rest] because their own mothers from time immemorial have never been in the practice of the custom, and consequently their constitutions do not at all require it (p.79)."

562 delivery, "her blood was purified to a white color to become
[827] the milk of the breast."[48] Nursing a child was the essence
•[853] of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 In a wider context, not only all their household members
462 but people anywhere were the objects of women's nurture:
252 women were in charge of the cooking even if occasionally
264 helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor houshold, short rationing daily was probable (Hauck, et al.:35,49). One old lady expressed deep satisfaction that she "did not feel hungry any more." She construed this as proof that she had ample
[782] merit, but it also meant that she was a great donor who gave
[431] continuously and took little. Women usually offered the
[796] early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When
593 age pushed women past their mature capacities, they returned
888 to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 A desire to give tender care and nourishment was deemed
857 inborn in all women. Although sex was not strongly
[291] differentiated in babyhood,[49] by age 3 a hard-to-handle
[593] skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phûm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[856] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

Only when the youngster was satiated did she gobble the remainder.[50] Parents often commented that girls in general were obedient and good, but boys were not. Everyone spoke, however, of exceptions. The capacity to play the female role grew with the child. It was not completed with the physiological maturity of first menstruation but only with ritual maturity.

The rituals to fit a woman for her office, described as "directly related to the welfare of the child," had 4 specific purposes. They perfected her as a compassionate being; restored and strengthened her body; improved her capacities as a nourisher; and strengthened her own khwan. The key to each of these aims was the holy fire.[51] Because actions taken by the fire were immediately and permanently effective, every effort was made to induce auspicious happenings. Words spoken by the fire had compelling effect so even ordinary speech became magical. Speaking of the fire's hotness so raised its heat that a mother was burned. For this reason, uninformed or careless visitors like children or foreigners were a danger.

According to Buddhist thinking, suffering developed compassion. Through the discomfort of pregnancy, followed by the anguish of childbirth and the heat of the fire, a woman became compassionate and so achieved the guide-line for moral behavior. Then a woman was sure to be touched with pity for the younger or less fortunate. One teacher despite the inconvenience went home twice a day from school to nurse her new baby because she "pitied" him too much to hire a wet-nurse. It was "pitiful" to see a child at another woman's breast for it implied that its mother was either unwilling or unable to nurse it. Thus, babies were rarely nursed by others than their own mothers.

The fire also strengthened a woman by ridding her of bad blood and foul fluids. Wind and Fire, the 2 spirit guardians of the elements necessary to the occasion, were invoked to assist in the drying of the uterus. In addition, strengthening

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50. Boys too fed their younger siblings but their purpose was a power-play: "to assure obedience in the future" (cf. Hanks and Phillips:648).

51. This fire was kept entirely separate from the one for cooking and boiling of water. It was ritually lit and ritually extinguished at the end of the fire-rest.

795 phlai and bamboo cutter under the house "so the child would
844 not roam away from home." The circumcision (akiko) per-
formed up to the eleventh year, allied a child to a human
795 group. "Circumcision is to accept the new-born baby into
the status of human beings" In a corresponding ceremony
304 for girls, the To Iman "cut a little piece of the labia."
852 However, some Muslims had the full winnowing ceremony per-
formed. If it were not, the child was raised aloft in the
851 midwife's hands with the words, "Mother Sī, Mother Sāk,
may this child be cool and happy!" The new-born baby was
then laid in a cloth cradle. Fruits were hung over the
795 tray or cradle. If a lactating Muslim mother accepted an-
other's child to nurse, the 2 babies had to be of the same
853 sex "lest later in life they marry, in which case theirs
852 would be an incestuous, brother-sister marriage." The
608 Buddhists entertained no such idea, so nursed babies of
either sex as needed. A Muslim view of colostrum as "like
pus from a sore" carried a more negative overtone than the
Buddhist's statement: "At first the mother's milk is too
dilute to be useful."

795 At the annual homage of a Muslim midwife to her
759 teacher each of her patients of the year sent a kilogram
of sugar, one coconut, one or 2 liters of glutinous rice,
and a hen (if a baby girl had been born) or a rooster (if
a boy). The chicken was killed by the midwife and made
into curries for mosque officials (men) invited to the
ceremony. The incense and candles were burned "while she
thinks of her teacher."

might provide clues to ways in which the diet may be improved. Most of these items were included in lists given by Sharp et al. (1953)[1]. To those lists should be added the following items from our food records:

Green leafy and yellow vegetables: Leaves of bergamot, chili, morinda, onion, potato, pumpkin, (2)sa-(5)noo, and of the following trees: (2)ma-(1)dan, (4)khlyb[2] and West Indian pea tree; (2)kha-(1)cauaun flowers.

Other vegetables: flowers of leek and pumpkin, and Chinese or black truffle (water chestnut).

Fruits: Thai nutmeg and tomato.

Fresh foods other than fish: buffalo, duck, cobra, turtle and field rat.

At the end of Chart 2, sources of water for drinking and food preparation have been included, not only because water is properly considered a nutrient, but also because the water used in preparation of food may affect the wholesomeness of foods eaten raw or with little cooking.

Untreated water was the customary beverage with meals. Ordinarily no distinction was made in source of drinking water for children and adults although boiled water was given to mothers and infants to drink during the post partum rest period (Hauck, 1956). Occasionally a sick person would be given boiled water to drink; for example one man who said he was "a little sick" and "not working" was observed to drink hot boiled water from a thermos bottle. In 1955, Ralis[3] found that tea was seldom or never drunk by nearly 3/4 of the respondents. Less than 7% drank it frequently. Thus in Bang Chan no custom had grown up which would afford the general population with a measure of protection against infection from

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1. See Sharp et al., 1953, pp. 193-196 for a list of 32 fish known to be found in Bang Chan; pp. 293-294 for 34 fruits grown in Bang Chan, and p. 295 for 11 fruits known to be used but not grown there; pp. 296-298 for 41 vegetables grown in Bang Chan, and pp. 299-300 for 24 other vegetables used.

2. (4)Khlyb was the term used in Bang Chan for an unidentified tree of the family Leguminosae. Its sweet tasting leaves were washed in boiling water to get rid of a bad odor, then were eaten with (4)nam (4)phrig, a chili sauce.

3. Golden and Ralis, 1957, p. 57. The answers to: "Do you drink tea frequently, occasionally, seldom or never?" were: often, 22; occasionally, 68; seldom, 158; never, 85.

and dinner, either meal taking an hour or two to prepare. Snacks might be eaten at any time. Adults often ate just the two principal meals, but children, especially the small ones who were not in school, might eat whenever hungry. The school children often purchased snacks from venders on the school grounds. If food was to be offered to the priests, who went around the village about seven o'clock in the morning, breakfast preparation was begun early, between 4:30 and 5:30 a.m., although family members might eat at various times during the morning: the husband before he went to the field, older children, before school time, babies and small children when the mother had time to feed them, and so on (Appendix A, p. 95). Preparation of supper usually took place sometime between 2:30 and 6 p.m. Whenever possible, family members ate together at the evening meal, but many exceptions were noted.

Rice is the principal item in every Thai meal. In Thai the general term meaning "to eat" is translated literally "to eat rice." All food items are divided into two classes: (1)khaaw rice and "with rice," or (2)kab (3)khaaw. Among the families studied three or four "with-rice" dishes were usually prepared during the day, i.e. for the two main meals, but the number varied in different families, and according to season. One or two of these dishes would usually be "hot" i.e. highly seasoned with fresh or dried chili peppers. Fish was the food item second in importance to rice, but the typical "with rice" preparation, whether hot or mild, contained more than one food item in addition to a variety of spices and flavoring materials (Appendix C, p. 118).

Between meal snacks might be any available leftover food,[1] fruit, or items purchased from a vender.[2] Such snacks were not regarded as meals, however, as no Thai considers that he has eaten a meal unless he has eaten liberally of rice.

The general method of cooking rice was the same throughout the village. The rice was washed two times in water from the canal or fish pond, and was then boiled in a large volume of unsalted water for about 2½ minutes. The rice pot was

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1. Leftover foods from breakfast were eaten later that day with or without reheating. "With-rice" was seldom left over from the evening meal, but rice was frequently kept over night.

2. Deep fat frying of bananas, sweet potato slices and the like was commonly observed, both among venders who sold their wares on the school ground, and those who travelled by boat. This method of cooking was never observed in ordinary home food preparation probably because fat was in relatively short supply.

252 usually covered. A common practice was to remove the cover and stir the rice once, toward the end of the cooking process. When the rice was almost done, surplus cooking water was drained off, and often after a lapse of time, the covered pot was put back onto the fire which had been allowed to die down, for about 6 minutes.[1] Thus the final cooking was essentially a process of steaming. Total cooking time varied from a little over 20 minutes to three-quarters of an hour, depending primarily on the amount of rice cooked. The finished product was moist enough to form a ball when pressed between the fingers. Left-over rice, if not eaten cold as a snack, was reheated by 271 being added to the hot rice at the next meal. Rice water was 272 commonly given to pets if there were any. In 4 families which 365 participated in the dietary study, rice water was given to infants, one 11-year old boy served himself liberally to it, and one adult man was observed to drink rice water before meals.

The many recipes for preparation of "with-rice" dishes may be grouped into two categories, hot and mild. Hot dishes always contain chili and varieties of spices which are hot tasting. One type of hot dish is curry which may be designated as either "hot" or "sour". Thai curry consists chiefly of fish or any available kind of meat, with or without vegetables. To make curry, shrimp paste, chili and spices were pounded thoroughly and then mixed with the meat and condiments and frequently with coconut milk. All were boiled together. Vegetables, if used, were added when the mixture was nearly done. Both vegetables and meat were cut into small pieces and washed before cooking. With the exception of dried chilies and tamarind, foods were not ordinarily left to soak in water. Sour curry differs from hot curry in that it contains less chili and spices and has a mixture of tamarind ((4)ma-(1)dan might be substituted) crushed with water added to it.

The other type of hot dish is (4)nam (3)phrig or chili sauce. It is made of shrimp paste, chili, garlic and other spices ground together in the mortar and then mixed with lime juice, sugar and salt or fishsoy. (4)Nam (3)phrig was always served with either raw or cooked vegetables. One informant commented that (4)nam (3)phrig was the everyday food among the villagers.

Preparation of mild dishes varied. These included canned vegetables, meat or eggs cooked with small amount of fat and a variety of spices and condiments including black pepper but not chili. Fish were sometimes roasted or boiled. Vegetables might be eaten either raw or cooked in coconut milk without seasoning. If vegetables were simply boiled in water,

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1. Median times for a series. In 15 instances cooking time before draining ranged from 18 to 38 minutes and rice was steamed from 2 to 12 minutes after draining.

people did not want to spend much on a baby, therefore they said that if a child ate too much "with-rice" he would be potbellied but thin in the upper part of the body, and that eating eggs would cause dental caries. This grandfather said he believed the truth to be just the opposite, but that goods things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice," one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

Secondly, Chutima suggests that particular foods were associated with, or suitable for, particular age levels, and a given sex. Data obtained in Bang Chan indicate that certain foods were associated with conditions such as pregnancy, lactation, and the puerperium, with occupation, and even socio-economic levels. For infants, breast milk was considered most suitable. The newborn infant was not usually put to the mother's breast for about 3 days after birth, and if a relative or neighbor did not nurse the infant, the small banana called (3)kluaj (4)nam-(4)waa (see p. 46), raw or baked, was crushed and fed to him before his mother's milk was available. This banana and rice, as (3)khaaw (3)tom and (3)khaaw (2)piag (two watery preparations), sometimes crushed with (3)kluaj (4)nam-(4)waa, were always the first solid foods introduced while the infant was breast fed. No other foods were introduced early. Some infants received fish and egg by 6 months of age, and a majority ate these foods by the time they were a year old. Some two year olds had not yet been given vegetables, and very few infants ate them before they were one year old.

Giving of "holy food"[1] to children suggests concern for strengthening children through dietary as well as other ritual means.

At the other end of life, as old age approached, the diet was supposed to change, ideally to a completely vegetarian one. Since one was soon to face death, one gave up eating meat and even fish, if possible, so as to avoid taking life. It was considered pitiful or wrong for an old person to fish. Being able to go without food was associated with merit. Those who stayed overnight at the temple on the Buddhist holy day went without solid food from before noon until the next morning as the priests did. One elderly woman remarked that when she stayed overnight at the temple she did not feel hungry, and did not eat anything at night, but other women, feeling hungry, drank coffee or milk at night. She

1. See p. 50.

262 883 understood that her merit helped her not to be hungry. Once she asked an eminent layman about eating at night. He said, "If you are not hungry, do not eat. If you feel hungry, it is better to eat. If someone invites you to eat, it is sinful to refuse."

261 Even young adults had a strong revulsion against gluttony. One of the symptoms of a man who went mad and had to be committed to an institution was that "he ate too much." A woman was despised because "she ate in secret. She stole eggs from her husband, sold them in the market, and then spent the cash on food which she ate there, instead of bringing it home." Definitions of a glutton were, "A 'with-rice' eater," or simply as "one who eats alone." These comments highlight the counsels of eating in moderation and in company. On the other hand, a full stomach was valued for "home is where one eats one's fill."

262 542 262 225 At maturity, when farm and other tasks were shared as equals, men and women ate almost the same food. The old prescription against animal food for women was somewhat relaxed, but not entirely. To sustain farmers during the seasons of hard work, however, extra quantities of rice and rice alone, were considered essential. "With-rice" was pleasant but not so necessary. Any shift away from a diet of rice as ordinarily cooked in Bang Chan was construed as a shift either in occupation or in health. For example an eminent citizen who gave up farming took to eating (3)khaaw (3)tom often. This soupy rice, a staple dish for infant feeding, had interesting socio-economic connotations. It was served as a light lunch to cooperative farm-workers to be followed at the day's end by a real meal. It was also "delicate" food, suitable for the sick, for city-people, for those who did not toil with their hands and backs. Consequently, when this man ate this "delicate food" more often, he was consciously or unconsciously serving notice on the community that he was not going to do farm work any more, for (3)khaaw (3)tom could not possibly have sustained a farmer's strength. Caustic villagers hinted that he was putting on airs.

262 863 941 Among conditions in which some change from the usual diet was found were pregnancy, post parturition and lactation. Relatively few foods were generally considered to be tabooed under any of these conditions, but many women preferred to limit intake to "safe" foods if there were any possibility that certain foods might cause harm.

124 Information was obtained from 42 mothers about the food they ate during the post-partum rest period. Two said they ate as usual, but for the remainder, the diet was considerably

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192 1. Literally "beautiful rice." For method of cooking, see p. 33.

curtailed. About half ate soupy rice rather than rice as usually prepared. All ate fish, but over half ate salted fish only, and about one-fourth ate fresh fish only. Rice and fish were apparently the only foods considered safe by all of these mothers. The only other food eaten by half or more of them was bananas of the (4)nam-(4)wa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeang (1)liang, a broth made with dried fish, and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some. When asked what foods they considered good for a woman who had recently borne a child, no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the post-partum rest period included more than a dozen items mentioned from 1 to 6 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

Fear of illness from eating incompatible foods after child birth was rather strongly expressed by many informants, even by some who knew of Chinese customs which were different from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home in the village, were not forbidden at the government health and maternity center at Nimburi.

The 45 mothers who were interviewed during lactation, but after work had been resumed, ate more nearly the usual diet than was the case during the post-partum rest period. As in pregnancy, the mothers apparently had no notion of special dietary needs during lactation, but foods considered undesirable during lactation were mentioned 27 times. The list included 12 kinds of food, and four attributes of food, i.e. sour and hot tastes, fermented foods and raw foods. No food was considered harmful by a majority of mothers, the one which occurred most frequently, jackfruit, being mentioned by 8 only of the 45 informants.

Reasons were seldom advanced for considering various foods unsuitable for mothers or children. During pregnancy, the hot-tasting foods, i.e. those made with chili, were said by one informant to injure the baby's complexion. When asked at what age a child could have adult food, mothers might say at one or two years, but often specified without giving a reason, that the child could have anything but the hot-tasting foods. A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby, 1 or 2 months old, ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana"[1] caused

1. The type of banana most familiar to people in the United States.

Reconstipation in infants, others that it caused diarrhea, whether taken directly by the infant or by the mother.

The belief that eggs would cause dental caries, and should therefore be omitted from children's diets, was expressed by the mother in a poorly nourished family. The possibility that such ideas arose from unwillingness to spend much money on food for a child has already been noted (see p. 42).

Information on food suitable in illness was obtained only incidentally. The Thai did not appear to have a consistent theory as to the cause of disease (Sharp et al. 1956, p. 403), and residents of Bang Chan did not seem to associate any of their illnesses with contaminated food or water. Choice of food in illness was probably associated in some instances with the idea that the body is composed of the four elements - wind, water, fire and earth, and that sickness results from or is a symptom of imbalance in the proportions or arrangement of these elements. Thus the "fragrant banana" and eggs, because of their "cooling effect," were said to be forbidden in measles. A child who was getting measles was restricted to rice and dried fish. In contrast the small, rather flavorless banana, designated (ก)ล้วย (k)uay-(k)una, was said to have "no cooling effect" and was considered an acceptable food in illness, as well as for newborn infants.

In one instance, when a patient had been taken to the hospital with severe diarrhea, a nurse instructed other family members not to eat lime, syrup (see p. 36), or raw vegetables, nor to drink unboiled water. The informant who told us about this offered no reason for these precautions. These foods were simply "forbidden" to the family of a patient with severe diarrhea.

Notions as to what is fortunate or unfortunate may also affect agricultural processes. The many ceremonies associated with culture and use of rice have been mentioned (p. 42). The idea that a papaya tree growing near the house was "unlucky" was attributed to Thai by a young Thai Nisiro in Bang Chan. When we commented on the papaya tree near his front door, he said the papaya tree dies easily and does not like water, but his was planted on high ground. According to this informant few villagers would be willing to grow papaya trees near the house. He considered [illegible] unreasonable, though he said that if specific harm were said to result, he would be concerned about it. The midwife at Khlong Suri Health Center said that she urged each woman who came there for delivery to have more banana, mango and papaya trees planted for home use. Before raising of papayas can be successfully encouraged, however, the idea that papaya trees bring bad luck must be overcome.

higher calorie intake in these periods. In general, the level of calories, phosphorus and thiamine and to some extent the protein varied with the rice consumption. The greater consumption of fish when fish ponds were drained during Round IV, accounted for the relatively higher protein content of the diets of both groups at this time, even though calorie intake was not at its peak. During this period, animal foods provided 45 and 51% of the total protein intake of Groups A and B respectively, whereas for the year as a whole, 37 and 40% of the protein intake of these groups was of animal origin.

The relatively high vitamin A and C intakes of families in Group A, during Round I as compared to other periods, was associated with a higher consumption of green leafy vegetables, and the use of sweet potatoes in quantity by one family. During Round II, families in Group A had few green vegetables, and their average intake of vitamin A was very low. The use of papaya, obtained as a gift, by one family in Group B during Round II raised the average ascorbic acid intake for this group substantially. Better average intakes, by one or both groups, of vitamin A, thiamine, riboflavin and calcium during the first Round, were not such as to provide liberal body stores to be called upon when food supplies of these nutrients were low.

SOME RECOMMENDATIONS FOR IMPROVEMENT OF DIET AND NUTRITION AMONG RESIDENTS OF BANG CHAN

Attempts to improve nutritional status in Bang Chan should be directed both toward increasing the supply and intake of certain nutrients and toward improvement of sanitary conditions so that intestinal infestation, diarrhea and other related illnesses will not lead to needless loss or increased requirement of nutrients.

Solution of the related problems of disposal of human excreta and provision of a year-round safe water supply are in the province of the sanitary engineer. Intestinal parasitism was common, but little can be done through treatment of individuals so long as the water supply is contaminated. Rain water was preferred for drinking, so provision of adequate and sanitary storage for rain water, coupled with sterilization of water from ponds and canals when rain water is not available, would do much to ensure safe drinking water. The custom of giving mother and infant boiled water only, during the post-partum rest period, provides a starting point for extending use of boiled water to other ages and conditions.

Notes on Meal Service

In a Relatively Prosperous Household

Friday, May 22, 1953

Before breakfast is served, the six-year old girl comes with a piece of jack fruit. SS weighs it and tells her to bring back what she does not eat. Later she comes with hands full of stones (14 of them). She has eaten this much as a "snack" before the regular meal. The grandmother finishes the piece (7 stones) and gives the rind to SS to weigh.

At breakfast the family sits in a circle on the kitchen floor. Each person except the baby has his own bowl of rice before him. In the center of the circle, within reach of all, are four small dishes of "with-rice" which has been prepared for breakfast: sour curry of buffalo meat, curry of (3)khii-(2)leg leaves, bean sprouts and one small fried fish. The mother takes a very small bit of fish on a spoon with rice, and feeds baby. During breakfast baby has 6 bites of rice with fish, nine small spoonfuls of rice with sour curry. The mother herself eats one bite of fish. She takes four spoonfuls of sour curry on plate with rice. This is shared with baby. Mother and baby eat mainly rice, fish and sour curry of buffalo meat, whereas grandmother and the six-year old girl have curry of (3)khii-(2)leg leaves and bean sprouts with their rice.

In a Relatively Poor Household

Wednesday, May 27, 1953

While the mother finishes the meal preparation, the seven-year old girl feeds the baby, first rice with some chopped egg, then rice with the "water" from the egg. The mother remarks that she cannot cook unless someone looks after the baby.

Technique of eating -- A tray with the "with-rice" is set out, also a bowl with water, for rinsing the hand, and a basin or bowl with drinking water. There are spoons in the "with-rice," but these seem to be used for taking some of the juice, which may be eaten directly or put on the individual's bowl of rice. Solid pieces are taken from the serving dish by hand, and mixed with some of the rice, which is then picked up in the right hand. Occasionally the person eating will rinse his hand with water. When finished, each person rinses his bowl (using either water from the bowl nearby, or from the general supply -- in this case the canal). Dishes are turned upside down on the platform near the stove, to dry.

Examples of Notes on Food Eaten by Individuals

Household 16 July 23, 1953

Family members observed at meal-time: All, as they ate breakfast at various times.

Notes re kind and amount of food eaten:

Breakfast: Girl aged 12 and boy aged 7 start eating at 7:20 a.m. Each one has one dish of rice and stew of swamp cabbage and salt fish for breakfast. They are through eating at 7:40 a.m.

9:10-9:30 a.m. Father eats two dishes of rice with stew and mother does also.

10:10-10:20 a.m. Son, 18 yrs. old, returns home and eats two dishes of rice mixed with stew.

10:40-11:00 a.m. Sons aged 25 and 20 have breakfast. The older one eats two dishes of rice but the younger one eats three.

11:30 a.m. Daughter aged 22 has two dishes of rice and stew. She is through eating at 11:45 a.m.

Household 67 May 26, 1953

Family members observed at meal-time: Mother and children.

Notes re kind and amount of food eaten:

Dinner: Girl aged 7 seems to be fond of fish but dislikes vegetables. Boy aged 11 likes to eat the vegetables from the curry. Each one eats two dishes of rice mixed with small amount of hot curry (5:02-5:17 p.m.)

(sic) One year old baby is fed by his older sister, eating two spoonfuls of rice mixed with boiled coconut milk. Whenever he refuses to eat, his mother nurses him.

5:40-5:55 p.m. Mother eats 3 dishes of rice with 2 dishes of hot curry, containing a small amount of fish.

Father begins eating at dark so we can't see him.

SUMMARY

Information on health, care, and diet of mothers and small children in Bang Chan, Thailand, was obtained primarily by interview, although some direct observations were made. In general, three areas of inquiry were included in this study: 1) clinical history, especially such information as might have a bearing on the nutrition and health of the child, 2) food intake at various periods, and 3) cultural customs and ideas of interest in relation to the Cornell Thailand Project.

In all, 66 mothers of young children were interviewed. Information on diet during pregnancy, postpartum, and lactation was obtained from women who were either in the stage under discussion or had only recently passed through it.

The description of child feeding practices is based on records obtained concerning 57 children from birth to two years of age, a majority of whom were visited from 5 to 7 times.

Information on growth is height and weight is based on observations made on 71 children, most of whom were weighed and measured 6 or 7 times. Observations were made for 30 of these children both before and after weaning.

During pregnancy most women in Bang Chan continued to eat as usual. A few expressed cravings for certain foods, and a minority thought some kinds of food should not be eaten during pregnancy.

During the postpartum rest period most women ate a very restricted diet. Rice and fish, with salt, were the foods considered by all informants to be appropriate for this period.

As a rule, diet during lactation, after the mother resumed her usual work, was the customary family diet. A minority of informants mentioned foods which should not be eaten by a nursing mother.

Evidence of the need to improve diets in this region was provided by the occasional occurrence of beriberi or the history of beriberi among mothers as well as by medical inspection and family dietary studies.

Breast feeding was the rule in Bang Chan. For a majority of infants observed, breast feeding was continued into the second year, and some were breast fed for more than two years. Few received animal milk after weaning.

A small, rather flavorless banana was given to young babies, sometimes before they were put to the breast. This type of banana and soupy rice were the only supplementary foods given before 6 months of age. Protein-rich foods, chiefly fish and egg, were generally introduced in small amounts during the second half of the first year. Few infants were given vegetables before one year of age, and even then none had them daily. At two years of age, some children had not yet been given green vegetables. Late introduction of vegetables into the child's diet may be due to the fact that vegetables were often prepared as hot curries which were considered unsuitable for young children. 853

A child was usually allowed foods commonly eaten by adults by the time he was weaned, although a few informants specified that the child could have anything but "hot tasting" foods, i.e. foods containing chili. A minority of informants mentioned other foods as not good for younger babies.

Except for dietary restrictions while the mother was lying by the fire, postpartum, no well established dietary taboos connected with the feeding of mothers or babies were encountered. The concept that a good choice of food is important to the health of both mother and child seemed to be entirely lacking. 846 853 262

Many of the young children in Bang Chan failed to gain, or even lost, weight in the intervals between observations. Almost all infants appeared to gain steadily up to 6 months of age, but stationary weight or weight loss for periods of from 1 to 7 months was observed in most children at some time. These periods were noted more frequently among children from 2 to 3 years old than among younger ones. Such experiences were not more common after weaning than at other times, but the cause or causes of growth failure could not be determined from the information available. 145

Some approaches to improvement in the diet of Thai mothers and children are suggested. Improvement in the diets of mothers and small children would probably parallel any improvement in the general family dietary, since food is prepared at one time for all members of the family. 252

births, until with the seventh child it might be dispensed with altogether without harm. In Bang Chan women who observed (2)jun (1)faj rested for an odd number of days, from 5 to 15 in this series. Seven or 9 days was most common. An odd number of days was considered good; an even number, bad. A wood fire was customary, although in 2 instances a charcoal brazier was used. One woman lay near a charcoal brazier and used a hot ashes chamber[1] also. With one exception (a non-Thai), even those who did not lie by the fire, but who used the hot ashes chamber, rested an odd number of days.

The traditional ideas on which the custom of lying by the fire was based were described in the Bangkok Calendar (Bradley, 1865):

> "The Siamese theory in regard to the part, which external and internal fire plays in the functions of life and health, is made to work powerfully in these circumstances. It teaches that there is, at such times, a diminution of heat in the body, and consequent liability to stagnation of the blood, which if not guarded against by fire, will leave the uterus flabby and enlarged, bad humors in the circulation, a consequent weak state of the stomach, resulting in the secretion of too little milk, and that of a bad quality for the child, all of which will be likely to be followed by a host of other fearful maladies to both mother and child."

The author, however, attributed deficiency in milk production to the practice of lying by the fire:

> "Now it is very remarkable that these last sequences, which are guarded against at so much expense of ease and comfort by the custom, are positively and directly brought about by following it. The mothers have but little milk for their babes during the month, and that of a poor quality. Consequently the attendant nurses have to feed them from the hour of their birth with honey, rice-water, and the pulp of soft bananas. This is their almost entire living for the first two or three days, and a large portion of it during the first month."

Of the 5 women we interviewed who did not lie by the fire, 3 used a hot ashes chamber regularly throughout the postpartum rest period, one used it occasionally, and one used both the hot ashes chamber and a hot water bottle. This latter woman

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1. A small metal box in which sticks of fuel were burned. The box was wrapped in cloth and placed on the mother's abdomen.

had lived outside the village and returned to the home of her mother, a traditional midwife, for delivery. Eight other women who were delivered by the same midwife observed (2)juu (1)faj. Two of these 5 women who, by using a hot ashes chamber, ventured to take a step away from the tradional practice were non-Thai (Chinese and Mon). Another, a woman aged 40, was having her 12th child. When we interviewed this woman during pregnancy she said she expected to lie by the fire, but when we visited her after the baby was born she was using a hot ashes chamber. The wife of one of the school teachers, who had observed the traditional (2)juu (1)faj with her first 5 children, said she found "the new way" more convenient; but by using it she had incurred the displeasure of some of the older women, especially her grandmother.

Activity and bathing. - Activity appeared to be rather limited during the postpartum period, but the respondents said they could move about to get some things for themselves, to eliminate, etc. We saw women sit up on the plank which served as bed to nurse the baby, change the cloths under it, and help to weigh and measure it (i.e. to assist us). Because of the warmth of the fire, and to avoid the smoke, the women turned from side to side frequently.

Bathing was customary during the postpartum rest period. For the first three days this was one of the midwife's responsibilities in care of the mother (Hanks, 1959).

Medications. - The 46 women who told us about medications used after childbirth had a total of 63 medicines; i.e., many used more than one kind. With one exception these were taken internally, and all preparations taken internally were mixed with alcoholic liquor (28% alcohol). Of the medications used, only one was prescribed from the Health Center, 4 were home remedies, and the remainder commercial preparations.[1] Two popular brands, snake brand and (1)jaa (1)dauaung, accounted for 60 per cent of the total.

Milk stimulation. - As already noted, lying by the fire was thought to be favorable to milk secretion. One woman commented that, since she was not a good milk producer, she must lie by the fire more than 7 days. Six women spoke of the hot water which they drank during the postpartum rest period as good for milk production. A large majority of the women mentioned taking (1)kaeaeng (1)liang, a broth made with dried

1. According to the label, some of these were supposed to be useful for menstrual and other complaints, as well as for childbirth. Some were even recommended for treatment of various disorders in men as well as women.

353 fish and vegetables, when asked if they did anything to stimulate milk secretion. Other preparations, each mentioned once or twice, were cobra curry, fried (3)kuj (1)chaaj flower, pork soup with (3)kuj (1)chaaj leaves, dried peas and peppers cooked in palm sugar syrup. Some of the medications used were reputed to stimulate milk flow. Three women spoke of peacock brand medicine and one of a Chinese medicine in this connection. With respect to the Chinese medicine, another informant said she took it "to remove the serum which interferes with milk secretion." One midwife put herbs on her daughter's breast and expressed and discarded the "early milk" which was considered bad for the baby. No association appeared to be made between putting the baby to the breast and stimulation of milk flow.

Drinking water. - Information concerning sources of drinking water used by the mothers was obtained from 46 mothers of young babies. Of these, 20 used canal water, 23 rain water, and 3 used either one. In general, there was a relation between season and source of water used. Most of the mothers whose babies were born between March and October drank rain water, whereas from November to February a majority drank canal water. Some families had enough water jars to preserve rain water for much of the dry season, whereas others had few or no jars and, therefore, could save only small amounts of rain water on a day-to-day basis. In all instances, the water, whatever its source, was boiled for the mother during the postpartum rest period. Forty-six women said they drank the water hot; one said it was warm. One popular traditional midwife said, however, that if the mother had her baby in the hospital, use of boiled water for drinking and bathing was not necessary.

CONDITION AND CARE OF BABIES AT BIRTH AND IN EARLY INFANCY

All information to be reported concerning condition and care of babies at birth and in early infancy relates to infants who were under one year of age when first visited. Thirty infants were seen when they were under 3 months of age.

Condition at Birth.

The condition of the baby at birth was generally described as satisfactory. One infant who died on the third day, before we saw the mother, was said to have cyanosis, failed to cry at birth, and needed to be "helped" for about one-half hour afterward. Three infants had congenital defects: umbilical hernia, inguinal hernia on the right side, and hemangioma on the right groin.

854 278 medications were taken internally, sometimes being painted on the tongue with a feather; but two preparations were applied over the abdomen. Some of the medications were described as "stomach medicine" or "to prevent flatulence." Five different kinds of proprietary medicine were given to 18 infants. In 13 instances, the medicine given was clearly homemade and included as major ingredients items such as flattery fruit, (3)luug (1)yaauau; cobra oil; horseshoe crab; and buffalo skin. The nature of the medicine, whether homemade or proprietary, was not clear in 8 instances. Usually medicine for infants was mixed with honey, but in 2 cases, alcoholic liquor was used as it customarily was for the mother.

Six newborn infants in this series were given no medicine. One of these was born at the Health Center. One of the other 3 infants delivered at the Health Center was given homemade medicine later, and no information was obtained on the third. Eye prophylaxis[1] was probably routine at the Health Center, as, in 2 of the 3 cases delivered there, informants knew that drops had been put in the infant's eyes. Traditional midwives, however, did nothing of this sort.

Water for Drinking and Bathing.

853 312 For the newborn infant as well as for the mother, water for drinking and bathing was boiled and was usually used while hot, often being kept warm in a vacuum bottle. Either rain water or canal water might be used depending on what was available at a given season. The water was dribbled from an adult's fingers into the infant's mouth. When the mother was no longer lying by the fire, boiled water was not considered essential for the infant. Nevertheless, over half the infants seen from this time up to 3 months of age were being given boiled water to drink. After 6 months of age this was rare.

853 855 312 In one instance, during the time when a younger sibling received boiled canal water, a 21-month old child was given boiled water also. At the time of a later visit both of these children were drinking unboiled canal water. In another case an orphaned boy's formula was made up with boiled water, although

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[744] [751] [731] 1. Vaccination for smallpox was the only modern preventive treatment which we knew to be used in Bang Chan in the absence of an epidemic. Since a severe epidemic of smallpox with many deaths ten years previously, health officers came to the Bang Chan elementary school once a year to vaccinate children, and other residents of the community could be vaccinated at this time. Four of the young children whom we visited periodically were vaccinated, at 4 months, 8 months, 1 and 2 years of age, respectively.

he was given untreated canal water to drink. One young mother gave boiled water to her 15-month old infant for a few days when the baby had diarrhea though on questioning she said no one had told her to do this. (The fact that boiled water was used for newborn infants and their mothers may have suggested the procedure to her.) Among the infants who received boiled water for a longer time than most, 4 were children of school teachers.

Early Feeding Practices.

Breast feeding was usual in Bang Chan, but most babies were not put to the breast until the second or third day or even later (Table 1).

Table 1. INITIATION OF BREAST FEEDING BY THE MOTHER FOR 38 INFANTS IN BANG CHAN.

Post natal day	Number of infants
1	1
2	11
3	22
4	2
5	2

As previously noted, no association was apparently made between putting the baby to the breast and establishing the milk flow.

In this series, 9 infants were nursed by a relative or neighbor one or more times before the mother's milk supply was established. Five of these infants had breast milk on the first day, 2 on the second, and 2 on the third. Choice of a woman who was a good milk producer to give the infant its first milk feeding was considered auspicious. The procedure was primarily of ritual significance.

Three infants were given cow's milk (diluted, condensed, or dried milk) before being put to the breast.

About half the infants received no food other than boiled water and milk while the mother lay by the fire. Honey was given with boiled water to about one-third of the infants, and about one-fourth had crushed banana, sometimes in addition to honey. When given, these foods were started before breast feeding was established. Either raw or baked, a small, rather flavorless variety of banana, (3)kluaj (4)nam-(4)wa, was used. We observed a grandmother dipping her fingers into a bowl of water, then crushing a bit of banana between them and poking this into the infant's mouth. The infant was given as much as he would take, usually about half of a banana at one time. Banana might be fed from one to three times per day.

Bang Chan. The only other woman in this series who did not restrict her diet postpartum was the wife of a school teacher. She said that women were supposed to eat rice with salt or salt fish at this time but that she ate all kinds of food.

As a rule, a woman's diet was considerably curtailed during the postpartum rest period. Rice and fish were apparently the only foods considered safe by all of the mothers interviewed. About half ate fish, but over half of these ate salted fish only, and about one-fourth ate fresh fish only. The only other food eaten by half or more of the mothers was banana of the (4)nam-(4)waa variety, baked bananas being commonly specified. Vegetables, when they were eaten, were usually in (1)kaeaeng (1)liang, a broth made with dried fish and reputed to be valuable for milk stimulation. In Bang Chan, the inflorescence of banana was commonly used in making this product, but other vegetables were favored by some.

When asked what foods they considered good for a woman who had recently borne a child no mother knew of any such food, but the list of foods mentioned as being bad for the mother during the postpartum rest period included more than a dozen items mentioned from 1 to 4 times each: egg, sweets, beef, vegetables, meat, pork, poultry, fresh fish, sour tasting foods, jackfruit, mangoes, fruits of all kinds, and glutinous rice.

Fear of illness from eating incompatible foods after childbirth was rather strongly expressed by many informants, even by some who knew of Chinese customs which were different from the ancient Thai customs. Some also knew that foods which were customarily forbidden to the woman who had her child at home were not forbidden at the government Health and Maternity Center at Minburi.

Diet During Lactation.

The term "diet during lactation" as used here refers to foods eaten when the mother had resumed her usual work following the postpartum rest period. The majority of nursing infants were under a year old when the records were obtained. All of the mothers ate rice everyday cooked in the usual way, and almost all had fresh, dried, or salted fish. About two-thirds had vegetables of some kind daily, but 6 women reported that vegetables of any kind were eaten only occasionally. Coconut, which as coconut milk is the basis for many curries, was used often. One nursing mother ate bananas daily, and about two-thirds of these women had bananas either occasionally or frequently. Only five women mentioned eating other fruits.

Three reported eating eggs daily,[1] and about two-thirds of the women had them either occasionally or frequently. Animal foods other than fish or eggs were eaten infrequently by most nursing women.

Our questions about ideas concerning foods during lactation did not uncover any firmly established traditional behavior. No food was considered harmful by a majority of informants. In response to the question as to foods which should not be eaten during lactation, however, 12 kinds of food and 4 attributes of food (sour, hot tasting, raw, fermented) were mentioned 27 times. Jackfruit, the item which occurred most frequently, was mentioned 8 times, corn, 3 times, swamp cabbage and pork, twice each; other items such as legumes, beef, poultry, egg, pineapple, and chico, once only. When asked if they disliked any foods at this time 4 women mentioned a dislike for vegetables. One mother said that cooked foods (in contrast to raw ones) were good for a lactating woman. Our question about foods craved during lactation brought little response.

To sum up, the mother's diet during pregnancy and lactation often approximated the usual diet in Bang Chan. A few women said they craved certain foods during pregnancy and some mentioned foods disliked at that time. A number of food items and attributes of food were considered by some informants to be undesirable during pregnancy and lactation, but no item was mentioned so frequently as to be considered tabooed. During the postpartum rest period, however, a greatly restricted diet was common. Mothers apparently had no idea of special dietary needs during pregnancy or lactation.

FEEDING PRACTICES FROM BIRTH TO TWO YEARS OF AGE

This description of feeding practices is based on 256 interviews concerning 57 infants and small children. The majority of them were visited from 5 to 7 times each. Since, insofar as possible, we saw the babies at 3-month intervals, changes in feeding practices will be described by 3-month periods or multiples thereof. If each visit to a child is considered as unity, the 8 age groups from birth to two years included from 17 to 41 children each with 6 of the age groups including more than 30 individuals. Thus the data obtained may be assumed to provide a reasonable picture of baby feeding practices in Bang Chan, 1952-54, and of significant deviations therefrom.

1. This does not mean that the mother ate a whole egg at one meal. Frequently one or two eggs might be used to prepare food for the entire family.

Breast Feeding.

853 184 As previously noted breast feeding was the rule. One child in this series, whose mother died when he was 5 days old, was never breast fed but was given canned or dried milk[1] diluted with boiled water. Another infant, whose mother died of tuberculosis when the child was a year old, was weaned at 5 months because of the mother's illness. A few breast fed infants were given cow's milk preparations at times. A child whose mother was a vender had cow's milk daily during the mother's absence; in another instance, cow's milk was given a baby when the mother was at work in a distant field. Whenever practicable, however, mothers apparently returned to the house to nurse the baby or had it brought to the field to be fed. One woman teacher who had a baby during the school year returned to her nearby home at recess to nurse the infant. Two mothers said they gave their infants some cow's milk because they thought their own milk supply was not adequate. One of these was the vender previously mentioned.

Supplementary Feeding of Infants.

853 Infant feeding during the mother's postpartum rest period has already been described (p. 12). After (2)juu (1)faj no mention was made of giving honey in water to babies, but up to about one month of age the only other change in practice which occurred was that two or three mothers started to mix a little rice with the crushed or baked banana which had been started previously. As during the mother's rest period, however, a minority of infants were being given banana, i.e. most of them had nothing except water in addition to mother's milk.

By 3 months of age about half of the infants were being given banana, (3)kluaj (4)nam-(4)waa, and mixing rice with it was more common. A few infants were being given rice as such. In most instances, for infants up to 6 months of age, rice was cooked with extra water and mashed, (3)khaav (2)piag, a preparation which was considered baby food. Rice water with sugar was added to the soupy rice for one infant less than 3 months old

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[234] 1. No fresh milk of any kind was available in Bang Chan. Water buffaloes were ordinarily not bred in the village and use of buffalo milk was unheard of. Among the light refreshments which could be bought at village stores, however, were coffee with condensed milk and diluted canned milk. Storekeepers stocked imported canned and dried milk including some brands designed for infant feeding. Directions for use were not in Thai, however, and the preparations actually fed to infants were often diluted more than recommended.

but additions of rice water, coconut milk, and salt[1] were more common from 3 to 6 months. A few infants less than 6 months old were given rice from the family pot cooked in the usual manner.[2] No other foods were introduced before 6 months of age.

A majority of infants from 6 to 8 1/2 months[3] of age were given ordinary rice, although for some, excess water was not drained off and special washed soupy rice was still given to others. Fishsoy, (4)nam (1)plaa, might be added for both salt and flavor. Several mothers said that when the baby had teeth he could begin to eat ordinary rice. At this time also the infant was given some other items which were considered as adult food (Table 2).[4] A few were fed protein-rich foods, i.e. fresh, dried, or salted fish, egg, meat, or poultry, between the sixth and ninth months. One child in this age group was given banana other than (3)kluaj (4)nam-(4)waa (kind not specified), and four infants had fruit other than banana frequently or occasionally. Orange, mango, guava, pineapple, and rambutan were mentioned according to season. Some kinds of (3)kha-(5)nom, which included purchased crackers, biscuits, or cookies as well as some sweet items which we would call desserts,[4] were given also, at least occasionally, to many babies over 6 months of age.

Among infants from 9 to 11 1/2 months of age increasing use of protein-rich foods, primarily fish and egg, was noted. Fruits other than the small (4)nam-(4)waa banana and (3)kha-(5)nom were also given to more infants. A few were given vegetables before one year of age, but none had them daily (Table 3).

Diet During the Second Year of Life.

For most of these babies breast feeding was continued into the second year. By this time almost all were given ordinary rice, and more than half had fish daily with fresh fish being fed more often than dried or salted fish. A few babies between

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1. In Thailand rice is not salted during cooking.

2. See (3)khaaw (5)suaj, glossary p. 81.

3. The nearest half month marked the dividing point between age groups. Thus an infant 8 months 20 days old would be considered as 8 1/2 months old and one 8 months 23 days old would be considered as 9 months old.

4. Neither such (3)kha-(5)nom nor fruit were included in the usual family meals, but school children often bought them as snacks to eat at noon recess (Hauck et al., 1956; Hauck and Hanks, 1959).

Table 2. Food Intake Other Than Milk of 32 Infants From 6 to 8 1/2 months Old.[1]

No. of Infants	No. of Food Items	Number of Infants Fed Food Items Other Than Milk: Rice	Banana	Other Fruit	Fish	Egg, Meat or Poultry	(2)Kha-(3)nom
1	0						
10	1	9					1
10	2	10	10				
4	3	4	4			3	1
3	4	3	3		3	3	2
1	5	1	1	1	1		1
3	6	3	3	3	3	3	3
Total	D[2]	29	9		3	4	2
32	F	1	6	1	1	3	3
	O		5	3	3	1	3

1. The nearest half month marked the dividing point between age groups. Thus an infant 8 months 20 days old would be considered as 8 1/2 months old and one 8 months 25 days old would be considered as 9 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

12 and 14 1/2 months of age were given egg daily, and almost all had egg either frequently or occasionally. About half the babies of this age were fed poultry or meat occasionally, but neither of these items was common in the family diets observed in Bang Chan (Hauck et al., 1958; Hauck and Hanks, 1959). At this age only 1 of 41 babies was given green vegetables daily, and less than one-third of them had vegetables of any kind even occasionally (Table 4).

As the children grew older they had vegetables more frequently, so that between 15 and 20 1/2 months of age almost half of the children ate vegetables at least occasionally (Tables 5 - 8). A few two-year old children had never had green vegetables; for many, even at this age or older, vegetables of any kind were occasional rather than frequent items of diet.

Of the 23 children between 21 and 24 1/2 months of age for whom we had records, 5 were still being breast fed, and one (the orphaned child) continued to receive imported cow's milk diluted with boiled water. All drank untreated canal or rain water according to the available supply. All were fed rice cooked in the usual manner, but one still had occupy unbrained rice at times.

[1] [See p. 20 - Hauck et al.] [2] [See p. 21-22 - Hauck et al.]

Table 3. Food Intake Other Than Milk and Rice of 39 Infants From 9 to 11 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk and Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Eha-(3)ems
2	0						
3	1				1		2
5	2			2	4		4
12	3		11	6	11		8
13	4		13	12	13	1	13
4	5		4	4	4	4	4
Total		D[2]	16	7	5		7
39		F	9	7	13	2	10
		O	3	10	15	3	14

1. The nearest half month marked the dividing point between age groups. Thus an infant 11 months 20 days old would be considered as 11 1/2 months old and one 11 months 23 days old would be considered as 12 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

Table 4. Food Intake Other Than Milk and Rice of 39 Babies[1] From 12 to 14 1/2 months Old.[2]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk and Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Eha-(3)ems
2	2			1	1		1
6	3		6	5	6		5
21	4		21	20	19	4	20
7	5		7	7	7	7	7
Total		D[3]	24	4	5	1	14
39		F	13	19	19	3	12
		O	1	10	11	8	8

1. Two additional babies in this age group were still on an all milk diet.

2. See Footnote 1, Table 3.

3. See Footnote 2, Table 3.

342 In Bang Chan infants less than a year old were seldom weaned. Of 3 such cases we encountered, the mother of one was ill with tuberculosis, and the other two mothers were again pregnant. Common answers to the question, "When should a baby be weaned?", were: "When it is a year old", or "At 1 1/2 years", or "When the mother is pregnant again." Mothers commonly nursed one infant until 3 to 7 months pregnant with the next. More than half of the children who were nursed longer than 18 months had no younger sibling during the period of this study.

Of 32 mothers who described the weaning procedure, 13 painted the nipples with boraphod or other bitter substance (lime or aloe), but an equal number said they did nothing. Six mothers gave other food instead of breast milk. In 4 cases cow's milk[1] was given; in one, bananas and (3)kha-(3)nom; and in one instance the food substitute was not specified.

Weaning in Bang Chan usually meant the end of milk feeding, but 3 babies in this series were given cow's milk feedings after weaning. These included the infant who was weaned at 8 months because of the mother's illness and two others who were weaned because of a pregnancy. The child who had been given cow's milk when the mother was away feeding continued to have cow's milk at night, after weaning.

Beliefs About Foods for Babies.

• 343 Foods "Good For" Or "Not Good For" Babies. - In addition to
335 asking what foods were given the baby, we asked mothers (or
341 other informants) what foods they considered "good for" or "not good for" the baby. Informants were not prompted by asking about specific foods. The most usual answer was that the informant did not know or did not consider any food either especially suitable or unsuitable. Only 6 informants mentioned foods considered good for the baby (Table 12).[2] One of these named 3 such foods: egg, fish, and vegetables.

A larger number of informants reported that one or more foods were not good for a baby, but in a majority of instances (30 of 50 replies) the informant did not mention any food in this category. In all, 14 foods and 3 characteristics of foods

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1. No fresh milk of any kind was available in Bang Chan. Water buffaloes were ordinarily not bred in the village, and use of buffalo milk was unheard of. Among the light refreshments which could be bought at village stores, however, were coffee with condensed milk and diluted canned milk. Storekeepers stocked imported canned and dried milk including some brands designed for infant feeding. Directions for use were not in Thai, however, and the preparations actually fed to infants were often diluted more than recommended.

2 [see p. 14 - Hauck]

("hot tasting" and "hard") were mentioned 39 times (Table 13) with jackfruit and chico being mentioned in connection with the same baby at both 6 and 9 months of age.

Table 12. Foods Considered Good for Babies.

Food	Number of Informants	Age of Baby at Time of Inquiry (months)
Rice	3	3, 13, 36
Egg	2	6, 15
Fish	2	15, 16
Vegetables	1	15

There was no indication that any food was considered harmful by most mothers. Although the list of foods considered not good for babies was considerably longer than the list of foods considered good for them, the item which occurred most frequently, jackfruit, was mentioned by only 6 informants. Eggs, vegetables, and fish were considered by some as good for the baby and by others as harmful (Tables 12 and 13).

Table 13. Foods Considered Not Good for Babies.

Food	Number of Informants	Age of Baby at Time of Inquiry (months)
Jackfruit	6	3, 6 and 9[1], 11, 18, 21, 22
"Hot tasting" foods	6	13, 14, 15, 24, 24, 27
Chico	4	6 and 9[1], 11, 21, 22
Egg	3	7, 11, 27
Sugar	3	9, 11, 13
Banana (ordinary "fragrant" type)	2	21, 22
Hard things	2	8, 10
Glutinous rice	2	9, 11
Fish	1	9
Fresh fish	1	15
Vegetables	1	6
Mango	1	6
Raw banana	1	6
Corn	1	18
Guava	1	18
Orange	1	15
"Ice"[2]	1	36

1. Mentioned for same child at both 6 and 9 months.

2. Either a frozen syrup or syrup over shaved ice.

262 853 Reasons were seldom advanced for considering certain foods unsuitable for mothers or children. During pregnancy the hot-tasting foods, i.e. those made with chili, were said by one 262 informant to injure the baby's complexion. When asked at what 855 age a child could have adult food, mothers might say at one or 853 two years but often specified, without giving a reason, that they could have anything but the "hot-tasting" foods (foods seasoned with chili). Two mothers said the child could have "hot tastes" at one year, whereas one said not until the child was 3 years old. A majority did not specifically mention hot tasting foods either to include or to exclude them.

853 A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby 1 or 2 months old ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana", (3)kluaj (5)hauaum[1], caused constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

853 The belief that eggs would cause dental caries and should 262 therefore be omitted from children's diets was expressed by the 853 mother in a poorly nourished family of low economic status.
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862 Opinions varied as to when children could be given "adult food". This was often, but not always, the age considered appropriate for weaning. As the question was worded it apparently implied that the child "could eat food as prepared for adults in the family" and did not necessarily exclude breast feeding, since children who "could have adult food" might still be nursing. The age at which a child could have adult food was sometimes related to stage of maturity as "when he can sit", "when he has teeth", or "when he can say (1)plaa (fish)".

262 Traditional and Modern Concepts of Rice Versus "With-Rice" in the Diet. - Rice is not only the basis of the adult diet in Thailand, but it has traditionally been regarded as the strength giving food par excellence. A portion of Chutima's (1939) description of the "old system" of diet follows:

> "Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal.

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1. The type of banana most familiar to people in the U.S.A.

Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply.[1]

Note that not only has rice been considered much more important as food than "with-rice", but that the diet was more limited for children and young women than for men. The Food and Drug Division of the Ministry of Public Health in Thailand has been trying to encourage people to eat more "with-rice" and less rice. The few comments we heard in relation to rice versus "with-rice" illustrate both the old and the new ideas. One informant stated that only rice can make children fat and that the "hot tasting" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish and was weak. He refused vegetables and bananas. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk[2], expressed the opinion that the ancient belief was based on thrift. He said that thrifty people did not want to spend much on a baby, therefore, they said that if a child ate too much "with-rice" he would be potbellied but this is the upper part of the body and that eating eggs would cause dental caries. This grandfather said that he believed the truth to be just the opposite, but that good things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice", one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (a fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

Summary of Infant Feeding Practices in Song Chan with Some Suggestions for Improvement.

To sum up the information obtained on baby feeding in Song Chan, breast feeding was the rule. Some babies were nursed for two years or longer although about two-thirds of those we observed through the weaning period had been weaned by 18 or 19 months of age. Aside from honey which was given with medicine or hot water to newborn babies for a few days only, crushed banana of the (4)nam-(4)waa variety was usually the earliest dietary supplement. By 3 months of age about half the infants were being given bananas, sometimes crushed with rice. Between

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1. In Thai the general term meaning "to eat" is translated literally "to eat rice." Food items are divided into two classes: rice and "with-rice."

2. See Footnote, page 25.

• 6 and 8 months soupy rice was a common addition to the infant's diet, and after the first teeth appeared many had rice from the family pot. Between 8 and 9 months, also, fish was given regularly to many babies and egg at least occasionally. Crackers, cookies, and various items designated as (3)kho-(3)nom were frequent additions at this age.

Seasonal fruit such as mango and orange was given to some infants from 6 months on, but most children had fruits other than the (4)nam-(4)wa banana infrequently even at two years of age. As the feeding of rice increased, banana was given less often, so that for the 2-year old child even banana was eaten only occasionally. A minority of babies were fed vegetables by one year of age, and some had not begun to eat them by two years. Only about half the children from 2 to 4 1/2 years old had vegetables frequently.

Avoidance of hot tastes, rather than reluctance to give vegetables, may have been responsible for late introduction of vegetables into the diet of many children. In Bang Chan vegetables were often combined with other foods, as in curries. They were usually added toward the end of the cooking time after the mixture had been seasoned. Vegetables from such a "hot dish" would not be offered to a small child unless the parents considered him old enough to eat "hot-tasting" foods. Among the mild "with-rice" dishes were vegetables pecked with a small amount of fat and seasonings other than chili, as well as vegetables cooked in coconut milk or in water (Hauck et al., 1955; Hauck and Banks, 1958). In this connection the suggestion of a Thai counselor that one might encourage eating more vegetables by discouraging the use of "hot" dishes seems promising, since a larger amount of mild than of "hot" "with-rice" food is eaten at one time. To promote more frequent, and earlier, feeding of vegetables to babies, one would need to encourage either more frequent preparation of mild "with-rice" dishes containing vegetables or special preparations of vegetables for the baby. The latter is rather impractical when foods are cooked one at a time over the same fire as in Bang Chan.

Perhaps one reason why most infants in Bang Chan had fish daily after 6 or 7 months of age is that in making curries fish was often cooked in a little fat or coconut milk before seasonings were added. Thus, a little fish could then be set aside for the baby before chili and other spices went into the pot. (Note, also, that rice and fish were the foods considered safe to eat during (3)jom (1)faj by all mothers interviewed). Changes in food preparation suggested for improvement of the family diet in general (Hauck, 1956) could automatically help to improve the feeding of young children who are gradually introduced to adult foods. At the same time, a better family diet would probably help to improve the quality and quantity of mother's milk, since during lactation mothers tended to eat as usual. In deciding whether the more effective approach would be through teaching

the fire for her during the first day or so, lest in her straining, Dian's womb "move to a new place," but Duan did it herself thereafter. The smoke was harder on others than for her for she was on the floor. She could leave the plank to bathe and to relieve herself through a crack in the floor. As soon as Chai got over being frightened of her turmeric-yellow stomach, he often came and lay beside her on the plank, though it was a squeeze! She took her medicine and often sipped hot water, feeling very modern with her brand-new thermos bottle. Constantly turning her back or front to the fire, she poked or dripped water on the flames to make coals. Once she tossed on a dry palm leaf, and as it flared up, put a cloth over her head to trap the smoke and heat. Though a rash developed on her body, she was complimented by Leh on the care she was taking of the heating and drying process. Unfortunately, a neighbor who wanted to help brought in some of the wood one day. Not remembering that to make noise with the wood caused diseased red eyes in the baby, she dropped the bundle with a crash! Alas, "aang" disease, of course, came at once. So the near-by [illegible] who always cared for them had to be called, but he used no medicine. "For eyes red from 'aang'," he said, "never use any eye-medicine as drops, or they will be permanently damaged or blind. Such eyes have not enough resistance to win over the strength of the medicine. A drop of mother's milk, any mother's, in the eyes is the cure."

Uterus pain was said to last one day for the first child, 2 days for the second, and so forth, increasingly. As Dian seemed to be in considerable pain, Leh resorted to an old cure: she secretly took the bamboo knife and the chisel from the baby's tray and put them under Duan's plank bed without telling her. Slowly the pain diminished.

If anyone spoke of uterus pain to her during the fire period, Duan would suffer still more. If a visitor spoke of the hotness of the fire, little boils would appear on her body. The fire, being thus made too hot, would have to be put out, and Duan "would be weak for a long time." This was because actions or even words occurring beside the baby fire set a new and permanent pattern. Neighbor's children were kept away lest they inadvertently exclaim about the heat.

A few relatives with gifts of banana, turmeric, and face powder dropped in, but visitors mostly stayed away. "It is an ugly sight," said Dian, "lying here with only a cloth over me, half naked and yellow, and I fear there might be an unpleasant smell."

The winnowing tray, with the baby on a pillow now covered with a plastic cloth, rested on a low table, the legs of which stood in bowls of water to keep away ants. At first an old dome-shaped fish trap had been set over it to prevent draft and

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854 mosquitos, but then Song bought in Minburi a bamboo frame with be-flowered netting. He also bought little mits to tie onto the baby's hands, so the fingers would not be sucked. Not every baby got these! Most of the time the baby lay naked, but was wrapped when nursed. One cool day they put over him a thick blanket. Lek, Duan, or Song bathed him in boiled water 3 times a day and always after his excretions, which were wiped off with cloths. Then fresh cloth was put under him. On the seventh day since he was thriving he was bathed in ordinary rain water. Every day Lek vigorously squeezed his fingers and legs "to make them straight," which made him yell each time. To speed the drying of the [854] cord, a charred leaf of betel pepper was applied for a [298] while to his navel on which Duan spit saliva several times a day.

853 Duan's milk supply was only fair. For milk stimulation they pressed her nipples and kept the fire hot. She was [262] also taking daily a special nursing curry of banana flower and vegetables (kaeng liang). One day she ate a cobra curry. A neighbor offered to help nurse the baby but Duan refused. "It is a pitiful sight to see one's child at [854] another's breast." Whenever the baby wailed he was given boiled water but was not necessarily at once picked up. If his crying continued, however, Duan washed her breasts with warm water, pressed out and threw away a little milk, moistened the baby's lips with water, then lifted him on the pillow to her plank. She laid him beside her and leaned over him to nurse, though occasionally took him in her arms. He was nursed about 10 times a day, and also received honey, boiled water, and a bit of banana, too. [278] One day the baby cried a lot, so they painted him with turmeric and gave him baked cobra tail in alcohol to warm him up.

846 As to her own diet, Duan followed the usual practice 262 of limiting herself rigidly to rice with salt, dried fish, and baked kluai namwa bananas. Egg was too cooling! "like glutinous rice, it brought pus to the unhealed cord and the vaginal wound." Duan also avoided "jam" bean which caused madness, fruit, and sweets. Whatever she ate affected her child by secreting into her milk. If she were sick, he would be so too. If he alone became ill, she must watch the foods both he and she ate. All these food instructions would stop only when nursing stopped a year or two later.

846 Duan decided to stay only 11 days by the fire, though Lek had told 15 and she would have liked to stay longer. However, she wanted to get back to work because the transplanting season was approaching. Besides, the

wood was getting low. Friday (*wan sùk*, day of happiness) was the best day of all to leave the fire, but for her, Friday happened to fall on the fourteenth day after delivery. It was better to come off on another day than to risk taking such an important step on an even-numbered day. Even numbers were always associated with the even corners of a coffin. 846 [801]

Usually the fire period went off safely, but not this time! One day, the heat "seemed to come up suddenly" and choke Dûan. She rose gasping and ran to the window for air. Horrified at the terrible danger of cool air, Lek hastened to get her back to the board. Then by accident Dûan dripped too much water on the fire and put it out! Later, Dûan was almost unconscious, felt unhappy (*sŭay*) and as if "the fire were burning inside her." Lek called both Sa-i and the *mô*. As the *mô* entered, Lek handed him the expected offering of incense, flowers, candle, and a baht and a half for his *khruu khâo*. He prayed to his teacher, then made holy water and a decoction both of which he gave Dûan to drink, saying, "The bad blood and the fish-water did not flow out well, a common trouble after childbirth. Since your body is not cold and the fire has not been out a half-day, you could start the fire up again. But as it is never good to put out the fire like this, I am taking you off it. Take a pot of salt, heat it well and wrap it in a cloth. Put that on your abdomen. Drink no cold water, or you will die." 846 755

Dûan was sad that she had to leave the fire early and on an even-numbered day, but one always wanted to obey a *mô*. All had gone so well when Chăi was born! That time she had taken the usual steps, choosing a Friday to come off the fire. Now she could not choose. Her formal leave of the fire was as before: The *mô* prepared earth holy water (*nammon thorranìkà*), some of which she drank, and some he sprinkled on the fire. She then knelt down facing the fire and touched her forehead to the floor 3 times, asking the Mother of the fire to bless her and her child, and to keep them well. She went outside to bathe, first with warm water to cleanse her body, then with holy water, and put on a clean shirt. Returning to the house she seated herself quietly, for she was not supposed to do anything for a time. Others in the family broke up the fireplace. The baby was taken off the winnowing tray. Warm water mixed with the holy water was dropped in his mouth. After being bathed in the holy water, he was laid in a little cradle made of a long cotton scarf, spread apart with sticks, and swung between 2 houseposts. 846 [854]

Now that the fire-period was over, they stopped all boiling of the water for the baby and Dûan. Rain water was substituted, but whenever the baby seemed sickly, boiled water was used. When their rain-water ran out, they got some at the temple. Both Dûan and the baby continued taking medicine for many weeks. [312] [758]

a new way was a woman bearing her first child because she was not yet ritually matured. This she wanted to be. Moreover, her self-interest led her to try to profit as much as possible from the experience of elders by first following the old way. By incorporating the experience of successful child-bearers into her own and the baby's life and by asking them to initiate actions auspiciously, she augmented by that much her own competence, and laid the groundwork for her future progress. Self-responsibility engendered respect for elders. Thus there was no split between old and young over innovations. Experience gave grounds both for conservatism and for changing, but at different age levels.

Secondly, changes were adopted by the rich who, spending their money rather conspicuously, sought to maintain and enhance their social position. Their wealth and position were in themselves unquestioned as signs of merit earned in another incarnation.

The changes being introduced to Bang Chan were of two kinds: first the prestigeful, and second, those giving no increment of esteem, i.e. idiosyncretic changes of taste or convenience; or those reflecting individual circumstances. The prestigeful innovations were oriented towards the use of market novelties, modern medical care, urban standards of cleanliness and beauty, and other ways termed "progressive" associated with the city of Bangkok, cynosure of the eyes of the rich. These values were leading certain families away from their original occupation of farming, into the fields of teaching, trading, carpentering, cottage-industry, etc. Since these new occupations brought in steady cash and large land holders, too, had a good income, an association was found of wealth, prestige, urban interests, and innovation. Comment on the hot ashes container (*fai chai*) indicated that it was a strong symbol of prestige and progress. To use it was "to get away from ignorance and the old way of doing things." It was "cleaner, not hot or ugly, and more convenient." One teacher took it up after reading an advertisement in the newspapers that described glowingly its more efficient healing effect. On the other hand, one woman abandoned the *fai chai* because "it was not hot enough to rid her of stiff muscles," so she went back to the use of the fire. "It is all right for rich Bangkok ladies who want to avoid a scar, but it does not give enough strength for a farmer." She had no urban pretensions. Also in this prestigeful aggregate, observed here and there, were the market novelties mentioned above: bed, mat, and mosquito net instead of the plank-bed; bits of medicine from the Chinese pharmacist instead of the old

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home brew; rub-on medicine (yā chup) instead of a fire or fire-container; canned cows' milk, and nursing bottles for the baby, and the bottles washed with salt; the transfer of a baby from the tray to the cloth cradle before the termination of the fire-rest because "he needed fresh air;" and the rejection of the turmeric rub against the wind element as "dirty and ugly."

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To use modern medical care was becoming prestigeful. Most spectacular here was a case of a prosperous and educated man who had had 9 children, then "feared he could not feed them all," so underwent voluntarily a vasectomy. Patronage of the second class doctors who used modern medications but explained them in traditional terms was frequent among the well-to-do. The Minburī Health Center, a resource in case of over-long and difficult labor, was beginning to be seen as a fashionable place to go for medical care and parturition. The case of the 2 teachers who laid plans ahead to go to the Center (but their quick labor precluded attempting to get there) showed that prestige had a stronger lure than convenience at times. It was much more convenient to bear a child at home, yet one of these teachers even talked about wanting to be delivered in Bangkok at the Woman's Hospital, an extreme of prestige and practical inaccessibility.

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The drive toward progressiveness led to conscious re-examining of those "old ways" that could be visually tested. One woman said, "There are fewer spirits (phī) nowadays." There was the mother who pondered the maxim about burning up all the wood collected by the husband to make a child finish tasks when he grew up. Finding it not true, she abandoned it at her next confinement. A man said that the old belief that papaya should not be planted near the house because "it dies easily and doesn't like water," and so would affect a child, was "unreasonable because the harm was not specific [e.g. a threat to skin or eyes]. If specific, I might believe it." An opening wedge of disbelief was noted where a woman gave no bit of rice to her baby to start a habit for later benefits because "she was told but didn't believe it," and another who said the "winnowing rite was not important."

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In addition to prestigeful changes were those due to individual circumstance, taste or preference, and convenience unaffected by social aspirations. One woman rejected going to the Minburī Center for delivery and took up the hot-ashes container instead of a fire because she could better direct her older children, and "it was less hard on them." A poor woman took no medicine during pregnancy because she had no money to buy it. A comment that of recent years medicines were purchased because "women are too lazy to make them up" as in the old days, sounded more personal than socially significant. A change induced by lack of money was that "hot spices

2%

262 expenditures by food groups is shown for the 11 families that
311 participated in the dietary study.

Consumption of canned foods was negligible. Some canned fish and fruits were on sale at stores in the village, in 1952-5%, but were seldom seen in homes.

262 Sweetened condensed milk, which was served in coffee
272 sold at the stores, was occasionally bought for the children.
350 On one occasion, a woman was seen buying milk diluted with
353 hot water as a beverage. Among 526 records of food eaten by school children during 24 hour periods, milk appeared twice only, once with coffee. Dried milk, for infant feeding, was used occasionally. During 1952-54, several instances were noted in which dried milk, mixed with water, was used to feed an infant while the mother was at work in the field or engaged in vending, but we encountered one case only of an infant who was not breast fed. This was an infant whose mother died when he was five days old, and who was reared by grandparents.

262 Relatively few items of food were available at the vil-
443 lage stores. In the inventory of the largest of the three
[27] stores in the village in 1948-49 (Sharp et al., 1953, pp. 211-212) the following items of food were listed: big dried chilies, shrimp paste, onion, garlic, fish sauce (fishsoy), salted fish, fresh chilies, limes, coconut, coconut oil[1], brown (palm)sugar, tea, coffee, condensed milk, orangeade and lemonade (carbonated), sweets, liquor, ingredients (including a lime paste) used together in betel chewing.[2]

New stock received in December by a local vendor who kept a few items for sale at her house included mature green beans, black beans, peanuts, sweet potatoes, salted turnip, pickled garlic and tomato sauce.

272 Larger stores served as informal men's clubs where tea,
443 coffee with condensed milk, and carbonated beverages were
515 sold primarily for consumption on the premises. The proprietor of a new store, built in December 1952, sold no liquor.

272 We have no estimate of the amount of liquor sold in Bang
443 Chan, although for those who drank it, its caloric value might
[27] be of significance.[3] About 9% of the householders interviewed

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[154] 1. Listed by Sharp et al. with non-food items, as much of it was burned in lamps.

2. Included here as food since some calcium may be obtained from this source.

3. One observer estimated the intake of certain village men who drank regularly as at least 2 oz. of rice liquor (28-35% alcohol) per day, representing about 100 calories. The estimated intake of women who drank regularly was about 1 oz. per day.

The observer often had
opportunity to make notes on foods eaten by various family members. Two examples of these are included in Appendix A, p. 97.

Snacks

We have noted that various family members ate the morning meal, in particular, at different times, and that children especially might eat leftover food between meals. Most Bang Chan school children[1] ate snacks, which were usually different from foods eaten at a regular meal. Doubtless most of them were purchased from one of the venders who were to be seen on the school grounds daily. Fruits and "desserts" were most commonly eaten, although a variety of other foods, not a part of the usual Thai meal, were also listed. Sweets were listed about 450 times on the 539 records obtained. Many of them had a base of rice, rice flour or glutinous rice with sugar, and included coconut, banana or other fruit. Some were made with legumes, and a few contained egg. Fried bananas, fried sweet potato slices, bananas or beans cooked in syrup, and bananas cooked in sweetened coconut milk were also listed. A few items such as ices, flavored syrup poured over shaved ice, and candies, had little nutrient value other than caloric content.

A glass of milk, and milk with coffee, were each listed once. These might have been obtained at the store adjoining the school grounds. These instances are worth noting primarily because, although dried and tinned milks were obtainable, milk was seldom given to village children after weaning.

Many children were given a bit of cash each day, and Janlekha (1955) commented that some children who did not have any might barter an egg for snacks. One could tell fairly well from the children's records what the venders offered for sale on a given day. Some influence of season was apparent; thus ices and syrup over shaved ice were eaten more often during the hot dry season, and cooked foods such as fried Chinese noodles appeared primarily in the cool season.

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1. With the cooperation of teachers of the third and fourth grades in the Bang Chan elementary school, records of food eaten during 24-hour periods were obtained from children in these grades at intervals of about one month during the school year. This was a regular activity in the health class. A total of 539 records (from 1 to 8 for each child) were obtained from 75 boys and 72 girls. To facilitate recording, each child was given a sheet of paper, with spaces for his name, the date, and kinds of food other than rice, eaten at the morning, noon and evening meals, and as snacks. These records were collected primarily for information on meal patterns of village families for comparison with the limited sample in the dietary survey, and on seasonal use of various foods.

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[17] takes it down the steps to the fish pond, where she swishes
[252] the basket around to wash the fish, and rinses her hands at the same time.

[253] There are some hazards to the food--chickens trying to get at the edible part of fish while the niece cleans it (she leaves the scales, etc. for them to eat); cat and kittens in the kitchen, having to be driven away from the grated coconut and coconut milk, and getting an occasional unweighed nip. Whether we start to weigh food for the evening meal or a.m. meal, some cooked foods are apt to be used, either left over [262] from a previous meal, or cooked in advance. This a.m., for [264] example, buffalo meat, already cooked (but not weighed before cooking) was used, and (3)khii-(2)leg leaves, which SS weighed last night. These latter were cooked last night, to reduce bitterness, then put into curry today.

Description of Food Preparation Area in a Relatively Poor Household

Wednesday, May 27, 1953

[17] Arrived about 5:45 a.m. While other food was being pre-
[260] pared, the 11-year old son came in with a package of salted white radish and a small milk tin with some coconut oil which had just been bought. This is the house which we found flooded when they sent for us to see the baby last fall. The roof seems to be well thatched. The floor is not wet after last [258] night's downpour. The bed platform, in one corner, is about [258] 8 x 10 feet. The baby's cradle hangs above it. In the oppo-[262] site corner is a shelf where utensils are kept. Some food, [258] in paper bags, is in a basket hung from the roof. Fresh fish [259] is kept in a jar of water until needed. The stove is on a small mound of earth, and further elevated on a small box (just big enough for the stove) filled with earth.

[258] We sit on a mat, spread on the mud floor, with the [255] scales, plastic bowls and waxed paper ready for weighing food. The children lie on a mat nearby. In the house is a fresh mound of earth, a small straw bin with rice, and various pieces of equipment.

One infant had congenital stridor when seen by the physician[1] at 3 months, but the difficulty in breathing had disappeared spontaneously before the baby was next visited at 3 1/2 months of age.

Illness in Early Infancy.

One infant that died on the fifth day was seen when one day old, at which time neither mother nor physician made any adverse comment on its condition. The mother, who was not living with her husband, returned to her work outside the village a week after delivery, and we were unable to talk with her again. So far as we could learn from neighbors, this infant had none of the symptoms concerning which we routinely inquired; namely, convulsions, vomiting, diarrhea, or fever.

A third infant in this series died when he was nearly 2 months old. At 13 days of age, when first seen, this infant had white patches on his tongue which were diagnosed as monilia-sis. When the physician saw the child again at 6 weeks of age he made no adverse comments on its condition. Emotional reaction to the infant's death was such that we were unable to get a clear description of events which led up to it from either parents or neighbors.[2]

Three infants had skin infections when seen within a few days after birth. The physician commented that skin was more susceptible to infection when moist than dry and that the babies had become very warm. The weather was hot, and babies were bundled up and/or were near the fire. He gave directions for keeping the skin clean and dusting with sulfa powder.

No deaths from tetanus occurred in this series, although infantile tetanus was prominent among causes of death of infants under one month old (Hauck, 1956).

Medicine Given to Babies During the First Few Days of Life.

On this point, information was obtained concerning 36 of 40 babies seen before they were 6 months old. Thirty of these were given medicine, sometimes more than one kind. Most of the

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1. A physician was present at all interviews with pregnant women and mothers with very young infants.

2. Although the mother had children by a previous marriage, this was the first child of this union, born after the parents had lived together for 9 years. The mother was 41 years old.

854 278 medications were taken internally, sometimes being painted on the tongue with a feather; but two preparations were applied over the abdomen. Some of the medications were described as "stomach medicine" or "to prevent flatulence." Five different kinds of proprietary medicine were given to 18 infants. In 13 instances, the medicine given was clearly homemade and included as major ingredients items such as flattery fruit, (3)lung (1)yauau; cobra oil; horseshoe crab; and buffalo skin. The nature of the medicine, whether homemade or proprietary, was not clear in 8 instances. Usually medicine for infants was mixed with honey, but in 2 cases, alcoholic liquor was used as it customarily was for the mother.

Six newborn infants in this series were given no medicine. One of these was born at the Health Center. One of the other 2 infants delivered at the Health Center was given homemade medicine later, and no information was obtained on the third. Eye prophylaxis[1] was probably routine at the Health Center, as, in 2 of the 3 cases delivered there, informants knew that drops had been put in the infant's eyes. Traditional midwives, however, did nothing of this sort.

Water for Drinking and Bathing.

853 312 For the newborn infant as well as for the mother, water for drinking and bathing was boiled and was usually used while hot, often being kept warm in a vacuum bottle. Either rain water or canal water might be used depending on what was available at a given season. The water was dribbled from an adult's fingers into the infant's mouth. When the mother was no longer lying by the fire, boiled water was not considered essential for the infant. Nevertheless, over half the infants seen from this time up to 3 months of age were being given boiled water to drink. After 6 months of age this was rare.

851 855 312 In one instance, during the time when a younger sibling received boiled canal water, a 21-month old child was given boiled water also. At the time of a later visit both of these children were drinking unboiled canal water. In another case an orphaned boy's formula was made up with boiled water, although

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[1] 1. Vaccination for smallpox was the only modern preventive treatment which we knew to be used in Bang Chan in the absence of an epidemic. Since a severe epidemic of smallpox with many deaths ten years previously, health officers came to the Bang Chan elementary school once a year to vaccinate children, and other residents of the community could be vaccinated at this time. Four of the young children whom we visited periodically were vaccinated, at 4 months, 8 months, 1 and 2 years of age, respectively.

Exposure of Infants to Sunlight.

• 354 Even during the rainy season sunshine was usually abundant in Bang Chan, but taking a baby out of doors at an early age was generally thought to involve some risk. Many houses had low or wide eaves, and an infant was usually kept in a cradle in the house where sunlight could not penetrate. When old enough to hold up its head while sitting astride an older person's hip, the infant might be carried about the compound by parents or older siblings. As the question was worded ("When did you take the baby outside the house?" or "At what age did you take the baby with you when you went out for pleasure?") the answer did not mean that the baby was taken out with any degree of regularity at the specified age. Most of the babies in this series had been taken outdoors by the time they were 3 months old, but 4 were a year or older when first exposed to sunshine. Nevertheless, the physician found no evidence of [164] rickets among the infants he examined.

One informant, a school teacher's wife, said she thought that taking the baby into the sunshine was not harmful; in fact she believed it made the baby stronger than usual. She thought, however, that too much exposure to sunshine might "bring cold into the baby" and she spoke of the beret as a protection against this.[1] In Bang Chan, an otherwise naked infant might wear a beret when being taken out of doors.

MATERNAL DIET

Diet During Pregnancy.

[94] [242] [125] Of 31 mothers who furnished some information on diet during pregnancy, 17 were pregnant when interviewed, and the remainder had young infants, in most cases under 3 months of age. Eighteen of the interviews were based on schedule 4 (Appendix p. 53) and provided fairly detailed information on the kinds of foods eaten. Other informants gave more general information, such as foods craved or disliked.

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[19] 1. Wellin (1956) mentioned the small woolen cap made or bought by mothers in the Valley of Ica, Peru, for the infant to wear. The cap was put on soon after birth and was worn, off and on, for many months. The function of the cap was to prevent the entrance of cold via the fontanel, which was defined as a particularly vulnerable point of entry. Wellin noted that all infants he saw in maternity wards in the Valley of Ica wore woolen caps.

597 Adoption was fairly common, though not always of lasting
842 satisfaction. On the other hand, in this watery domain, the
855 trouble (lambàk) in raising children, mostly involving
845 ceaseless tending, was such that a childless woman was accorded a little surface envy as one who had missed or avoided a lot of trouble. The attitude towards twins was ambivalent. "Twins are unlucky because there are more mouths to feed, more labour, trouble, and not enough milk. With twins, a poor family will never rise again." "No one will marry a twin for fear of begetting twins." "If twins are of a different sex, one must die." Yet others considered twins lucky "because they could be nursed at the same time, and given the same things."

855 Wealth differences also affected these attitudes,
842 especially if babies came in close succession. Comments
184 heard were: "Why do poor people have more children than the rich?" "Many visitors come bringing gifts to a rich parturient because she is respected. No one likes to talk to a poor person." "Those who have a baby oftener than every 3 years will never be rich. Fortunately, 4 of my 7 children died." The increasing cost of raising children was a concern. In one of the few families that had plans for their children's education, the father underwent a vasectomy after his 3 fine children were born, because he "feared he would not be able to feed them all." His wife, reassured that the operation had not "hurt" her husband, "was glad he had done so."

847 Abortifacients and Contraceptives

[779] Episodes concerning abortifacients were whispered about both Muslims and Buddhists. A Buddhist who induced abortion was seen as impeding an individual's rebirth and disobeying a religious prohibition on taking life, tenets which did not obtain among the Muslims. Abortifacient medicines to be used with abdomen-pressing were quietly sold by Muslims.[6] "Unmarried Muslim girls use them mostly," reported one Buddhist, "and they almost die in the process." A Buddhist curer had similar expensive medicine, but "unlike the Muslims, he will
842 not destroy the baby." Chinese boat-vendors also carried contraceptive medicines (ya) which were secretly discussed by wives. A husband reported his wife as saying, "Old ways

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6. Fraser (193) reports that in the Muslim village of Rusembilan, abortions were openly practiced, (as if part of a Muslim cultural heritage).

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People used their knowledge of food properties to ameliorate their physical condition. During lactation, for instance, women ate vegetables or not "depending on the condition of the baby," for breast milk was very easily affected by adverse properties. In the broader context of general dietary needs, people entertained ideas about the suitability of certain foods to certain ages, sexes, occupations, conditions, and occasions (Hauch, et al: 47-50). Nevertheless, persons often risked an undesirable effect in food for pleasure. The proper banana variety for ritual use was the tiny klûai nâm, yet it was not planted much in Bang Chan because the people "did not like the taste." They substituted the "pleasant-tasting" klûai nâm mâ. Here orthodoxy came off second. The heat of alcoholic drink relished by men and older women often pressed the margin of safe temperature control. The cobra--turtle--or chicken--plus--alcohol feasts exemplified how readily the elders gambled even on the increment of sin from eating meat, or risked an over-heated temper, for the joy of eating such cherished delicacies.

Food dislikes, if temporary, reflected an imbalance of elements; if usual, an individual constitutional set of the person's elements. To eat disliked food was therefore positively harmful. To urge someone to eat disliked food was wrong.[16]

Illness

All illness, anxiety, and soul loss was caused by intrusions from outside the body. The intrusion might be from a supernatural source (rítthí:powerful) or natural (tâw thammadaa) (Textor:10) but in either case the result was the same: disruption of the elements. Anxiety, whether caused by a social situation such as fear of frustration, by a broken bone or by a fever, also was a disruption of balance. An attack by the supernatural disease missile, "lûuk"[17] gave rise to the classic symptoms of wind-excess: "a man cried all the time and had flatulency." Elements were also disorganized by spirit attack. The victim suffered hysteria, paralysis, flatulence, convulsion,

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16. Phillips (p. 61) reported that parents did not give their child a disliked medicine because "it offends him...; It is better not to give it to him than hurt his feelings."

17. This small shin missile invaded the body and then expanded to the size of a buffalo. Intentional attack (sorcery) might kill; accidental, merely poison (cf. Textor:110-177). Suspected thun was one of the few reasons why a family would authorize or grave a violation of the body of a deceased member as an autopsy.

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An old woman summed up significantly 2 attitudes saying, "In the old days people made more merit and so lived longer, but because we had no hospitals, the children died younger." The relation of good health and longevity to proper religious and moral behavior was fundamental in Bang Chan. If merit did not suffice, medical attention, traditional or modern, could not prolong life. Children, however, were tender (อ่อน) and easily prey to sickness.
• 855
Traditional care could help them, but being delicate and tender like city people, children could also be helped by modern hospital care.
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Between the 2 systems people sensed little conflict, for each patient made a preliminary diagnosis of his symptoms and sought the type of assistance his diagnosis and convenience indicated. [illegible] with some knowledge of both systems might offer their patients a choice of remedy. With the right diagnosis, magic, and medicines, a quick cure was expected. If not forth-coming, people were disappointed and moved to another specialist for his help. Modern medicine merely took its place as one more recourse.
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The basic handicap of modern medicine was that it had no magical resources or holy water. "Its effectiveness is limited to the properties of the ingredients." Old medicine on the other hand had, in addition to these properties, "the strength of the [illegible]'s incantation plus the power of every person who learned and used that incantation, back to the time of its discovery, centuries ago." Thus where the medical schemes offered the same specialty, as in fevers, bone-setting, or obstetrics, the old appeared to offer more resources.

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Besides its deficiencies in magic and strength-making attributes, modern medical care had other drawbacks. First, it was not accessible. A trip to Bangkok for medical purposes involved far more time than a day. Minburi's Health Center was a feasible trip, even for a woman in labor (stays ranged from 6 to 24 hours). Home arrangements for tending children, feeding buffalo, and other chores were less demanding. Bang Chan's eagerness for local modern care was shown when a Bangkok physician visited Bang Chan for a few times as part of a nutrition study. He was besieged with private requests for medical advice. Secondly, modern medical care was expensive. In Bangkok, after the expense of getting there, taxis, food, and housing costs for accompanying relatives, hospital, and doctor's fees sometimes meant losing the family gold and even land. Minburi's costs were closer geared to farm income, but medicines appeared costly. "Modern drugs taste and act better, but the poor have to use the old." Third,

What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the families, living in tiny separate cottages.[1] Usually with inadequate or no land, they earned an irregular income by hiring themselves out for farm or other work. At the other extreme, in a hamlet-like cluster of dwellings, lived a closely affiliated group of kin. A senior couple more or less headed the married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying home from school to do so. Where the adult cooperative group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

Plowing could be done by a man and wife, but for both transplanting and harvesting which had to be done within a few days, large groups were necessary. Two patterns of auxiliary group labor prevailed: reciprocal cooperative work, and hiring of labor.

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1. Janlekha, 1955, categorized families as 9% "one-person," 59% nuclear, 8% limited extended (including one or more parents of a spouse), 27% extended (including dependent married couples or other collateral relatives), and the temple residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

expenditures by food groups is shown for the 11 families that participated in the dietary study.

Consumption of canned foods was negligible. Some canned fish and fruits were on sale at stores in the village, in 1952-53, but were seldom seen in homes.

Sweetened condensed milk, which was served in coffee sold at the stores, was occasionally bought for the children. On one occasion, a woman was seen buying milk diluted with hot water as a beverage. Among 526 records of food eaten by school children during 24 hour periods, milk appeared twice only, once with coffee. Dried milk, for infant feeding, was used occasionally. During 1952-53, several instances were noted in which dried milk, mixed with water, was used to feed an infant while the mother was at work in the field or engaged in vending, but we encountered one case only of an infant who was not breast fed. This was an infant whose mother died when he was five days old, and who was reared by grandparents.

Relatively few items of food were available at the village stores. In the inventory of the largest of the three stores in the village in 1948-49 (Sharp et al., 1953, pp. 211-212) the following items of food were listed: big dried chilies, shrimp paste, onion, garlic, fish sauce (fishsoy), salted fish, fresh chilies, limes, coconut, coconut oil[1], brown (palm) sugar, tea, coffee, condensed milk, orangeade and lemonade (carbonated), sweets, liquor, ingredients (including a lime paste) used together in betel chewing.[2]

New stock received in December by a local vender who kept a few items for sale at her house included mature green beans, black beans, peanuts, sweet potatoes, salted turnip, pickled garlic and tomato sauce.

Larger stores served as informal men's clubs where tea, coffee with condensed milk, and carbonated beverages were sold primarily for consumption on the premises. The proprietor of a new store, built in December 1952, sold no liquor.

We have no estimate of the amount of liquor sold in Bang Chan, although for those who drank it, its caloric value might be of significance.[3] About 9% of the householders interviewed

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1. Listed by Sharp et al. with non-food items, as much of it was burned in lamps.

2. Included here as food since some calcium may be obtained from this source.

3. One observer estimated the intake of certain village men who drank regularly as at least 2 oz. of rice liquor (20-35% alcohol) per day, representing about 100 calories. The estimated intake of women who drank regularly was about 1 oz. per day.

listed on 10 or more of the 24-hour dietary records obtained. For items which were major ingredients, the number of records on which the item appeared, is given.[1] Thus (1)plaa (1)thuu, which is bought by residents of Bang Chan during the busy work seasons, was used more often than any other single variety of fish named. Of the varieties caught locally, climbing perch, serpentheads, and silurus were most commonly used. Fermented fish, not included in the calendar, appeared on 53 records, and fish with kind not specified, on 180. Eggs were used more often than any animal food other than fish. Among green vegetables, swamp cabbage and (2)phag (2)ka-(2)cheed were commonly used. Bamboo shoots and lotus stalks were prominent among the non-leafy vegetables. Bananas which are grown in every garden and are available all year round were much the most common fruit, although other seasonal fruits were eaten more often in 6 of the 9 months in which school children submitted records.

Some idea may be obtained of peak seasons for use of various common foods by noting the months designed by x. Thus in January and May, serpentheads were listed on about 1/3 of the records, and were frequently served at more than one meal. Sweet potato, usually fried and eaten as a snack, was listed on 35 of 52 records obtained from school children in September. Flowers of the West India pea tree were listed on 10 of 55 records in October, and 12 of 88 in November, with occasional mention on records obtained in 4 other months.

Fruits were eaten much less often than one might expect in a tropical area where many varieties are available and fruit can be grown the year round. They were most often eaten by children as snacks, although pineapple and papaya were usually, and banana occasionally cooked in "with-rice" dishes such as curry. In September, fruit was included in the diets of less than 1/3 of the children. An average of more than one serving of fruit per child per day was recorded in 5 months only, May, June, October, November and February. In May, when (4)ma-(1)faj or rambai was in season 46 of 76 children reported having eaten it. Pineapple, listed by 35 of 61 children in June, was most often served in curry at one or more of the family meals. In October, oranges were eaten by 30 of 55 children who submitted records. Bananas (mostly of the (4)nam-(4)waa variety) topped the list in November and February.

Items mentioned on fewer than 10 records, and hence arbitrarily omitted from the chart, are worth noting as they

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1. No figures are given for sweet basil, garlic, onions, chili or limes, which were so often used in small amounts as seasoning that the count obtained would give no clear idea of the extent of their use. Some common spice plants were not mentioned on the records.

The observer often had
126 opportunity to make notes on foods eaten by various family
262 members. Two examples of these are included in Appendix A, p. 97.

Snacks

262 We have noted that various family members ate the morn-
264 ing meal, in particular, at different times, and that children
955 especially might eat leftover food between meals. Most Bang
Chan school children[1] ate snacks, which were usually different
from foods eaten at a regular meal. Doubtless most of these were purchased from one of the venders who were to be seen on the school grounds daily. Fruits and "desserts" were most commonly eaten, although a variety of other foods, not a part of the usual Thai meal, were also listed. Sweets were listed about 450 times on the 539 records obtained. Many of them had a base of rice, rice flour or glutinous rice with sugar, and included coconut, banana or other fruit. Some were made with legumes, and a few contained egg. Fried bananas, fried sweet potato slices, bananas or beans cooked in syrup, and bananas cooked in sweetened coconut milk were also listed. A few items such as ices, flavored syrup poured over shaved ice, and candies, had little nutrient value other than calorie content.

272 A glass of milk, and milk with coffee, were each listed
once. These might have been obtained at the store adjoining the school grounds. These instances are worth noting primarily because, although dried and tinned milks were obtainable, milk was seldom given to village children after weaning.

262 Many children were given a bit of cash each day, and
437 Janlekha (1955) commented that some children who did not have
855 any might barter an egg for snacks. One could tell fairly
[261] well from the children's records what the venders offered for sale on a given day. Some influence of season was apparent; thus ices and syrup over shaved ice were eaten more often during the hot dry season, and cooked foods such as fried Chinese noodles appeared primarily in the cool season.

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[120] 1. With the cooperation of teachers of the third and fourth grades in the Bang Chan elementary school, records of food eaten during 24-hour periods were obtained from children in these grades at intervals of about one month during the school year. This was a regular activity in the health class. A total of 539 records (from 1 to 8 for each child) were obtained from 75 boys and 72 girls. To facilitate recording, each child was given a sheet of paper, with spaces for his name, the date, and kinds of food other than rice, eaten at the morning, noon and evening meals, and as snacks. These records were collected primarily for information on meal patterns of village families for comparison with the limited sample in the dietary survey, and on seasonal use of various foods.

262 Some snacks, i.e. seasonal fruits, may have been picked from the home garden, and items such as lotus seeds were probably gathered wherever the children found them.

Comments on Foods Eaten by School Children

264 In addition to the high percentage of school children 266 who ate snacks, a conspicuous observation was that many ate 268 no regular lunch (Table 3). We did not ask the children to record when they ate snacks, but only what they ate. The number of snacks recorded by individual children did not, however, appear to be related to whether or not they had eaten lunch. For example, among the 76 children who provided 24-hour food records during May, 1953, the average number of snacks recorded by the 39 children who ate a regular lunch and the 37 who did not, was about the same, i.e. a little over three per child.

Table 3. Number and Percentage of Children Who Ate Snacks, and Who Missed Lunch, Arranged by Months in which Records were Obtained

Month[1]		No. of Records	Children who ate snacks		Children who missed lunch	
			No.	Percentage	No.	Percentage
May	1953	76	73	96	37	49
June	1954	61	56	92	32	53
July	1953	79	77	98	53	67
Sept.	1953	32	49	94	36	69
Oct.	1953	55	50	91	22	40
Nov.	1953	88	81	92	57	65
Dec.	1952	18	14	78	10	56
Jan.	1954	69	64	93	41	59
Feb.	1953	41	39	95	31	81
	Total	539	503	93%	321	60%

1. Note that although the figures are arranged by month, the records were obtained over a period extending from December 1952 through June 1954.

Most of the children who ate lunch regularly brought rice and some of the "with-rice" dishes prepared for a family meal in a lunch pail. Menus for breakfast and noon meals were often identical. Children who lived at a distance may have found it harder to carry lunch, especially when they had to walk to school, but the month by month record of the percentage of children who missed lunch (Table 3) does not indicate any clear seasonal trend. Even children who lived nearby might neither bring lunch nor return home during the noon recess. We were at the home of a school teacher, a short distance on foot from the school, when his two children returned in the afternoon. The mother said that they usually waited until after school to eat, but were having an snack on that day because for the first time, they had carried lunch to school.

Thorangkul (1957) examined all of the dietary records to note the frequency with which the following food groups occurred: protein-rich food, carbohydrate-rich food other than plain boiled rice, vegetables and fruits. She considered the records of each child as a unit; thus if a boy for whom 5 daily records were available, had recorded protein-rich food such as fish, eggs, or beans 16 times, he was regarded as having more than 3 "servings"[1] of such food per day. The frequency with which various food items occurred in the daily diets of these children is shown in Table 4.

Considering the day's record as a whole, some protein-rich food, usually fish, was included in the records of 97% of the children. Such protein-rich food appeared two or more times per day in the records of over 80% of the boys and about 90% of the girls. In contrast, no fruit was mentioned in the records of about 10% of the children, although fruit was one of the commonest snacks. Vegetables were not mentioned in the records of 10% of the boys and 17 of the girls. Only about one-fourth of the vegetables recorded were green or yellow.

For 75 children for whom we had 4 or more records, Thorangkul (1957), to obtain a rough estimate of the adequacy of the children's diets, grouped the records into three categories, based on the number of times protein-rich foods, vegetables and fruits appeared. On the average, children whose diets were placed in Class I had at least 3 "servings" of protein-rich food, 3 "servings" of vegetables and 2 of fruits. Diets in Class II included some from each of the food groups each day, but the items were recorded less frequently than in diets in Class I. Diets in Class III did not include foods from each of the food groups emphasized, each day. On this

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1. The term serving is used here to designate each time an item appeared in the daily food record. Thai do not have "servings" as the term is used in Western countries.

242 people did not want to spend much on a baby, therefore they
243 said that if a child ate too much "with-rice" he would be pot-bellied but thin in the upper part of the body, and that eating eggs would cause dental caries. This grandfather said he believed the truth to be just the opposite, but that goods things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice," one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

242 Secondly, Chutima suggests that particular foods were
243 associated with, or suitable for, particular age levels, and a given sex. Data obtained in Bang Chan indicate that certain foods were associated with conditions such as pregnancy, lactation, and the puerperium, with occupation, and even
833 socio-economic levels. For infants, breast milk was considered most suitable. The newborn infant was not usually put to the mother's breast for about 3 days after birth, and if a relative or neighbor did not nurse the infant, the small banana called (3)kluaj (4)nam-(4)wa (see p. 44), raw or baked, was crushed and fed to him before his mother's milk was available. This banana and rice, as (3)khaaw (3)tom and (3)khaaw (2)pia (two watery preparations), sometimes crushed with (3)kluaj (4)nam-(4)wa, were always the first solid foods introduced while the infant was breast fed. No other foods were introduced early. Some infants received fish and egg by 6 months of age, and a majority ate these foods by the time they were a year old. Some two year olds had not yet been given vegetables, and very few infants ate them before they were one year old.

• 835 Giving of "holy food"[1] to children suggests concern for
(7) strengthening children through dietary as well as other ritual means.

242 At the other end of life, as old age approached, the
243 diet was supposed to change, ideally to a completely vegetarian one. Since one was soon to face death, one gave up eating meat and even fish, if possible, so as to avoid taking life. It was considered pitiful or wrong for an old person to fish. Being able to go without food was associated with merit. Those who stayed overnight at the temple on the Buddhist holy day went without solid food from before noon until the next morning as the priests did. One elderly woman remarked that when she stayed overnight at the temple she did not feel hungry, and did not eat anything at night, but other women, feeling hungry, drank coffee or milk at night. She

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1. See p. 50.

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

A discussion of food habits in Bang Chan would be incomplete without some description of ceremonies ((l)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and at festivities. Thus, there was reason to make a (l)ngaan as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

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1. Significantly the same Thai word is used for work and for ceremony.

2. Topknots, formerly worn by all Thai children, used to be cut ritually at the time of puberty. In Bang Chan, the growing of a topknot had become primarily an attempt to improve a child's health. Few school age children wore topknots. They were usually cut earlier than puberty.

3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

Few items used less frequently, the figures are correspondingly less than the usual amount eaten. Thus, sweet potato, which is represented as 18 grams per day per person in Group A, actually appeared on 3 records only. One family of 6 persons ate 1200 grams of sweet potato at one meal and a substantial amount later the same day. Most items appear on the lists for both groups, but sweet potato, sweet basil and bananas were included on the list for Group A only, and glutinous rice which is used as a sweet in this area, appears on the list for Group B only. Note that a few common foods account for most of the nutrients in the diets of both groups. These common foods account for only about 80% of the calcium and vitamin A value and slightly less of the ascorbic acid in the diets of Group A. The list for Group B accounts for about 70% of the calcium and 60% of the ascorbic acid in the diets of this group. The variety of green leaves used once or twice only on survey days by Group B, and the number of different seasonal fruits used by both groups in small amounts as snacks, probably account for this.

Contribution of Snacks to the Nutrient Content of Diets.- On the average, 4 out of 5 children had some snack per day, whereas only one adult in 6 did so. The following items appeared most commonly: glutinous kinds of fruit, 40 times (orange 7, banana 6, pineapple, watermelon and mango each 5 times, guava, jujube and Manila tamarind each 2 times, olives, rambutan, rambai, star gooseberry, (2)ta-(1)kao and Thai nutmeg each once,) coconut and bread each 13 times, glutinous rice 8, mung bean 7, truffles 6, products made of rice flour 6 times, and a variety of other items including rice noodles, sweet potato, taro, bean sprouts, lotus stalks, lotus seeds, popcorn, products made of cassava flour, sugar cane, pork and milk from 1 to 4 times each. Salt, and/or palm sugar were eaten with a number of the snacks. Although they contributed only about 2% of the total calories, and from 1 to 3% of most nutrients, snacks contributed 16% of the total ascorbic acid for Group A and 11% for Group B.

Seasonal Variation in Food Preparation, Meal Patterns, Food [illegible] and Current Value of Food Eaten

In Table 14, a summary including the number of meals prepared, time spent in meal preparation, number of "with-rice" dishes, and cash expenditures for food is given by rounds, for families in each group.

Number of Meals Prepared. - Food was cooked twice on each survey day in 3 of 6 households in Group A and 3 of 5 households in Group B. Heavy farm work or vending which kept the mother away from the house sometimes accounted for once-a-day food preparation. One housewife who took food to market in Bangkok, cooked food twice a day only during the period shortly before the birth of a child, when she was not vending.

[Text continues on page 78 --- Analyst]

[illegible] takes it down the steps to the fish pond, where she swishes the basket around to wash the fish, and rinses her hands at the same time.

There are some hazards to the food---chickens trying to get at the edible part of fish while the niece cleans it (she leaves the scales, etc. for them to eat); cat and kittens in the kitchen, having to be driven away from the grated coconut and coconut milk, and getting an occasional unweighed nip. Whether we start to weigh food for the evening meal or a.m. meal, some cooked foods are apt to be used, either left over from a previous meal, or cooked in advance. This a.m., for example, buffalo meat, already cooked (but not weighed before cooking) was used, and (3)chili-(2)leg leaves, which HH weighed last night. These latter were cooked last night, to reduce bitterness, then put into curry today.

Description of Food Preparation Area in a [illegible] Relatively Poor Household

Wednesday, May 27, 1953

Arrived about [illegible] a.m. While other food was being prepared, the 11-year-old son came in with a package of salted white radish and a small milk tin with some coconut oil which had just been bought. This is the house which we found flooded when they sent for us to see the baby last fall. The roof seems to be well thatched. The floor is not wet after last night's downpour. The bed platform, in one corner, is about 8 x 10 feet. The baby's cradle hangs above it. In the opposite corner is a shelf where utensils are kept. Some food, in paper bags, is in a basket hung from the roof. Fresh fish is kept in a jar of water until needed. The stove is on a small mound of earth, and further elevated on a small box (just big enough for the stove) filled with earth.

We sit on a mat, spread on the mud floor, with the scales, plastic bowls and waxed paper ready for weighing food. The children lie on a mat nearby. In the house is a fresh mound of earth, a small straw bin with rice, and various pieces of equipment.

Notes on Meal Service

In a Relatively Prosperous Household

Friday, May 22, 1953

Before breakfast is served, the six-year old girl comes with a piece of jack fruit. SS weighs it and tells her to bring back what she does not eat. Later she comes with hands full of stones (14 of them). She has eaten this much as a "snack" before the regular meal. The grandmother finishes the piece (7 stones) and gives the rind to SS to weigh.

At breakfast the family sits in a circle on the kitchen floor. Each person except the baby has his own bowl of rice before him. In the center of the circle, within reach of all, are four small dishes of "with-rice" which has been prepared for breakfast: sour curry of buffalo meat, curry of (3)khii-(2)leg leaves, bean sprouts and one small fried fish. The mother takes a very small bit of fish on a spoon with rice, and feeds baby. During breakfast baby has 6 bites of rice with fish, nine small spoonfuls of rice with sour curry. The mother herself eats one bite of fish. She takes four spoonfuls of sour curry on plate with rice. This is shared with baby. Mother and baby eat mainly rice, fish and sour curry of buffalo meat, whereas grandmother and the six-year old girl have curry of (3)khii-(2)leg leaves and bean sprouts with their rice.

In a Relatively Poor Household

Wednesday, May 27, 1953

While the mother finishes the meal preparation, the seven-year old girl feeds the baby, first rice with some chopped egg, then rice with the "water" from the egg. The mother remarks that she cannot cook unless someone looks after the baby.

Technique of eating -- A tray with the "with-rice" is set out, also a bowl with water, for rinsing the hand, and a basin or bowl with drinking water. There are spoons in the "with-rice," but these seem to be used for taking some of the juice, which may be eaten directly or put on the individual's bowl of rice. Solid pieces are taken from the serving dish by hand, and mixed with some of the rice, which is then picked up in the right hand. Occasionally the person eating will rinse his hand with water. When finished, each person rinses his bowl (using either water from the bowl nearby, or from the general supply -- in this case the canal). Dishes are turned upside down on the platform near the stove, to dry.

2: Hauck et al. D.E-9 (1992-1994) 1994 AO7 Central Thai AO7 Baeg Chan

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Examples of Diet Records Submitted by School Children

Date	Breakfast	Lunch	Dinner	Snack
	Diet Record[1] of 10-year Old Girl: Diet Class I[2]			
May 19, '53	Sour curry of (2)phag (2)ka-(2)cheed Curry of swamp cabbage Boiled vegetables Fried mushrooms Roasted pilot fish Chili sauce		Cooked fish (sour) (2)phag (2)ka-(2)cheed Chili sauce	Star gooseberry Jack fruit seeds Fruit of egg tree Sweet made of flour, sugar, coconut milk Sweet made of flour, sugar, sugar palm
July 7, '53	Curry of (2)phag (2)ka-(2)cheed Boiled swamp cabbage	Boiled fish Boiled fermented fish	Boiled egg Roasted fish	(1)lum-(1)laj (Fruit of Euphoria longana) Jack fruit seeds Sweet made of flour and sugar
Sept. 13, '53	Cooked climbing perch and other fish (sour)	Fried towel gourd with pork Fried serpent-head	Boiled climbing perch and silurus	Sweet made of flour, sugar and coconut milk Hog plum
Oct. 29, '53	Sour curry of natural flowers with (2)phag (2)ka-(2)cheed Fried pork with swamp cabbage	Hot curry of serpenthead (2)phag (2)ka-(2)cheed Chili sauce	Sour curry of lotus stalks	Jack fruit seeds Fried banana Jambean

Examples of Diet Records Submitted by School Children (cont.)

Date	Breakfast	Lunch	Dinner	Snack
Nov. 25, '53	Curry of lotus stalks Fried salted fish (2)phag (2)ka-(2)cheed Chili sauce	Curry of swamp cabbage Fried salted fish	Roasted salted fish Curry of (2)phag (2)ka-(2)cheed	Orange Fried banana Sweet made of flour, sugar, coconut and corn Sweet made of flour, sugar, egg and coconut
Jan. 30, '54	Sour curry of (2)phag (2)ka-(2)cheed with natural flowers	Sour curry of green papaya	Fried sweetened fish	Jack fruit seeds Rice flour chips Sweet made of flour, sugar, coconut, corn
June 4, '54	Fried fermented fish Curry of egg plant Cooked salted pork	Fried egg Salted crabs	Curry of pineapple Curry of chicken Curry of bamboo shoots	Star gooseberry Ice Sweet made of flour, sugar and coconut milk Sweet made of flour, sugar and coconut

Diet Record of 12-year Old Girl: Diet Class III

Feb. 14, '53	Hot curry of fish Fried dried meat with sugar		Sour curry of swamp cabbage	Sweet made of rice, banana and coconut milk
July 7, '53	Curry of chicken		Curry of white gourd	Longan

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Examples of Diet Records Submitted by School Children (cont.)

Date	Breakfast	Lunch	Dinner	Snack
Sept. 13, '53	Curry of (3)khli-(2)leg		Curry of chicken	Fried sweet potato Star gooseberry Hog plum
Oct. -- '53	Sour curry of green papaya Fried swamp cabbage		Hot curry of fish	Guava Sweet made of dried beans and sugar
Nov. 28, '53	Fried Chinese noodles Boiled vegetables Chili sauce		Fried fish Boiled vegetables Chili sauce	Fried banana Fried Chinese noodles Sweet made of rice, banana and coconut milk
Jan. 30, '54	Beef curry		Sour curry of swamp cabbage	Chinese cake Jujube Sweet made of flour, sugar, coconut and corn Sweet made of dried beans and sugar

1. "With-rice" dishes only are listed for breakfast, lunch and dinner.

2. Adapted from Thoranghul (1957).

D.E-6 (1954-1956) 1958 AOT Central Thai AOT Bang Chan

284 278 medications were taken internally, sometimes being painted on the tongue with a feather; but two preparations were applied over the abdomen. Some of the medications were described as "stomach medicine" or "to prevent flatulence." Five different kinds of proprietary medicine were given to 18 infants. In 13 instances, the medicine given was clearly homemade and included as major ingredients items such as flattery fruit, (3)luag (1)yanau; cobra oil; horseshoe crab; and buffalo skin. The nature of the medicine, whether homemade or proprietary, was not clear in 8 instances. Usually medicine for infants was mixed with honey, but in 2 cases, alcoholic liquor was used as it customarily was for the mother.

Six newborn infants in this series were given no medicine. One of these was born at the Health Center. One of the other 3 infants delivered at the Health Center was given homemade medicine later, and no information was obtained on the third. Eye prophylaxis[1] was probably routine at the Health Center, as, in 2 of the 3 cases delivered there, informants knew that drops had been put in the infant's eyes. Traditional midwives, however, did nothing of this sort.

Water for Drinking and Bathing.

853 312 For the newborn infant as well as for the mother, water for drinking and bathing was boiled and was usually used while hot, often being kept warm in a vacuum bottle. Either rain water or canal water might be used depending on what was available at a given season. The water was dribbled from an adult's fingers into the infant's mouth. When the mother was no longer lying by the fire, boiled water was not considered essential for the infant. Nevertheless, over half the infants seen from this time up to 3 months of age were being given boiled water to drink. After 6 months of age this was rare.

851 • 855 312 In one instance, during the time when a younger sibling received boiled canal water, a 21-month old child was given boiled water also. At the time of a later visit both of these children were drinking unboiled canal water. In another case an orphaned boy's formula was made up with boiled water, although

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744 754 781 1. Vaccination for smallpox was the only modern preventive treatment which we knew to be used in Bang Chan in the absence of an epidemic. Since a severe epidemic of smallpox with many deaths ten years previously, health officers came to the Bang Chan elementary school once a year to vaccinate children, and other residents of the community could be vaccinated at this time. Four of the young children whom we visited periodically were vaccinated, at 4 months, 8 months, 1 and 2 years of age, respectively.

he was given untreated canal water to drink. One young mother gave boiled water to her 18-month old infant for a few days when the baby had diarrhea though no questioning she said no one had told her to do this. (The fact that boiled water was used for newborn infants and their mothers may have suggested the procedure to her.) Among the infants who received boiled water for a longer time than most, 6 were children of school teachers.

Early Feeding Practices.

Breast feeding was usual in Bang Chan, but most babies were not put to the breast until the second or third day or even later (Table 1).

Table 1. INITIATION OF BREAST FEEDING BY THE MOTHERS FOR 36 INFANTS IN BANG CHAN.

Post natal day	Number of infants
1	1
2	11
3	22
4	2
5	0

As previously noted, no association was apparently made between putting the baby to the breast and establishing the milk flow.

In this series, 9 infants were nursed by a relative or neighbor one or more times before the mother's milk supply was established. Five of these infants had breast milk on the first day, 2 on the second, and 2 on the third. Choice of a woman who was a good milk producer to give the infant its first milk feeding was considered auspicious. The procedure was primarily of ritual significance.

Three infants were given cow's milk (diluted, condensed, or dried milk) before being put to the breast.

About half the infants received no food other than boiled water and milk while the mother lay by the fire. Honey was given with boiled water to about one-third of the infants, and about one-fourth had crushed banana, sometimes in addition to honey. When given, these foods were started before breast feeding was established. Either raw or baked, a small, rather flavorless variety of banana, (3)kluaj (4)nam-(4)wa, was used. We observed a grandmother dipping her fingers into a bowl of water, then crushing a bit of banana between them and poking this into the infant's mouth. The infant was given as much as he would take, usually about half of a banana at one time. Banana might be fed from one to three times per day.

Table 3. Food Intake Other Than Milk of 22 Infants From 6 to 8 1/2 months Old.[1]

No. of Infants	No. of Food Items	Number of Infants Fed Food Items Other Than Milk: Rice	Bananas	Other Fruit	Fish	Egg, Meat or Poultry	(2)Vegetables (3)Vegetables
1	0						
10	1	9					1
10	2	10	10				
4	3	4	4			3	1
3	4	3	3		3	3	2
1	5	1	1	1	1		1
3	6	3	3	3	3	3	3
Total	[illegible]	29	9		3	4	2
22	F	1	6	1	1	3	3
	O		3	3	3	1	3

1. The nearest half month marked the dividing point between age groups. Thus an infant 6 months 20 days old would be considered as 6 1/2 months old and one 6 months 23 days old would be considered as 6 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

[264] 12 and 14 1/2 months of age were given egg daily, and almost all had egg either frequently or occasionally. About half the babies of this age were fed poultry or meat occasionally, but neither of these items was common to the family diets observed in Bang Chan (Hauck et al., 1958; Hauck and Hanks, 1959). At this age only 1 of 41 babies was given green vegetables daily, and less than one-third of them had vegetables of any kind even occasionally (Table 4).

264 262 As the children grew older they had vegetables more frequently, so that between 18 and 20 1/2 months of age almost half of the children ate vegetables at least occasionally (Tables 5 - 8). A few two-year old children had never had green vegetables; for many, even at this age or older, vegetables of any kind were occasional rather than frequent items of diet.

[274] Of the 23 children between 21 and 24 1/2 months of age for whom we had records, 5 were still being breast fed, and one (the orphaned child) continued to receive imported cow's milk diluted with boiled water. All drank untreated canal or rain water according to the available supply. All were fed rice cooked in the usual manner, but one still had soupy undrained rice at times.

[See p. 20 - Hauck et al.] [See p. 21-22 - Hauck et al.]

Table 5. Food Intake Other Than Rice of 11 Weanling Babies From 15 to 17 1/2 months Old.[1]

No. of Infants	No. of Food Items	Number of Infants Fed Food Items Other Than Rice				
		Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Cheese (3)Cream
1	3	1	1			
6	4	6	6	6		6
4	5	4	4	4	4	4
Total	D[2]	10	3	3	1	3
11	F		3	7		2
	O	1	4		3	5

1. The nearest half month marked the dividing point between age groups. Thus an infant 17 months 20 days old would be considered as 17 1/2 months old and one 17 months 23 days old would be considered as 18 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

Table 6. Food Intake Other Than Milk and Rice of 30 Babies 15 to 17 1/2 months Old.[1]

No. of Infants	No. of Food Items	Number of Infants Fed Food Items Other Than Milk and Rice				
		Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Cheese (3)Cream
1	1	1				
1	2	1				1
3	3	3	2	1		3
12	4	12	12	12	1	11
13	5	13	13	13	13	13
Total	D[2]	33	2	2	1	10
30	F	4	11	16	2	9
	O	3	15	8	11	8

1. See Footnote 1, Table 5.

2. See Footnote 2, Table 5.

Table 7. Food Intake Other Than Rice of 14 Weanling Babies From 18 to 20 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Rice			
		Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)pom
2	3	2		2		2
4	4	4	3	4	1	4
8	5	8	8	8	8	8
Total 14	D[2]	11	2	1	2	8
	F	3	6	8	1	5
	O		3	5	6	1

1. The nearest half month marked the dividing point between age groups. Thus an infant 20 months 20 days old would be considered as 20 1/2 months old and one 20 months 23 days old would be considered as 21 months old.

2. D = daily, F = frequently (at least once a week), and O = occasionally (at longer intervals).

Table 8. Food Intake Other Than Milk and Rice of 18 Babies From 18 to 20 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk and Rice			
		Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)pom
3	3	3	2	1		3
9	4	9	9	9		9
6	5	6	6	6	6	6
Total 18	D[2]	14	1	3		7
	F	3	11	5		7
	O	1	5	8	6	4

1. See Footnote 1, Table 7.

2. See Footnote 2, Table 7.

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Table 9. Food Intake Other Than Rice of 17 Weanling Babies From 21 to 24 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
6	4		6	6	6	1	5
11	5		11	11	11	11	11
Total		D[2]	16	1	2	3	7
17		F	1	8	6	1	3
		O		8	9	8	6

1. The nearest half month marked the dividing point between age groups. Thus an infant 24 months 20 days old would be considered as 24 1/2 months old and one 24 months 23 days old would be considered as 25 months old.

2. D - daily, F - frequently (at least once a week), and O - occasionally (at longer intervals).

Table 10. Food Intake Other Than Milk and Rice of 6 Babies From 21 to 24 1/2 months Old.[1]

No. of Infants	No. of Food Items		Number of Infants Fed Food Items Other Than Milk and Rice				
			Fish	Egg, Meat or Poultry	Fruit	Vegetable	(2)Kha-(5)nom
6	6		6	6	6	6	6
Total		D[2]	5				3
6		F	1	4	3		2
		O		2	3	6	1

1. See Footnote 1, Table 9.

2. See Footnote 2, Table 9.

Fish, fresh, dried, or salted, depending on the family fare, was a regular part of their diet (Tables 9, 10). One had egg daily, and 10, frequently; but for more than half of them egg, as well as meat or poultry, was an occasional item of diet. All were fed (2)kha-(5)pom, and almost half had something in this class of foods daily. Only three had green or other vegetables daily and 5 never ate them. Bananas of the (4)nam-(4)waa variety were eaten by all, but only one had banana daily while more than half had them only occasionally. Four were sometimes given bananas other than (4)nam-(4)waa, the variety which was considered safe for infants and invalids. Two had never had other fruit, but most children of this age were occasionally given other seasonal fruit. The variety of foods other than milk given to these children did not appear to depend on whether or not they had been weaned (Tables 5 - 10).

Weaning.

Some of the children in this series had been weaned before our observations were started, and 19 had not been weaned when last visited. For 30 children the period of observation included weaning (Table 11), and in most cases enough records were obtained so that the effect, if any, of weaning on the weight curve could be ascertained.

Table 11. Age at Weaning for 37 Babies and Number for Whom Weight Records Before and After Weaning were Obtained, Bang Chan, 1952-54.

Approximate Age At Weaning	Number of Babies	
	Total	Weighed Before And After Weaning
(months)[1]		
5	1	0
9	1	1
11	1	1
12	8	4
13 - 14	5	5
16 - 17	2	2
18 - 19	8	7
20 - 22	7	6
25	2	2
28	1	1
36	1	1
Total	37	30

1. Because of the method of choosing children for study, the majority of those observed were under two years of age. We have no basis for judging what proportion of children in Bang Chan were breast fed beyond two years of age.

862 In Bang Chan infants less than a year old were seldom weaned. Of 3 such cases we encountered, the mother of one was ill with tuberculosis, and the other two mothers were again pregnant. Common answers to the question, "When should a baby be weaned?", were: "When it is a year old", or "At 1 1/2 years", or "When the mother is pregnant again." Mothers commonly nursed one infant until 3 to 7 months pregnant with the next. More than half of the children who were nursed longer than 18 months had no younger sibling during the period of this study.

Of 32 mothers who described the weaning procedure, 13 painted the nipples with boraphed or other bitter substance (lime or aloe), but an equal number said they did nothing. Six mothers gave other food instead of breast milk. In 4 cases cow's milk[1] was given; in one, bananas and (2)kha-(5)nom; and in one instance the food substitute was not specified.

Weaning in Bang Chan usually meant the end of milk feeding, but 5 babies in this series were given cow's milk feedings after weaning. These included the infant who was weaned at 5 months because of the mother's illness and two others who were weaned because of a pregnancy. The child who had been given cow's milk when the mother was away vending continued to have cow's milk at night, after weaning.

Beliefs About Foods for Babies.

853 Foods "Good For" Or "Not Good For" Babies. - In addition to
• 855 asking what foods were given the baby, we asked mothers (or
242 other informants) what foods they considered "good for" or "not good for" the baby. Informants were not prompted by asking about specific foods. The most usual answer was that the informant did not know or did not consider any food either especially suitable or unsuitable. Only 6 informants mentioned foods considered good for the baby (Table 12).[A] One of these named 3 such foods: egg, fish, and vegetables.

A larger number of informants reported that one or more foods were not good for a baby, but in a majority of instances (30 of 50 replies) the informant did not mention any food in this category. In all, 15 foods and 2 characteristics of foods

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1. No fresh milk of any kind was available in Bang Chan. Water buffaloes were ordinarily not bred in the village, and use of buffalo milk was unheard of. Among the light refreshments which could be bought at village stores, however, were coffee with condensed milk and diluted canned milk. Storekeepers stocked imported canned and dried milk including some brands designed for infant feeding. Directions for use were not in Thai, however, and the preparations actually fed to infants were often diluted more than recommended.

A [see p. 26 - Analyst]

("hot tasting" and "hard") were mentioned 39 times (Table 13) with jackfruit and chico being mentioned in connection with the same baby at both 6 and 9 months of age.

Table 12. Foods Considered Good for Babies.

Food	Number of Informants	Age of Baby at Time of Inquiry (months)
Rice	3	3, 15, 36
Egg	2	6, 15
Fish	2	15, 16
Vegetables	1	15

There was no indication that any food was considered harmful by most mothers. Although the list of foods considered not good for babies was considerably longer than the list of foods considered good for them, the item which occurred most frequently, jackfruit, was mentioned by only 6 informants. Eggs, vegetables, and fish were considered by some as good for the baby and by others as harmful (Tables 12 and 13).

Table 13. Foods Considered Not Good for Babies.

Food	Number of Informants	Age of Baby at Time of Inquiry (months)
Jackfruit	6	5, 6 and 9[1], 11, 18, 21, 22
"Hot tasting" foods	6	12, 14, 15, 24, 24, 27
Chico	4	6 and 9[1], 11, 21, 22
Egg	3	7, 11, 27
Sugar	3	9, 11, 12
Banana (ordinary "fragrant" type)	2	21, 22
Hard things	2	6, 10
Glutinous rice	2	9, 11
Fish	1	9
Fresh fish	1	15
Vegetables	1	6
Mango	1	6
Raw banana	1	6
Corn	1	18
Guava	1	18
Orange	1	15
"Ice"[2]	1	36

1. Mentioned for same child at both 6 and 9 months.

2. Either a frozen syrup or syrup over shaved ice.

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843 Reasons were seldom advanced for considering certain foods unsuitable for mothers or children. During pregnancy the hot-tasting foods, i.e. those made with chili, were said by one informant to injure the baby's complexion. When asked at what
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855 age a child could have adult food, mothers might say at one or two years but often specified, without giving a reason, that
853 they could have anything but the "hot-tasting" foods (foods seasoned with chili). Two mothers said the child could have "hot tastes" at one year, whereas one said not until the child was 3 years old. A majority did not specifically mention hot tasting foods either to include or to exclude them.

853 A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby 1 or 2 months old ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana", (3)kluaj (5)hauaum[1], caused constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

753 The belief that eggs would cause dental caries and should
262 therefore be omitted from children's diets was expressed by the
853 mother in a poorly nourished family of low economic status.
855

862 Opinions varied as to when children could be given "adult food". This was often, but not always, the age considered appropriate for weaning. As the question was worded it apparently implied that the child "could eat food as prepared for adults in the family" and did not necessarily exclude breast feeding, since children who "could have adult food" might still be nursing. The age at which a child could have adult food was sometimes related to stage of maturity as "when he can sit", "when he has teeth", or "when he can say (1)plaa (fish)".

262 Traditional and Modern Concepts of Rice Versus "With-Rice" in the Diet. - Rice is not only the basis of the adult diet in Thailand, but it has traditionally been regarded as the strength giving food par excellence. A portion of Chutima's (1939) description of the "old system" of diet follows:

> "Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal.

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1. The type of banana most familiar to people in the U.S.A.

853 3 and 6 months soupy rice was a common addition to the infant's diet, and after the first teeth appeared many had rice from the family pot. Between 6 and 9 months, also, fish was given regularly to many babies and egg at least occasionally. Crackers, cookies, and various items designated as (2)kha-(5)nom were frequent additions at this age.

863 Seasonal fruit such as mango and orange was given to some
855 infants from 6 months on, but most children had fruits other
262 than the (4)mam-(4)waa banana infrequently even at two years of age. As the feeding of rice increased, banana was given less often, so that for the 2-year old child even banana was eaten only occasionally. A minority of babies were fed vegetables by one year of age, and some had not begun to eat them by two years. Only about half the children from 2 to 4 1/2 years old had vegetables frequently.

Avoidance of hot tastes, rather than reluctance to give vegetables, may have been responsible for late introduction of vegetables into the diet of many children. In Bang Chan vege-
[252] tables were often combined with other foods, as in curries. They were usually added toward the end of the cooking time after the mixture had been seasoned. Vegetables from such a "hot dish" would not be offered to a small child unless the parents considered him old enough to eat "hot-tasting" foods. Among the mild "with-rice" dishes were vegetables panned with a small amount of fat and seasonings other than chili, as well as vegetables cooked in coconut milk or in water (Hauck et al., 1958; Hauck and Hanks, 1959). In this connection the suggestion of a Thai co-worker that one might encourage eating more vegetables by discouraging the use of "hot" dishes seems promising, since a larger amount of mild than of "hot" "with-rice" food is eaten at one time. To promote more frequent, and earlier, feeding of vegetables to babies, one would need to encourage either more frequent preparation of mild "with-rice" dishes containing vegetables or special preparations of vegetables for the baby. The latter is rather impractical when foods are cooked one at a time over the same fire as in Bang Chan.

[252] Perhaps one reason why most infants in Bang Chan had fish
[263] daily after 6 or 7 months of age is that in making curries fish was often cooked in a little fat or coconut milk before seasonings were added. Thus, a little fish could then be set aside for the baby before chili and other spices went into the pot. (Note, also, that rice and fish were the foods considered safe to eat
121 during (2)juu (1)faj by all mothers interviewed). Changes in
262 food preparation suggested for improvement of the family diet in general (Hauck, 1958) could automatically help to improve the feeding of young children who are gradually introduced to adult foods. At the same time, a better family diet would probably help to improve the quality and quantity of mother's milk, since during lactation mothers tended to eat as usual. In deciding whether the more effective approach would be through teaching

about the same as the 3rd percentile of male infants in the U.S.A., and from one year on the values fell below the 3rd percentile. Norms for American children are inappropriate for use with Thai, but an increasing lag in growth such as we observed may be a matter for concern. 145.1 14

Weight Loss and Failure to Gain. - Many of the children in Bang Chan failed to gain or actually lost weight over periods of time. This occurred frequently between two weighings which were 1 to 4 months apart and occasionally when a child was reweighed after an interval of 6 months. In some children loss of weight or failure to gain extended over two weighing intervals. Such loss or failure to gain may be an important sign of malnutrition (Jelliffe, 1955). 145 [146]

Relation to age. - The ages at which the children experienced weight loss or failure to gain were determined by inspection of the weight-age graphs. As shown in Table 17, a period of loss of weight or stationary weight was noted for only one child below the age of 6 months. Between the ages of 6 and 12 months, a time when healthy infants usually continue to grow rapidly, such periods of weight loss or failure to gain for intervals of 1 to 5 months between weighings were observed in almost 40 per cent of the infants. Dr. Montri (1939) and Dr. Amara (1957) did not discuss the growth of individual infants, hence we do not know to what extent failure of some infants to gain weight may account for the depressed growth, on the average, which both of these observers reported for infants of this age.

During the second year of life children may be expected to gain weight less steadily, but more than 40 per cent of the children of this age in Bang Chan lost weight or failed to gain over intervals of 1 to 7 months.

After 2 years of age approximately one-half to two-thirds of the children weighed in a given 6-month period lost or failed to gain weight. Of 68 children who were weighed and measured over a period of a year or more, only 16 did not experience such loss or failure to gain between any two weighings. Most of these were in the youngest age group, only 3 were over 2 years old at the end of the study.

Possible reasons for failure to gain. - From the information available specific reasons cannot be given for the loss or failure to gain weight of so many of the young children of Bang Chan. Infection may have played a role, although we saw little evidence of severe infection and it was seldom mentioned. [164] Increased activity as children grow older might affect rate of gain at the toddler age. For safety very young children in Bang Chan were closely tended which meant that their activities were rather restricted. As they became older and learned to [855]

A [See p. 37 - Analyst]

keep out of danger, they had more freedom. At this time their caloric needs may have increased more rapidly than did their caloric intake. To the student of nutrition, inadequate intake of essential nutrients seems likely to be of importance when children fail to gain.

In some areas growth failure is common at weaning, but this did not seem to be a major factor in Bang Chan. Weaning before one year of age was uncommon (Table 11, p. 24), yet growth failure occurred in many infants between 6 and 12 months.

Observations on the weight gain of 30 children whom we weighed both before and after weaning are summarized in Table 18. Four children lost or did not gain weight between the weighing before weaning and the one afterward (code numbers 13, 23, 35, and 56), while 3 others, who had been weaned shortly before a weighing, did not gain between the next two weighings (code numbers 22, 33, and 37). Thus only 7 of 30 children lost or failed to gain weight at or near the time of weaning (Table 18, I).

Weight curves of 4 children could not be interpreted in relation to weaning. Two of these (code numbers 15 and 44) were weaned just before their last weighing; for two others (code numbers 18 and 51) the intervals between weighings were long (Table 18, II). Only 5 individuals gained at each successive observation (Table 18, III), whereas 18, a majority, failed to gain at some period other than at weaning (Table 18, III and individuals designated *).

Of 19 other children who had not been weaned by the time the study ended, 10 lost weight or failed to gain at some period during the study.[1]

Since Thorangkul (1957) noted a clear association with season of weight loss or failure to gain in Bang Chan school children, the weight records of infants and young children were inspected to see if such an association occurred at younger ages also. The number of children weighed during each month and the number who had lost weight or had failed to gain since the previous weighing were counted after omitting observations on children under 6 months of age, as well as those whose most recent weighing had been obtained more than 4 months previously. Little or no indication of relation of season to weight loss or failure to gain was apparent. At the weighings in April, July, August, and September, 1953, a smaller proportion of the children had lost weight or failed to gain; but this is not

1. Of the 22 other children in the study, 20 had been breast fed but were weaned before the study began, and 2 were receiving cow's milk because of death or illness of their mothers.

[TEXT CONTINUED ON PAGE 46]

[See p 44 - Analyst]

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

were at first a series of unrelated incidents—that is, the possible tenuousness of the links between parent and child first came to my attention with the occasional, but wholly unselfconscious, reports from informants on what to my Western ears seemed like rather turbulent childhoods: their frequent movement from family to family while they were still children and their own care, as adults, of friends' or relatives' children. (This suspicion was reinforced and partially verified later while recording life histories). Later it was noticed that, in sharp contrast to the West, villagers tend to be less concerned about the illness of children than the illness of adults; informants with whom this observation was discussed said either that they had not noticed or explained it by saying that since children recover so quickly from sickness there is less need to worry about them. Finally and perhaps most important, it became clear that the request of the villager who stopped me and asked me to take and rear her child was by no means idiosyncratic; the request was made on four separate occasions by different individuals, both within and without Bang Chan. The intent of these requests were difficult to ascertain. Since the requests tended to come up rather suddenly, in the presence of the child, and were always accompanied by laughter, they may well have been said in "jest" or as a threat to the child. On a few occasions the parent took pains to be sure the child understood what was being said, in which case the child responded with screaming. Also, Europeans have traditionally been used as bogey men in the disciplining of children. (I myself have occasionally been addressed as a malevolent spirit by youngsters.) On the other hand, because children of poor families have been known to be given to individuals of high status, and because Occidentals are automatically assigned such status, it is not altogether unlikely that the parent was sounding me out as a potential patron of the child.

The problem with all the above, however, is that it was unknown to what extent they represented typical or deviant attitudes and responses. The Sentence Completion item, *"We want to give our child to him because . . ."* was selected for use in the SCT administered to a larger, representative sample of villagers because, being an extreme phrasing of these attitudes, it might shed light on the villagers' general readiness to accept them as well as their justifications for them. Of the fifty-six informants who responded to the item, 79 percent accepted the premise and 21 percent rejected it, *i.e.*, "I do not want to give my child to anybody." Of the forty-five individuals who accepted the premise, nineteen said it was good for either the child or the parent, *i.e.*, "that person was good, and he wanted that person to teach his child to be good"; "I would get some money by giving it away"; "I could not stand the child anymore." And eighteen said it was justifiable, *i.e.*, "because of poverty"; "I did not have the means to rear the child."

854 mosquitos, but then Song bought in Mīnburī a bamboo frame with be-flowered netting. He also bought little mits to tie onto the baby's hands, so the fingers would not be sucked. Not every baby got these! Most of the time the baby lay naked, but was wrapped when nursed. One cool day they put over him a thick blanket. Lek, Duan, or Song bathed him in boiled water 3 times a day and always after his excretions, which were wiped off with cloths. Then fresh cloth was put under him. On the seventh day since he was thriving, he was bathed in ordinary rain water. Every day Lek vigor- [856] ously squeezed his fingers and legs "to make them straight," which made him yell each time. To speed the drying of the [278] cord, a charred leaf of betel pepper was applied for a while to his navel on which Dūan spit saliva several times a day.

853 Dūan's milk supply was only fair. For milk stimulation they pressed her nipples and kept the fire hot. She was [262] also taking daily a special nursing curry of banana flower and vegetables (khaēng līang). One day she ate a cobra curry. A neighbor offered to help nurse the baby but Duan refused. "It is a pitiful sight to see one's child at [854] another's breast." Whenever the baby wailed he was given boiled water but was not necessarily at once picked up. If his crying continued, however, Dūan washed her breasts with warm water, pressed out and threw away a little milk, moistened the baby's lips with water, then lifted him on the pillow to her plank. She laid him beside her and leaned over him to nurse, though occasionally took him in her arms. He was nursed about 10 times a day, and also received honey, boiled water, and a bit of banana, too. [278] One day the baby cried a lot, so they painted him with turmeric and gave him baked cobra tail in alcohol to warm him up.

846 As to her own diet, Dūan followed the usual practice 262 of limiting herself rigidly to rice with salt, dried fish, and baked khūai namwā banana. Egg was too cooling: "like glutinous rice, it brought pus to the unhealed cord and the vaginal wound." Dūan also avoided "jam" bean which caused madness, fruit, and sweets. Whatever she ate affected her child by secreting into her milk. If she were sick, he would be so too. If he alone became ill, she must watch the foods both he and she ate. All these food instructions would stop only when nursing stopped a year or two later.

846 Duan decided to stay only 11 days by the fire, though Sāi had said 13 and she would have liked to stay longer. However, she wanted to get back to work because the transplanting season was approaching. Besides, the

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A major clustering of first experiences, and so of habit formation, was in intra-uterine existence. Every experience of the mother was shared by the fetus. After birth, a baby daily formed habits of eating, sleeping, and crying, and later, as a child, habits of respect, obedience, truth-telling, etc. To create good habits efforts were bent to control and ameliorate any first experience: to make it as correct as possible; to seek out favorable astrological moments; to ask auspicious, skilled, or learned persons to be part of the initial action. An example was the establishment of nursing. When the baby was put to the breast the first time, the objective was not nourishment but to establish a good habit, viz. copious and strong sucking from an ample milk supply. Only after this first nursing did breast-milk as nourishment become important. If on this occasion he did not nurse well, he would have the habit of eating poorly all his life. Moreover, whatever the mother's experience with her first-born, it would not only be repeated every time he nursed, but set the nursing pattern for all subsequent children she bore. For her first-born, though, a mother would have had no previous experience of making milk. She had to be taught, or shown, how to make good milk, just as the baby had to be taught to suck, and later taught to eat rice. Consequently, the first-born baby was almost always first nursed by another person (not necessarily a kinswoman) with copious milk. Then 2 or 3 days later, because the example had been set, good milk came in and the mother started nursing. What was to be avoided at all costs was a first suck of colostrum, which appeared to be "unfit, early milk" from an insufficiently lactating breast. This would be a poor precedent. Until a mother decided her milk was right for nursing, a baby subsisted usually on honey and water, and maybe a little crushed banana. If a woman were not satisfied with her nursing capacities for her first-born child, when the second child was born she might ask another lactating woman to give the baby a first nursing so as to improve her own habit.[42] One woman flatly said her own milk was always unfit as proved by her babies' health, so she used a bottle of (canned) cow's milk from the start. She felt she had the habit

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42. Bradley (79-80) felt that the dehydration attendant on lying by the hot fire significantly reduced the quantity and quality of the milk.

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called out "Mine!" ("khǭng chan" [female speaking] or "phom" [male speaking]). Never did a parent call "oure!"[44] Sometimes the mother might ask a relative or friend present to claim the child, and so become a godparent.

As the first human step to control the volatile khwan, the first objective of winnowing a baby was to seize it (kan rap khwan) and so "complete" the child's person.[45] By tying holy thread at the wrist and ankle soul-exits, the khwan which had flitted in and out of the womb was given root. It was still flighty, but now it had a life-long home.

852 851 774

Secondly, the child was given membership in a human family. Connection through blood and semen did not establish kinship. At first, the child hovered between corporeal and non-corporeal existence. "The child is not fully human for the first 3 days." This period was under the supernatural control of Mother Sǭ, for babies "never died during the first 3 days after birth. They might be born dead or they died 6 or 7 days later." The shock of dropping the child on the tray "made him forget his life as a spirit." When someone cried "mine!" the child finally cut his relationship with the spirit-world. As an old woman explained, "The ties are the important part [of the ceremony]. They show that the child belongs to someone. Once a tie fell off one wrist. The child cried and cried until it was restored," fearing its lost khwan would attach itself elsewhere. The claiming set up kinship as a contract before witnesses. Whoever announced responsibility for the child's care, and this was usually the mother, deserved reciprocal care in old age. Other relatives would also help to bring him through to maturity. He would not be so frightened of an evil spirit because of family support, nor of the "ghost of an ancestor" who would be recognized as a relative.

852 [774]

Third, the ceremony strengthened the child. By giving him through the ties a stable khwan, he "grew better, cried less, and did not get sick."

[856] [789]

The incorporation of as many auspicious elements as possible into the ritual was customary. Since the child took

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44. A winnowing tray (basket) had the capacity to "trap" spirits. It could seize or trap not only the khwan soul, but, at New Year's, one of the fun ghosts (Textor:371).

45. There is no convenient way of expressing "oure" in Thai in this restricted sense (id.).

852 after whoever claimed him, a mother might ask a "wealthy
856 person, of polite, calm, and good character" to do this.
789 The baby also started an association with whatever items were placed on his tray with him. Besides the most common ones mentioned in Nūan's tale were ink and books (which induced learning), gold, rings, jewelry, money (wealth); bergamot thorn, a tin of kaffir lime (sharp wit); and a razor (a good wood-cutter for the fire; said to be a Muslim custom). When the baby was finally transferred from tray
852 to cradle these items were returned to household use. The
789 bamboo cutter, rhizome of phlai, and earth associated with cutting the cord were taken off the tray and buried with the placenta. Their significance lay as part of a binding ritual. The phlai and earth might be taken off ahead of time.

Binding Rituals

829 Because Bang Chan accorded autonomy to every individ-
774 ual, whatever his age, everyone had the free choice to go wherever his advantage lay. In infancy and childhood, the khwan soul might flee at any time, and could only be re-
[852] captured by a khwan-calling or khwan-ladling rite (Textor: 396-411). After about the age of 8, a thaam khwan ceremony helped to bind in and strengthen the khwan soul. In daily life, the fear that a loved one, whatever his age, would withdraw or run away if unhappy, frightened, or over-
829 burdened dogged people their whole lives. Casual episodes
593 were sometimes viewed with alarm. Once a boy of 10 on his own initiative went off to live a few days with his grandmother only 10 minutes away by boat. His mother complained that he had wandered (pai thiaw) and feared it would become a habit. Parents dreaded that grown children would find work away from the village; that daughters would elope; that adopted children or spouses run away; or even that their child, at marriage, would elect to go live with his in-laws. At any time a husband might go into the priesthood leaving his wife and children to fend for themselves, though here the wife had to give her permission and the motive was sympathetically viewed.

A traditional jesting threat was to "go away to the jungle-forest" (pai pā).

The economic and social base for this fear of losing a child to the world was that children were a parental investment with an anticipated return: for the trouble of bearing and raising them, children should work for the family until their marriage. Furthermore, a boy was to bring his parents merit by being ordained, while a girl was to care for them in their old age. If a child moved away

562 [827] [853] delivery, "her blood was purified to a white color to become the milk of the breast."[48] Nursing a child was the essence of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 462 252 224 [082] [431] [796] In a wider context, not only all their household members but people anywhere were the objects of women's nurture: women were in charge of the cooking even if occasionally helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor household, short rationing daily was probable (Hauck, et al. 45,49). One old lady expressed deep satisfaction that she "did not feel hungry any more." She construed this as proof that she had ample merit, but it also meant that she was a great donor who gave continuously and took little. Women usually offered the early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When age pushed women past their mature capacities, they returned to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 857 [291] [593] A desire to give tender care and nourishment was deemed inborn in all women. Although sex was not strongly differentiated in babyhood,[49] by age 3 a hard-to-handle skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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[822] 48. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phum, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

[856] 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

Only when the youngster was satiated did she gobble the remainder.[50] Parents often commented that girls in general were obedient and good, but boys were not. Everyone spoke, however, of exceptions. The capacity to play the female role grew with the child. It was not completed with the physiological maturity of first menstruation but only with ritual maturity.

The rituals to fit a woman for her office, described as "directly related to the welfare of the child," had 4 specific purposes. They perfected her as a compassionate being; restored and strengthened her body; improved her capacities as a nourisher; and strengthened her own khwan. The key to each of these aims was the holy fire.[51] Because actions taken by the fire were immediately and permanently effective, every effort was made to induce auspicious happenings. Words spoken by the fire had compelling effect so even ordinary speech became magical. Speaking of the fire's hotness so raised its heat that a mother was burned. For this reason, uninformed or careless visitors like children or foreigners were a danger.

According to Buddhist thinking, suffering developed compassion. Through the discomfort of pregnancy, followed by the anguish of childbirth and the heat of the fire, a woman became compassionate and so achieved the guide-line for moral behavior. Then a woman was sure to be touched with pity for the younger or less fortunate. One teacher despite the inconvenience went home twice a day from school to nurse her new baby because she "pitied" him too much to hire a wet-nurse. It was "pitiful" to see a child at another woman's breast for it implied that its mother was either unwilling or unable to nurse it. Thus, babies were rarely nursed by others than their own mothers.

The fire also strengthened a woman by ridding her of bad blood and foul fluids. Wind and Fire, the 2 spirit guardians of the elements necessary to the occasion, were invoked to assist in the drying of the uterus. In addition, strengthening

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50. Boys too fed their younger siblings but their purpose was a power-play: "to assure obedience in the future" (cf. Hanks and Phillips:648).

51. This fire was kept entirely separate from the one for cooking and boiling of water. It was ritually lit and ritually extinguished at the end of the fire-rest.

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Thus she performed several rites involving the maintenance of the immature khwan of children and of rice.[54]

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The acme of maternal virtues was manifested in the "good nourishers" (lĭang dĭ). These women had borne many children who "nursed and slept well, did not cry, and easily established good habits." They were lĭang dĭ not just because of the time spent by the fire, for that time could be matched by persons who had lost babies. They were special persons of more than usual capacities for success in nurture. Good to have around for their auspicious influence, they were called upon to inaugurate or help processes concerned with health and growth. They performed, or caught the child in the winnowing ceremony, or gave babies their first suck. They were the persons to whom a sickly child was brought so that his health might be improved by calling the soul and tying holy cord at wrist and ankle (riak khwan). [755] [774]

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54. If a child indfcated by continuous crying that he had lost his khwan, a mature (suk) woman had to be asked to call it back ritually and re-tie it into the body with sacred cord at wrist and ankle. There was no special magic. Her words suffice. Khwan-ladling, a more elaborate and compelling form of the same ceremony, used magical formulae (Textor:401-402). One of Phillips' sentence-completion tests was, "If one is frightened, the best thing to do is..." Of the respondents, 7 women, including one Muslim, would set to work to "call back the khwan" (Phillips:267-268). No man suggested the latter. 562 774 789

In the agricultural rites, women handled the rice's khwan in basically the same way when it was immature: inviting the young Rice Goddess to stay and grow in the field, and transporting to the house the child-like seed that only next year would grow to maturity. For these rites a woman used an incantation if she knew one. That she could also handle the rice khwan by speaking "extemporaneously" (Textor:429), indicated that her mere words were enough. If no one else were available, a non-suk woman could call the khwan of a child or of the Rice Mother by reason of her in-born female potency, but could not "ladle" a khwan. 562 243 789

When the khwan was mature (after a person was about age 10) men took over its care. In the men's thaw khwan (khwan-strengthening) rite, here, too, women were the ones to carry off the cloth-and-leaf covering of the baisĭ (tiered offering) into which the khwan had flitted during the ceremony. The rice-ceremony at the threshing floor was a thaw khwan, so was performed by men. 562 774 856 [243]

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janlekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 16 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand (Kingshill 1960:7)).

Besides the work in rice-fields, women dug and cleaned

562 delivery, "her blood was purified to a white color to become
827 the milk of the breast."[48] Nursing a child was the essence
853 of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

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462 but people anywhere were the objects of women's nurture:
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888 to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

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857 inborn in all women. Although sex was not strongly differentiated in babyhood,[49] by age 3 a hard-to-handle
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856 49. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

792 village offers of regular service, the holiday offerings, home
262 invitations and sporadic gifts so that all priests had places
441 to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut[1] or hardship.

792 About mid-July, Buddhist Lent changed the food habits
796 somewhat. This three-month period corresponded with the height
262 of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering, and thereafter the priests went regularly on their appointed rounds.

796 On Buddhist holidays, the people did not usually eat any
261 of the food brought to the temple, but on (3)thaauad (2)ka-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bounteously.

792 Residing at Wat Bang Chan in 1954 were 22 boys, aged 10
857 to 16, sent to serve the priests, get their living and attend
262 school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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792 1. Amounts of food given usually exceeded the actual
262 needs of the priests and temple boys. One instance was noted
737 in which food was sent by the priests to a needy old person
235 nearby. Leftover rice was dried and sold for chicken feed.

114 2. The transcription used throughout this report is
104 that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

221 The year starts with May, the beginning of the rice-
132 year. At this time the rains began to soften the parched ground, and the heat slackened. School re-opened. Farmers
241 turned to plowing, harrowing, raising the seedlings. Both
512 sexes worked about equally in field labor, boys from 14 and
871 girls from about 15 years of age performing tasks according
462 to skill and strength. Everyone was in the field at dawn.
983 The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy
244 day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third
1264 meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

221 With the rains, the canals had filled, so that by June
132 buyers with big rice boats could return. The few farmers who
501 could afford to hold onto a portion of their last year's crop
443 sold it for a better price at this time. Vegetables and
241 fruits which had died in the long drought were replaced, and trees were planted.

24 In July the heavy transplanting season began. Because
221 of cooperative work habits or hiring out, people worked
132 solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly con-
312 trollable. Lack of rain might be remedied by pumping water
871 from the canals but flooding would drown the plants. School vacation was scheduled at this time so both teachers and
857 children could help. Older children might work in the fields,
887 while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food
438 for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

252 a woman's" (Sharp et al., 1953, p. 88). For instance, the
462 husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was
252 sick or resting after childbirth. The ability of boys as well
857 as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had
252 (Hauck, 1953). Responsibility for food preparation increased
[383] with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a
[597] daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 Certain men of eminence, e.g. headmen and elders, would
554 not be asked to cook at all, but as they aged, they might re-
887 turn to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for
252 2 months because his wife had back trouble. Some dishes were
562 cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 A premium was put on good cooking, and certain women
261 who were noted for their cooking were in great demand for large
[869] scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 Food was commonly prepared twice a day, in the morning
264 and late afternoon. The meal pattern was the same for breakfast

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1. Suvarnakich (1950) described the Thai diet in a
262 general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

per day were calculated for Groups A and B by Round and for all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

Although our sample was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

From the viewpoint of parents, the "peak of life" was the time when children were no longer dependent, but productive, unmarried workers whose earnings stayed within the family. Household 16 was such a family, forward looking, progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 --- Analyst]

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 8. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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Family workers are members of farm operating families other than the farm operators themselves who regularly participate in the farm work of the families. These do not include children of school age who occasionally help in the farm work especially during the busiest period.

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Hired laborers are farm laborers who are hired for all or part of the work season for more or less fixed wages in kind or in cash. These hired laborers have in addition to their yearly wage a privilege to board and lodge freely at their employers' home, and thus become part of their employers' household. The contract, usually verbal, is on a one year basis.

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Piece-workers are farm laborers who receive wages on a piece-work basis for such short-term tasks as uprooting the seedlings, transplanting, and harvesting. Payment for piece-work is made at the end of the day at going rates. It has been observed that most of the extra work in Bangchan is done by piece-workers, and that very few farms engage hired laborers. Piece-workers may be called independent workers, for they have no obligation other than finishing the day's task agreed upon. They may work whenever they please and may stop working altogether if they have enough money. The disadvantage of piece-workers is that they do not have, as hired laborers do, the guarantee of a job. This is quite crucial especially if under-employment of farm labor exists.

Age	Method	Kinds of Farm Work
13-14	Moderate pressure.	Hauling, weeding, buffalo tending, transplanting, chicken feeding, fishing, household work.
15-16	High pressure.	All kinds of farm work. Harrowing, harvesting, and uprooting (boys only) are started at this age.

By the time the young are 16 years old, they are already reliable farm hands, although they are still not considered competent enough to participate in the cooperative work to which only the best family workers are expected to be sent. By the time they reach 18 years of age, all males and females should be well trained in all kinds of farm work.

According to the Primary Education Law, parents are responsible for sending their children to school at the age of eight. These children are to remain in school until they are over fourteen years old, or until they have passed Pratom IV.[2] Since school hours start at nine and last until three in the afternoon, children of school age are still able to participate in the farm work before or after school hours. Moreover, most rural primary schools including the Bangchan Primary School have adjusted their vacation recesses to the periods when rice farm labor is needed most -- from August 16 to September 15 which coincides with transplanting period, and from December 16 to January 15 which coincides with harvesting period. It is during these vacations that the upperclass children are expected to contribute their

2. Primary education is divided into four academic years -- Pratom I, II, III, and IV.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 857 872 labor to the family farm work. It is also the time for children of families of other occupation to earn their small lampai from piece-working.

872 871 We have devoted a few pages to this topic of training the young for farm work because we think it is relevant to the study of the village economy. While the standard of teaching is generally poor in most primary schools in Thailand and consequently farm children receive rather poor academic education, it has been observed that their training in the farm work given by the family is exceedingly thorough. With the exception of a few bright children who are able to finish Pratom IV in four years and thus are able to leave the primary school at the age of 12, most farm children are kept in the school until the age of 14 because they usually fail in the examination at the end of each academic year and have to repeat once, twice, and even thrice. A good many are obliged to leave school at the 369 87 compulsory age of 14 without passing Pratom IV. Urban children, on the other hand, usually pass Pratom IV at the age of 10 and are able to proceed on their secondary education at the standard age of 11 when they start their Matyom I. This is because they went to school at an early age and had better teachers at the Pratom level. Thus, farm children usually lag behind urban children in academic achievement. The situation is aggravated by the city secondary schools' practice of using students' achievement by age as the basis for admission decision. As a result, farm children do not

*243 times, usually three or four. When the seedbed had been plowed and cross-plowed, plowing of the other fields began, but not immediately after the plowing of the seedbed, for the buffaloes were then used in harrowing of the seedbed.

2. Harrowing. Started on June 13 after plowing of the seedbed was completed and ended on August 24, the day following the completion of plowing of the fields for transplanting. As with the case of plowing, harrowing was first concentrated on the seedbed.

3. Removal of weeds after harrowing. This is a necessary step following harrowing. During the harrowing process, weeds which have been turned over by plowing are collected at the spikes of the harrow. Occasionally, the farmer will lift up his harrow in order to free it from the accumulated weeds which are thus left in small piles. Not all the weeds, however, are caught by the spikes of the harrow. The result is that after harrowing there may be seen on the parcel small piles of weeds emerging above the water, while the uncollected weeds which scatter all over the parcel are hidden under water.

• [857] All these weeds must be removed from the parcel. Removal of these weeds may be done by children working side by side with adults. The weeds are first collected by hand and put in larger piles on the parcel. These larger piles are later transferred to the dike so that the parcel will be cleared of weeds. This process is usually done during the noon recess (actually from 10 a.m. to 2 p.m.) when buffaloes rest. Children may carry on the work while adults resume their plowing or harrowing

*243 511 and that they are consumed daily. Expense on cookies is high because of school children's daily allowances which *243 were assumed to be spent entirely on this item. Even though • 857 cash is extremely scarce in the village, especially during 511 the period from July until just before harvesting time in January when roughly seven out of ten farm operating families do not have any cash at all, the children still have the privilege of receiving daily cash allowance. This is possible because of the chicken enterprise. The children simply take eggs along and convert them into cash at cooky stalls in the school yard. In this manner, it is seen that the school children have an important part in the daily flow of Bangchan eggs into Bangkok markets.

*243 276 511 The kind of tobacco commonly used in Bangchan is the relatively inexpensive native tobacco which smokers make into cigarettes themselves with the use of a special kind of thatchleaf binder. Bangchan women do not smoke, but they use tobacco heavily while they chew betel. Most men, young and old, are in the habit of smoking, while chewing betel is now limited to elderly people of both sexes. Tobacco is thus rated among major items of expenses because it is used in smoking as well as betel chewing.

*243 291 511 Obviously, clothing is one of the major items of expenses. In fact, it is the highest item after food, averaging 556 baht per family annually. Since rice farmers work partially under water most of the time, the rate of wear and tear of clothing is rather high. Each family worker

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 50 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, a younger generation. In the few polygymous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap.V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlekha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

796 relatives, his other kin and friends according to bonds of
574 affection and respect. Certain priests of pleasing personalities, wide acquaintance or kinship in the community, or of valued skills, were invited more often than others, as were prominent elders and hamlet headmen. An invitation usually went only to the elder couple in a family. It did not automatically include the children. If married sons or daughters were invited, they were asked separately. Poor individuals were included only in the festivities of their close kinfolk, their immediate neighbors, maybe their own hamlet headman, or persons to whom they were obligated. Unless they were aged, their presence was validated only by hard work. Reciprocity was a factor, for one who could not reciprocate presumably would not be asked, nor would he volunteer. The few who were "anti-social" for whatever personal reason rarely attended.

262 Most members of the working group and guests left at
574 home their children of such age as to require watching.
796 Nursing babies might be there, hung in a hammock. Though
858 the children who ran excitedly about seemed numerous, most of them were the children, grandchildren, nieces and nephews of host, co-sponsors and relatives, so could not be excluded.

To sum up, those who shared least in the diet of the ceremonial season were the dependent children, i.e. up to the age of 6 or so, the less gregarious, and the poor who had no way to reciprocate. Children from 7 to adolescence shared in a limited way, attending (l)ngaan of their own close kin or of a geographically close neighbor. Parents sometimes took snacks from the feast home to the children. On the other hand, persons of prestige and popularity, especially if aged, were asked frequently.

262 Doubtless for those who attended many (l)ngaan, the
796 food eaten during the ceremonial season differed considerably from the usual family fare. We have no way of knowing whether it was better than usual because of a larger intake, for instance, of pork and meat in general, or whether the total nutritive value was less satisfactory because of increased consumption of "empty calories" in the form of sugar and alcohol.

262 During the (l)ngaan season the home meal schedule was
264 frequently disrupted in the families of the participants.
796 The main cook might be absent, too tired, or too full to feel like cooking a big meal at home. In anticipation of a feast, preparation of the usual breakfast or dinner or both might be abandoned, with reliance on a few snacks for the stay-at-homes to add to their rice. Thus the food intake of family members who did not attend the ceremonials might be adversely affected.

ooo One other aspect of (l)ngaan which should be mentioned

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relationships: within the family, usually in terms of the relative ages of people; elsewhere, in terms of age, wealth, power, knowledge, religious or governmental role. Secondly, they are based on the assumption that every individual, regardless of his position in the hierarchy, deserves respect. The first is a respect associated with the proper performance of one's role; the second, a recognition of the essential dignity of every human being.

The role of these respect patterns cannot be emphasized enough. Benedict, in her study (1946) of Thai culture at a distance, referred to the learning of the *waj*, or gesture of obeisance, as "the first teaching the child receives." Although the *waj* is perhaps not the very first social act the child learns, I have seen infants no more than two weeks old being guided by the mother in raising the palms of their little hands to the forehead in expression of deference to superiors. The older infant who can do this on his own almost always receives acknowledgments of approval and delight from the adults in attendance. An older sibling really means it when he says of his relationship with his younger brothers, "when I ask them to do some kind of work, they go and do it. They never disobey, and when there is no disobedience, there is no hatred. . . . Formerly, whenever there was entertainment somewhere I took them with me. My younger siblings love me a lot. . . ." His position in the authority structure assumes the respect of those younger than he, and they willingly grant it for, among other things, he plays his role well as the kindly superior who takes them with him whenever there is entertainment. All the polite little linguistic forms (honorifics, expletives suggesting status and, most important, ordinary kinship terminology with its specification of relative age) as well as kinesthetic forms (lowering the body while passing a seated older person, holding the younger between one's legs and with arms around him in a position of protection) also serve to emphasize the respect that people grant one another because of their differential status. Perhaps the most revealing illustration of the strength of these patterns, at least the authority pattern, was provided by a two-year-old toddler who pointed to the stomach of his pregnant mother and said with pride, "My younger sibling is in there. When he is born he will be *my* responsibility." Little doubt that when the child is born he will give his older brother his due.

With regard to the other respect form, recognizing the dignity of every human being, more than once I have heard parents say that they disliked giving their child a certain medicine "because it offends the baby; he does not like it. It is better not to give it to him than to hurt his feelings." Although I do not doubt that in some instances the parents were annoyed more by the screams of the child than anything else, I am also convinced that for the most part they were respecting his basic individuality and right

4:Phillips E-4,5 (1956-1957) 1966
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to choose, even if in this case it was seemingly to his own detriment—he knows what is best for himself. Even the incompetent, helpless infant is an independent soul with his own will and right of determination, and his dignity must be respected.

It must be recognized of course that in the cosmology of Bang Chan the infant is anything but a conative *tabula rasa*. When he enters the world of human beings he brings with him not only a stock of individually accumulated merit (*bun*) and demerit (*baap*) from countless previous lives which will affect his being in this one, but also a host of other forces which predetermine his character: his *khwaan* (soul-stuff), *winjaan* (psycho-biological motive power), *caj* (heart), and *nidsaj* or *ʔupanidsaj* (ingrained character), among others. (J. R. Hanks 1959 has a brilliant exposition of the role of these elements.) In a very real sense the infant enters the world of humans as a developed, or partially developed, psychological being. Human influences, particularly virtue and "good habits," can be inculcated into him, but they are ultimately limited by these pre-natally determined characteristics. Much of Bang Chan child rearing is actually a series of perpetual compromises between (a) parents surrendering to what they think are the child's predetermined traits (and while this represents an extraordinary respect for his infantile individuality, it also leads in a developmental sense to much of the solipsism to which we have been referring throughout); (b) parents trying to come to terms with, or overcome, his preordained characteristics by inculcating good habits through example, coaxing, and whipping (the three modes of socialization, in order of priority, although villagers are more prone to talk about whippings than actually give them; most are too tenderhearted, and the rare whipping is almost always the result of sudden rage); and (c) leaving the child to his own devices. The third differs from the first in that it focuses on the parent's concerns rather than the child's and indicates indifference rather than respect. Thus, in contrast to the illustration above, one constantly sees children, generally under eight years of age, "annoying" conversing adults (primarily by making noises, although not necessarily to get the latter's attention) to which the parent responds with continuous but intermittent "tsk, tsks." The adult never raises the volume of his admonition, never gets increasingly disturbed, and eventually gives up while the children continue on their merry, noise-making way. The parent's lack of genuine concern and compulsion is not lost upon the child. Although events of this type are not overly noticeable in Bang Chan—precisely because they occur in such an easygoing and unremarkable way—they do take place repeatedly, and represent one of the principal interactional themes of the parent-child relationship. Children learn quickly that although parents will go through little ritualistic forms of controlling them,

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lying configuration.) However, from the point of view of their etiology in the individual, it is clear that the villagers' tendencies toward loose relationships are related to early childhood experiences. A second source is their philosophical notions concerning the nature of the individual. These notions are largely cultural derivatives of Buddhist doctrine, although at the behavioral level they function simply as unstated premises which guide and tacitly define behavior.[28]

Reference was made earlier to the basic assumptions governing the socialization of the Bang Chan child. When the child enters the world of human beings, he is already a partially formed and psychologically independent individual, with his own *ʔupanidsaj* (ingrained character) and *khwaan* (soul-stuff), not to mention his stock of accumulated merit and demerit from countless previous lives which predetermines his character. The effect of these definitions is not only to award to the child a sense of psychic individuality that is partially[29] independent of any social environment to which he is exposed, but to assign to him a fundamental sense of psychological equality. We are not speaking here of *social* equality. The

[28] From a strict analytic point of view, it would probably be best to consider Buddhist doctrine as an abstract, codified representation of these premises rather than consider the premises as explicit, logically coherent deductions from Buddhist doctrine. To be sure, many Bang Chaners often explain and justify their actions by pointing directly to Buddhist doctrine, sometimes applying its tenets correctly, and sometimes not. But for most, Buddhism is a diffuse, ubiquitous *Weltanschauung*, the precise effects and applications of which the villagers are typically unconscious. It would probably not be incorrect to think of most religious "traditions," particularly the "Great" codified ones, as functioning in this way.

[29] The term "partially" is inserted here to indicate that despite these ontological notions, few villagers, as J. R. Hanks (1959) points out, ever consider "any human child so marvelously endowed . . . from previous existences that training is unnecessary." The child's *ʔupanidsaj*, *khwaan*, merit and demerit, as well as his *winjaan* (psychological motive power), *caj* (heart), and *phroomlikhid* ("the lines of his destiny as established by Brahma") are all crucial predeterminants of his character. But few Bang Chaners ever think of a person's character as due solely to the uncontrolled emergence of these pre-natal forces. Rather, they represent the basic psychological raw material with which parents and other socializing agents must work, and set the limits of these agents' enculturating efforts. What is important is that the limits—the "degrees of freedom" permitted the parents—tend to be narrowly defined. Intensive probing of informants indicates that there is no general agreement on whether these cosmological forces are more or less influential than parental training in shaping a child, although they tend to be invoked more frequently as explanations of negative characteristics and of unusual happenings, positive as well as negative, in the lives of individuals. Also, villagers are inclined to think of them as the reasons behind *particular* characteristics and events, assigning to parental training a more diffuse influence in the development of the child. Thus, when asked why a particular individual grew up to be a *nagkleeng* (an aggressive, daring, sometimes bullying type of person) and how one of their fellow Bang Chaners had grown up to become an admiral in the Thai Navy, informants attributed the character and success of these individuals respectively to their *ʔupanidsaj* and *kam*. (*Kam*, the Thai derivative of *karma*, is the proportion of merit to demerit that a person may have at any particular moment in

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858 828 child is clearly a social inferior, and is due all the prerogatives of his position: he is to be dealt with gently, kindly, and benevolently, with sympathetic regard for his incompetence; correlatively, he must be taught to express deference and obedience to superiors. Rather, the equality awarded the child results from the recognition that in the workings of the cosmic scale it is impossible to ascertain what the child could once have been or eventually will become, and he, like any soul, is always *potentially* of the same value as any other person. It is precisely for this reason that most Bang Chaners, if they mention it at all, are only mildly pleased rather than particularly proud that one of their own grew up to become an admiral in the Thai Navy. It comes as no great surprise that such a thing can happen. To them, it is no more unusual than that the prime minister himself should be a person who was born and reared in a village. (By the same token, the peasant background of these two individuals creates no special sense of personal identification with them on the part of the villagers. They are perceived simply as two unique *individuals*, their peasant roots being viewed as only one of the literally countless factors that made them what they are today.) [27] To a large extent, the equality of the child derives from the premise that he is not so much a child as he is a human being who happens to be at a particular stage in his ontological

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time). When probed further and asked if their parents' training may have had any influence on these individuals, they replied "yes" and "maybe" in the case of the admiral, but disavowed all parental influence in the case of the *nagkleeng*. A few said that the *nagkleeng* became that way because of bad friends.

[115] One villager, phrasing his comment as a personal conjecture, volunteered that the notion of parents being the major influence on a child's character is a "modern" idea. Another informant, the wife of a school teacher and well versed in her husband's teaching training manual (prepared in Bangkok by Western-trained educators) argued that a person's character is dependent "mostly on the influence of the home and school." However, since on other occasions she complained to me that one of her sons "does not have an *?upanidsaj* for studying, and there is nothing a parent can do but let the child have his own way," it would suggest that her commitment to the pronouncements of her husband's mentors was not too well internalized.

To avoid confusion, it might be added that from a historical point of view only one of the above cosmological forces (*kam*) is strictly Buddhistic in origin. The others are either Brahmanic (*khwaam* and *phroomli?khid*) or traditionally Thai (*?upanidsaj*, *winjaan*, and *caj*). Of all the terms, *kam* and *?upanidsaj* are the ones most frequently referred to when discussing an individual's character.

[27] [565] [571] [554] It is precisely for this reason, as I indicated in an earlier writing on Thai social structure (see Sharp *et al.* 1956: 163) that Thai society "cannot be said to have a class system in the classical European sense of the term." People identify with others as individuals, not as representatives of social classes.

The very fact that individual peasant boys can climb the social ladder to attain some of the highest social positions of the land, without it even being considered particularly noteworthy, attests to the fundamental equalitarian nature of the ideas underlying the Thai social system despite the obvious emphasis given to status and hierarchy in individual face-to-face relationships.

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career. From an epistemological point of view, there is of course nothing strange about such an approach. What is perhaps somewhat unique, however, is that the villagers actually use it as the point of departure in their treatment of the child.

The practical consequences of these equalitarian notions are manifold. For one thing, with the child defined as a separate and equal soul, the relationship between parent and child takes on a highly instrumental flavor; that is, rather than expressing love toward the child as an end in itself or otherwise treating him in ways that require no further justification (it is assumed that love is characteristically an absolute sentiment, not a means to any other satisfaction) villagers explicitly see the relationship between parent and child in contractual terms. Thus villagers say that they "are going to the trouble" of bringing up their children and "doing good things for them" (just as their own parents "went to the trouble" of bringing them up and "doing good things" for them) so that they will have someone to care for them in their old age and make merit for them when they die. Similarly, they say they love their parents because they are indebted to them for bringing them into the world. The language of the "contract" is poignantly explicit: "When I think of my mother, I think of the debt I owe her for bringing me into the world and feeding me so I would survive"; "Parents who do not teach their children how to *wai* [exhibit respect to the parents] get nothing from them. I did many *bunkhuns* [good things requiring reciprocation] for my daughter, so now she gives me everything"; "When I was three my father gave me to my uncle who fed me and trained me, so I loved my uncle more" (cf. pp. 64–66, L. M. Hanks 1959c, and Phillips 1959 for further documentation of this point).

In and of themselves there is nothing strange about these "contractual" criteria. However, they do reflect a fundamental recognition of the independence of parent and child and of the fact that parent and child have the *option* of fulfilling each other's needs. More specifically, they are expressions of the assumption that there is nothing intrinsic to the parent-child relationship that requires the two persons to be linked together. The relationship clearly is not fortuitous, but neither is it absolute. It functions primarily for the instrumental and symbiotic satisfactions that its participants can gain from it.[28] Lacking the absolute elements of an ultimate

[28] In his paper on "Changes in Family Life" in Bang Chan (1959c) L. M. Hanks notes: "At birth a parent ceremonially formally accepts obligations to an unknown infant soul lightly bound to its body; to this point the new-born one without relation to its parent has been under the protection of a spirit mother. This phrasing contrasts sharply with the Occidental concept of 'flesh and blood.'" In another place in the manuscript, Hanks also comments: ". . . but every case [every kinship tie] is reducible, if one presses the question, to benefits of an older or richer or stronger for the

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each person's own ideas, not those of other family members, it would be best to find somewhere we can be by ourselves.[11] Every informant in the sample eventually accepted our request for privacy with complete understanding. Also, it was usually easy to find an isolated spot: underneath the house, a buffalo shed, in a grove of trees, or if necessary in the boat. However, because Bang Chan notions of privacy do not apply to children, approximately one-third of the interviews were conducted with children in attendance at one point or another. The first time a child appeared, we made an attempt to shoo him away. This, however, was usually futile: he would leave and then return; only the boredom of our adult conversation would eventually drive him away. In the case of nursing children, we would always wait until the mother was free, although if the child wanted the breast during the interview we would simply continue and "ignore" his presence; his mother seemed to, at least at the conscious level.

One of the more important administrative tasks of the pre-test was to try out various instructions that would be given to *informants* on how to take the SCT. During these trial interviews, we experimented with various versions of the "introductory remarks" and settled on the following as the version to be used with our final 111 informants.

After explaining to the informant that we had come to chat, and after having chatted (which varied from ten minutes to two hours, depending upon the subject matter and the mood of the informant) we reminded him that I had been sent to Bang Chan by Cornell University to study the life and thought of the Thai people: "My professor sent me, and when I return to America, he will examine me on the information that I have gathered. So I would like to ask you for your *personal* help. I know that you can help me and can give me a true picture of the life and thought of Thai farmers. And [with a giggle] I think you can help me pass my examination." At this point, during the regular interviews, I would remind the informant that a few weeks earlier the abbot of Monastery Bang Chan had, on a ceremonially auspicious day, supervised the lottery from which the names of my informants had been selected: [12]

> *Aacaan* Phuang supervised the ceremony and your family was one of the families chosen in the lottery to be interviewed by me. Both *Aacaan* Phuang and I thought that this was the best way to select

[11] Informants were also asked, on the same grounds, not to reveal the items or their responses to other villagers. We are certain that there were several who ignored our request—not out of malice but simply because it was not that important to them. However, since there were so many items on the schedule, covering so many different areas, I doubt whether their reports to other potential informants biased our results in any substantial way.

[12] I am indebted to Robert B. Textor for having originally suggested this method of selecting part of my sample.

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to choose, even if in this case it was seemingly to his own detriment—he knows what is best for himself. Even the incompetent, helpless infant is an independent soul with his own will and right of determination, and his dignity must be respected.

It must be recognized of course that in the cosmology of Bang Chan the infant is anything but a conative *tabula rasa*. When he enters the world of human beings he brings with him not only a stock of individually accumulated merit (*bun*) and demerit (*baap*) from countless previous lives which will affect his being in this one, but also a host of other forces which predetermine his character: his *khwaan* (soul-stuff), *winjaan* (psycho-biological motive power), *caj* (heart), and *nidsaj* or *ʔupanidsaj* (ingrained character), among others. (J. R. Hanks 1959 has a brilliant exposition of the role of these elements.) In a very real sense the infant enters the world of humans as a developed, or partially developed, psychological being. Human influences, particularly virtue and "good habits," can be inculcated into him, but they are ultimately limited by these pre-natally determined characteristics. Much of Bang Chan child rearing is actually a series of perpetual compromises between (a) parents surrendering to what they think are the child's predetermined traits (and while this represents an extraordinary respect for his infantile individuality, it also leads in a developmental sense to much of the solipsism to which we have been referring throughout); (b) parents trying to come to terms with, or overcome, his preordained characteristics by inculcating good habits through example, coaxing, and whipping (the three modes of socialization, in order of priority, although villagers are more prone to talk about whippings than actually give them; most are too tenderhearted, and the rare whipping is almost always the result of sudden rage); and (c) leaving the child to his own devices. The third differs from the first in that it focuses on the parent's concerns rather than the child's and indicates indifference rather than respect. Thus, in contrast to the illustration above, one constantly sees children, generally under eight years of age, "annoying" conversing adults (primarily by making noises, although not necessarily to get the latter's attention) to which the parent responds with continuous but intermittent "tsk, tsks." The adult never raises the volume of his admonition, never gets increasingly disturbed, and eventually gives up while the children continue on their merry, noise-making way. The parent's lack of genuine concern and compulsion is not lost upon the child. Although events of this type are not overly noticeable in Bang Chan—precisely because they occur in such an easygoing and unremarkable way—they do take place repeatedly, and represent one of the principal interactional themes of the parent-child relationship. Children learn quickly that although parents will go through little ritualistic forms of controlling them,

4:Phillips E-4,5 (1956-1957) 1966
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the parents often do not really care and children can pretty much get away with doing what they want.[14]

With regard to other expressions of the recognition of individual dignity, one rarely sees in Bang Chan any physical or even verbal coercion. (The rare use of whipping, noted above, is to punish transgression, not to implement action.) Other than in horseplay, children do not push each other around; in my twenty-two months in Thailand, I saw not one case of young children in a serious fight, despite the fact that I looked for it. Very rare indeed is the parent who uses force or the threat of force on his child; there is no Siamese equivalent to the American intimidation, "You had better do that or else. . . ." In general, Bang Chaners proceed on the simple assumption that if people, including children, do not do what you ask them, they have good—and more important, private—reasons for responding that way; there is no need for, or interest in, self-justification. The major means of inducing recalcitrants to conform to your wishes is to cajole, wheedle, and flatter them (see particularly the responses to the Sentence Completion items, *"The best way to treat a subordinate is . . ."*; *"The worst way to treat a subordinate is . . ."* in chapter V). A less conscious but more frequently practiced alternative is simply to withdraw support: the parent who turns his back on the child and walks out (particularly evident in our TAT stories),[15] the older sibling who refuses to take his younger ones with him when there is entertainment to be seen, and the like. It must be noted, however, that social disengagement, although frequently utilized, does not always work; often the individual who is left suspended merely accepts the fact and continues about his business. The major point to be recognized is that villagers do not use forms of direct, blatant coercion on others. If soft words or the withdrawal of love will not move them, then their decision, freely determined, must be respected.

Love and affection within the family appear primarily in two forms. Their most typical expression is shown through the gifts, favors, and services people do for each other. The degree of affection that individuals feel toward one another is in fact explicitly measured in these terms. Thus, a father says that of all his daughters, the one who has given him the greatest pleasure is "the one who sells things . . . When she gets money,

[14] In qualification, however, it must be noted that all Bang Chaners are extremely sensitive to social cues—partially as a consequence of having to balance off their individualistic propensities against the demands of the authority system—and here the children ignore their parents only because the latter have indicated by their very halfheartedness that they do not care. The children can, and do, quickly hop to it on the slightest indication of parental seriousness: a stern look, for example. My point, however, is that such looks are comparatively rare.

[15] In another paper, Hanks and Hanks (1963) make the same observation on the basis of behavioral materials.

4:Phillips E-4,5 (1956-1957) 1966
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were at first a series of unrelated incidents—that is, the possible tenuousness of the links between parent and child first came to my attention with the occasional, but wholly unselfconscious, reports from informants on what to my Western ears seemed like rather turbulent childhoods: their frequent movement from family to family while they were still children and their own care, as adults, of friends' or relatives' children. (This suspicion was reinforced and partially verified later while recording life histories). Later it was noticed that, in sharp contrast to the West, villagers tend to be less concerned about the illness of children than the illness of adults; informants with whom this observation was discussed said either that they had not noticed or explained it by saying that since children recover so quickly from sickness there is less need to worry about them. Finally and perhaps most important, it became clear that the request of the villager who stopped me and asked me to take and rear her child was by no means idiosyncratic; the request was made on four separate occasions by different individuals, both within and without Bang Chan. The intent of these requests were difficult to ascertain. Since the requests tended to come up rather suddenly, in the presence of the child, and were always accompanied by laughter, they may well have been said in "jest" or as a threat to the child. On a few occasions the parent took pains to be sure the child understood what was being said, in which case the child responded with screaming. Also, Europeans have traditionally been used as bogey men in the disciplining of children. (I myself have occasionally been addressed as a malevolent spirit by youngsters.) On the other hand, because children of poor families have been known to be given to individuals of high status, and because Occidentals are automatically assigned such status, it is not altogether unlikely that the parent was sounding me out as a potential patron of the child.

The problem with all the above, however, is that it was unknown to what extent they represented typical or deviant attitudes and responses. The Sentence Completion item, *"We want to give our child to him because . . ."* was selected for use in the SCT administered to a larger, representative sample of villagers because, being an extreme phrasing of these attitudes, it might shed light on the villagers' general readiness to accept them as well as their justifications for them. Of the fifty-six informants who responded to the item, 79 percent accepted the premise and 21 percent rejected it, *i.e.*, "I do not want to give my child to anybody." Of the forty-five individuals who accepted the premise, nineteen said it was good for either the child or the parent, *i.e.*, "that person was good, and he wanted that person to teach his child to be good"; "I would get some money by giving it away"; "I could not stand the child anymore." And eighteen said it was justifiable, *i.e.*, "because of poverty"; "I did not have the means to rear the child."

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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243 seedlings; hauling heavy loads; fishing by throwing net
462 and by spearing; setting up and starting the windmill; starting the engine; simple carpentry work; most parts of house construction except the most technical parts like leveling and planning where the "professional" carpenters are often called in for advice; simple repairing of tools and equipment; guarding of the buffaloes and irrigation equipment left in the field when somebody must stay overnight at the temporary watch-house.

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• 861
868 In order to be competent for these various farm jobs, the young were gradually trained, starting at a rather early age of 5-7 years. At the beginning they were not forced, but allowed to participate in some simple farm work like light hauling and removal of weeds which have been turned over by harrowing. Mild pressure is applied when they grow older to the age of 8-12, and they are expected to participate in more complex and heavier jobs. More and more discipline is observed with the progress of the age of the young. The outline of training schedule which we have tried to reconstruct in collaboration with some elderly Bangchan informants is given below.

Age	Method	Kinds of Farm Work
5- 7	Not forced, but allowed or induced to work if they want to.	Light hauling, removal of weeds which have been turned over by harrowing.
8-12	Mild pressure.	Light hauling, removal of weeds which have been turned over by harrowing, some household work, and help in the kitchen (girls only).

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Age	Method	Kinds of Farm Work
13-14	Moderate pressure.	Hauling, weeding, buffalo tending, transplanting, chicken feeding, fishing, household work.
15-16	High pressure.	All kinds of farm work. Harrowing, harvesting, and uprooting (boys only) are started at this age.

By the time the young are 16 years old, they are already reliable farm hands, although they are still not considered competent enough to participate in the cooperative work to which only the best family workers are expected to be sent. By the time they reach 18 years of age, all males and females should be well trained in all kinds of farm work.

According to the Primary Education Law, parents are responsible for sending their children to school at the age of eight. These children are to remain in school until they are over fourteen years old, or until they have passed Pratom IV.[2] Since school hours start at nine and last until three in the afternoon, children of school age are still able to participate in the farm work before or after school hours. Moreover, most rural primary schools including the Bangchan Primary School have adjusted their vacation recesses to the periods when rice farm labor is needed most -- from August 16 to September 15 which coincides with transplanting period, and from December 16 to January 15 which coincides with harvesting period. It is during these vacations that the upperclass children are expected to contribute their

2. Primary education is divided into four academic years -- Pratom I, II, III, and IV.

846 [989] Seven days after the end of the fire period, Dūan sent a message to the mō to look in his book as to what direction from the house she should bury the phlai, the bamboo knife, and the pot with the now dried placenta and cord. She already knew some of the procedure: burying should take place on a Monday or a Friday; south was right during the first three months of the lunar calendar, November, December, January; and the full moon of the twelfth month (October) was especially good, for the moon waned thereafter. Chāi had been born in October, so north was right for him, but for a girl it would have been east. Song or Lek or anyone could bury the pot, but most mothers did it themselves. If it were buried in the wrong direction, the baby would die, and if not under a tree, he would leave them and their home, and roam. The instructions came. With the things in her hand, she walked toward a big jackfruit tree. Beside it was a sakāe. Either was good, so she chose the sakāe which, being nearer the house, might strengthen by that much the roots that would keep her boy at home. After burying the pot and all, she returned directly to the house, remembering to pick, as she came, a fruit, a vegetable, a leaf, and then a piece of wood, all useful things. In the house she added them to the usual household stores. By doing so, and by using them up shortly, she ensured that her new son would be a good worker, who on returning home would always bring something to add to the requirements and wealth of the household. Once buried, the placenta, "like ashes," was ignored and the spot forgotten.

846 262 [461] [753] [757] 862 Within a month after childbirth, Dūan was back at farm work, even to the back-straining pounding of rice in the big mortar. For three months she avoided fruits, particularly guava and jackfruit. Then, since the baby was thin, she gave up vegetables, especially gourds, corn, and the green plants that grew in the canal. One day, because she carelessly ate some salted field crabs, the baby got thrush on its tongue. They cured him by smearing the milky juice of a peel of klūai nam banana on the cloth sheet covering his cushion, then wiping this on his tongue (cf. Anuman Rajadhon 1961:153). So the year passed, and then another. Not long after his third birthday, Dūan realized she was pregnant again, so took steps to wean him. She painted her nipples with "black medicine" (yā dam), a bitter and hot tasting ointment made from the boraphed rhizome (McF; 474). Then she sent the child over to her mother's older sister's house for four nights. To make quite sure, she followed an old ritual way, too. She boiled an egg hard and peeled it. Holding the egg behind her back, she turned her face away from her son, and handed it to him behind her so that she could not see his face. "Henceforth, you shall not nurse any more," she said. Without looking at him, she walked

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away from him straight out the door. Thus the child was successfully weaned. Duan would have "pitied" him too much to wean him so soon had a new baby not been on the way.

Fish, fresh, dried, or salted, depending on the family fare, was a regular part of their diet (Tables 9, 10).[1] One had egg daily, and 10, frequently; but for more than half of them egg, as well as meat or poultry, was an occasional item of diet. All were fed (2)kha-(5)nom, and almost half had something in this class of foods daily. Only three had green or other vegetables daily and 5 never ate them. Bananas of the (4)nam-(4)waa variety were eaten by all, but only one had banana daily while more than half had them only occasionally. Four were sometimes given bananas other than (4)nam-(4)waa, the variety which was considered safe for infants and invalids. Two had never had other fruit, but most children of this age were occasionally given other seasonal fruit. The variety of foods other than milk given to these children did not appear to depend on whether or not they had been weaned (Tables 5 - 10).

Weaning.

Some of the children in this series had been weaned before our observations were started, and 19 had not been weaned when last visited. For 30 children the period of observation included weaning (Table 11), and in most cases enough records were obtained so that the effect, if any, of weaning on the weight curve could be ascertained.

Table 11. Age at Weaning for 37 Babies and Number for Whom Weight Records Before and After Weaning were Obtained, Bang Chan, 1952-54.

Approximate Age At Weaning	Number of Babies	
	Total	Weighed Before And After Weaning
(months)[1]		
5	1	0
9	1	1
11	1	1
12	8	4
13 - 14	5	5
16 - 17	2	2
18 - 19	8	7
20 - 22	7	6
25	2	2
28	1	1
36	1	1
Total	37	30

1. Because of the method of choosing children for study, the majority of those observed were under two years of age. We have no basis for judging what proportion of children in Bang Chan were breast fed beyond two years of age.

862 In Bang Chan infants less than a year old were seldom weaned. Of 3 such cases we encountered, the mother of one was ill with tuberculosis, and the other two mothers were again pregnant. Common answers to the question, "When should a baby be weaned?", were: "When it is a year old", or "At 1 1/2 years", or "When the mother is pregnant again." Mothers commonly nursed one infant until 3 to 7 months pregnant with the next. More than half of the children who were nursed longer than 18 months had no younger sibling during the period of this study.

Of 32 mothers who described the weaning procedure, 13 painted the nipples with boraphed or other bitter substance (lime or aloe), but an equal number said they did nothing. Six mothers gave other food instead of breast milk. In 4 cases cow's milk[1] was given; in one, bananas and (2)kha-(5)nom; and in one instance the food substitute was not specified.

Weaning in Bang Chan usually meant the end of milk feeding, but 5 babies in this series were given cow's milk feedings after weaning. These included the infant who was weaned at 5 months because of the mother's illness and two others who were weaned because of a pregnancy. The child who had been given cow's milk when the mother was away vending continued to have cow's milk at night, after weaning.

Beliefs About Foods for Babies.

853 855 242 Foods "Good For" Or "Not Good For" Babies. - In addition to asking what foods were given the baby, we asked mothers (or other informants) what foods they considered "good for" or "not good for" the baby. Informants were not prompted by asking about specific foods. The most usual answer was that the informant did not know or did not consider any food either especially suitable or unsuitable. Only 6 informants mentioned foods considered good for the baby (Table 12).[2] One of these named 3 such foods: egg, fish, and vegetables.

A larger number of informants reported that one or more foods were not good for a baby, but in a majority of instances (30 of 50 replies) the informant did not mention any food in this category. In all, 15 foods and 2 characteristics of foods

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1. No fresh milk of any kind was available in Bang Chan. Water buffaloes were ordinarily not bred in the village, and use of buffalo milk was unheard of. Among the light refreshments which could be bought at village stores, however, were coffee with condensed milk and diluted canned milk. Storekeepers stocked imported canned and dried milk including some brands designed for infant feeding. Directions for use were not in Thai, however, and the preparations actually fed to infants were often diluted more than recommended.

2 [see p. 26 - Hunlyet]

262 843 Reasons were seldom advanced for considering certain foods unsuitable for mothers or children. During pregnancy the hot-tasting foods, i.e. those made with chili, were said by one 262 informant to injure the baby's complexion. When asked at what 855 age a child could have adult food, mothers might say at one or 853 two years but often specified, without giving a reason, that they could have anything but the "hot-tasting" foods (foods seasoned with chili). Two mothers said the child could have "hot tastes" at one year, whereas one said not until the child was 3 years old. A majority did not specifically mention hot tasting foods either to include or to exclude them.

853 A reason given for omitting jackfruit from the diet during lactation was that it would cause diarrhea in the baby. One informant said that if a mother nursing a young baby 1 or 2 months old ate fresh vegetables, the baby would have diarrhea. Some informants said the "fragrant banana", (3)kluaj (5)hauaum[1], caused constipation in infants, others that it caused diarrhea, whether eaten directly by the infant or by the mother.

753 The belief that eggs would cause dental caries and should 262 therefore be omitted from children's diets was expressed by the 853 mother in a poorly nourished family of low economic status.
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862 Opinions varied as to when children could be given "adult food". This was often, but not always, the age considered appropriate for weaning. As the question was worded it apparently implied that the child "could eat food as prepared for adults in the family" and did not necessarily exclude breast feeding, since children who "could have adult food" might still be nursing. The age at which a child could have adult food was sometimes related to stage of maturity as "when he can sit", "when he has teeth", or "when he can say (1)plaa (fish)".

262 Traditional and Modern Concepts of Rice Versus "With-Rice" in the Diet. - Rice is not only the basis of the adult diet in Thailand, but it has traditionally been regarded as the strength giving food par excellence. A portion of Chutima's (1939) description of the "old system" of diet follows:

> "Our children and young women are forbidden by ancient doctrine from eating any fair quantity of animal products, but must eat plenty of rice which is considered as the only true food, the others being only appetizers. And to stimulate the palate, large quantities of hot and irritating condiments (chilies and peppers principally) are consumed at every meal.

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1. The type of banana most familiar to people in the U.S.A.

Some vegetables, boiled or raw, are also included, but in small quantities in spite of abundant supply." 262

Note that not only has rice been considered much more important as food than "with-rice"[1], but that the diet was more limited for children and young women than for men. The Food and Drug Division of the Ministry of Public Health in Thailand has been trying to encourage people to eat more "with-rice" and less rice. The few comments we heard in relation to rice versus "with-rice" illustrate both the old and the new ideas. One informant stated that only rice can make children fat and that the "hot tasting" foods help them to eat more rice. Another commented that rice makes children strong, and "with-rice" makes them weak. Another, a mother of seven children, said that if babies were given too much "with-rice" they would be potbellied. The more modern view was expressed by an informant who said that a certain child ate only rice with fish and was weak. He refused vegetables and banana. One affluent farmer, an elderly man whose orphaned grandchild was being raised on cow's milk[2], expressed the opinion that the ancient belief was based on thrift. He said that thrifty people did not want to spend much on a baby, therefore, they said that if a child ate too much "with-rice" he would be potbellied but thin in the upper part of the body and that eating eggs would cause dental caries. This grandfather said that he believed the truth to be just the opposite, but that good things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice", one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (a fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

Summary of Infant Feeding Practices in Bang Chan with Some Suggestions for Improvement.

To sum up the information obtained on baby feeding in Bang Chan, breast feeding was the rule. Some babies were nursed for two years or longer although about two-thirds of those we observed through the weaning period had been weaned by 18 or 19 months of age. Aside from honey which was given with medicine or hot water to newborn babies for a few days only, crushed banana of the (4)nam-(4)waa variety was usually the earliest dietary supplement. By 3 months of age about half the infants were being given banana, sometimes crushed with rice. Between 853 [862]

1. In Thai the general term meaning "to eat" is translated literally "to eat rice." Food items are divided into two classes: rice and "with-rice." [A2]

2. See Footnote, page 25.

keep out of danger, they had more freedom. At this time their caloric needs may have increased more rapidly than did their caloric intake. To the student of nutrition, inadequate intake of essential nutrients seems likely to be of importance when children fail to gain.

In some areas growth failure is common at weaning, but this did not seem to be a major factor in Bang Chan. Weaning before one year of age was uncommon (Table 11, p. 24), yet growth failure occurred in many infants between 6 and 12 months.

Observations on the weight gain of 30 children whom we weighed both before and after weaning are summarized in Table 18. Four children lost or did not gain weight between the weighing before weaning and the one afterward (code numbers 13, 23, 35, and 56), while 3 others, who had been weaned shortly before a weighing, did not gain between the next two weighings (code numbers 22, 33, and 37). Thus only 7 of 30 children lost or failed to gain weight at or near the time of weaning (Table 18, I).

Weight curves of 4 children could not be interpreted in relation to weaning. Two of these (code numbers 15 and 44) were weaned just before their last weighing; for two others (code numbers 18 and 51) the intervals between weighings were long (Table 18, II). Only 5 individuals gained at each successive observation (Table 18, III), whereas 18, a majority, failed to gain at some period other than at weaning (Table 18, III and individuals designated *).

Of 19 other children who had not been weaned by the time the study ended, 10 lost weight or failed to gain at some period during the study.[1]

Since Thorangkul (1957) noted a clear association with season of weight loss or failure to gain in Bang Chan school children, the weight records of infants and young children were inspected to see if such an association occurred at younger ages also. The number of children weighed during each month and the number who had lost weight or had failed to gain since the previous weighing were counted after omitting observations on children under 6 months of age, as well as those whose most recent weighing had been obtained more than 4 months previously. Little or no indication of relation of season to weight loss or failure to gain was apparent. At the weighings in April, July, August, and September, 1953, a smaller proportion of the children had lost weight or failed to gain; but this is not

1. Of the 22 other children in the study, 20 had been breast fed but were weaned before the study began, and 2 were receiving cow's milk because of death or illness of their mothers.

[TEXT CONTINUED ON PAGE 44]

[See p 44 - Analysis]

Table 18. Observations on Weight Gain for Thirty Children Weighed Before and After Weaning.

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Sex and Code No.	Age at Observations	Age at Weaning	No. of Weighings: Before Weaning	No. of Weighings: After Weaning	Comments on Weight
	months	months			
	I. INDIVIDUALS WHO LOST OR FAILED TO GAIN WEIGHT AT OR NEAR THE TIME OF WEANING.				
F 13	0-15	12/	6	1	L 12-15[1]
M 23	2-19	14	3	2	NG 13-16
M 35	4-21	17	5	2	L 15-18
*M 56	20-37	25/	3	4	L25-28; L 31-37
*M 22	2-18	15	6	1	L 9-12; NG 15-18
M 33	4-22	12	3	4	L 12-16
*M 37	9-25	19	4	3	L 9-10½; NG 20-22; L 22-25
	II. INDIVIDUALS WHOSE WEIGHT CURVES COULD NOT BE INTERPRETED IN RELATION TO WEANING.				
F 15	0-17	16	6	1	NG 14-17
M 18	0-18	12/	3	1	Not weighed between 5-18 months.
*F 44	16-29	28	5	1	L 16-17; NG 21-24; marked gain 27-29
F 51	18-35	18/	1	3	Not weighed 18-29
	III. INDIVIDUALS WHO GAINED AT EACH SUCCESSIVE OBSERVATION.				
F 10	0-16	9	4	2	
M 19	1-17	13	5	2	
M 30	3-19	14	5	2	
M 42	11-27	19	3	3	
M 45	11-28	20	3	2	

* Individuals other than those in group IV, who lost or failed to gain weight at some period other than at weaning.

Table 18, con't.

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Sex and Code No.	Age at Observations	Age at Weaning	No. of Weighings: Before Weaning	No. of Weighings: After Weaning	Comments on Weight
	months	months			
	IV. INDIVIDUALS WHO FAILED TO GAIN AT SOME PERIOD OTHER THAN AT WEANING.				
M 4	0-15	10	5	2	NG 6-9
M 12	0-15	12/	6	1	NG 9-12; weaned right after 6th measurement; gain thereafter.
M 28	3-18	13	5	2	NG 5-6½ and 9-12
M 29	5-20	14/	3	3	L 10-14
F 31	3-21	18/	6	1	NG 6-9; L 12-15
M 32	4-21	18/	6	1	L 9-11
F 39	9-27	22	5	2	L 9½-12; NG 24-27
M 41	11-27	20/	5	2	NG 12-17
M 43	11-28	22	4	2	NG 18-21
F 46	12-22	18	2	2	NG 12-16; L 19-22
F 48	15-30	19	2	4	L 21-25
M 53	19-36	20	1	6	L 28-31
F 61	24-40	36	4	2	NG 24-27; NG 37-40
M 64	25-42	25	1	4	Weaned immediately after first weighing; large gain between 25-30 months; NG 39-42

1. L = Loss NG = No Gain Figures represent age in months.

clear evidence of a seasonal effect. If weight gain in Thai infants is related to season, this could be better defined by weighing groups of children at monthly intervals and determining when or if changes in rate of gain occur. 145

Although our records were not made for the purpose of correlating food intake with weight gain, and no quantitative information was obtained on the diets of mothers and babies, we attempted to see if any obvious relation existed between the variety of food eaten by the mother or the child and the child's growth. For this purpose, case studies were made of 7 infants whose records from birth onward were fairly complete. The age at last observation was from about 14 to 18 months. Four of these children had gained at each weighing and weighed more at one year of age than the average infant observed by Dr. Montri (1939). Three were chosen because they had lost weight or failed to gain at some time during the period of observation and weighed less at one year of age than the average infant observed by Dr. Montri. Infants of both sexes were included in each group. No illnesses or abnormalities were recorded in the clinical histories of any of these babies or their mothers. No evidence was obtained from the qualitative food records as to why some infants gained consistently and at a fairly "normal" rate, whereas others gained relatively slowly and failed to gain or lost weight at times (Smith, 1958). 145 262 [125]

Quantitative food records might have provided evidence on this point but our observations were inadequate for this purpose. Such quantitative records should include estimations of the amount of mother's milk obtained by the infants, based on the baby's weight before and after nursing, as well as records of supplementary food given. Analysis of the mother's milk, particularly for the content of the water soluble vitamins which are influenced by the mother's diet, should also help to shed light on the cause or causes of the common failure to gain weight among older infants and small children in Bang Chan. No cases of beriberi occurred among the infants we observed, but in two instances siblings had died of infantile beriberi. [164] [165]

Evidence of protein malnutrition has not been commonly recognized in rice eating areas, but one must consider the possibility that these children may be in a state analagous to pre-kwashiorkor. Development of the clinically recognizable protein deficiency disease may be forestalled when the child learned to feed himself and eats more liberally of rice with some fish and egg. Of the 54 children with kwashiorkor observed by Netrasiri and Netrasiri (1955) in Bangkok, many were weaned earlier than was usual in Bang Chan. Most of them, however, had been breast fed, and 4 were still being breast fed when the disease was diagnosed. 121 [162] [171]

581 It was not felt necessary to marry. Because of the strong
589 economic position of women, a few spinsters had their own homes, farmed their own lands, enlisting nephews and nieces to help, or hiring as needed, and entered fully into the social life of the area. Others lived with relatives and assisted in the maintenance of a larger household unit. Some men, too, never married.
[593] One group of grown siblings of both sexes stated they were "too happy together to marry."

836 Pre-marital chastity was more or less observed. If a girl
848 became pregnant before marriage, her parents brought pressure, usually successful, on the boy to marry her. The occasional illegitimate child was raised without stigma in the girl's family, though problems arose during pregnancy and delivery (cf. "cone of wood" below). The mother later found a husband. One father was angered because he felt his daughter's pregnancy wrecked her chances for a marriage of prestige. He was conspicuous for his social aspirations towards city ways.

• 864 Information on human sexual matters was gathered by the
831 young sometimes by accidental observation of parents and others, through hints from hearing cursing, and by conversations with grandparents, older siblings, and friends of the same sex. Men joked on sex matters at the all-male rice-uprooting parties. Being antithetic to the ascetic prescriptions of Buddhism, sex talk was highly charged. Sex was never discussed in mixed company.

Residence

592 The nuclear family of husband, wife, and unmarried children was the primary social and productive unit, but other resident kinship units larger and smaller also occurred. After marriage,
[591] the couple usually lived for a time in the house of the parents of one spouse or the other; then, as soon as they could afford it, set up housekeeping in their own house. Of a sample of 96 families in Bang Chan, 30 set up independent households at once after marriage, 16 after one year, and the rest, a few per year, on throughout 10 years; 15 of the families never had a house of their own but lived with other relatives (Janlekha:37). Of 298 families, 59.4 per cent lived independently as a nuclear family, while 34.9 per cent lived with other relatives in the house. (The remaining were single persons living alone, or priests at the temple in the "ecclesiastical family.") The average size of the households (not necessarily the nuclear families) was 5.7 persons, with a range of 1 to 14, the median
361 being 6 (ibid. 28-29). The house of a new couple was usually built adjacent to parents or relatives, and certainly within calling distance or sight of some other household. Social
621 patterns of cooperative work, borrowing, and visiting kept adjacent households, whether kin, co-religionists or not, in

4:Phillips E-4,5 (1956-1957) 1966
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the parents often do not really care and children can pretty much get away with doing what they want.[14]

With regard to other expressions of the recognition of individual dignity, one rarely sees in Bang Chan any physical or even verbal coercion. (The rare use of whipping, noted above, is to punish transgression, not to implement action.) Other than in horseplay, children do not push each other around; in my twenty-two months in Thailand, I saw not one case of young children in a serious fight, despite the fact that I looked for it. Very rare indeed is the parent who uses force or the threat of force on his child; there is no Siamese equivalent to the American intimidation, "You had better do that or else. . . ." In general, Bang Chaners proceed on the simple assumption that if people, including children, do not do what you ask them, they have good—and more important, private—reasons for responding that way; there is no need for, or interest in, self-justification. The major means of inducing recalcitrants to conform to your wishes is to cajole, wheedle, and flatter them (see particularly the responses to the Sentence Completion items, *"The best way to treat a subordinate is . . ."*; *"The worst way to treat a subordinate is . . ."* in chapter V). A less conscious but more frequently practiced alternative is simply to withdraw support: the parent who turns his back on the child and walks out (particularly evident in our TAT stories),[15] the older sibling who refuses to take his younger ones with him when there is entertainment to be seen, and the like. It must be noted, however, that social disengagement, although frequently utilized, does not always work; often the individual who is left suspended merely accepts the fact and continues about his business. The major point to be recognized is that villagers do not use forms of direct, blatant coercion on others. If soft words or the withdrawal of love will not move them, then their decision, freely determined, must be respected.

Love and affection within the family appear primarily in two forms. Their most typical expression is shown through the gifts, favors, and services people do for each other. The degree of affection that individuals feel toward one another is in fact explicitly measured in these terms. Thus, a father says that of all his daughters, the one who has given him the greatest pleasure is "the one who sells things . . . When she gets money,

[14] In qualification, however, it must be noted that all Bang Chaners are extremely sensitive to social cues—partially as a consequence of having to balance off their individualistic propensities against the demands of the authority system—and here the children ignore their parents only because the latter have indicated by their very halfheartedness that they do not care. The children can, and do, quickly hop to it on the slightest indication of parental seriousness: a stern look, for example. My point, however, is that such looks are comparatively rare.

[15] In another paper, Hanks and Hanks (1963) make the same observation on the basis of behavioral materials.

252 462 a woman's" (Sharp et al., 1953, p. 88). For instance, the husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was 252 867 sick or resting after childbirth. The ability of boys as well as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had 252 (Hauck, 1953). Responsibility for food preparation increased 383 with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a 397 daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 554 884 Certain men of eminence, e.g. headmen and elders, would not be asked to cook at all, but as they aged, they might return to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for 252 2 months because his wife had back trouble. Some dishes were 565 cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 861 868 A premium was put on good cooking, and certain women who were noted for their cooking were in great demand for large scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 264 Food was commonly prepared twice a day, in the morning and late afternoon. The meal pattern was the same for breakfast

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114 262 1. Suvarnakich (1950) described the Thai diet in a general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

4:Phillips E-4,5 (1956-1957) 1966
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as do rejected lovers who fear suffering again. Without strong bonds, they develop no sense of guilt for those they injure and stand ultimately responsible only to themselves, individuals among individuals who differ mainly in the amount of influence they wield. Thus Dang [the informant] can make demands of others but feels little obligation toward them. As he left his father and uncle with scarcely a second thought, so others can leave him. Of course, as was indicated by Dang's projective test data, this form of individualism is not entirely without its psychic toll. But on the level of action and conscious decision, the moral for a Thai runs: invest not thy love in a shadow.

The piece by this writer (Phillips, 1959) is essentially an amplification of some of the findings of the above paper and a confirmation, in the life histories of two other informants, of their typicality. The paper was confined to an examination of the development and expression of the needs for dependence and independence in the lives of these villagers. Three major points emerged from the analysis. First, the most common expression of dependence was in the area of subsistence and economics, in the individual's desire to attach himself to others who would give him sustenance in return for services rendered. Over and over again, the informants viewed their relationships with other people, particularly kin, in terms of the others' economic value to themselves. However, this mode of dependence was not so much an overriding compulsion as it was a basic postulate about human relationships: the measure of another person's love was explicitly the degree to which in material terms he served the self. The second point, in contrast to the above, was that marriage was seen as the means by which a person could free himself from the obligations of economic dependence. This freedom has two aspects: freedom from the frustrations caused by others; and freedom to set oneself up as master of one's own household, thus reaping the psychological satisfactions—status, power, and prestige—of having others dependent on oneself. The third and perhaps most striking point concerned the fact that all these informants spent their childhoods being shuttled from one family to another. Although this experience may not have been culturally modal, it occurred with sufficient frequency to be a possibility for every Bang Chan child. It was further suggested that in part such experiences taught villagers at a very early age that they had to fend for themselves, and that the experiences served as psychological prototypes for the sense of fragility of social relationships that is so characteristic of village life.

In contrast to most of the literature cited above, the last two articles are based on data which are products of interviews heavily weighted toward the psychologically expressive. Two of the informants admitted that they told us things that they had never shared with anyone, and the agitation (a

4:Phillips E-4,5 (1956-1957) 1966
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fundamentals of that structure or of the ultimate values upon which it is based. In a very real sense, the educated group is a class with a vested interest. Consequently it is conservative and pragmatic rather than radical and speculative . . .

The closest approximation to a psychological literature resulting from these fundamental intellectual orientations are religious and secular didactic essays, public school texts on morality, self-help or "peace of mind" tracts, and satirical or didactic fiction and poetry. (Mosel 1961 provides an excellent discussion of contemporary Thai poetry.)

Addressed to the reading public at large, these writings do not purport to be concerned with any particular group or class of Thai society: peasants, Bangkokians, Northeasterners, or others. Since they are for the most part written by the educated elite, however, they tend to reflect their authors' interests and standards. To what extent their standards differ from those held by peasants is difficult to determine with precision, although impressionistically it would seem that in psychological questions the educated elite give considerably more attention to the importance of social forms, the desirability of pleasing others, and also reveal a greater sense of compulsiveness, achievement, and social uneasiness than do peasants. Villagers simply seem more relaxed and self-accepting. However, these differences are very much a matter of degree. A Bang Chan child who learns about proper modes of behavior from *Sombad Khoon Phuu Dii*, discussed below, may not have the same compulsion nor experience the same pressures to implement his studies as does the child of the Ministry of Education official who wrote the text. However, he thoroughly understands the teachings, their relevance and importance; knowing them is part of being Thai. A few illustrations will provide some of the flavor of these writings.

One of Thailand's most famous men of letters is M. R. Khukrit Pramoj, a publisher, editor, author, lecturer, and recently, movie actor. Educated in England and a member of the royalty, he is known to most Westerners as a kind of Siamese equivalent of Henry R. Luce, but to most Thai (although to no more than a handful of Bang Chaners, the majority having never even heard his name) he is known for his all-around knowledge of human affairs. His most popular work is *Panhaa Pracamwan*, or *Problems of Everyday Life*, a multi-volumed set of dialogues based on a column he wrote for his own newspaper in which he answers questions from hypothetical individuals who have "written" for advice on problems of ordinary living. These problems concern such matters as how to handle one's jealousy, how to treat those below and above one in the hierarchy, and how to control one's feelings of spleen and anger.

The following excerpt from volume iv of these essays (1952: 337–339) is not only representative of Khukrit's thinking, but bespeaks a

4:Phillips E-4,5 (1956-1957) 1966
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relationships: within the family, usually in terms of the relative ages of people; elsewhere, in terms of age, wealth, power, knowledge, religious or governmental role. Secondly, they are based on the assumption that every individual, regardless of his position in the hierarchy, deserves respect. The first is a respect associated with the proper performance of one's role; the second, a recognition of the essential dignity of every human being.

The role of these respect patterns cannot be emphasized enough. Benedict, in her study (1946) of Thai culture at a distance, referred to the learning of the *waj*, or gesture of obeisance, as "the first teaching the child receives." Although the *waj* is perhaps not the very first social act the child learns, I have seen infants no more than two weeks old being guided by the mother in raising the palms of their little hands to the forehead in expression of deference to superiors. The older infant who can do this on his own almost always receives acknowledgments of approval and delight from the adults in attendance. An older sibling really means it when he says of his relationship with his younger brothers, "when I ask them to do some kind of work, they go and do it. They never disobey, and when there is no disobedience, there is no hatred. . . . Formerly, whenever there was entertainment somewhere I took them with me. My younger siblings love me a lot. . . ." His position in the authority structure assumes the respect of those younger than he, and they willingly grant it for, among other things, he plays his role well as the kindly superior who takes them with him whenever there is entertainment. All the polite little linguistic forms (honorifics, expletives suggesting status and, most important, ordinary kinship terminology with its specification of relative age) as well as kinesthetic forms (lowering the body while passing a seated older person, holding the younger between one's legs and with arms around him in a position of protection) also serve to emphasize the respect that people grant one another because of their differential status. Perhaps the most revealing illustration of the strength of these patterns, at least the authority pattern, was provided by a two-year-old toddler who pointed to the stomach of his pregnant mother and said with pride, "My younger sibling is in there. When he is born he will be *my* responsibility." Little doubt that when the child is born he will give his older brother his due.

With regard to the other respect form, recognizing the dignity of every human being, more than once I have heard parents say that they disliked giving their child a certain medicine "because it offends the baby; he does not like it. It is better not to give it to him than to hurt his feelings." Although I do not doubt that in some instances the parents were annoyed more by the screams of the child than anything else, I am also convinced that for the most part they were respecting his basic individuality and right

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Giggling is very often used in the marketplace when an item must be bargained over. Similarly, a villager who wants to quit working for another will usually preface his request with some giggling, although equally often he will just leave—saying absolutely nothing—and will later send a middleman to collect his wages and make the severance official. The latter alternative is prompted by the desire to avoid *all* awkwardness.

The third major form of the villagers' politeness—that associated with making a good impression on others—has to a certain extent been covered by the materials already presented. Thus, in terms of the actual manifestations, there is really little difference between flattering another person, for example, because it will make him feel good, because it will make getting something out of him much easier, or because it will make one appear much more attractive in his eyes. However, it is clear that the motivations in these three cases are all quite different. It is for this reason that this last category has been introduced. When villagers meet another person whom they regard as significant (and this by no means includes all their contacts) they do put forth considerable effort to make a good impression on him. And being polite—courteous, helpful, flattering—is one of the most suitable means for achieving this effect.

Discussion of this interactive mode would perhaps not be necessary were villagers themselves not so keenly aware of it. Village children are continually and consciously taught, by word and deed, the necessity always to put their best foot forward (cf. the earlier illustrations in *Characteristics of a Good Person*). Bang Chaners assess themselves and others in terms of their capacity to make themselves appealing: both the "good" and the "competent" person is one who can make himself attractive by speaking softly, gently, and if possible, beautifully and cleverly. Often villagers take offense at an individual who refuses to do this because his very refusal suggests that he does not feel respect for others. Again, it should be emphasized that we are talking here about the form of behavior, not the substance or commitment behind it.

What the ultimate psychological roots of this behavior are is unclear. It is apparent—largely because of the great attention given to formal considerations such as manners, proper speech, and the like—that this concern is not prompted primarily by the desire to be loved by others. Love would require a more substantial medium. Gaining the respect and approval of others is clearly an important component of the attitude, but one wonders why a people otherwise so self-loving and self-accepting should need their self-esteem repeatedly validated by others. Perhaps the most important reason behind the villagers' concern with impressing others really has little to do with the others themselves, although obviously at the behavioral level it implicates them—that is, I would suggest that the major factor behind the

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V

Analysis: The SCT's Exploration of Thai Personality[1]

Attitudes Toward Authority

The first area to be dealt with is in a sense the easiest. Thai attitudes toward authority represent what is perhaps the most explicitly expressed and highly ramified area of their social psychological life. The notion of authority—a sense of superordination and subordination—is an intrinsic part of their linguistic structure, it being impossible to address or refer to a person without indicating his social status relative to the self; two-week-old infants are taught to *waj*, or offer the gesture of obeisance to superiors; during elections, villagers say that they are going to vote for the prime minister because "he is our Master. He has been very good and kind to us. He is like our father, and we are like his children"; the entire structure of the family is predicated on a system of superordination and subordination, even to the extent of considering a twin born a few minutes ahead of his sibling the latter's social superior. Examples expressive of this emphasis in the workaday life of the villagers could be cited endlessly.

What is impressive in the data to follow is not only the near unanimity of villagers in responding positively to what are essentially neutral authority situations, but the tendency on the part of a large number to respond positively to the authority situation even when the authority figure is avowedly wrong. Many of their responses also make quite explicit the underlying ethical justifications for the authority system.

The first item, *"When the phuujinjaj told him to do it, he . . . ,"* is a

[1] Words and phrases appearing in parentheses in the responses on the following pages are for purposes of clarification. The few Thai words appearing in the responses are either "complex concepts" or "difficult to translate" terms, and have been retained mainly for those readers familiar with Thai. At the top of the table, the English language item that was originally prepared for the villagers appears first; it is followed by the best English translation of the actual Thai item given to informants, including the Thai pronouns that were used. Intra-sample differences (age, sex, religion, economic position), where important, are indicated in the text, not the tables.

462 Besides the work in rice-fields, women dug and cleaned [503] canals and ditches, mounded land, and fished in many ways, the [226] most laborious of which was plunging a heavy basket into the mud to catch burrowing fish. In the household chores, in which men shared to some extent, they carried water, cut and fetched wood, tended livestock, cultivated kitchen gardens, [501] pounded rice in mortars, and cleaned houses. Boats were rowed by paddling or sculled by standing and pushing a single large [354] oar. Cooking was time consuming. The low stoves were on the ground or floor. Since there were no tables or chairs, one [352] squatted two to four hours a day to cut or pound ingredients, [516] stir the curry, or wash the dishes.

The training of boys and girls for farm and household 868 work was thorough and started early. By 18 years of age, 561 boys and girls with few exceptions were experienced in every 461 step of farming. Janlekha's chart (1955:82) indicates the progression (parenthetical additions are the present author's):

Age	Method	Kinds of farm work
5 - 7	not forced, but allowed or induced to work if they want to	light hauling, removal of weeds which have been turned over by harrowing
8 - 12	mild pressure	light hauling, removal of weeds which have been turned over by harrowing; some household work and help in the kitchen - girls only - (sometimes boys)
13 - 14	moderate pressure	hauling, weeding, buffalo-tending, transplanting, chicken-feeding, fishing, household work (boys and girls)
15 - 16	high pressure	all kinds of farm work, harrowing, harvesting, and uprooting - boys only - are started at this age.

872 Children worked in the fields before and after school
461 which, compulsory for all children aged eight to fourteen, was held from 9 a.m. to 3 p.m. five and one-half days a week. Vacations coincided with peak work seasons so children could help in the fields or at home.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 seedlings; hauling heavy loads; fishing by throwing net
462 and by spearing; setting up and starting the windmill; starting the engine; simple carpentry work; most parts of house construction except the most technical parts like leveling and planning where the "professional" carpenters are often called in for advice; simple repairing of tools and equipment; guarding of the buffaloes and irrigation equipment left in the field when somebody must stay overnight at the temporary watch-house.

*243 In order to be competent for these various farm jobs,
861 the young were gradually trained, starting at a rather early
* 868 age of 5-7 years. At the beginning they were not forced, but allowed to participate in some simple farm work like light hauling and removal of weeds which have been turned over by harrowing. Mild pressure is applied when they grow older to the age of 8-12, and they are expected to participate in more complex and heavier jobs. More and more discipline is observed with the progress of the age of the young. The outline of training schedule which we have tried to reconstruct in collaboration with some elderly Bangchan informants is given below.

Age	Method	Kinds of Farm Work
5- 7	Not forced, but allowed or induced to work if they want to.	Light hauling, removal of weeds which have been turned over by harrowing.
8-12	Mild pressure.	Light hauling, removal of weeds which have been turned over by harrowing, some household work, and help in the kitchen (girls only).

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Age	Method	Kinds of Farm Work
13-14	Moderate pressure.	Hauling, weeding, buffalo tending, transplanting, chicken feeding, fishing, household work.
15-16	High pressure.	All kinds of farm work. Harrowing, harvesting, and uprooting (boys only) are started at this age.

By the time the young are 16 years old, they are already reliable farm hands, although they are still not considered competent enough to participate in the cooperative work to which only the best family workers are expected to be sent. By the time they reach 18 years of age, all males and females should be well trained in all kinds of farm work.

According to the Primary Education Law, parents are responsible for sending their children to school at the age of eight. These children are to remain in school until they are over fourteen years old, or until they have passed Pratom IV.[2] Since school hours start at nine and last until three in the afternoon, children of school age are still able to participate in the farm work before or after school hours. Moreover, most rural primary schools including the Bangchan Primary School have adjusted their vacation recesses to the periods when rice farm labor is needed most -- from August 16 to September 15 which coincides with transplanting period, and from December 16 to January 15 which coincides with harvesting period. It is during these vacations that the upperclass children are expected to contribute their

2. Primary education is divided into four academic years -- Pratom I, II, III, and IV.

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369 have an opportunity for secondary education although some
87 of them have adequate financial support. This has a tre-
[464] mendous effect on job opportunity for farm people, for most firms and Government departments set Matyom VIII as minimum standard for even the lowest clerical job.

*243 While farm children have a poor academic education,
369 they are compensated by a high degree of farm training which
464 includes not only the technique of rice growing but also the
868 use of basic equipment for manual labor and simple construction work. It has been observed that farmers are better qualified to do manual work than urban people. This aptitude, however, does not to any considerable extent minimize the farmer's disadvantage in making a living other than by farming. In the first place, compensation for manual work is generally lower than the pay for clerical jobs. Second, there are in the city more job opportunities for clerical work and other white-collar types than there are for manual work. Third, the white-collar jobs tend to be more or less permanent while the manual jobs tend to be somewhat seasonal, and the manual worker seldom has a "position" in the firm as does the white-collar worker.

To the extent that these three conditions remain true, it may be assumed that the type of academic education and practical training being given to Bangchan children will serve only to confine them to farming life rather than to give them opportunity for alternative occupations.

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243 857 872 labor to the family farm work. It is also the time for children of families of other occupation to earn their small lampai from piece-working.

872 871 We have devoted a few pages to this topic of training the young for farm work because we think it is relevant to the study of the village economy. While the standard of teaching is generally poor in most primary schools in Thailand and consequently farm children receive rather poor academic education, it has been observed that their training in the farm work given by the family is exceedingly thorough. With the exception of a few bright children who are able to finish Pratom IV in four years and thus are able to leave the primary school at the age of 12, most farm children are kept in the school until the age of 14 because they usually fail in the examination at the end of each academic year and have to repeat once, twice, and even thrice. A good many are obliged to leave school at the compulsory age of 14 without passing Pratom IV. Urban children, on the other hand, usually pass Pratom IV at the age of 10 and are able to proceed on their secondary education at the standard age of 11 when they start their Matyom I. This is because they went to school at an early age and had better teachers at the Pratom level. Thus, farm children usually lag behind urban children in academic achievement. The situation is aggravated by the city secondary schools' practice of using students' achievement by age as the basis for admission decision. As a result, farm children do not

369 87

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To the extent that these three conditions remain true, it may be assumed that the type of academic education and practical training being given to Bangchan children will serve only to confine them to farming life rather than to give them opportunity for alternative occupations.

What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the families, living in tiny separate cottages.[1] Usually with inadequate or no land, they earned an irregular income by hiring themselves out for farm or other work. At the other extreme, in a hamlet-like cluster of dwellings, lived a closely affiliated group of kin. A senior couple more or less headed the married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or go to the store. Cooking was simplified, or food might be prepared once a day only. Respite came only when the first born was able to help oversee a younger child, sometimes staying home from school to do so. Where the adult cooperative group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

Plowing could be done by a man and wife, but for both transplanting and harvesting which had to be done within a few days, large groups were necessary. Two patterns of auxiliary group labor prevailed: reciprocal cooperative work, and hiring of labor.

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1. Janlekha, 1955, categorized families as 5% "one-person," 59% nuclear, 8% limited extended (including one or more parents of a spouse), 27% extended (including dependent married couples or other collateral relatives), and the temple residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

22 132 241 512 871 462 883 The year starts with May, the beginning of the rice-year. At this time the rains began to soften the parched ground, and the heat slackened. School re-opened. Farmers turned to plowing, harrowing, raising the seedlings. Both sexes worked about equally in field labor, boys from 14 and girls from about 15 years of age performing tasks according to skill and strength. Everyone was in the field at dawn. The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

22 132 501 443 24 With the rains, the canals had filled, so that by June buyers with big rice boats could return. The few farmers who could afford to hold onto a portion of their last year's crop sold it for a better price at this time. Vegetables and fruits which had died in the long drought were replaced, and trees were planted.

24 22 132 In July the heavy transplanting season began. Because of cooperative work habits or hiring out, people worked solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly controllable. Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School vacation was scheduled at this time so both teachers and children could help. Older children might work in the fields, while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ←WET→							←COOL→		←HOT→		
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	---→ heavy		moderate	←---heavy---→		←------light------→			←-------negligible--------			
Canals	rising			high		(floods)			lowering fast			low,dry
Cultivation of Rice	plowing-------→ seedbed grown				growing	early var. mature						
	TRANSPLANTING					←---------HARVEST--------→						
School	vacation							vacation			vacation	
Cash available Source	cash in hand---------- rice					←-----cash shortage------→					cash in hand-- main rice sale	
					cash jobs----------→							
Fruit;vegetables	--→ ←-new planting-→								←------annuals die------			
Fish: Supplies	ponds drained-→								←-----ponds drained-------			
Maturation		←-------many varieties----------→							←---best varieties---→			
Preserving	←----much-----→		←----------moderate----------→						←----------most-------→			
Ceremonies	ceremonies-------→			←------Buddhist Lent------→							←--ceremonies---	
Dietary survey	--→	←-----Round I------→			←-------Round II-------→			←----Round III----→			←--Round IV-	

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 18°F (10°C) in April and 22°F (12°C) in January.

2: Hauck et al. D.E-5 (1953-1954) 1958 AO7 Central Thai AO7 Bang Chan

There was an important psychological difference between the two work seasons. At planting time, people were anxious; at harvest they were happy. People saw cash just ahead, for the crop was now safe. Each host of a cooperative work party gave at least one big convivial feast, the best he could provide and even the hired laborers got a round of liquor. People joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

When the crop was in, the people rested, fished, and began to prepare for big ceremonies demanding organized work. Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fishponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

Most farmers sold their rice in February. Capital was invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

The land dried up and cracked, rainwater for drinking gave out, and some canals were reduced to mud. Cherished plants were kept alive by watering, but no new planting could be done. Buffalo, which at other seasons were confined and fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another. Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

improvement, (1)ngaan sponsored by them might serve to acquaint a large group with a new practice. Suppose, for example, that addition of premix to rice, and cooking rice without excess water were being promoted. If one of the respected priest-practitioners could be persuaded to introduce those practices at his homage-to-the-teacher rite and give them some publicity, this might help to create a favorable attitude toward the suggested change.

Every change will require continuing education, and a variety of approaches should be used, some of which have been mentioned. If the elementary school teachers were persuaded of the importance of a good diet and improvement in sanitation, and had a sound understanding of the desired changes in practice, they could influence both the oncoming generation, and their neighbors through teaching and example. Continued practical health education for school children should ultimately bear fruit. The value of eating more green leafy vegetables should be taught, and the children could learn about leafy greens available in the village, but not widely used at present. Good foods to bring to school for lunch might be stressed. Hard cooked eggs have already been mentioned. If convenience as well as health value were stressed, this might lead in time to increased consumption of eggs by growing children, and ultimately by adults as well. If a simple school lunch program were organized, either on a cooperative basis or subsidized, the inclusion of peanuts would help to increase both the protein and the thiamine content of the children's diets. Though unfamiliar to many of the children, lightly roasted peanuts were enjoyed as a treat offered at the end of the medical inspection. If teachers could influence vendors to prepare and sell more of the snacks which would be desirable additions to the children's food, this would be a gain. Fruit could be stressed for school lunch. At any time of year, a banana a day for each child would probably be possible, and bananas should be emphasized even though their nutritive value is not so outstanding as that of many other fruits. Values of other fruit in season should be taught. The school garden could be used to demonstrate how to grow some of the more nutritious vegetables. Awards for those with the best home gardens could be used to stimulate improvement. Similarly, recognition for improvement in home sanitation might be useful.

In adult discussion groups, both men and women should learn about good food and health practices. The slack period between transplanting and harvest, when people can get about easily by boat, would be the best time for such meetings. Since many adults in Bang Chan were illiterate or did not read with ease, very simple teaching material is needed. Association between good food and health must be built up gradually. Appeal to economic and other motives may be used where such motives reinforce the desired ends. The extension method of adult education, just in its beginnings in Thailand,

offers a means of teaching local leaders who in turn could [87] teach neighborhood groups.

Where alternative solutions are being considered, a well designed experimental program would help to decide which would be more acceptable. Teachers and advanced home economic students at nearby Kasetsart University might plan and execute such an experiment on a small scale. Thus, after learning in the laboratory how to include rice polishings in some common "with-rice" dishes, this might be taught to people in one village. In another, addition of premix to milled rice at home, and cooking rice without excess water, could be taught. In both, the health values of undermilled rice could be stressed and the need to keep or to restore these if white rice is used. A followup should be made to see how many have tried, and how many have adopted the proposed change. Experience in pilot projects under the Thailand-UNESCO Fundamental Education Project (TUFEC) should provide clues as to methods likely to be successful. In Bang Chan, where frank deficiency disease is uncommon, improvements in health and nutriture may not seem spectacular. Improving nutrition, which implies changing attitudes, food habits, agricultural and sanitary practices, must be seen as a long term goal, requiring continuing education.

4:Phillips E-4,5 (1956-1957) 1966
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from Bang Chan, the figure is as high as 85 percent (Dobby 1950). In these terms, therefore, it is best to view the incidence of land tenancy in Bang Chan as largely a function of local, historical circumstances.

A final word should be said about Bang Chan's proximity and accessibility to Bangkok—the cornucopia of so much that is new, interesting, and desirable (if somewhat equivocally) to most Siamese peasants. It is clear that Bang Chan's closeness to the capital creates certain conditions that would not be present in a community situated, for example, 200 kilometers, instead of 31 kilometers, from the nation's largest city. Simply on practical grounds, this nearness to the city permits the villagers to take advantage of opportunities—economic, recreational, and religious—which those living in distant provinces can obtain only after serious consideration of the financial and psychological expenses involved: "Do I have shoes to wear in the city? Do they treat people from the provinces well? With whom will I stay? Do I have the train fare?" A Bang Chaner who visits the capital does not have to make such financial or emotional commitments, since it is only a one hour, three and one-half baht (seventeen and one-half cents) bus ride back home, although many do share with their up-country cousins the peasant's apprehensions about city manners.

The attractions of Bangkok take several forms: off-season jobs, medical care, kinship ties, special schools, great market places, famed monasteries or fairs, and the many other places where one can go to have fun. A survey conducted in Bang Chan during 1955 (Goldsen and Ralis 1957) indicates that 62 percent of all household heads in the village visited Bangkok more than twice during the year for just such purposes. (Twenty-one percent had not gone to Bangkok at all, and 23 percent had gone more than ten times.) Many villagers, particularly younger men, attracted by the promise of regular wages, lighter work, and the bright lights of the city, leave Bang Chan with the hope that they will never have to return, although of course many do. The Goldsen-Ralis survey reveals that 26 percent of their respondents had lived in Bangkok for a year or more, although for most this was in fulfillment of military service.

Living in Bangkok is not something that is desired in and of itself. Bang Chaners are keenly aware of the disadvantages of city living—particularly its great expense and insecurity—and are impressed only by those individuals who have made a success out of their urban sojourn. Most would agree that a Bangkok coolie, for all his exposure to the wonders of the modern world, lives a considerably less attractive life than they do.

The frequent transit between Bang Chan and Bangkok,[8] however,

[8] Of less practical consequence than their direct personal experiences and word-of-mouth contacts, but not to be ignored, are the villagers' contacts with Bangkok by way of radio, newspapers, books, and of course by way of what their children bring

4:Phillips E-4,5 (1956-1957) 1966
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continually brings to the attention of the villagers urban standards and aspirations which, whenever possible, they attempt to apply to themselves. L. M. Hanks (1959*b*: 19) sees the operation of this characteristic acculturative mechanism in Bang Chan in terms of the villagers' "search for respectability": "A respectable cremation requires an orchestra; a respectable dwelling a tile roof; a respectable sickness an injection; and a respectable family must chaperone carefully its growing daughters. So run a host of points which help to bolster but not necessarily to advance social position."

Yet, after the relationship between village and town has been considered, Bang Chan remains very much a peasant community, whose residents are concerned first and foremost with the cultivation of rice, the maintenance of their monastery, and their own immediate social environment. Despite aspirations, many Bang Chan cremations must go without the orchestra; most dwellings lack the tile roof; injections are taken only by those who can afford them; and the necessity for boys and girls to work together during harvest time, a period of unavoidably infectious joy, precludes any rigidly imposed chaperonage. Perhaps the best assessment of the cultural position of Bang Chan was provided by the writer's field assistant—an individual born and reared in a village in the Northeast who, although in many respects worldly and urbane, maintained an almost passionate identification with his peasant background—who said: "When I first came here to Bang Chan, I never thought that people living so close to Bangkok could be *real* Thai villagers. But they are. They are not as friendly and hospitable as Northeastern peasants, and they are more interested in money, but they have a much greater love of the land. No city person could ever think and feel as they do."

Family Life and Social Organization

In terms of the traditional categories of social structural analysis, the social organization of Bang Chan is strikingly simple. There are essentially only five social units which demand, and toward which villagers express, relatively enduring psychological commitments. These are the nuclear family;

home from school, the curriculum for which is written and directed by Ministry of Education officials in the city. Approximately 14 percent of Bang Chan households have battery driven radios (there is no electricity in the village) and approximately 60 percent of the villagers can read, although considerably fewer actually have the proficiency to go comfortably through a newspaper; theoretically the same number of people can write, but few Bang Chan adults have the courage to take pencil to paper without feeling discomfort over their handwriting, spelling, and knowledge of stylistic forms. Newspapers that people bring home from town are passed around and read more for their entertainment than information; the few books that are seen in the village are pulp magazines, religious or moralistic writings, and occasionally do-it-yourself pamphlets ("How to Raise Chickens the Modern Way").

4:Phillips E-4,5 (1956-1957) 1966
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a loosely defined, laterally oriented kindred; the nation-state (mentioned not for formal reasons, but because it actually is psychologically important); and to a lesser extent, the village monastery and school. Of these five institutions, the nuclear family is the principal focus of psychological concern, beyond the individual himself. Otherwise, there are in Bang Chan no castes, age-grade societies, occupational groups (other than the family), neighborhood groups, or groups expressive of village solidarity (such as councils or governing boards) which might impose a sense of obligation on the villagers, or to whose norms or functions the villagers might have to conform.[6] Bang Chaners do not have to contribute their labor to their community, serve as village guards, contend with the dictates of village elders, or even actively coöperate with fellow villagers.

All villagers have additional relationships of varying degrees of intimacy both within and without the community, but these are dyadic, not group, relationships based on implicit expectations of mutual benefit. Such contacts are in nature primarily idiosyncratic (friends), transient (reciprocal work groups, gambling and drinking partners), or contractual (as opposed to affective or kin determined: vendors, landlords, debtors, rice millers, employers, and doctors). It is important to recognize that if some of these latter relationships take on positive affective qualities, they may also assume some of the forms and feelings of kinship. Thus, a young man who is taken on as a hired hand by a family frequently ceases to be considered an "employee" and becomes instead an "adopted son." (This type of *gemeinschaft* relationship, contrary perhaps to theoretical expectations, is also characteristic of many occupational situations in Bangkok.) In a similar vein, the terms for older sibling (*phii*), elder uncle (*lung*), and elder aunt (*paa*) are used as terms of address and reference between individuals who are obviously not related to each other, but who wish to mark overtly their fondness and respect for one another. The use of these

[6] There are two minor exceptions to this generalization: (1) a monastery lay committee whose functions are limited to the secular tasks of monastery administration, and membership in which brings prestige and Buddhist merit to a few selected members of the community; and (2) reciprocal work groups organized for and limited to rice transplanting and harvesting, membership in which is completely voluntary and a matter of mutual convenience (Janlekha 1955). Careful accounts are kept as to how much labor is contributed by each participating family, and responsibility for remitting labor received lies with the individual participant, not the group.

It must be noted that the monastery and its cadre of relatively permanent monks, although the very institution that defines the existence of "the village of Bang Chan," is not from the point of view of its clientele primarily a unit representative of village cohesiveness. It is first and foremost *a* Buddhist monastery where one may make merit and only secondarily *the Bang Chan* Monastery. Several members of the community patronize other monasteries, and several Bang Chan monks come from other locales. The keen sense of individual obligation that villagers feel toward their monastery could be directed toward any monastery.

and KY followed by a number.) The center of social life in Bang Chan is the Buddhist monastery or wat and the adjacent government primary school. The community simply consists of the clientele which regularly patronizes Wat Bang Chan and this school rather than other comparable institutions elsewhere in the region. Within the area of the community lives a minority of Thai Moslems constituting about ten per cent of the population. They have their own mosque which happens to be just outside Bang Chan, but they attend many secular and some Buddhist functions at Wat Bang Chan. A number of small stores, which also serve as coffee houses and men's clubs, are used as neighborhood centers in different parts of the village. Near the central wat and school, there is also a store, and the house provided by one of the headmen for use as the Project headquarters.

This present interim report of the Cornell Thailand Project includes some of the data necessary for the design of a program to improve health and diet in Bang Chan. Another report, now in preparation, will give the results of a detailed dietary survey made in the community following the health survey reported on here. These two studies together will indicate existing deficiencies in health and diet, and will permit the formulation of recommendations for needed changes in behavior as these can be realized in the context of the village and national culture.

The author of this study, Dr. Hazel M. Hauck, is Professor of Food and Nutrition in Cornell University. She has been associated with the work of the Cornell Thailand Project since 1950. She not only designed and supervised the research on health, nutritional status, and diet in Bang Chan, but during almost a year of field work in Thailand she obtained valuable data on many other topics for the Project's files. Some of her daily work in Bang Chan made little sense to the villagers, but they nevertheless became devoted to her. Her energy, tact and fine spirit in facing the discomforts and difficulties of rough field work in a tropical foreign land inspired both her Thai and American associates. Working with Professor Hauck were Dr. Amusith Rajatasilpin, now a teacher in the School of Public Health in Bangkok; Miss Sapha Indrasud, now in the Ministry of Public Health; Dr. Chumlong Kittivoja, of the Dental School of the University of Medical Sciences, Bangkok; and Miss Saovanee Sudsaneh, who has been doing post-graduate work in nutrition at Cornell and Harvard. To all of these faithful workers, the Cornell Thailand Project is greatly indebted.

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Contacts Outside the Community

Radio and movies provide indirect contact between the community and the outside world and seem to encourage the acceptance of urban behavior patterns. (See Table 16.) In addition, however, there is direct contact between the community and the capital city. The inhabitants commute to Bangkok to sell their products or to visit. Some go to the city to live for a time, to attend the city's schools, to work as laborers or to serve in the military or police force. For example, about a quarter of the sample (26 per cent) reported that during the year preceding the survey they had been to Bangkok ten or more times. About a third of the sample (35 per cent) have lived in Bangkok, mostly for the purpose of working there. On the other hand, almost half the sample (45 per cent) have never been to the Don Muang Airport; and over two-thirds (69 per cent) have never been to the Annual Agricultural Fair.

One would expect that such direct exposure to the urban life and values of the capital city, for example, might be linked with greater readiness to try out improved methods of agriculture either because exposure to urban life may mean exposure to more information, or, less directly, may mean exposure to the urban values of economic self-advancement and experimentation. And there is, indeed, a relationship between exposure to the capital city and use of the motor. The two factors are not linked for all the residents--the relationship is a conditional one. That is, it is mainly among illiterate farmers where urban contact is associated with readier acceptance of the motor.

TABLE 19. ILLITERATE FARMERS* WHO HAVE GREATER CONTACT WITH THE CITY ARE MORE LIKELY THAN OTHERS TO USE THE MOTOR

"This past year, how many times did you go to Bangkok...?"

Literacy	Never or once (Proportion who own or use the motor)		Twice or more (Proportion who own or use the motor)	
Illiterate	44%	(40)	58%	(51)
Literate	83	(36)	88	(83)

* Male farmers only

In the same way, there is a similar conditional link between use of the motor and wider contacts beyond the horizons of Bang Chan. Visits to the airport and to the agricultural fair, for example, (both centers of contact with urban culture) are associated with use of the motor among illiterate farmers. If the farmer can read and write, on the other hand, he is just

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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Age	Method	Kinds of Farm Work
13-14	Moderate pressure.	Hauling, weeding, buffalo tending, transplanting, chicken feeding, fishing, household work.
15-16	High pressure.	All kinds of farm work. Harrowing, harvesting, and uprooting (boys only) are started at this age.

By the time the young are 16 years old, they are already reliable farm hands, although they are still not considered competent enough to participate in the cooperative work to which only the best family workers are expected to be sent. By the time they reach 18 years of age, all males and females should be well trained in all kinds of farm work.

According to the Primary Education Law, parents are responsible for sending their children to school at the age of eight. These children are to remain in school until they are over fourteen years old, or until they have passed Pratom IV.[2] Since school hours start at nine and last until three in the afternoon, children of school age are still able to participate in the farm work before or after school hours. Moreover, most rural primary schools including the Bangchan Primary School have adjusted their vacation recesses to the periods when rice farm labor is needed most -- from August 16 to September 15 which coincides with transplanting period, and from December 16 to January 15 which coincides with harvesting period. It is during these vacations that the upperclass children are expected to contribute their

2. Primary education is divided into four academic years -- Pratom I, II, III, and IV.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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*243 857 872 labor to the family farm work. It is also the time for children of families of other occupation to earn their small lampai from piece-working.

872 • 871 We have devoted a few pages to this topic of training the young for farm work because we think it is relevant to the study of the village economy. While the standard of teaching is generally poor in most primary schools in Thailand and consequently farm children receive rather poor academic education, it has been observed that their training in the farm work given by the family is exceedingly thorough. With the exception of a few bright children who are able to finish Pratom IV in four years and thus are able to leave the primary school at the age of 12, most farm children are kept in the school until the age of 14 because they usually fail in the examination at the end of each academic year and have to repeat once, twice, and even thrice. A good many are obliged to leave school at the compulsory age of 14 without passing Pratom IV. Urban children, on the other hand, usually pass Pratom IV at the age of 10 and are able to proceed on their secondary education at the standard age of 11 when they start their Matyom I. This is because they went to school at an early age and had better teachers at the Pratom level. Thus, farm children usually lag behind urban children in academic achievement. The situation is aggravated by the city secondary schools' practice of using students' achievement by age as the basis for admission decision. As a result, farm children do not

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the community and joined, about one mile south, Sāensaēb Canal, a broad old waterway connecting Bangkok and Minburī with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Minburī, two miles east, cut through one side of the area. On it lay Bang Khūat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō paet," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Minburī with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Minburī had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Minburī, Kilō paet, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoe), one located in Minburī, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

1. A new large school has since been built away from the temple compound.

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[503] Besides the work in rice-fields, women dug and cleaned
[226] canals and ditches, mounded land, and fished in many ways, the most laborious of which was plunging a heavy basket into the mud to catch burrowing fish. In the household chores, in which men shared to some extent, they carried water, cut and fetched wood, tended livestock, cultivated kitchen gardens, pounded rice in mortars, and cleaned houses. Boats were rowed
[501] by paddling or sculled by standing and pushing a single large
[354] oar. Cooking was time consuming. The low stoves were on the
[352] ground or floor. Since there were no tables or chairs, one squatted two to four hours a day to cut or pound ingredients,
[516] stir the curry, or wash the dishes.

868 The training of boys and girls for farm and household
561 work was thorough and started early. By 18 years of age,
461 boys and girls with few exceptions were experienced in every step of farming. Janlekha's chart (1955:82) indicates the progression (parenthetical additions are the present author's):

Age	Method	Kinds of farm work
5 - 7	not forced, but allowed or induced to work if they want to	light hauling, removal of weeds which have been turned over by harrowing
8 - 12	mild pressure	light hauling, removal of weeds which have been turned over by harrowing; some household work and help in the kitchen - girls only - (sometimes boys)
13 - 14	moderate pressure	hauling, weeding, buffalo-tending, transplanting, chicken-feeding, fishing, household work (boys and girls)
15 - 16	high pressure	all kinds of farm work, harrowing, harvesting, and uprooting - boys only - are started at this age.

872 Children worked in the fields before and after school
461 which, compulsory for all children aged eight to fourteen, was held from 9 a.m. to 3 p.m. five and one-half days a week. Vacations coincided with peak work seasons so children could help in the fields or at home.

000improvement, (1)ngaan sponsored by them might serve to acquaint a large group with a new practice. Suppose, for example, that addition of premix to rice, and cooking rice without excess water were being promoted. If one of the respected priest-practitioners could be persuaded to introduce these practices at his homage-to-the-teacher rite and give them some publicity, this might help to create a favorable attitude toward the suggested change.

Every change will require continuing education, and a variety of approaches should be used, some of which have been [872] mentioned. If the elementary school teachers were persuaded of the importance of a good diet and improvement in sanitation, and had a sound understanding of the desired changes in practice, they could influence both the oncoming generation, and their neighbors through teaching and example. Continued practical health education for school children should ultimately bear fruit. The value of eating more green leafy vegetables should be taught, and the children could learn about leafy greens available in the village, but not widely used at present. Good foods to bring to school for lunch might be stressed. Hard cooked eggs have already been mentioned. If convenience as well as health value were stressed, this might lead in time to increased consumption of eggs by growing children, and ultimately by adults as well. If a simple school lunch program were organized, either on a cooperative basis or subsidized, the inclusion of peanuts would help to increase both the protein and the thiamine content of the children's diets. Though unfamiliar to many of the children, lightly roasted peanuts were enjoyed as a treat offered at the end of the medical inspection. If teachers could influence vendors to prepare and sell more of the snacks which would be desirable additions to the children's food, this would be a gain. Fruit could be stressed for school lunch. At any time of year, a banana a day for each child would probably be possible, and bananas should be emphasized even though their nutritive value is not so outstanding as that of many other fruits. Values of other fruit in season should be taught. The school garden could be used to demonstrate how to grow some of the more nutritious vegetables. Awards for those with the best home gardens could be used to stimulate improvement. Similarly, recognition for improvement in home sanitation might be useful.

In adult discussion groups, both men and women should learn about good food and health practices. The slack period between transplanting and harvest, when people can get about easily by boat, would be the best time for such meet- [212] ings. Since many adults in Bang Chan were illiterate or did not read with ease, very simple teaching material is needed. Association between good food and health must be built up gradually. Appeal to economic and other motives may be used [871] where such motives reinforce the desired ends. The extension method of adult education, just in its beginnings in Thailand,

4:Phillips E-4,5 (1956-1957) 1966
AO7 Central Thai AO7
Bang Chan

621 631 essentials not atypical of the region. Instead of villages being organized administratively on the basis of natural social groupings and demarcations—that is, social centers and groups with which people feel a primary identification, in Bang Chan's case the local Buddhist monastery and government primary school—so that governmental and social units are isomorphic, they are gerrymandered into highly arbitrary administrative units. Thus the village of Bang Chan is comprised of seven *muubaan* or hamlets, at the head of which are seven hamlet headmen; these hamlets are located in two different *tambon*, or communes (four in one commune, three in the other) headed by two commune headmen, neither of whom lives in Bang Chan; the two communes are located in two different districts headed by two different district officers and their staffs; the two districts fortunately are in a single province, Phranakhoon, the same administrative unit in which the metropolis of Bangkok is located. Yet the people who reside in these varying hamlets located in different communes and districts all perceive themselves as living in the single village of Bang Chan. The fundamental organizational problem here is that since the sources and lines of governmental authority do not follow the lines of the natural Bang Chan community, jurisdictional conflicts and confusions arise to threaten the effectiveness of those community-wide programs that occasionally may be initiated. For example, during a diphtheria immunization campaign in the village (Hanks and Hanks 1955), the public health officer from one of the district offices was reluctant to immunize all the children of Bang Chan on the grounds that some of them came from hamlets outside his district's jurisdiction; he yielded, as the Hankses note, only when a perceptive villager pointed out that if germs knew no boundaries why should he?

Not all villages of the Central region have such real or potential administrative difficulties. (And Bang Chan does not have them too frequently either, principally because the government does not initiate too many community service programs.) However, the basic organizational principle which admits them—that houses are grouped together as administrative "villages" on the basis of conceptual neatness rather than socially functional criteria—is a common feature of the administrative structure of the Central Plain.

621 792 The foregoing account describes some basic culture patterns which Bang Chan shares with other villages of either the region or the nation. In addition to these broader patterns, Bang Chan has certain traits which inevitably refer to local village conditions and contingencies. For example, the most active and viable social unit in Bang Chan beyond the familial level is the order of Buddhist monks associated with the monastery. It is the only organization within the village that has been successful in mobilizing community activity (Sharp *et al.* 1953), although much of this activity has

125 he could write, could only sign his name, or could do neither.*
212 Those who said they could write a letter are considered here to be literate. All others are grouped together as illiterates or on a low level of literacy.

212 The literacy rating was tested for validity as follows: in
Dong Chan literacy is known to be related to age. Ever since
* 872 1935** there has been a school in the community. Since that date
125 school attendance has been compulsory. Attendance has been fairly full for the last twenty years, but most older residents have never had the opportunity for formal schooling.

212 The survey data reflect this correlation between literacy and
* 177 age. Among farmers under 40 years of age, only 16 per cent were
* 178 rated as illiterate or barely literate by the survey criterion; while 59 per cent of those of 40 years or older are rated as illiterate. Thus one can have reasonable confidence in the survey
561 response as a rating of literacy.

TABLE 10. LITERACY OF FARMERS DECREASES WITH AGE

	Age	
	Under 40 yrs.	40 yrs. or more
Literacy		
Illiterate	16%	59%
Literate	84	41
Total cases	(79)	(131)

* 177 Literacy is linked discernibly to acceptance of the motor and
* 178 mushroom growing. The proportion of literate farmers who have tried the motor is twice as high as the corresponding proportion
228 among those who are illiterate. It is less strongly linked to the
241 decision to grow mushrooms, and is, at best, weakly linked to the decision to raise tilapia or to use fertiliser.

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212 * In addition, interviewers asked respondents who said they could write to demonstrate it by writing something on the ques-
402 tionnaire.

[125] ** See Siamese Rice Village, op. cit.

42

621
125
[872]

3.a. Is there anyone from your house who is now attending mattayom school?

1.	Yes	86
2.	No	309

b. Do you have any children who have not yet entered or not yet finished prathom school?

1.	Yes	201
2.	No	188
--	Unascertainable	4

c. IF YES: Do you plan to send any of these children to mattayom school or not, or is it uncertain?

5.	Plans to send	66
6.	Does not plan to send	83
7.	Unascertainable	52

[863] 4. What kind of occupation would please you the most—farming or some other occupation? If some other occupation, that other occupation would please you the most?

1.	Farmer prefers farming	266
2.	Farmer prefers other occupation	85
3.	N. from other occupation prefers his occupation	85
4.	N. from other occupation prefers farming	8
5.	N. from other occupation prefers another occupation	5
6.	Unascertainable	4

5. How is Baan BC-KY in your opinion? Is it a very good place to live, a fairly good place to live, or not such a good place to live?

8.	Very good	71
9.	Fairly good	254
X.	Not so good	4
0.	Unascertainable	4

[276] 6.a. Do you smoke cigarettes or not?

7.	Yes	208
8.	No	118
--	No Answer	7

b. If yes: Would you say that you smoke more cigarettes than most people in BC-KY, less than most people in BC-KY, or about the same as most people in BC-KY?

9.	More	11
X.	Less	68
Y.	About the same	128
0.	Unascertainable	1

T 63 Place of Bangchan in the Administrative Area

In the highly centralized system of Thai administration, the whole country is divided into 9 circles (pharq), 71 provinces (changwad), 414 districts (amphur) and 77 sub-districts (king-amphur), 3,650 communes (tamboi), and some 50,000 hamlets (muban).

CT 621 634 121 In the section on reasons for the choice of the field site (page 32)[a/4] mention was made of an artificial division of Bangchan between two administrative units. By that we mean one part of our "natural" or "functional" Bangchan village administratively belongs to one amphur and the other part belongs to another amphur. The situation will become more vivid when we discuss our "natural" Bangchan village.

CT 621 121 Our "Natural" Bangchan Village

In this study we are not interested in an administrative unit which is often an artificial division, but rather in a "natural" or "functional" village which may be operationally defined as a geographical area inhabited by a conglomeration of people having one or more common social centers.

CT 621 794 872 Bangchan people patronize an active Buddhist religious institution popularly known as Wat Bangchan, and an adjacent government primary school, both centrally located in the community.

CT 621 *128 For practical reasons for ease in statistical manipulation, we assume that the smallest administrative unit --

[a/4] [Erratum: this should read "page 36"---Analyst]

621 *128 the hamlet or muban -- is indivisible, although as a matter of fact a Thai hamlet is actually made up of individuals and families. We proceeded, then, to draw the boundary line of our natural village by first selecting Wat Bangchan as the social center and defining the natural village as composed of all hamlets whose headmen and the birth of whose population patronized this wat. The hamlets thus included were found to be Muban 4, Muban 5 and Muban 6 of Tambol Bangchan, Amphur Minburi, Changwad Phra-nakorn, and Muban 5, Muban 6, Muban 7 and Muban 8 of Tambol Kannayao, Amphur Bangkapi, Changwad Phra-nakorn. For the sake of brevity these seven hamlets will henceforth be referred to as BC4, Bc5, BC6, KY5, KY6, KY7 and KY8 respectively.

• [872] We then checked the list of students enrolled in the primary school which is adjacent to the wat and found that most of the families residing in the seven hamlets sent their children to this school and that only a negligible fraction of the student body consisted of those from other nearby hamlets.

Our "Bangchan Village" may thus be defined as an area within the composite boundary line of BC4, BC5, BC6, KY5, KY6, KY7 and KY8. This is an area of about 6,500 rai (of which 6,404 rai are privately owned), assuming a somewhat circular shape and having as its centers Wat Bangchan and the adjacent Bangchan Primary School (see Map I).

361 312 Across this "Bangchan Village" and through its center runs a main canal, the Bangchan Canal, in a northeast-southwest

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

178 finally, for a few families, took precedence over rice
463 growing. The relative importance of these new occupations remained low, however, since only a few families were needed to meet the village requirements for such services.

434 The establishment of the primary school some thirty
647 years ago opened up new jobs as teachers and janitors for
875 some educated villagers who were given preference over out-
• [272] siders. It should be noted, nevertheless, that at the beginning the primary school teachers were not considered as regular officials and their pay was as low as six baht a month during the prewar years. Even during the war, they did not get as proportionately large a cost-of-living raise as did other regular officials. It was only after the war that they were made regular officials and that their pay rose almost a hundred times to 450 to 550 baht a month with provision for a steady raise to more than one thousand baht
[48] a month. This new occupation in public service also increased with the extension of the central government employment into the rural areas and with improved transportation facilities which permitted an individual to commute daily between his office in Bangkok and his home in Bangchan. Thus, a Bangchan resident is now serving as an educational supervisor in the nearby Minburi District and a few others are on the regular payroll of the government-owned Bangkok wharf.

•243 With the background knowledge of the situation of
464 Bangchan farm laborers previously described in mind, we may
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463

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

Age	Method	Kinds of Farm Work
13-14	Moderate pressure.	Hauling, weeding, buffalo tending, transplanting, chicken feeding, fishing, household work.
15-16	High pressure.	All kinds of farm work. Harrowing, harvesting, and uprooting (boys only) are started at this age.

By the time the young are 16 years old, they are already reliable farm hands, although they are still not considered competent enough to participate in the cooperative work to which only the best family workers are expected to be sent. By the time they reach 18 years of age, all males and females should be well trained in all kinds of farm work.

According to the Primary Education Law, parents are responsible for sending their children to school at the age of eight. These children are to remain in school until they are over fourteen years old, or until they have passed Pratom IV.[2] Since school hours start at nine and last until three in the afternoon, children of school age are still able to participate in the farm work before or after school hours. Moreover, most rural primary schools including the Bangchan Primary School have adjusted their vacation recesses to the periods when rice farm labor is needed most -- from August 16 to September 15 which coincides with transplanting period, and from December 16 to January 15 which coincides with harvesting period. It is during these vacations that the upperclass children are expected to contribute their

2. Primary education is divided into four academic years -- Pratom I, II, III, and IV.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 857 872 labor to the family farm work. It is also the time for children of families of other occupation to earn their small <u>laupai</u> from piece-working.

872 871 We have devoted a few pages to this topic of training the young for farm work because we think it is relevant to the study of the village economy. While the standard of teaching is generally poor in most primary schools in Thailand and consequently farm children receive rather poor academic education, it has been observed that their training in the farm work given by the family is exceedingly thorough. With the exception of a few bright children who are able to finish Pratom IV in four years and thus are able to leave the primary school at the age of 12, most farm children are kept in the school until the age of 14 because they usually fail in the examination at the end of each academic year and have to repeat once, twice, and even thrice. A good many are obliged to leave school at the compulsory age of 14 without passing Pratom IV. Urban children, on the other hand, usually pass Pratom IV at the age of 10 and are able to proceed on their secondary education at the standard age of 11 when they start their Matyom I. This is because they went to school at an early age and had better teachers at the Pratom level. Thus, farm children usually lag behind urban children in academic achievement. The situation is aggravated by the city secondary schools' practice of using students' achievement by age as the basis for admission decision. As a result, farm children do not

369 87

Bang Chan Canal bisected the community and joined, about one mile south, Sānsæb Canal, a broad old waterway connecting Bangkok and Minburi with the canal network of the central plains. A well-raised, year-round road which ran between Bangkok, 20 miles to the southwest, and Minburi, two miles east, cut through one side of the area. On it lay Bang Khŭat, another community, about eight kilometers from Bang Chan (cf. Kaufman:1960), and a cluster of houses called "Kilō pæt," (Kilō 8) both west of Bang Chan and nearer to Bangkok. A shallow canal flanked this road most of the way.

The town of Minburi with district offices, shops, and pharmacists, and a good-sized Muslim population was well-known to most of the residents of Bang Chan. Its middle school drew from the surrounding farming countryside, including Bang Chan, those few pupils whose educational aspirations led them beyond the local elementary school. Minburi had electricity, but no telephone or telegraph facilities.

For nine months of the year, while Bang Chan lay under water, most of the marketing was done through boat-vendors who plied the canals. During the dry months, or for large festivities, people marketed at Minburi, Kilō pæt, or in Bangkok.

The Thai government administered Bang Chan through two district offices (amphoe), one located in Minburi, the other in Bangkapi, close to Bangkok. The common boundary of their respective districts happened to run through the middle of the community. Seven local head men, each in charge of one of the seven hamlets (mūban) into which the entire community was divided reported to one or the other district office. They transmitted instructions from their superiors to the farmers, maintained order mostly by their personal prestige, and kept the village census more or less up to date by recording and reporting marriages, births, and deaths.

At the center of the community was the cherished Buddhist temple with its abbot, monks, and novices, numbering 15 to 50 depending on the season. The elementary public school, occupying one of its buildings,[1] was attended by 300 children aged eight to fifteen, both Buddhist and Muslim. The temple compound was surrounded by a number of houses, including a cafe and stalls for small vendors. A small country mosque (surao) in another hamlet was the religious center for the Muslim minority, some of whose children attended another school just outside the Bang Chan community. The abbot and the imam, the respective local heads of the two religious faiths, were of importance in the community as leaders.

1. A new large school has since been built away from the temple compound.

759 sought, ritually requested of some relative who was a mid-
571 wife.[70] Some persons though continued to limit themselves
602 to delivering their relatives, and never sought magic at all.

Two Worlds: The Natural and the Supernatural

759 To deliver a baby as a midwife or even as an unskill-
772 ed kinsman, embraced 2 aspects: a manual or technical, and a magical. These aspects corresponded to Bang Chan's 2 great worlds of knowledge and experience: the natural and the supernatural.

Midwifery was not alone in embracing both of these categories. Every activity, bus-driving, dancing, printing, or other, had its incorporated magical means to augment the probability of success. Though with the manual or technical skills of the natural world alone one could come through all right with even a modicum of supernatural help, success was greater. No one wanted to take the responsibility and risks of "going it alone" especially when the resources of the supernatural world were so freely and easily accessible to everyone. At the very least, one could start an enterprise on Friday (Wan Suk: Happy Day). The closer an enterprise was to the margin of life and death, however, the larger the supernatural element. In farming, curing, and midwifery, for instance, the ritual component was strong.

• [874] Since these 2 worlds were qualitatively different, each required a different method of learning. The supernatural world, immaterial, royal and sacred, was learned

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[769] 70. Three women had recieved theirs from their mother, mother's mother, and mother's older brother, respectively. A retired midwife planned to give hers "to the daughter or grandchild ("Lan":sex not specified) who was interested enough to ask for it." One man had received his from his father's father. Childbirth magic would hardly be a suitable topic of conversation between priests, but it might have been passed down there, too. The midwife whom one accompanied while learning probably was the source of one's magic. Women's magic was passed down the maternal line only, whereas men could get theirs both from kinsmen and at the temple.

by instruction from a ritually[71] approached teacher. "One cannot accidentally learn. One has to ask to be taught." As a practitioner in this field, the title "mɔ̄" signalized expertise; where teaching was involved, the title was khrū (teacher [McF. 183]) or ʔāchān (professor [McF.990]). Speech was the key to this tradition, in spite of sacred books and wall-carvings in the temples.[72] Modern education, being book-and-teacher based, shared in this aura. There, even today, listening is more comfortable than reading.

Techniques of the practical, natural world were learned not by teaching but pragmatically by observation, example and experience. Eyes were the key. "I know because I saw," said a midwife. At the highest level of achievement in the natural world one was expert (nak), e.g. convict (nak thōt, an expert in being punished) a tourist (nak thīeo, an expert in roaming around).[73] Within the natural world, an intense pragmatism reigned always emphasizing visual phenomena. People were keenly

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71. To speak ritually one held in the hand the trio of incense, flowers, and a candle. This was the way to cross over from the profane to the sacred world, to inform (bɔ̄k) or make a request of, a sacred being (a teacher, priest, king, or deity). The tiny flame of the offering invoked holy fire, and so had the effect of making one's words compelling, for no one could gainsay a request under such circumstances. A husband about to deliver his wife held incense, flower, and candle in hand as he requested the help of ancestors and spirits. (Bishop Pallegoix saved the existence of his mission by thus approaching the King [Pallegoix, Vol. 2:201]). The trio of offerings, whether at the 4 corners of the lying-in fire-floor, or in "hat phlī krathong" at a "thām khwan" rite, or even in an ordinary khwan khao made all actions and words compelling.

72. Because words, immaterial and invisable, lay at the base of occultism, words as continuous agents of power permeated Bang Chan's ordinary daily life. This was why words, verbal play, and punning initiated action: pregnant women attended the monks' "coming out of retreat" (ɔ̄k phansā) so that the child would "come out" (ɔ̄k) easily.

73. It should not be forgotten that most activities in the supernatural world had their technical sides, and the term "nak" was used there too. A curer had to learn his herbs; a dancer, his steps; and a master of ceremonies, the words of the chants.

close touch with each other's activities and needs. 621

These residence arrangements had considerable bearing on the amount of help at hand for a pregnant, parturient, or lactating woman, especially since every woman expected to bear her child at home. A woman's first child was often born while she was still resident in the house of her parents or parents-in-law. If the separate household had been set up, and especially if there were other small children, a parturient's mother or other relative came to stay with her for delivery and post-delivery care, or a woman might return to her parental or her husband's home for the event. In fact, since husbands and wives were both needed in the fields, it took great diligence for a woman, without extra kinfolk in the house, to carry on child-care, cooking, and field-work, and then undergo child-bearing besides. The extensive overlap in the division of labor (Sharp et al. 1953:94-98), though, resulted in much sharing by husbands in the household chores, so that the burdens were somewhat eased. Help in child-birth was one of the areas of mutual aid freely accorded by neighbors, so all women could count on adequate or even ample help at this time. 621 844 592 844 [462]

Wealth Differences:

Way of Life

Real polarities of wealth existed. A well-to-do person owned rice fields, a good house, and had many devoted kinsmen. Teachers who were governmental civil servants and a few of the traders were somewhat better off because they had regular sources of cash. A poor man, owning no land, lived humbly and hired out at day labor and other odd jobs. Yet the way of life of the well-to-do was not very different from that of the poor. Practically all persons worked in the fields or at related activities, wore the same cotton clothes, and ate the same food. Rice was plentiful. Fish, fruit, vegetables, and fuel could be amply obtained practically without cost, though it was also possible to spend money on these. Yet here and there persons were beginning to lose their old satisfaction in life as a farmer. Changes were beginning to come in, heralded by such things as hair permanently waved, gasoline pressure-lamps, increased geographical and political awareness, grumbling over the cost of living, and frustration over rising expectations. Urban life as met with in Bangkok was viewed with some awe as a glittering universe with different ideas and needs, yet also with some uneasiness. The city dwellers sometimes looked down on the country dwellers and made them feel uncomfortable. 556 875 441 [464] 556 511 178 369

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

262 A discussion of food habits in Bang Chan would be in-
796 complete without some description of ceremonies ((1)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

796 The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-
527 teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion
264 of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

[782] Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could
[554] afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and
527 at festivities. Thus, there was reason to make a (1)ngaan
796 as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

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[198] [461] 1. Significantly the same Thai word is used for work and for ceremony.

[302] [581] [1138] 2. Topknots, formerly worn by all Thai children, used to be cut ritually at the time of puberty. In Bang Chan, the growing of a topknot had become primarily an attempt to improve a child's health. Few school age children were topknots. They were usually cut earlier than puberty.

[875] 3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

796 The actual ritual of these ceremonies did not take a great deal of time although it was important. Most of the time and effort went into preparing and serving food. Even a small celebration involved cooperative effort among relatives and friends. For every event, the Buddhist altar in the home was decorated and offerings were made to the house-spirit. A big cremation might require planning in detail for years ahead: invitations to priests and relatives in distant parts of the country; hiring an orchestra and obtaining ceremonial gear. For the largest events, when the guest lists ranged upward to 60 or so priests and 400 other guests, one borrowed the hundreds of trays, dishes and bowls owned by the temple. No rental fee was charged for these, but such items had to be returned the next day, clean, and damaged articles replaced or paid for. As the day or days drew near, boat-loads of fresh provender were bought at big markets, and organized cooperative cooking went on under the direction of a competent person, usually one of the "professional" cooks of the village. The day before one ordination, 33 women were seen preparing vegetables, fish and soup; 13 others were making 7 kinds of desserts; about 50 others of both sexes were at different tasks, the men in particular cooking Chinese noodles, grating coconut, stirring, stoking fires. The picture was one of rows of stoves, pots so large they were stirred with a boat paddle, buckets of sugar, eggs by the hundreds, a hired generator to run a mechanical coconut-grater. On this occasion two meals were served. At another splendid (1)ngaan, the priests were fed three meals, other guests up to eight meals, over a period of two and one-half days. Workers had received additional meals beforehand.

262 The banquet comprised rice and many dishes not met with in daily fare: Chinese noodles; "with-rice" dishes of several kinds, rich in fish, meat and vegetables: for example, fried chicken with internal organs, garlic and pepper; fried pork with mung bean; (2)mii (a fried vermicelli) with fish, vegetables, and a tomato sauce; many different desserts made of eggs, rice flour, glutinous rice, agar, coconut and coconut milk, sugar, sweet potato, dried green beans; flowers served in syrup, fresh fruit such as watermelon; ices and coffee.

128 In Appendix A, p. 102 is a list of foods bought for an 262 annual homage-to-the-teacher rite. It is the nearest approxi- 796 mation to a quantitative record of food for a ceremony that 895 the research group obtained. The prominence of purchased foods, especially of flesh foods, is noteworthy.

264 On the great day, the priests were served first, either 796 at 7 a.m. or 11 a.m., or both, always at least in part by the 792 host, who sat and chatted with them. No one else ate until

435 Some information as to the cost in baht of the larger
196 ceremonies held in 1954, and their scale, was obtained from
[124] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400, liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new utensils 550; 6 priests fed; each priest given 12 baht; 12 (2)pin-(1)toos filled to take to the temple; 100 duck eggs donated, and 300 baht received from 30-40 guests.

[714] Cremation[1]: Total cost 40,000[2], including about 10,000 for food; 61 priests fed[3]. About 500 guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and liquor 150; 40 tang (800 liters) fish and 3 tang Chinese noodles donated.
B: Total cost, 11,000[4].

[585] Wedding: A: Thai Buddhist: Total cost 5000. Guests gave 2300.
[583] B: Rite of forgiveness after elopement: a meal, with 5 bottles of liquor.
[184] C: Moslem: 2 buffalo slaughtered. 400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
sugar cane, fruits, sweetmeats and other things. At more
[383] modest weddings and the rite of forgiveness for a couple who had eloped, food might differ from the usual fare only by including the three essentials of a wedding: pork, chicken and alcohol.

273 Increased consumption of alcoholic beverages during the
796 ceremonial season was indicated by the sales of one local
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1. Cremation was the last of several rites at death. Private 7-day, 30-day and 100-day rites were held, when priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[574] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

At the height of the boom, the demand for rice straw swept many of the fields clean of the stubble usually left there after harvest, thereby decreasing food for the roaming buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralis (1957) were 1) the cash outlay required was small, 2) returns were realized quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralis made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

Food for Homage-to-the-Teacher Rite
Performed by a Buddhist Priest Who Was
a Traditional Practitioner

Item	Amount	Cost in Baht	Item	Amount	Cost in Baht
Cereals and Legume Seeds:			**Fish and Meat (cont.):**		
Rice noodles		10.	Dried fish	6	gift
Soybeans & fermented vegetables	25 kg.	12.	Roasted fish	3 kg.	gift
			Shrimp paste	2 kg.	18.
Mung beans	10 lit.	25.	Lobsters		15.
Cassava flour		2.25	Lobsters (for soup)		7.50
Sugar and dessert:			Pig's skin (for soup)		10.
Palm sugar	1 pail	67.	Beef[1]	15 kg.	150.
Cane sugar	14 kg.	85.	Ingredients for Mussel-man curry[1]		27.
(2)Kha-(5)nom (3)tuaj-(1)foo	500 cups	35.	Boiled chickens[2]	2	22.
Fish and Meat:			Pig's head[2]	4 heads	222.
Fish ((1)plaa (2)myk) for soup		6.	Pork[2]	4 kg.	40.
Silurus and serpenthead	60 kg.	gift			

262 435 736 [275] Food for Homage-to-the-Teacher Rite (cont.)

Item	Amount	Cost in Baht
Fruit:		
Bananas ((3)klua; (4)nam-(4)waa)	5 bun.	from father
Chico[2]		5.
Coconut	150	180.
Coconut (young, to make dessert)	30	30.
Job's tears	1 lit.	3.
Plums, yellow[2]		5.
Pomelos[2]		6.
Rose apples[2]		2.
Tamarind		7.50
Tomato sauce		8.
Young palm fruit[4]	7 sun.	3.
Vegetables (non leafy):		
Bamboo shoots, cooked	1 pail	28.
[272] Cucumber		--.3
[273] Egg plants		--.3
[274] Garlic	5 kg.	26.50
Gourd, white		1.
Onion, fragrant[5]		6.
Onion[5]	½ kg.	.3
Onion, welsh[5]		--.3
Mushrooms		3.
Radish, white		--.3
[564] **Vegetables (leafy green and yellow):**		
Cabbages		--.3
Chinese kale		--.3
Chili, green		7.50
Vegetables (leafy green & yellow) cont.:		
Lettuce		--.3
Parsley		--.3
Pumpkin	3 fruits	12.
Sweet basil leaves		1.
Sweet potatoes	6 kg.	6.
(3)Tang-(5)oo		--.3
Seasonings etc.:		
Vinegar	1 bottle	1.
Fishsoy	1 jar	10.
(2)Ka-(1)chaa;	2½ kg.	12.50
Sodium glutamate		5.
Pepper		14.
Agar	400 gms.	36.
Miscellaneous:		
Cola beverage	72 bottles	72.
Liquor	16 bottles	80.[6]
Ice		30.
Cigarettes	2 pkgs.	--.6
Tobacco	1 heap	--.6
Betel pepper		9.
Fresh areca nut		10.
Dried areca nut		8.
Dried palm leaves	1 big bundle	2.
Firewood		50.
	Total	1577.75

[184]

1. For Moslem guests.
2. Food items placed on a tray and used in the ceremony proper.
3. Items so marked cost a total of 140 baht.
4. Not identified.
5. Several kinds of onions, both fresh and dried, are commonly used.
6. Prices not stated; estimate for liquor.

178 laboring profession, limiting the work to transplanting only.
592 Apparently she did not earn enough. During this hard period
621 the young boy left her. The woman continued to live alone for two years. After the collapse of her shack in 1953 she went to live with a young couple in KY5 who are not related to her. In exchange for room and board and a nominal allowance, the old woman agreed to take care of the couple's baby.

178 Case 8: In 1949, a couple, both teachers in the Bang-
592 chan Primary School, were sharing the same dwelling with the
• 845 wife's mother's family, but having a separate food arrange-
434 ment for themselves and their two young daughters. Thus,
621 they appeared in the 1949 census as a separate family. In
[416] local standard, the combined income of these two teachers was quite high. The family lived well and was the only family in Bangchan that owned a camera. In the 1953 census this family became a part of the wife's mother's family because they had arranged to share the same food. The reason that was given for this new arrangement was that some time earlier the wife's brother, who had been living with his mother, got married and moved out to start an independent family, whereupon the old lady suggested that her daughter move in to fill the vacancy.

178 Case 9: In 1949, a family of three, consisting of
592 a young couple and their six years old daughter, worked as
621 farm hands for the wife's mother for fixed pay on which they
[573] were able to live independently. Two or three years later, the wife's mother asked this family to move into her household

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434 on a small plot that they own or rent, but all families
463 in this category derive their main income from wages.

3. Trader. Main income from the more or less regular sale, not production, of rather considerable amounts of goods. Perhaps somewhat arbitrarily, we have not included in this category those very few families who derive their main income from production of cookies or the like, even though such families might themselves perform the selling of their products to local consumers; such families are included in the 'home enterpriser' category below.

[426]
[427] 4. Investor. Main income from land rent, interest on loans, and/or speculative gain.

5. Professional. Main income from such specialties as midwifery or dramatic entertainment.

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647 6. Public servant. Main income from, or majority of
463 working time spent in, government employment. This is the only category in which we had to add the additional criterion of "majority of working time"; government pay is rather low, and one person who works full time in the employ of the government actually receives more income from other sources.
[875] This category includes regular government officials, teachers
[622] and school janitors. The hamlet headmen are not included, however, as their main incomes are otherwise derived and their remuneration from the government is extremely low. They maintain no daily routine as public servants. The headmen are all farm operators, except one who is an investor.

178 doctors were practicing in 1953 than in 1949, while there
463 was no change in the number of midwives. In most cases,
621 however, these professional services had ceased to be the main sources of income of the families engaging in them.

621 In 1953, occupation defined as public service in-
434 cluded the jobs of an educational supervisor, one teacher,
463 two school janitors, two workers in the government-owned
647 Bangkok wharf, and one policeman. Actually, there were five
[875] Bangchan residents who were teaching in 1953. Only one of these, however, was a family head. Two of the other four teachers were husband and wife living with the wife's mother who was classified as an investor -- the most prosperous of the investors mentioned earlier in this section. Another teacher, a wife, was also living with her mother who was also an investor. The last teacher, also a wife, was living independently with her husband who was operating a rice farm, and the occupation of the family was thus classified as farm operating. With the possible exception of the policeman, all these public servants were well paid in the village standard, ranging from some four hundred baht a month for a janitor to eight hundred baht for the educational supervisor. After the 1953 census was taken, more regular jobs were opened to Bangchan residents by the Highways Department, and also more people took up regular jobs of a public service nature in Bangkok while retaining residence in Bangchan by commuting daily between the village and their offices. Thus,
[178] although the percentage figures remain constant during

178 463 finally, for a few families, took precedence over rice growing. The relative importance of these new occupations remained low, however, since only a few families were needed to meet the village requirements for such services.

434 647 • 875 [372] The establishment of the primary school some thirty years ago opened up new jobs as teachers and janitors for some educated villagers who were given preference over outsiders. It should be noted, nevertheless, that at the beginning the primary school teachers were not considered as regular officials and their pay was as low as six baht a month during the prewar years. Even during the war, they did not get as proportionately large a cost-of-living raise as did other regular officials. It was only after the war that they were made regular officials and that their pay rose almost a hundred times to 450 to 550 baht a month with provision for a steady raise to more than one thousand baht [48] a month. This new occupation in public service also increased with the extension of the central government employment into the rural areas and with improved transportation facilities which permitted an individual to commute daily between his office in Bangkok and his home in Bangchan. Thus, a Bangchan resident is now serving as an educational supervisor in the nearby Minburi District and a few others are on the regular payroll of the government-owned Bangkok Wharf.

• 243 464 621 463 With the background knowledge of the situation of Bangchan farm laborers previously described in mind, we may

FOOD IN CONNECTION WITH FESTIVITIES AND CEREMONIES

A discussion of food habits in Bang Chan would be incomplete without some description of ceremonies ((1)ngaan)[1] which dominate the village scene during the dry, post-harvest season. These events are of interest in connection with food habits because of 1) the prominent place that food occupies in them, 2) the cultural significance and relatively large cost, both of which must be taken into account in any plans for dietary improvement and 3) the possible influence of differences in food habits at the ceremonial season and of problems of sanitation incident to large-scale food preparation on the nutrition and health of village residents.

The season for ceremonies and festivities opened with the harvest rites to the Rice Goddess and closed with the beginning of Buddhist Lent in mid-July. The big occasions were cremations, ordinations into the Buddhist priesthood, weddings, and rites for cutting of the topknot[2] or homage-to-the-teacher.[3] Smaller family celebrations might mark such events as the raising and dedicating of a house, the return of a son from the army, or even public events such as the completion of a road or a bridge. Whatever the focal activity, a gala meal was served first to priests and then to guests.

Offering food to priests brought merit, which ensured happiness in later rebirths (see p. 9). Because the greater the number of priests served, the greater the merit, people were spurred to put on as large an affair as they could afford. Moreover, a person was judged throughout the community by the abundance and quality of the food served daily and at festivities. Thus, there was reason to make a (1)ngaan as opulent as possible, but celebrations of every degree occurred in Bang Chan, from lavish feasts to simple ceremonies.

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1. Significantly the same Thai word is used for work and for ceremony.

2. Topknots, formerly worn by all Thai children, used to be cut ritually at the time of puberty. In Bang Chan, the growing of a topknot had become primarily an attempt to improve a child's health. Few school age children wore topknots. They were usually cut earlier than puberty.

3. A person who had received specialized knowledge from a teacher gave thanks annually in a ceremony, to which those who had profited by this knowledge were obliged to come and/or contribute. Thus, all the patients of a traditional medical practitioner helped him to honor his teacher.

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This economic picture indicates that from early childhood, women had engaged in such physical labor that by 18 years of age they had strong muscles and backs through lifting, stooping, and squatting. Since to stop work during pregnancy was construed as laziness, women worked vigorously up to the day of delivery. If a woman were delivered during one of the hectic seasons, she might shorten her post-natal rest to whatever she thought was a safe minimum.

Marriage

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As people of the community often met at the temple, at ceremonies, and at work parties, there too young people met. Unmarried girls went freely and often alone on duties about the community, and also to Minburi to sell vegetables or take a load of paddy to the mill. To temple fairs and such they went in groups. Though parents hoped their children would marry within the community, a few young people "married out."

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Girls were married between 17 and 27 or so, most frequently around 21 to 23. Since boys at 21 might have to serve 2 years in the army, and were urged to spend as well at least a few months in the priesthood, their marriages took place between 22 and 30, most often around 24 or so. Parents were in no hurry to marry off their grown children at the very age when their productivity was funneling wealth back into the family. However, if male help in the family were short, parents were more receptive to suitors. No girl was married against her wishes nor to a stranger.[4] Marriages might be arranged through formal conversations opened by the man's family and carried on through a go-between, but the girl had the final say. A secret agreement between the partners might even precede negotiations. About half of the marriages were elopements, sometimes arranged because negotiations were dragging, sometimes to avoid the higher costs of more formal arrangements. Marriage, though largely based on socio-economic factors (Phillips:62) was not devoid of personal esteem. Sharp (Bang Chan data at Cornell) has a note on the desirable qualities in a husband as viewed by women. "Sexual virility," last on the list, was minimized in relation to such qualities as "religiousness," "wealth," "industriousness," which headed the list.

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4. A person who uses magical means to force an unwilling woman's love "will be born 500 times as a mad dog."

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Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

221 132 241 512 771 [illegible] [illegible] 264 [illegible] The year starts with May, the beginning of the rice-year. At this time the rains began to soften the parched ground, and the heat slackened. School re-opened. Farmers turned to plowing, harrowing, raising the seedlings. Both sexes worked about equally in field labor, boys from 14 and girls from about 15 years of age performing tasks according to skill and strength. Everyone was in the field at dawn. The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)too, or tiered lunch kit.

221 132 [illegible] [illegible] [illegible] With the rains, the canals had filled, so that by June buyers with big rice boats could return. The few farmers who could afford to hold onto a portion of their last year's crop sold it for a better price at this time. Vegetables and fruits which had died in the long drought were replaced, and trees were planted.

241 221 132 In July the heavy transplanting season began. Because of cooperative work habits or hiring out, people worked solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly controllable. Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School 1312 771 857 988 [illegible] vacation was scheduled at this time so both teachers and children could help. Older children might work in the fields, while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

252 a woman's" (Sharp et al., 1953, p. 88). For instance, the
462 husband cooked when his wife was away from home, e.g. selling in the market or in farm labor, and of course when she was
252 sick or resting after childbirth. The ability of boys as well
887 as girls to cook rice and some of the accompaniments was taken for granted. A girl or boy could cook rice "as soon as he could lift the rice pot," e.g. at 6 or so; by age 12 he could cook a creditable meal. In mid-December, 1952, on the last day of school before vacation, one of us saw committees of school children (aged 7-14 years) preparing food for a special meal, on the school grounds. The variety of dishes prepared and the ease with which the children went about their tasks gave evidence of the home experience these children had had
252 (Hauck, 1953). Responsibility for food preparation increased
883 with age up to about 15 years, after which all available able-bodied family members did field work during the busy seasons (cf. p. 11). Several hours per day were spent in cooking and by middle age, parents were eager to turn this job over to a
891 daughter or daughter-in-law. If they had no daughter, this was an explicit reason for adopting a baby girl.

252 Certain men of eminence, e.g. headmen and elders, would
881 not be asked to cook at all, but as they aged, they might re-
891 turn to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for
252 2 months because his wife had back trouble. Some dishes were
562 cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

252 A premium was put on good cooking, and certain women
261 who were noted for their cooking were in great demand for large
268 scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 Food was commonly prepared twice a day, in the morning
264 and late afternoon. The meal pattern was the same for breakfast

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114 1. Suvarnakich (1950) described the Thai diet in a
262 general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

storekeeper: about 800-900 liter bottles per month during the 3 months dry season as compared to about 350 bottles per month during the 9 months of the rice season.

Moslems never served liquor at their weddings, cremations, and other auspicious events. Moslem residents occasionally attended Buddhist (l)ngaan in spite of dietary proscriptions that Buddhists did not observe.[1] A medium (spiritualist) commented however that because pig's head was essential for her homage-to-the-teacher rites, some Moslem sick persons preferred to go to the Buddhist temple for treatment. There the priest-practitioner could afford to set up a separate kitchen for his Moslem patients, and so spare them the distress of confronting pork. To one big ordination Moslem guests brought their own food. Buddhists came somewhat more often to Moslem ceremonies.

We do not have enough information to appraise the nutritional significance of food eaten at ceremonies. Some individuals got a great deal of it, others very little. One must remember that the (l)ngaan was not a public but a private event at home, to which guests came on invitation. Although cremations and the teacher-rites of priest-practitioners were held at the temple, and so had a semi-public character, no one who was not invited presented himself for food. Of the participants, the working group undoubtedly received the most food; they were there the longest time, had regular meals, tastings and snacks throughout the (l)ngaan as a whole itself. This group comprised the host, co-sponsors and their immediate kin; other relatives and friends who were asked or who volunteered to help. The feeling was, if one were "very fond" of the host, one volunteered to cook. If less close, one was invited as a guest, but made the usual cash donation. Sociable persons combining skill and energy were invited often and volunteered often, hence spent many days at ceremonies. Young unmarried men and women were asked and liked to be asked to work, for such occasions offered a great chance for fun and flirting.

Different degrees of participation may be estimated from Janlekha's (1955) figures for reported contributions ranging from 30 to 1000 baht in a year. Since a contribution of 5 to 10 baht per (l)ngaan was customary, the villager with the lowest reported contribution probably attended from 3 to 6 ceremonial occasions. Attendance at 100 or more (l)ngaan is unlikely, hence the villager who gave as much as 1000 baht probably made larger contributions per (l)ngaan.

What sort of persons or groups in the village were invited as guests? Every host's list included his older

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1. Moslems were said to resist army service because they were afraid they would have to eat pork.

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A, B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

APPENDIX A

Description of the Kitchen and Some Notes on Food Preparation in a Relatively Prosperous Household[1]

Friday, May 22, 1953

Arrived at 5:15 a.m. When we reached the house, the mother was holding the dog. The house was dark, and we walked around sleeping babies and children, ... The 15 year old niece who prepares meals here, was already at work. For light she had an oil lamp, a tin of about 1 pt. capacity, with wick. The rice was already measured, but she waited until SS could weigh it, before putting it on to cook. SS used her flashlight to see the scale and her notebook.

The kitchen here has a thatched roof, well smoked, but the walls and "windows" are of woven split bamboo. A sliding wooden "window" can be pushed back to allow access to a broad shelf outside. Here a large pan of pond water is kept, so that dishes may be rinsed and hands rinsed after each operation. Dishes are stacked upside down, on a wooden rack nearby, to dry.

The stove area in the corner has place for one fire, but several places for pots to stand. Downstairs, under the shed near the fish pond, is a larger clay stove, where the niece cooks the rice in the morning (enough for noon as well) and some other items; for example the (3)khii-(2)lag leaves which were cooked last night for use in sour curry this a.m. This probably keeps the kitchen cooler than it would otherwise be. Waste, fish bones, vegetable parings, etc., which are to be given to the chickens, can be thrown below through the space between two floor levels (kitchen and main rooms).

Rice water, coconut water, and food left in the serving bowls when the meal is over, are given to the dogs. A bowl is kept below, near where rice is drained, for dog food. Food left in pots is kept for humans to eat.

Fish caught in the pond are kept alive in pond water, in a water jar. When a fish is wanted, the niece catches one from the jar, stuns it with the back of her knife, and scales and cleans it on a split log nearby (rounded side of log up). The fish is put into a small basket, and the niece

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1. In reproducing these notes, slight changes have been made such as substitution of descriptive terms for personal names which appeared in the original.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

Age	Method	Kinds of Farm Work
13-14	Moderate pressure.	Hauling, weeding, buffalo tending, transplanting, chicken feeding, fishing, household work.
15-16	High pressure.	All kinds of farm work. Harrowing, harvesting, and uprooting (boys only) are started at this age.

By the time the young are 16 years old, they are already reliable farm hands, although they are still not considered competent enough to participate in the cooperative work to which only the best family workers are expected to be sent. By the time they reach 18 years of age, all males and females should be well trained in all kinds of farm work.

According to the Primary Education Law, parents are responsible for sending their children to school at the age of eight. These children are to remain in school until they are over fourteen years old, or until they have passed Pratom IV.[2] Since school hours start at nine and last until three in the afternoon, children of school age are still able to participate in the farm work before or after school hours. Moreover, most rural primary schools including the Bangchan Primary School have adjusted their vacation recesses to the periods when rice farm labor is needed most — from August 16 to September 15 which coincides with transplanting period, and from December 16 to January 15 which coincides with harvesting period. It is during these vacations that the upperclass children are expected to contribute their

2. Primary education is divided into four academic years -- Pratom I, II, III, and IV.

Even after the child was out, the pile of wood was still a drying womb to be treated carefully. It was also the wood for a consecrated fire. To drop a piece of this wood carelessly both injured and desecrated. If this happened a disease of the eyes "sang," came at once for which no male medical powers had any remedy. The only cure was in women's hands, that essence of maternity, "a drop of mother's milk--any mother's." The larger implications of this linking of fire and maternity are dealt with in the next section.

The Fire of Maturity

In the events surrounding the birth of the child, the significant step for the woman personally was the post-partum rest period by the fire (yū fai). Far more was at stake than just drying the uterus. The fire rest was one of the series of rites of the life-cycle which marked the course of an individual from birth to death. The others were the cutting of the umbilical cord, first head shaving, top-knot tonsure, ordination (for men), marriage, and cremation. Through the consecrated fire a woman formally achieved full maturity: she became suk (cooked, ripe, mature). Maturity did not come just by bearing a child. The fire brought about the transformation.[46]

How was mature womanhood viewed? What was the essential female role and office? Bang Chan saw a woman as one who "feeds and lengthens lives." As the custodian of growth she was, first, the guardian of the vital, essential khwan soul, and especially of the immature, flighty khwan of growing persons.

Secondly, a woman was a donor of nourishment (liang).[47] Her primary responsibility was to nurture children and other tender beings. She nourished the fetus with her blood. After

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46. "The fiery element digests what is eaten or drunk...and cooks the body and gives it its beauty of complexion. And the body thus cooked is kept free from decay" (Warren:157-158).

47. All the deities "concerned with the welfare of our bodies and our khwan" were maternal (Mae), e.g. Rice, Water, Earth, "Mother-Goddess" (Mae Sū), and several Mother-Princesses (Chao Mae). Fire, and maybe wind, were both female (mae) and male (phra) (Textor:485). To these deities, "higher" than ordinary spirits, Bang Chan "owed more."

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156 (riak khwan). Theirs was an augmented personal potency[55] in nurture not unlike the mana so widespread in the Asian-Pacific area.[56] The best midwives were liāng dī, though not all liāng
[059] dī were midwives. This societal peak was not an unattainable ideal. In the community, certain women were pointed out as liāng dī and some of them recognized in themselves the validity of this title.

562 The association of rice, motherhood, and khwan now stands
774 clear. Rice made suk by cooking over a fire, was the essential
776 food not only for the body but for the khwan. Growth and life
262 depended on the nourished khwan. Rice came from a maternal figure, the Rice Goddess, Mae Phōsop (cf. J.R. Hanks, 1960). Human mothers, too, when made suk, gave suk nourishment: the milk of the breast was merely transformed rice. Whenever rice was eaten throughout human adulthood, the Rice Mother continued her nourishment, for in each grain was a bit of her khwan, nourishing to the human khwan. The rice-bowl and ladle, used in many a ceremony, stood for the maternal care given a human khwan, and by extension, personal care throughout life. Whenever the rice bowl with offerings (khwan khāo: soul-[of]-rice)
[782] was presented by a parturient or by a sick person, loving care comparable to maternal care was being requested.

182 The idea of re-birth, of a fresh start within the pure area encircled by the holy cord, with auspicious words and
• 885 consecrated fire, was deep in every life-cycle rite. The
846 particular circumstance of the fire of parturition was a
562 forthright cooking to bring out and increase a woman's
372 essential femaleness, to transform her from a youthful, partial giver into a complete, mature donor of nourishment. Such was the satisfaction of women in this female role that many said they would like to be reborn as women. Few wanted

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55. Anuman Rajadhon (p. 134) reports that in India a newborn girl needed no ritual paraphernalia to keep away spirits because "her sex...is a protection in itself, and spirits cannot come to bother her." This was close to Bang Chan's idea of female potency.

56. Cf. "Mana" (E.R.E. VIII:375) for a quick run-down on a definition of mana.

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to be reborn as men. All women were eager to undergo the post-partum fire at least once. After that modifications might be entertained.[57] Whether the baby lived or died was not pertinent, for the benefits of the fire were for the mother.

Comparison of Male and Female Maturation Rites

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The parallel ritual that fitted men to perform their masculine role was ordination into the Buddhist priesthood. The well-documented Buddhist ends should not be permitted to eclipse this other personal goal. Just as the fire prepared a woman for motherhood, so ordination changed an immature youth into a man ready for marriage and fatherhood. He too was transformed from raw (dip) to ripe (suk). Men gained compassion through denial and suffering. Since their natures were seen as hard (khaeng), strong, bent on gain, influence, and power, possibly destructive and concupiscent, the severest deprivations were invoked: the renouncement of the gratifications of sex and food. Of the 2, the deprivation of food involved the greatest break with previous habits, for since babyhood, food had been a symbol of maternal care. Hence, a man was cast on his own. His only refuge and support was the Buddha, the law, and the Brotherhood. This self-denial induced the suffering that, coupled with knowledge gained from study of the scriptures, led to compassion. The suffering in no way

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57. The fire-rest though desirable was not obligatory. In 1865, Bradley said it could be "dispensed with in times of civil commotion, for fear of the enemy" and "no damages whatever were suffered whatever to mother or child" (p.79). Like other life cycle rites it was postponed if not convenient (gaduak). Also in times of peace, "a few mothers here and there cannot lie by the fire," and a few say, "they will not" (ibid:p.79). Bang Chan would accept this viewpoint freely as reflecting an individual, constitutional set of elements, or as an autonomous decision of an individual. The woman would never feel herself as competent as a ritually mature person though.

885 deprived a man of his masculine strength but was expected to
793 change him into a kind and merciful being.[58] It took at least
562 a three month season (phansā) in the priesthood to make a man
785 mature, responsible, and effective. That this moral fitness
[778] was not obtained overnight was given vivid illustration: if a
Buddha Amulet, designed for invulnerability, failed to be effective when tested by having a gun fired at it, it was "sometimes jokingly dismissed as a monk (phra) who has just been ordained (bùat mai)" (Textor:529). This interesting episode illuminates
789 one other important result achieved by both men and women in
885 their respective maturation rites: authorization to handle magic.

Magic and Maturity

In Bang Chan, magic was powerful. Whatever the purpose, whether beneficial or nefarious, it was effective if all conditions were met. Lest such power fall into unscrupulous hands, the community limited its availability and use to those who had gained the moral qualities and fitness to handle it wisely. Only the ritually mature could be counted on to be compassionate, strong, responsible adults, and so were permitted access to occult powers. Whether by ordination or the fire-rest, to be suk was an absolute prerequisite to magical knowledge. It did not give magical power, but qualified one to seek it out. Since no career in medicine was possible without magic, no man could be a mō who had not been previously ordained.

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562 The uses of magic by men had entirely different objectives from those of women. Their respective fields did not

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58. "A monk was changed...to be meek and mild." By seeking his morning alms he "show(s) mercy towards creatures" (prōt sat) (Anuman Rajadhon:76-77). Women's tenderness in their maternal function was not associated with shyness. A compassionate woman with a strong winyān soul (which projected the quality of the heart) was enterprising and effective (cf. J.R. Hanks, 1959). Where sexual characteristics were confused, instability in behavior appeared. The cultural expectation was that children and women were delicate (ōn), older people and men were hard (khaeng). "A male who is easily induced to convulse is one who had a 'soft' heart (chai ōn).[4] ...and also a 'soft' khwan (khwan ōn).....Such a young man is excitable rather than predictable and dependable, and hence is cause for parental anxiety" (Textor:485).

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The medium's powers as a mɔ̀ appeared to be entirely equivalent to a man's.

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To summarize, the fire-rest enabled a woman to acquire fruitful habits, new status, and the right to handle magic. The implications of the ritual clarified the role of women and the associated symbolism of rice, and by contrast the role of men. The nature of the magical resources available to each sex laid the groundwork for a career in midwifery for women, and for men, a career as a mɔ̀.

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Comparison of the respective rites of maturation points up certain contrasts and parallels between men and women. Women achieved compassion and maturity through their sexual role, while men achieved these qualities by denying their masculinity. Even a bounty of merit, which a man achieved directly by ordination, came to a woman through procreation, by the ordination of a son, or as a wife if her husband were ordained. Many activities were done by either sex, but each had certain exclusive proprietary areas. If women were donors of nourishment, men too had their donor roles, sexual, economic, religious, etc. Each paralleled the other in the formal steps to maturity, building the way for a complementary social and marital partnership for which both were ritually and psychologically well prepared.[62]

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62. In contrast, note the psychological ill-preparedness, leading to severe tensions in Ceylon (Obeyesekere, passim).

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friends to say positively that they cannot and will not endure it. For such, some other course has to be taken by the use of ...medicines" (p. 81).[74]

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The most noticeable modification in the customs of childbirth was the shortened fire-rest which had shifted from 29 or so days, to 9 to 15 or less; this was practiced by everyone.[75] Another conspicuous change adopted by a few dozen persons was the substitution for the open fire of a heat-making contrivance, in particular the hot-ashes or charcoal burning container (chamber or fire-box: fai chut) and the hot water bottle. (The hot brick and wrapped pot of hot salt were probably old alternatives.) New, of course, were the occasional utilization of the Minburi Health Center; the second class doctors; and, somewhat more generally, the novelties of the market, such as flowered net-frames, mits, shirts, pillowcases, and pacifiers. There were a few other changes noted.

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Who took up the innovations? First, they were women who had already successfully borne a child, undergone a full fire-rest, and were bearing their second or later children. Being already ritually mature (guk) and of proven competence in childbearing, they had no reason to fear a change and nothing to lose. Age and experience gave them the self-confidence, authority, and interest to ponder their experience and decide on ways to increase their effectiveness and their comfort. They had the right to do so because of the fundamental autonomy of the individual. Strong-minded old ladies might criticise the substitution of the hot-ashes container for the fire, feeling it was not hot enough to do the job, but they never questioned the woman's right to do so. The least likely to adopt

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74. On the other hand, Bradley (pp. 82-83) was puzzled why his success in saving the life of so revered a personage as the Queen by taking her off the fire, a move so thoroughly approved by the King, did not cause universal abandonment of the fire-rest. He was not aware that many a mɔ̄ did the same (with the possible exception of the sponging with tepid water), that as a mɔ̄-with-a-particular-specialty he could do anything he wanted but no one would copy it without personal formal authorization, and that he was up against the deeply-rooted rite of female maturation concerning which even royalty had no authority (Bangkok Calendar, 1871:107-109).

75. We have no data on whether this shortening process set in in the 1930's, or after World War II in the late 1940's. The month-long rest was universal in the 1920's.

178 a new way was a woman bearing her first child because she
184 was not yet ritually matured. This she wanted to be.
Moreover, her self-interest led her to try to profit as
312 much as possible from the experience of elders by first
846 following the old way. By incorporating the experience
•885 of successful child-bearers into her own and the baby's
life and by asking them to initiate actions auspiciously,
she augmented by that much her own competence, and laid
the groundwork for her future progress. Self-responsi-
bility engendered respect for elders. Thus there was no
split between old and young over innovations. Experience
gave grounds both for conservatism and for changing, but
at different age levels.

178 Secondly, changes were adopted by the rich who,
184 spending their money rather conspicuously, sought to main-
556 tain and enhance their social position. Their wealth
and position were in themselves unquestioned as signs of
merit earned in another incarnation.

178 The changes being introduced to Bang Chan were of two
564 kinds: first the prestigeful, and second, those giving no
increment of esteem, i.e. idiosyncratic changes of taste
or convenience; or those reflecting individual circum-
stances. The prestigeful innovations were oriented to-
wards the use of market novelties, modern medical care,
urban standards of cleanliness and beauty, and other ways
termed "progressive" associated with the city of Bangkok,
cynosure of the eyes of the rich. These values were
leading certain families away from their original occupa-
tion of farming, into the fields of teaching, trading,
carpentering, cottage-industry, etc. Since these new
occupations brought in steady cash and large land holders,
too, had a good income, an association was found of
372 wealth, prestige, urban interests, and innovation. Com-
846 ment on the hot ashes container (fai chut) indicated that
178 it was a strong symbol of prestige and progress. To use
it was "to get away from ignorance and the old way of do-
ing things." It was "cleaner, not hot or ugly, and more
convenient." One teacher took it up after reading an
advertisement in the newspapers that described glowingly
its more efficient healing effect. On the other hand, one
woman abandoned the fai chut because "it was not hot
enough to rid her of stiff muscles," so she went back to
the use of the fire. "It is all right for rich Bangkok
ladies who want to avoid a scar, but it does not give
177 enough strength for a farmer." She had no urban preten-
178 sions. Also in this prestigeful aggregate, observed here
278 and there, were the market novelties mentioned above:
954 bed, mat, and mosquito net instead of the plank-bed; kits
of medicine from the Chinese pharmacist instead of the old

food, seed, and chicken feed were met, 58 per cent of the crop remained to be sold off for cash (Janlekha 1955:53). Almost every inhabitant was engaged in commercial rice farming. A few teachers, craftsmen, and traders, alone did not farm. Plantings of early and late varieties in different plots spread the toil. Cooperative work or some local hired help assured adequate labor forces at the needed moment. Nevertheless, two heavy work seasons dominated the rice cycle. The first of these, June through August, involved soil preparation and transplanting of the seedlings in long straight rows. In the second season, November into February, the rice was harvested, brought home for threshing and winnowing, then sold or stored. The straw was stacked as buffalo feed. People were anxious during the preparatory and planting season, for rains were fickle and the planning and timing had to be exact. Work was hard and almost grim. Harvest, though perhaps more of a physical strain because people cut the stalks by day, then threshed and winnowed far into the night, was gay and so less taxing emotionally, for the crop had safely passed through the threats of flood, drought, and pest, and "cash was in sight." Haste was necessary because each plot of rice had to be harvested within three or four days of its maturity, and because at that season the canals were drying up rapidly, raising the possibility not only that human backs and not boats would move the crop, but that the buyers themselves could not get their boats in to take the main portion to the urban markets. Then a farmer might have to wait until the canals filled again in June to sell his rice and get his money. Since during the busy seasons everyone from age 18 on up was taken up with farming, the cooking, child care, and other chores were carried on by the aged and the very young. These work days taxed to the limit the strength of all men, women, and even young people. Ten to 18 hours might be spent stooping to transplant or weed, or, at harvest, to cut the rice stalk close to the ground. There was a great deal of heavy lifting of seedling bundles or sheaves. The few professional masseurs in the area said they were kept on the run because of back complaints especially during the periods of heavy labor.

In the periods between these two seasons, tools were repaired, houses rebuilt, and ceremonies organized. Extra cash was earned in various ways. People kept very busy, though they did allow themselves more sleep.

The importance of women's role in agriculture is indicated by their virtual equation with men. In every step of rice-production women worked alongside men, plowing with the buffalo, planting, weeding, harvesting, repairing the dikes, hauling, etc. Only uprooting the seedlings was exclusively men's work (even this was done by women elsewhere in Thailand [Kingshill 1960:73]).

Besides the work in rice-fields, women dug and cleaned

Seasonal Activities

128 A chart has been prepared to show the climatic conditions in Bang Chan and what people were doing at different seasons (Chart 1). For convenience, the periods covered by the four rounds of the dietary survey (p. 58) are included.

129 The year starts with May, the beginning of the rice-year. At this time the rains began to soften the parched ground, and the heat slackened. School re-opened. Farmers turned to plowing, harrowing, raising the seedlings. Both sexes worked about equally in field labor, boys from 14 and girls from about 13 years of age performing tasks according to skill and strength. Everyone was in the field at dawn. The buffalo, but not the farmer, rested through the noonday heat (about 10 a.m. until 2 p.m.) and also on the weekly holy day. Meals were usually eaten about 10 a.m. and after returning from the field at dark. Although two meals a day were usual at other times, at this season, some had a third meal about 2 p.m. If the buffalo were brought home to rest, this meal could be eaten at home, but hired laborers or those working far from home often took with them rice and other foods in a (2)pin-(1)toe, or tiered lunch kit.

130 With the rains, the canals had filled, so that by June buyers with big rice boats could return. The few farmers who could afford to hold onto a portion of their last year's crop sold it for a better price at this time. Vegetables and fruits which had died in the long drought were replaced, and trees were planted.

131 In July the heavy transplanting season began. Because of cooperative work habits or hiring out, people worked solidly day after day for two months on their own or on another's fields. It was dawn-to-dark, back-breaking work.

132 This was an anxious time. The seedlings had to go in at exactly the right time. Water level was only partly controllable. Lack of rain might be remedied by pumping water from the canals but flooding would drown the plants. School vacation was scheduled at this time so both teachers and children could help. Older children might work in the fields, while younger ones, from 8 to 13, and the aged took over the care of babies and toddlers, fished, cooked, gathered food for the family and grass for the buffalo. People knew the crop was subject to drought and flood, pests of rats and worms, destruction by birds or wandering buffalo or duck, and in the end to the mysterious fluctuations of the price of rice on the world market. Moreover, some persons worried about debts, acquired from giving a ceremony or making a capital investment and sometimes from heavy gambling during the rest season.

252 a woman's" (Sharp et al., 1953, p. 88). For instance, the
442 husband cooked when his wife was away from home, e.g. selling
in the market or in farm labor, and of course when she was
252 sick or resting after childbirth. The ability of boys as well
867 as girls to cook rice and some of the accompaniments was taken
for granted. A girl or boy could cook rice "as soon as he
could lift the rice pot," e.g. at 6 or so; by age 12 he could
cook a creditable meal. In mid-December, 1952, on the last
day of school before vacation, one of us saw committees of
school children (aged 7-14 years) preparing food for a special
meal, on the school grounds. The variety of dishes prepared
and the ease with which the children went about their tasks
gave evidence of the home experience these children had had
252 (Hauck, 1953). Responsibility for food preparation increased
with age up to about 15 years, after which all available able-
bodied family members did field work during the busy seasons
(cf. p. 11). Several hours per day were spent in cooking and
by middle age, parents were eager to turn this job over to a
daughter or daughter-in-law. If they had no daughter, this
was an explicit reason for adopting a baby girl.

Certain men of eminence, e.g. headmen and elders, would not be asked to cook at all, but as they aged, they might return to the task. One old headman, all of whose children had married and left home, said that he was doing the cooking for 2 months because his wife had back trouble. Some dishes were cooked by men only, even when their wives stood by: turtle, frog and cobra curries, for instance. These were also food for men only, suitable to serve at a drinking party.

A premium was put on good cooking, and certain women who were noted for their cooking were in great demand for large scale food preparation during the ceremonial season. One farmer planned to send his daughter to learn from such a skilled cook, having in mind the food preparation which would be needed when his sons were old enough to be ordained. Adverse comments might be made if the food did not come up to expectation; thus, a small boy complained that his curry was "too salty," and an old woman said loudly that the curry made by her 16-year old grand-daughter was "not good," although this girl was the only one at home to cook.

Meal Patterns[1] and Preparation of Typical Thai Dishes

252 Food was commonly prepared twice a day, in the morning
264 and late afternoon. The meal pattern was the same for breakfast

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118 1. Suvarnakich (1950) described the Thai diet in a
267 general way and Sharp et al., (1953, pp. 263-274) summarized the small amount of information on diet in Bang Chan obtained during the preliminary study in 1948-49.

562 delivery, "her blood was purified to a white color to become
827 the milk of the breast."[8] Nursing a child was the essence
853 of a woman's function, the supremely feminine act. A priest said, "A mother mercifully receives the khwan into her womb, and for maintaining life gives more of her own body, strength, and care (i.e. than does the father). Mothers are born to love children. Theirs is a steady intent to provide children with successful existences. To a mother one is most grateful" (S.S.).

562 In a wider context, not only all their household members
462 but people anywhere were the objects of women's nurture:
252 women were in charge of the cooking even if occasionally
254 helped by men. At the meals they prepared they were often the last to eat, so often "holding back and eating whatever was left over," that in a poor household, short rationing daily was probable (Hauck, et al.:35,[9]). One old lady expressed deep satisfaction that she "did not feel hungry any more." She construed this as proof that she had ample
082 merit, but it also meant that she was a great doner who gave
431 continuously and took little. Women usually offered the
176 early morning food to priests in behalf of the family, and they took charge of cooking the immense amount of food served at large ceremonies and temple festivities. When
593 age pushed women past their mature capacities, they returned
888 to the status of recipients. A son said of his senile mother, "She has gone back to being a child" (klap pai pen dek). The son's wife cooked delicacies for her.

562 A desire to give tender care and nourishment was deemed
857 inborn in all women. Although sex was not strongly
291 differentiated in babyhood,[9] by age 3 a hard-to-handle
593 skirt was put on a tiny girl, who reacted with vast pride. By 5, girls were helping with cooking and baby tending. Often has an older sister of 9 or 12 been observed patiently feeding her charge the ice cream she longed to eat herself.

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822 8. This very phrase was congruent with the colors associated with the khwan. Red or white flags, or pieces of cloth, or puddings (khanom) were required wherever khwan were involved, such as in rice, san phra phûm, and tham khwan ceremonies. Red was an auspicious color, white symbolized innocence and purity.

856 9. Anuman Rajadhon reports, though, that at the moment of birth, the child's sex was immediately "adjusted" (Anuman Rajadhon:127).

would not come willingly to work. When a family with a reputation for stinginess diluted the (3)khaaw (3)tom too much, the group refused to eat any, thereby reminding the host of his obligation for hospitality.

Guests to whom meals were served fell into four categories: 1) kin, 2) visiting dignitaries, 3) priests and 4) drinking companions. Kinfolk who came as guests were married children, or those who were away at school or work, or kinsmen from Bangkok or elsewhere. The older the relative or the greater the distance travelled, the greater the honor accorded him. Foods were exchanged. Two visiting ladies travelling in a large boat, made an annual round of all their relatives, bringing certain "city" foods and receiving substantial gifts of rice, fish and fruit. They stayed for several days as guests of one family, then moved on. Every person from Bang Chan who visited a relative in Bangkok carried big packages of food, usually rice or eggs, as gifts. With the inflated prices in Bangkok, it was advantageous to have a "country cousin" who might bring food. Visiting kinsmen always recognised the need for eventual reciprocity.

Visiting dignitaries were usually entertained by hamlet headmen. Meals served to visiting officials, policemen and others might be elaborate, involving cooperative help in preparation, but reciprocity, if any, rarely took the form of a return meal.

Regular visits of the priests, as well as the invitation of priests to the house for special events, have been mentioned. Priests might also come from afar, usually staying at the temple but receiving generous offerings of food from people of the community.

The custom of convivial get-togethers of either or both sexes was well established. Men traditionally enjoyed "stag" dinners of four up to twenty or more whenever the ingredients for a turtle, frog, cobra or other snake curry were available. Chicken curry might also be thus served, and once a catfish mash was prepared by a male visitor from the north. These curries were cooked by men, and the host served liquor freely. The all-male character of the occasion reflected the old restrictions on women's partaking of flesh foods (see p. 42), but older women did not hesitate to join in the drinking. Women also got together in drinking parties, sometimes to play cards.

In addition to sharing food with people in these four categories, the general rules of hospitality required that anyone who came to the house at meal time, should be offered food, or at least a drink of liquor, tea, or plain water.

people did not want to spend much on a baby, therefore they said that if a child ate too much "with-rice" he would be pot-bellied but thin in the upper part of the body, and that eating eggs would cause dental caries. This grandfather said he believed the truth to be just the opposite, but that goods things were expensive. As an illustration of the idea that thrift was the basis of restriction of "with-rice," one young mother said that an egg was regarded as equivalent to one (1)plaa (1)thuu (fish), and was enough for two persons. Sometimes one egg would serve an entire family. She said that a child would be punished if he ate a whole egg at a meal.

Secondly, Chutima suggests that particular foods were associated with, or suitable for, particular age levels, and a given sex. Data obtained in Bang Chan indicate that certain foods were associated with conditions such as pregnancy, lactation, and the puerperium, with occupation, and even socio-economic levels. For infants, breast milk was considered most suitable. The newborn infant was not usually put to the mother's breast for about 3 days after birth, and if a relative or neighbor did not nurse the infant, the small banana called (3)kluaj (4)nam-(4)waa (see p. 46), raw or baked, was crushed and fed to him before his mother's milk was available. This banana and rice, as (3)khaaw (3)tom and (3)khaaw (2)piag (two watery preparations), sometimes crushed with (3)kluaj (4)nam-(4)waa, were always the first solid foods introduced while the infant was breast fed. No other foods were introduced early. Some infants received fish and egg by 6 months of age, and a majority ate these foods by the time they were a year old. Some two year olds had not yet been given vegetables, and very few infants ate them before they were one year old.

Giving of "holy food"[1] to children suggests concern for strengthening children through dietary as well as other ritual means.

At the other end of life, as old age approached, the diet was supposed to change, ideally to a completely vegetarian one. Since one was soon to face death, one gave up eating meat and even fish, if possible, so as to avoid taking life. It was considered pitiful or wrong for an old person to fish. Being able to go without food was associated with merit. Those who stayed overnight at the temple on the Buddhist holy day went without solid food from before noon until the next morning as the priests did. One elderly woman remarked that when she stayed overnight at the temple she did not feel hungry, and did not eat anything at night, but other women, feeling hungry, drank coffee or milk at night. She

1. See p. 50.

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understood that her merit helped her not to be hungry. Once she asked an eminent layman about eating at night. He said, "If you are not hungry, do not eat. If you feel hungry, it is better to eat. If someone invites you to eat, it is sinful to refuse."

Even young adults had a strong revulsion against gluttony. One of the symptoms of a man who went mad and had to be committed to an institution was that "he ate too much." A woman was despised because "she ate in secret. She stole eggs from her husband, sold them in the market, and then spent the cash on food which she ate there, instead of bringing it home." Definitions of a glutton were, "A 'with-rice' eater," or simply as "one who eats alone." These comments highlight the counsels of eating in moderation and in company. On the other hand, a full stomach was valued for "home is where one eats one's fill."

At maturity, when farm and other tasks were shared as equals, men and women ate almost the same food. The old proscription against animal food for women was somewhat relaxed, but not entirely. To sustain farmers during the seasons of hard work, however, extra quantities of rice and rice alone, were considered essential. "With-rice" was pleasant but not so necessary. Any shift away from a diet of rice as ordinarily cooked in Bang Chan[1] was construed as a shift either in occupation or in health. For example an eminent citizen who gave up farming took to eating (3)khaaw (3)tom often. This soupy rice, a staple dish for infant feeding, had interesting socio-economic connotations. It was served as a light lunch to cooperative farm-workers to be followed at the day's end by a real meal. It was also "delicate" food, suitable for the sick, for city-people, for those who did not toil with their hands and backs. Consequently, when this man ate this "delicate food" more often, he was consciously or unconsciously serving notice on the community that he was not going to do farm work any more, for (3)khaaw (3)tom could not possibly have sustained a farmer's strength. Caustic villagers hinted that he was putting on airs.

Among conditions in which some change from the usual diet was found were pregnancy, post parturition and lactation. Relatively few foods were generally considered to be tabooed under any of these conditions, but many women preferred to limit intake to "safe" foods if there were any possibility that certain foods might cause harm.

Information was obtained from 42 mothers about the food they ate during the post-partum rest period. Two said they ate as usual, but for the remainder, the diet was considerably

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1. Literally "beautiful rice." For method of cooking, see p. 33.

the priests had finished[1]. The trays of food from which each guest served himself were bountiful, but it was not proper to eat very heartily, lest the host suffer the shame of running out of food. If there were a dramatic show or movie at night it was open to the public. In one case 2000 people attended. At that time eight commercial venders turned up to sell coffee, soft drinks, ices and other foods. Venders came to every large ceremony, and were heavily patronized. At the end of a (1)ngaan, the sponsors felt satisfaction and security. Where there was plenty of food to take home, the success was even greater. An earthy compliment was, "the fields were full of feces."

In addition to the banquet were ceremonial offerings of food to spirits and ritual food sometimes consumed as a sacrament. For each ceremony, appropriate selections were made from a specific list: a cooked pig's head, or at least a slice of cooked pork; two kinds of sweetmeats, red ((2)kha-(5)nom (3)tom (1)deeng) and white ((2)kha-(5)nom (3)tom (5)khaaw); a cooked fish, usually (1)plaa (3)chaamun, with its head and tail; a green coconut with its coconut water; a bunch of bananas either of the (3)kluaj (4)nam-(4)waa or (3)kluaj (4)nam varieties; a hard-boiled egg, usually duck; and liquor.[2] Other kinds of sweets, fruit, sugar cane, items for betel chewing, chicken, salt, and rice might appear. As these ceremonies were thought to be suspicious, purifying, therapeutic and protective, they were most elaborate at the great (1)than-(1)khwan (soul-strengthening) ceremony, at house-raisings and at rites to local guardian spirits. The necessity of these ceremonies explains why when public structures were raised, a portion of the public funds were used for a repast. In Bang Chan when donations for a new school

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1. Other priorities in service might be observed; for example, at a celebration preceding ordination the priest-candidates were served next. At one small affair, when 11 priests came to a home to conduct a service for a disabled old man who could not go to the temple, this elder was served after the priests, then the research group who counted as visiting dignitaries, and finally the other family members, with the women who prepared the food, and the children, eating last. The general sequence prescribed by etiquette was: priests should be served before anyone else, old before the young, the males before females, persons with high status such as teachers and ceremonialists before low, urban before rural. Those who cooked and served came last of all. When the number of participants was large, guests might be served, as they arrived, over a period of hours.

2. The presence of meat, fish and alcohol in this ceremonial food reflected non-Buddhist elements in Thai culture, and should not be viewed as a gross violation of Buddhist precepts.

178 592 621 the family members we were informed that A's daughter and her four children had moved out of the village separately to different places which could not be traced, while B's brother and sister went to live with a relative in Lam-loogga, also a rice growing village some fifteen miles to the north. The two chief bread winners of the family, A's husband and B's father, managed successfully to get themselves ordained and are now residing in the village temple. Early in 1953 B went to live with her relatives in Lam-loogga, leaving the sick old grandmother alone in Bangchan. [792] [828] The arrangement was that the old woman was to quit the old shack and take refuge in the secular part of the temple where it would be possible for her ex-husband, now a priest, to have two meals delivered to her every day. Just before the 1953 census was taken, however, she was taken to Lam-loogga. The last member of the disintegrating family was thus left out of the 1953 census.

178 592 587 736 621 Case 2: After the death of his first wife, an old man in BC4 gave his two sons equal shares of his property. He then acquired a second wife and built a separate quarter apart from the main building, thus creating a new family of two. In 1952 he was fatally hit by a truck on the Rinburi road. After a few months of unhappy stay with one of her step sons, the widow acquired a new husband and moved out to a neighboring village.

178 592 621 [166] Case 3: There was in BC4 a laboring family of three consisting of an old man, his daughter, and her son. After